

MEETING NOTICE

A meeting of the
Bayside Local Planning Panel
will be held in the Committee Room, Botany Town Hall
Corner of Edward Street and Botany Road, Botany
on **Tuesday 28 May 2019 at 6.00 pm**

ON-SITE INSPECTIONS

On-site inspection/s will precede the meeting.

AGENDA

1 ACKNOWLEDGEMENT OF TRADITIONAL OWNERS

Bayside Council respects the traditional custodians of the land, and elders past and present, on which this meeting takes place, and acknowledges the Gadigal and Bidjigal Clans of the Eora Nation.

2 APOLOGIES

3 DISCLOSURES OF INTEREST

4 MINUTES OF PREVIOUS MEETINGS

4.1 Minutes of the Bayside Local Planning Panel Meeting - 14 May 20192

5 REPORTS – PLANNING PROPOSALS

Nil

6 REPORTS – DEVELOPMENT APPLICATIONS

6.1 DA-18/1161 - 31 Albert Street, Botany.....13

6.2 DA-17/1249 - 1 Baker Street, Banksmeadow75

6.3 DA-18/1173 - 1 Beauchamp Road, Banksmeadow207

Members of the public, who have requested to speak at the meeting, will be invited to address the Panel by the Chairperson.

The meeting will be video recorded and live streamed to the community via Council's Facebook page.

Meredith Wallace
General Manager

Bayside Local Planning Panel

28/05/2019

Item No	4.1
Subject	Minutes of the Bayside Local Planning Panel Meeting - 14 May 2019
Report by	Michael McCabe, Director City Futures
File	SF18/2998

Recommendation

That the Bayside Local Planning Panel notes that the Minutes of the Bayside Local Planning Panel meeting held on 14 May 2019 have been confirmed as a true record of proceedings by the Chairperson of that meeting.

Present

Marcia Doheny, Chairperson
Jan Murrell, Independent Expert Member
Stephen Moore, Independent Expert Member

Also present

Ben Latta, Acting Manager Development Services
Fausto Sut, Manager Governance & Risk
Pascal Van De Walle, Coordinator Development Assessment
Angela Lazaridis, Senior Development Assessment Planner
Eric Alessi, Development Assessment Planner
Helen Lai, Development Assessment Planner
James Arnold, Principal Town Planner, Arnold Urban
Taif George, IT Technical Support Officer
Anne Suann, Governance Officer

The Chairperson opened the meeting in the Botany Town Hall Committee Room at 6.04 pm.

1 Acknowledgement of Traditional Owners

The Chairperson affirmed that Bayside Council respects the traditional custodians of the land, elders past and present and future leaders, on which this meeting takes place, and acknowledges the Gadigal and Bidjigal Clans of the Eora Nation.

2 Apologies

An apology was received from Patrick Ryan, Community Representative.

3 Disclosures of Interest

There were no disclosures of interest.

4 Minutes of Previous Meetings

4.1 Minutes of the Bayside Local Planning Panel Meeting - 23 April 2019

Decision

That the Bayside Local Planning Panel notes that the Minutes of the Bayside Local Planning Panel meeting held on 23 April 2019 have been confirmed as a true record of proceedings by the Chairperson of that meeting.

5 Reports – Planning Proposals

Nil

6 Reports – Development Applications

6.1 DA-2018/325 - 10 Rye Avenue, Bexley

An on-site inspection took place at the property earlier in the day.

Determination

That the development application DA-2018/325 for the construction of a storage shed within the Bayside Council Bexley Depot at 10 Rye Avenue, Bexley is **APPROVED** pursuant to Section 4.16(1) of the Environmental Planning and Assessment Act 1979, subject to the conditions of consent attached to the Council officer's report.

Name	For	Against
Marcia Doheny	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Jan Murrell	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Stephen Moore	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Reasons for the Panel's Determination

- The application is compliant with the requirements of the Rockdale LEP 2011 and the Rockdale DCP 2011.
- The shed is not visible from the street and will have no adverse impacts on adjoining properties.
- The requirements of Council staff that the shed not impact on existing trees, the drainage line, the water tank or a shed on the site have been addressed by a condition of consent.

- The conditions of consent also address stormwater issues by requiring that a functional stormwater system be designed with details of it to be submitted to Council with a Construction Certificate.

6.2 DA-2018/222 - 152-200 & 206 Rocky Point Road, Kogarah

An on-site inspection took place at the property earlier in the day.

The following person spoke:

- Chris Ferreira, planning consultant, Ethos Urban, spoke for the officer's recommendation and responded to the Panel's questions.

Determination

- 1 That the Stage 2 development application DA-2018/222 for the construction of a two (2) storey child care centre for 66 children, car parking, landscaping and signage at 152-200 & 206 Rocky Point Road, Kogarah is **APPROVED** pursuant to Section 4.16(1) of the Environmental Planning and Assessment Act 1979, subject to the conditions of consent attached to the Council officer's report, with the following additional change to Condition 49:

49. Prior to issue of the Construction Certificate, detailed drainage design plans for the management of stormwater generally in accordance with the approved civil engineering design stormwater drainage plans prepared by C&M Consulting Engineers:

Drawing Number	Revision	Dated
01859_100	-	-
01859_201	03	08/02/19
01859_601	03	07/02/19
01859_621	01	15/08/18
01859_631	02	30/08/18
01859_701	03	11/02/19
01859_702	01	15/08/18

The detailed drainage design places shall be reflective of the approved architectural plans. The rainwater tank is to be connect for internal stormwater re-use to all toilets and external landscape irrigation. Design certification, in the form specified in Rockdale Technical Specification Stormwater Management, and drainage design calculations are to be submitted with plans. Council's Rockdale Technical Specification Stormwater Management sets out the minimum documentation requirements for detailed design plans. Stormwater management requirements for the development site, including the final discharge/end connection point, must comply with Rockdale Technical Specification Stormwater Management.

- 2 That the submitters be advised of the Bayside Local Planning Panel's decision.

Name	For	Against
Marcia Doheny	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Jan Murrell	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Stephen Moore	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Reasons for the Panel's Determination

- The proposed development is fully compliant with all the applicable planning controls.
- The amended plans have responded to the issues raised by Council staff and will result in a well designed high quality child care centre.
- The Panel notes that the building has been designed to minimise openings to the west and south and to open out onto the street, thereby reducing impacts on neighbouring properties.
- The 1.8 m acoustic fence on the western boundary and the 3 m rear wall and the separation created by the 1.88 m wide drainage line at the rear of the site will provide good separation and will assist with noise management.
- There was one submission that relates to traffic impacts on Rocky Point Road and the Panel notes that the Sydney Eastern City Planning Panel fully considered traffic issues when it determined the development application and approved the location of the child care centre.
- The Panel is satisfied that the arrangements for the vehicular access to the centre are appropriate and notes that traffic generation will be reduced because many of the users of the child care centre are likely to reside in the adjoining development and therefore will not drive to the centre.

6.3 DA-2017/224/F - 152-200 & 206 Rocky Point Road, Kogarah

An on-site inspection took place at the property earlier in the day.

The following person spoke:

- Chris Perreira, planning consultant, Ethos Urban, spoke for the officer's recommendation and responded to the Panel's questions.

Determination

- 1 In accordance with Section 4.55(1) of the EPA the Panel is satisfied that the proposed modification is:
 - of minimal environmental impact;

- that it is substantially the same development as the development for which consent was granted before it was modified; and
 - that it did not require notification.
- 2 That Modification Application No. DA-2017/224/F, being a Section 4.55(1A) application to amend Development Consent No. DA-2017/224, to amend condition 19(h) relating to louvres within the western facades of Buildings B & E at 152-200 & 206 Rocky Point Road, Rockdale, is **APPROVED** pursuant to Section 4.16 of the Environmental Planning and Assessment Act 1979 and subject to the modifications of conditions of consent attached to the Council officer's report and the following changes to Condition 2:
2. The development must be implemented substantially in accordance with the plans listed below, the application form and on any supporting information received with the application, except as may be amended in red on the attached plans and by the following conditions:

Plan/Dwg No.	Issue No.	Dated	Received
ARCHITECTURAL PLANS—prepared by PTW			
DA-002 SITE ANALYSIS	6	14/07/2017	17/11/2017
DA-099 BASEMENT B3	2	13/11/2017	17/11/2017
DA-100 BASEMENT B2	7	13/11/2017	17/11/2017
DA-101 BASEMENT B1	8	31/01/2018	5/10/2018
DA-110 LEVEL GROUND	12	17/09/2018	5/10/2018
DA-111 LEVEL 1	8	23/03/2018	5/10/2018
DA-112 LEVEL 2	8	23/03/2018	5/10/2018
DA-113 LEVEL 3	8	28/09/2018	5/10/2018
DA-114 LEVEL 4-5	7	13/11/2017	17/11/2017
DA-116 LEVEL 6	7	13/11/2017	17/11/2017
DA-117 LEVEL 7	7	13/11/2017	17/11/2017
DA-118 LEVEL 8	7	13/11/2017	17/11/2017
DA-119 LEVEL 9	7	13/11/2017	17/11/2017
DA-120 LEVEL 10	7	13/11/2017	17/11/2017
DA-121 LEVEL 11-12	7	13/11/2017	17/11/2017
DA-123 ROOF PLAN	8	31/01/2018	10/08/2018
DA-200 STREET ELEVATIONS	5	14/07/2017	17/11/2017
DA-210 ELEVATIONS – BUILDING B	5	14/07/2017	17/11/2017
DA-211 ELEVATIONS – BUILDING C	5	14/07/2017	17/11/2017
DA-212 ELEVATIONS – BUILDING D	5	14/07/2017	17/11/2017
DA-213 ELEVATIONS – BUILDING E	6	13/11/2017	17/11/2017
DA-214 ELEVATIONS – BUILDING F&G	6	23/03/2018	5/10/2018
DA-300 SECTIONS – BUILDING B & C	5	14/07/2017	17/11/2017
DA-301 SECTIONS – BUILDING D & E	5	14/07/2017	17/11/2017
DA-302 SECTION PARK	5	14/07/2017	17/11/2017
DA-303 SECTIONS - ROCKY POINT ROAD TO PRODUCTION LANE	1	14/07/2017	17/11/2017
DA-304 SECTIONS – WESTERN & SOUTHERN BOUNDARY	1	14/07/2017	17/11/2017
DA-310 DRIVEWAY PROFILE RAMP 1 – MAIN ENTRY	6	13/11/2017	17/11/2017
DA-311 DRIVEWAY PROFILE RAMP 3	6	14/07/2017	17/11/2017
DA-312 DRIVEWAY PROFILE RAMP 4 – TOWNHOUSE ENTRY	7	23/03/2018	5/10/2018
DA-400 DA ADAPTABLE APARTMENT – TYPE PLAN	6	14/07/2017	17/11/2017
DA-401 DA LIVABLE SILVER TYPE PLAN	6	14/07/2017	17/11/2017

DA-511 LEVEL 1 STORAGE	2	13/11/2017	17/11/2017
DA-612 DA DEEP SOIL DIAGRAM	7	13/11/2017	17/11/2017
DA-710 FACADE ELEVATIONS (BUILDING B)	5	14/07/2017	17/11/2017
DA-711 FACADE ELEVATIONS (BUILDING C&D)	5	14/07/2017	17/11/2017
DA-712 FACADE ELEVATIONS (BUILDING E)	5	14/07/2017	17/11/2017
DA-713 FACADE ELEVATIONS (LINK BUILDING & BUILDING F&G)	5	14/07/2017	17/11/2017
PROJECT SCHEDULE	6	14/11/2017	17/11/2017
MATERIALS & FINISHES			
DA-700 DA COLOUR SAMPLE BOARD	5	14/11/2017	17/11/2017
ARCHITECTURAL PLANS—prepared by mosca pserras architects			
Operable Louvre Sections / OL1	A	12/02/2019	17/04/2019
	C	15/04/2019	
Operable Louvre Elevations / OL2	C	15/04/2019	17/04/2019
	A	12/02/2019	1/03/2019
Block B East & West Elevations / 802	K	17/12/2019	17/04/2019
Block E East & West Elevations / 804	K	17/12/2019	17/04/2019
Horizontal Operable Louvre Panel / 1005	A	13/12/2018	17/04/2019 1/03/2019
SUBDIVISION PLAN			
Sheets 1 & 2 Surveyor's Reference 118031505_12	N/A	No date	16/11/2017
LANDSCAPE PLANS – prepared by Arcadia Landscape Architecture			
Pages 1 – 34 200_Masterplan, 400_Plant Schedule, Softscape Plans No.'s 401 – 406 Landscape Details (2 pages)	Issue S	November 2017	16 Nov 2017
CIVIL & STORMWATER PLANS – Prepared by AT&L with Project No. 16-380			
SKC25_ACCESS ROAD LAYOUT OPTION 2	B	13-11-17	13/11/2017
SKC26_ACCESS ROAD CROSS SECTION OPTION 2	B	14-11-17	13/11/2017
SKC27_TOWNHOUSES RAMP	B	14-11-17	13/11/2017
SKC28_ACCESS ROAD AND PRODUCTION INTERSECTION	B	14-11-17	13/11/2017
DAC011 - SITEWORKS AND STORMWATER DRAINAGE PLAN SHEET 1	C	14-07-17	28/07/2017
DAC012 - SITEWORKS AND STORMWATER DRAINAGE PLAN SHEET 2	D	14-07-17	28/07/2017
DAC013 - SITEWORKS AND STORMWATER DRAINAGE PLAN SHEET 3	D	14-07-17	28/07/2017
DAC015 - STORMWATER DETAILS SHEET 1	B	19-12-16	28/07/2017
DAC016 - STORMWATER DETAILS SHEET 2	A	14-07-17	28/07/2017
DAC050 – STORMWATER DRAINAGE CATCHMENT PLAN	E	14-07-17	28/07/2017
DAC051 - OSD TANK 1 DETAILS	C	14-07-17	28/07/2017

DAC052 - OSD TANK 2 DETAILS	C	14-07-17	28/07/2017
DAC053 - OSD TANK 3 DETAILS	D	14-07-17	28/07/2017
DAC080 – EROSION AND SEDIMENTATION CONTROL PLAN	D	14-07-17	28/07/2017
DAC081 – EROSION AND SEDIMENTATION CONTROL DETAILS	B	19-12-16	28/07/2017

In the event of any inconsistency between conditions of this approval and the drawings/documents referred to in condition 2, the conditions of this approval prevail.

[Amendment A - S4.55(1A) amended on 20 April 2018]

[Amendment B - S.455(1A) amended on 11 September 2018]

[Amendment D - S4.55(1A) amended on 8 October 2018]

[Amendment F – S4.55(1A) amended on **]***

- 3 That a Building Information Certificate be obtained for the unauthorised building works (erection of louvres to Buildings B & E).

Name	For	Against
Marcia Doheny	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Jan Murrell	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Stephen Moore	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Reasons for the Panel's Determination

- The modified louvre design is required because building regulations specify a window type design that does not permit moveable louvres.
- The Panel is satisfied that the fixed openable louvres proposed will achieve the objective of moderating light and heat on the west facing facade of the building.

6.4 DA-2018/318 - 72 Banksia Street, Botany

An on-site inspection took place at the property earlier in the day.

The following person spoke:

- Huss Chalich, architect from Pinnacle Plus, spoke for the officer's recommendation and responded to the Panel's questions.

Determination

- 1 That the Development Application No. DA-2018/318, for the proposed demolition of existing structures, Torrens Title subdivision into two (2) lots and construction of a two (2) x two (2) storey semi-detached dwellings, at 72 Banksia Street, Botany, be **DEFERRED** to enable the preparation of amended plans that:
- replace the double driveway with a single driveway;
 - improve the design of the front facade to add more articulation;

- create an improved landscape setting at the front of the development with canopy trees and more planting in keeping with the existing streetscape.
- 2 That a revised Clause 4.6 request to vary the floor space ratio (FSR) standard contained in Clause 4.4A of the BBLEP2013 is also required.
 - 3 That the objector be advised of the Bayside Local Planning Panel's decision.

Name	For	Against
Marcia Doheny	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Jan Murrell	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Stephen Moore	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Reasons for the Panel's Determination

- The Panel considers that the presentation of the proposed development to the street is unsatisfactory. This is because of the double driveway and lack of modulation to the front facade.
- The Panel has also considered the applicable desired future character statement in the Rockdale DCP and does not consider that the proposal is consistent with the desired future character as it relates to:
 - enhancing the public domain and streetscape;
 - promoting neighbourhood amenity and enhancing pedestrian comfort;
 - encouraging site layout and building designs that promote commonality and a visual relationship with the surrounding built form and dwelling styles;
 - encouraging a strong landscape and vegetation theme within both the private and public domain;
 - promoting site access and parking facilities that do not dominate the streetscape; and
 - maintaining roof forms to reflect the characteristics of the prevailing designs within the street.

6.5 DA-2017/227/A - 6-8 Cecil Street, Monterey

An on-site inspection took place at the property earlier in the day.

The following person spoke:

- Elias John Sokias, Design Studio 407, was present for discussion.

Determination

- 1 In accordance with Section 4.55(1a) of the EPA Act the Panel is satisfied that the proposed modification is:
 - of minimal environmental impact;
 - substantially the same development as the development for which consent was granted before the consent was modified; and
 - that it was not required to be notified.
- 2 That the Bayside Local Planning Panel resolve pursuant to Section 4.55(1A) of the Environmental Planning and Assessment Act 1979, to modify Development Consent No. DA-2017/227 to widen a lift well and other changes to satisfy building regulation requirements at 6-8 Cecil Street, Monterey is APPROVED subject to the conditions of consent attached to the Council officer's report, and the consent amended in the following manner:
 - a Modify condition no. 2 to refer to the amended plans.
 - b Modify condition no 24 to read as follows:
 24. All vertical plumbing, other than roofwater heads and downpipes, shall be concealed within the brickwork of the building. The fire booster valves shall be located in accordance with the public domain plan. Utilities shall be softened with landscaping so as not to detract from the overall appearance of the development and amenity of the streetscape. Details demonstrating compliance with this requirement shall be submitted to the Principal Certifying Authority (PCA) prior to the issue of the Construction Certificate.

Name	For	Against
Marcia Doheny	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Jan Murrell	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Stephen Moore	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Reason for the Panel's Determination

- The modifications sought are required to comply with building regulations and will have no adverse impact.

6.6 DA-2018/63 - 1-2 Waines Crescent, Rockdale

An on-site inspection took place at the property earlier in the day.

The following person spoke:

- Ziad Chanine, architect, Director of CD Designs, spoke for the officer's recommendation and responded to the Panel's questions.

Determination

- 1 That the Panel is satisfied that the Clause 4.6 request to vary the height standard contained in Clause 4.3 of the RLEP 2013 will result in consistency with the objectives of the height standard and the objectives of the B4 Mixed Use zone and that it is therefore in the public interest to vary the control.
- 2 That the Development Application No. 2018/63 for the construction of a seven (7) storey shop-top housing development comprising of fifty (50) residential apartments, two (2) commercial units and basement parking at 1-2 Waines Crescent, Rockdale is **APPROVED** pursuant to Section 4.16(1)(a) of the Environmental Planning and Assessment Act 1979 and subject to the conditions of consent attached to the Council officer's report.
- 3 That the objector be advised of the Bayside Local Planning Panel's decision.

Name	For	Against
Marcia Doheny	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Jan Murrell	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Stephen Moore	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Reasons for the Panel's Determination

- The applicant has responded to the issues raised by the Design Advisory Panel to produce a high quality design in a very constrained site.
- The height exceedance is largely a result of the lift overruns, pergolas and parapets of the building which will allow for access to the rooftop communal space.
- The non-compliance with the natural ventilation requirements of the Apartment Design Guidelines have been addressed by a condition of consent requiring amendments to the plans for more openable windows.
- With respect to the submission concerning the development using street parking which is currently used by customers of a nearby business, in accordance with the Apartment Design Guidelines the Panel notes that the parking required by the development will all be provided on-site which will minimise any parking impacts to the laneway.

The Chairperson closed the meeting at 7.20 pm.

Certified as true and correct.

Marcia Doheny
Chairperson

Bayside Local Planning Panel

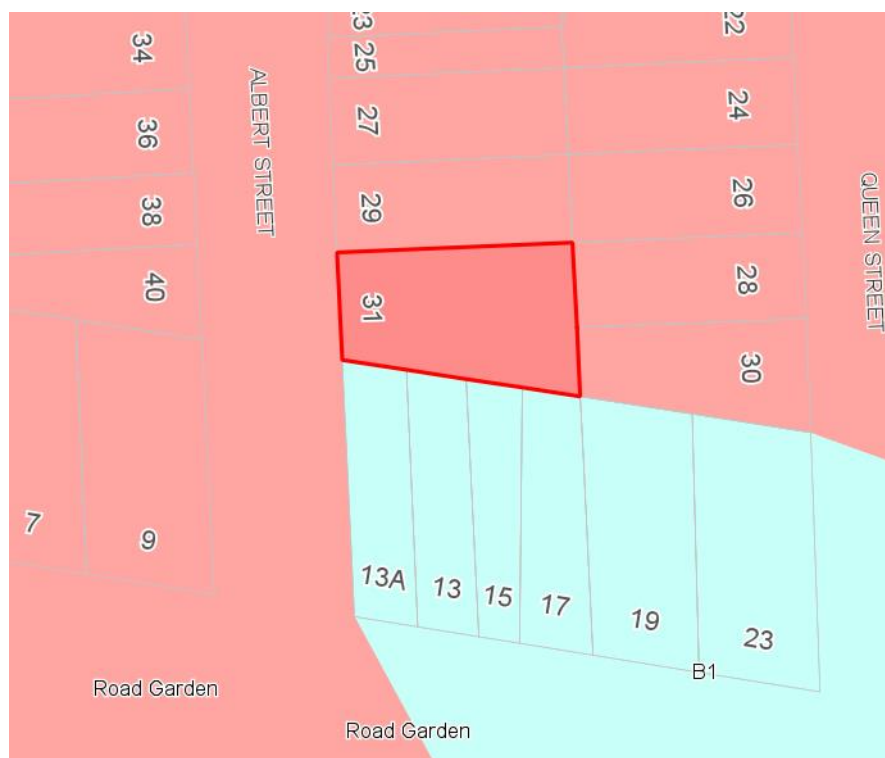
28/05/2019

Item No	6.1
Application Type	Development Application
Application No	DA-18/1161
Lodgement Date	31/08/2018
Property	31 Albert Street, Botany
Ward	Botany Bay
Owner	RK Investment Holdings Australia Pty Ltd
Applicant	David DeChiara
Proposal	Demolition of existing structures, Torrens Title subdivision into two lots and construction of two semi-detached dwellings and swimming pool.
No. of Submissions	Nil
Cost of Development	\$499,323.00
Report by	Michael McCabe, Director City Futures

Officer Recommendation

- 1 That the Bayside Local Planning Panel considers the Clause 4.6 request to vary the FSR standard contained in Clause 4.4 of Botany Bay LEP 2013 and is satisfied that the variation will result in consistency with the objectives of the FSR standard and the objectives of the R2 Low density residential zone, and is therefore in the public interest to vary the control.
 - 2 That Development application DA-2018/1067 for the demolition of existing structures, Torrens Title subdivision into two lots and the construction of two semi-detached dwellings and swimming pool at No. 31 Albert Street, Botany, be APPROVED pursuant to Section 4.16 of the Environmental Planning and Assessment Act 1979 and subject to the conditions of consent attached to this report.
-

Location Plan



Attachments

- 1 Assessment Report [↓](#)
- 2 Elevations - Front and Rear [↓](#)
- 3 Elevations - Sides [↓](#)
- 4 Landscape Plans [↓](#)
- 5 Roof Plan [↓](#)
- 6 Shadow Diagrams [↓](#)
- 7 Site Plan [↓](#)
- 8 Subdivision Plan
- 9 s4.6 variation request to FSR [↓](#)

BAYSIDE COUNCIL

Planning Assessment Report

Application Details

Application Number:	2018/1161
Date of Receipt:	31.8.2018
Property:	31 Albert Street, Botany
Lot & DP/SP No:	Lot 20 DP 60879
Owner:	RK Investment Holdings Australia Pty Ltd
Applicant:	David DeChiara
Applicant Address:	111 St Georges Road, Bexley
Proposal:	Demolition of existing structures, Torren title subdivision into two (2) lots, removal of trees and construction of two x 2 storey semi-detached dwellings and one swimming pool.
Property Location:	East side of Albert Street, between William and Hambly Streets, Botany
Value:	\$499,323.00
Zoning:	Botany Bay Local Environmental Plan 2013 R2 Low Density Residential
Author:	Petra Blumkaitis
Date of Report:	9 May 2019
Classification of Building:	1a – Dwelling 10b – Swimming pool
Present Use:	Residential
No. of submissions:	Nil

Key Issues

The key issues for this development application are:

- Non-compliance with the maximum permitted floor space ratio (FSR).

BAYSIDE COUNCIL

Planning Assessment Report

Recommendation

1. That the Bayside Planning Panel consider the Clause 4.6 request to vary the FSR standard contained in Clause 4.4 of Botany Bay LEP 2013 and is satisfied that the variation will result in consistency with the objectives of the FSR standard and the objectives of the R2 Low density residential zone, and is therefore in the public interest to vary the control.
2. That Development application DA-2018/1067 for the demolition of existing structures, Torrens title subdivision into two (2) lots and the construction of two semi-detached dwellings and one swimming pool at No. 31 Albert Street, Botany, be APPROVED pursuant to Section 4.16 of the Environmental Planning and Assessment Act 1979 and subject to the conditions of consent attached to this report.

Site Description

The site, legally identified as Lot 20, Sec E, DP 60879, is located on the eastern side of Albert Street, between Swinbourne and Hambly Streets. The site is relatively flat, pentagonal in shape and has a total area of 635m². The site is currently accommodated by a single storey brick dwelling house and a garage and pool at the rear of the site. There is no significant vegetation on site and no street trees adjacent to the site. See locality map below.



BAYSIDE COUNCIL

Planning Assessment Report

Site History

The subject DA was lodged with Council on 1 September 2018. No previous applications are recorded by Council for the site.

Description of Development

Council is in receipt of the subject application which seeks consent for the following:

- Demolition of existing structures being a detached dwelling, detached garage and a swimming pool, and associated site clearing,
- Subdivision of the existing one lot into two lots,
- Construction of two x 2 storey semi-detached dwellings consisting of:
 1. Ground floor; double garage, laundry, powder room, kitchen, pantry, dining and living rooms
 2. First floor; four bedrooms, two bathrooms and a rumpus room; and
- One swimming pool on the proposed southern lot (Lot A), and
- Landscaping.

Statutory Considerations

Environmental Planning and Assessment Act, 1979

An assessment of the application has been undertaken pursuant to the provisions of the *Environmental Planning and Assessment Act, 1979*.

S.4.15(1) - Matters for Consideration – General

S. 4.15(1)(a)(i) - Provisions of Environmental Planning Instruments

The following Environmental Planning Instruments are relevant to this application:

State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004

The application is accompanied by BASIX Certificate Number 948096M dated Thursday 26 July 2018. The Certificate demonstrates the proposed development satisfies the relevant water; thermal comfort and energy commitments as required by SEPP (BASIX).

The provisions of the SEPP are satisfied in this instance.

BAYSIDE COUNCIL

Planning Assessment Report

State Environmental Planning Policy No. 55 – Remediation of Land

The provisions of SEPP 55 have been considered in the assessment of the application, along with the requirements of Part 3K- Contamination of the Botany Bay Development Control Plan 2013 (BBDCP 2013). The likelihood of encountering contaminated soils on the subject site is considered to be extremely low given the following:

- 1 The site appears to have been continuously used for residential purposes.
- 2 The adjoining and adjacent properties are currently used for residential purposes.
- 3 The site and surrounding land were not previously zoned for purposes identified under Table 1 of the contaminated land-planning guide in State Environmental Planning Policy 55, in particular industrial, agricultural or defence uses.

On this basis, the site is considered suitable in its present state for the proposed residential development. No further investigations of contamination are considered necessary.

State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017

State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017 (Vegetation SEPP) applies to the proposal. The site contains trees that are subject to approval by Council under clause 4.1.7 of Rockdale Development Control Plan 2011, conferred by:

- (a) development consent, or
- (b) a permit granted by Council.

Council's Tree Management Officer has recommended appropriate conditions that have been imposed in the consent, regarding the removal of existing trees and planting new trees.

Subject to compliance with the conditions of consent, the proposal is satisfactory in relation to SEPP (Vegetation in Non-Rural Areas) 2017.

Botany Bay Local Environmental Plan 2013

The application is considered under the remit of the Botany Bay Local Environmental Plan 2013 (BBLEP 2013) and the following information is provided:

Principal Provisions of BBLEP 2013	Compliance	Comment
2.1 Landuse Zone		The site is zoned R2 – Low Density Residential under the BBLEP 2013.
2.2 Zoning of land. Is the proposed use/works permitted with development consent?	Yes	The proposed use of semi-detached dwellings is permissible with Council's consent under the BBLEP 2013.
2.3 Zone objectives. Does the proposed use/works meet the objectives of the zones?	Yes	The proposed development is consistent with the following objective in the BBLEP 2013: <ul style="list-style-type: none"> To provide for the housing needs of the community within a low density residential environment.

BAYSIDE COUNCIL

Planning Assessment Report

Principal Provisions of BBLEP 2013	Compliance	Comment
2.7 Demolition requires consent. Demolition of a building or work may be carried out only with development consent.	Yes	The proposal includes demolition of the existing detached dwelling house and ancillary structures on site.
1.3 Height of Buildings The height of a building on any land is not to exceed the maximum height shown for the land on the Height of Buildings Map.	Yes	Clause 4.3 permits a maximum building height of 8.5 metres as measured from NGL (existing) for the subject site. The proposed development seeks a building height of 7.8m at the highest point.
1.4 Floor space ratio The maximum floor space ratio for a building on any land is not to exceed the floor space ratio shown for the land on the Floor Space Ratio Map.	No	The site is in the 'N' area on the BBLEP 2013 FSR map, within an identified Area 3. Clause 4.4A(3)(d) permits an overall FSR of 0.5:1 for the subject site. The proposed development seeks an FSR of 0.59:1 for the semis, which is a variation of 20% from the development standard. The applicant has submitted a Section 4.6 variation request to support the non-compliance. This addressed later in this report. A detached dwelling house on the same proposed subdivided lots of between 301m ² and 350m ² would be granted a FSR of 0.7:1 The FSR is calculated in accordance with Clauses 4.4A and 4.5 of BBLEP 2013.
The following provisions in Part 6 of the LEP apply to the development– <ul style="list-style-type: none"> 6.1 – Acid sulfate soils 6.2 - Earthworks 6.3 - Stormwater Management 	<p>Yes</p> <p>Yes</p> <p>Yes</p>	<p>6.1 – Acid sulfate soils: Class 4. The proposed works will involve minimal excavation to prepare the site for new dwellings. Further investigation is not warranted.</p> <p>6.2 – Earthworks on site will be required for site preparation. The anticipated impact from the earthworks is acceptable.</p> <p>6.3 – Council's Development Engineer has reviewed the application and supports the</p>

BAYSIDE COUNCIL

Planning Assessment Report

Principal Provisions of BBLEP 2013	Compliance	Comment
<ul style="list-style-type: none"> 6.9 – Development in areas subject to aircraft noise 	N/A	<p>proposal, subject to recommended conditions.</p> <p>6.9 – The subject site is outside the 20 ANEF contour.</p>

The objectives and provisions of the BBLEP 2013 have been considered in relation to the subject development application. The proposal is considered satisfactory in terms of the BBLEP 2013.

Clause 4.6 Variation to Floor space ratio

The site has a maximum floor space ratio (FSR) of 0.5:1 on the BBLEP 2013 FSR map. The proposed semi-detached dwellings will result in a FSR of 0.59:1, which is a variation of 20%.

The applicant has provided a written Clause 4.6 variation request, providing justification for the proposed variation to the 0.5:1 FSR requirement, stating that it is unnecessary and unreasonable in the particular circumstances.

In *Wehbe v Pittwater Council* [2007] NSW LEC 827 (*Wehbe*), the Land and Environment Court set out the following 5 different ways in which an objection to a development standard may be well founded:

- 1 The objectives of the standard are achieved notwithstanding non-compliance with the standard.*
- 2 The underlying objective or purpose of the standard is not relevant to the development and therefore compliance is unnecessary.*
- 3 The underlying object or purpose would be defeated or thwarted if compliance was required and therefore compliance is unreasonable.*
- 4 The development standard has been virtually abandoned or destroyed by the council's own actions in granting consents departing from the standard and hence compliance with the standard is unnecessary and unreasonable.*
- 5 The zoning of the particular land is unreasonable or inappropriate so that a development standard appropriate for that zoning is also unreasonable and unnecessary as it applies to the land and compliance with the standard would be unreasonable or unnecessary. That is, the particular parcel of land should not have been included in the particular zone.*

In *Four2Five Pty Ltd v Ashfield Council* [2015] NSWLEC 1009 & NSW LEC 90 (*Four2Five*), the Court established that the construction of Clause 4.6 is such that it is not sufficient for the applicant to demonstrate that there are sufficient environmental planning grounds to justify contravening the development standards, as required by Clause 4.6(3)(b), or for the consent authority to be satisfied that the proposed development is consistent with the public interest because it is consistent with the objectives of the particular standard and the objectives for development within the zone in which the development is proposed to be carried out, as required by Clause 4.6(4)(a)(ii). The Court outlines that Clause 4.6 requires that in addition to the requirements listed above, the applicant must also establish that compliance with the development standard is unreasonable or unnecessary in the circumstances of the case, as is required by Clause 4.6(3)(a). This may involve reference to reasons 2-5 outlined within *Wehbe*.

BAYSIDE COUNCIL

Planning Assessment Report

Consent may be granted for the proposal subject to Clause 4.6, notwithstanding that the proposal would contravene this development standard, as the FSR development standard is not expressly excluded from this Clause (Cl 4.6(2)). The applicant has provided a written request justifying the contravention of the development standard pursuant to Clause 4.6(3) of Botany Bay Local Environmental Plan 2013, which is considered below. The matters for consideration pursuant to Clause 4.6(4) are considered below.

4.6 Variation request assessment

Clause 4.6(3)

Clause 4.6(3) states consent must not be granted for development that contravenes a development standard unless the consent authority has considered a written request from the applicant that seeks to justify the contravention of the development standard by demonstrating:

- (a) That the compliance with the development standard is unreasonable or unnecessary in the circumstances of the case.

The applicant has argued the FSR standard is unreasonable or unnecessary in the following:

- *"...this requirement is unfair because a single dwelling is able to build on a 0.7:1 and this bulk and scale would be much greater than a 0.5:1 for a semidetached dwelling."*
- *"Notwithstanding non-compliance with the numerical controls of the standard, the proposal meets the objectives of the standard...
The variation to the FSR standard is consistent with the potential environmental impacts that may otherwise be reasonably expected by a complying development with regards to:*
 - *the desired future character of the locality,*
 - *the preservation of the residential amenity of surrounding development having particular regard to overshadowing and privacy impact,*
 - *achieving general compliance with the other applicable planning controls, and*
 - *providing acceptable rear and front setbacks when compared with the prevailing setbacks and likely future setbacks in the area.*

Comments:

The proposed development has been assessed as resulting in acceptable impacts to neighbouring properties in regard to overshadowing and loss of privacy. The bulk and size of the proposed semi-detached dwellings is consistent with the future character of Botany and the scale is also consistent with the emerging development character of subdivided lots. A strict application of the FSR development standard in this case is assessed to be unreasonable and unnecessary.

- (b) That there are sufficient environmental planning grounds to justify contravening the development standard.

The written S4.6 variation request submitted to support the FSR non-compliance includes the following, which addresses the planning grounds on which the development standard may be varied:

BAYSIDE COUNCIL

Planning Assessment Report

"The proposed use is aligned with Council's, and the wider community's, objectives and demands for creating appropriately located accommodation. The development will achieve its objective of providing additional accommodation opportunities for the area. The proposed development satisfies the guidelines of the Act through providing an efficient land use, and makes orderly and efficient usage of existing infrastructure within the locality. Moreover, there are no significant adverse impacts on the 'public goods' such as air quality, noise, views and amenity."

Comments:

There are no physical factors on the site which may justify a variation from the development standard, such as a steep slope, contamination, flood affectation, critical habitat, heritage items or the like. There are planning grounds on which the development standard may be varied; these are the compliances of the proposal with all other relevant development controls and that the proposal is otherwise assessed as resulting in a satisfactory development and use of the land which is consistent with the locality and has minimal impacts on the site and neighbouring properties.

Clause 4.6(4)

Clause 4.6(4) states consent may not be granted for development that contravenes a development standard unless:

(a) The consent authority is satisfied that:

- (i) The applicant's written request has adequately addressed the matters required to be demonstrated by subclause (3).

Comments:

Council is satisfied that the written request has adequately addressed the matters required to be demonstrated in subclause (3).

- (ii) The proposed development will be in the public interest because it is consistent with the objectives of the particular standard and the objectives for development within the zone in which the development is proposed to be carried out.

Comment: The following matters pursuant to Clause 4.6 are therefore also considered:-

- Objectives of the Floor space ratio standard
- Objectives of the R2 Low density residential zone
- Public interest
- Objectives of Botany Bay LEP 2013 Clause 4.6

Objectives of Clause 4.4 Floor space ratio

The objectives of Clause 4.4 FSR of the Botany Bay Local Environmental Plan 2013 are:

- To establish standards for the maximum development density and intensity of land use,
- To ensure that buildings are compatible with the bulk and scale of the existing and desired future character of the locality,

BAYSIDE COUNCIL

Planning Assessment Report

- To maintain an appropriate visual relationship between new development and the existing character of areas or locations that are not undergoing, and are not likely to undergo, a substantial transformation,
- To ensure that buildings do not adversely affect the streetscape, skyline or landscape when viewed from adjoining roads and other public places such as parks, and community facilities,
- To minimise adverse environmental effects on the use or enjoyment of adjoining properties and the public domain,
- To provide an appropriate correlation between the size of a site and the extent of any development on that site,
- To facilitate development that contributes to the economic growth of Botany Bay

The submitted variation request notes the following:

"The bulk and scale of the building, whilst more extensive than that of the immediately adjoining dwellings, is consistent with that of other semi-detached developments in the LGA and provides a characteristic form and streetscape.

The development does not detract from the character of the local area. In order for the development to be compatible it does not necessarily need to be the same.

The development does not impact upon the visual relationship between adjoining buildings and has been designed to limit the height of the building to retain a consistent roof line along Albert Street.

The proposal incorporates a modern and contemporary design which will add innovation and visual interest to the streetscape, similar to other recent semi-detached developments in the immediate area.

The design of the proposal including its setbacks, limited roof form, and materials has had regard to the potential adverse impacts on adjoining neighbours and has sought to mitigate impacts of overshadowing and privacy.

There are no additional adverse impacts which stem directly from the FSR departure.

It is considered that an appropriate correlation between the size of the site and the size of the proposed development has been achieved."

Comments:

The proposal is consistent with the objectives of the FSR development standard because it is compatible with the bulk and scale of the character of the area, does not adversely affect the streetscape and results in minimal adverse impacts on adjoining properties.

Objectives of the R2 Low density residential zone

The objectives of the R2 Low density residential zone are:

- To provide for the housing needs of the community within a low density residential environment
- To enable other land uses that provide facilities or services to meet the day to day needs of residents
- To encourage development that promotes walking and cycling

The submitted variation request argues the proposal is consistent with the objectives of the R2 zone in:

"it is considered that the development satisfies the objectives of the R2 zone. The development provides additional housing in the form of two separately titled residential dwellings to accommodate

BAYSIDE COUNCIL

Planning Assessment Report

the future housing needs of the community within a low density environment. The scale, bulk and height of the development does not detract from the existing one-two storey character of dwellings in the area and has done everything to limit the extent of potential environmental impacts to adjoining properties.

Comments:

The proposed development is consistent with the objectives of the R2 Low density residential zone because it provides additional housing to serve the housing needs of the community and is consistent with the low density scale of development in Albert Street.

The proposal may encourage walking and cycling as it is located within a reasonable proximity to employment, recreation and retail opportunities.

Public Interest and Public Benefit

The proposed variation is considered to be in the public interest as the proposed development will provide additional housing to the community.

During the public notification period for the development application no submissions about proposal were received by Council.

Objectives of Clause 4.6 Exceptions to development standards

The objectives of Clause 4.6, pursuant to Clause 4.6(1) of Botany Bay Local Environmental Plan 2013) are:

- a) *to provide an appropriate degree of flexibility in applying certain development standards to particular development,*
- b) *to provide better outcomes for and from development by allowing flexibility in particular circumstances*

Comments:

The subject site is not constrained by any particular environmental issues which would warrant flexibility in applying development standards to achieve better outcomes for and from development of the site. Nevertheless a degree of flexibility, being a 20% variation of the FSR standard is considered acceptable for the development proposed, on the subject site.

Summary

The Clause 4.6 variation request to the floor space ratio control has been assessed in accordance with relevant case law, being the principles of *Wehbe v Pittwater Council (2007) NSW LEC 827* and *Four2Five Pt Ltd v Ashfield Council (2015) NSWLEC 1009 & NSW LEC 90 (Four2Five)*.

The proposal is consistent with the underlying objectives of the standard identified. The proposed development has been assessed against Councils' Botany Bay Local Environmental Plan 2013 and Botany Bay Development Control Plan 2013 controls and is compliant with all controls except for the FSR development standard.

It has been established that the proposed development is appropriate and adherence to the development standard in this instance is unreasonable and unnecessary.

BAYSIDE COUNCIL

Planning Assessment Report

The applicant's Clause 4.6 request is well-founded and the departure from the FSR development standard for 31 Albert Street, Botany is in the public interest. On this basis it is recommended that the development standard relating to the maximum FSR for the site pursuant to Clause 4.4 of the Botany Bay Local Environmental Plan 2013 should be varied.

S. 4.15(1)(a)(ii) - Provisions of any Draft EPI's

There are no current Draft EPIs applicable to this development

S. 4.15(1)(a)(iii) - Provisions of any Development Control Plan

The following Development Control Plan is relevant to this application:

Botany Bay Development Control Plan 2013

The application has been assessed against the controls contained in the BBDCP 2013. The discussion below compares the proposal with the relevant provisions of this Policy.

Part 3A – Parking & Access

The table below compares the proposal with the relevant provisions of this Part of the DCP.

Control	Proposed	Complies
3A.2 – Parking provisions of specific uses		
C2 – Semi-detached dwelling		
One space per dwelling	Each dwelling is provided with a double garage.	Yes
3A.3.1 – Car park design		
C10 – Off street parking facilities are not permitted within the front setback	Both double garages are behind the front building line.	Yes
C13 – Pedestrian entrances and exits shall be separated from vehicular access paths	A pedestrian path to the front doors of the dwellings are not proposed. The site plan and landscape plan show the likely location for paths to be grassed areas.	No
C28 – Min 3m wide access driveway for dwelling houses	The width of each vehicle crossover is 3m.	Yes

Part 3E – Subdivision and Amalgamation

The table below compares the proposal with the relevant provisions of this Part of the DCP.

Control	Proposed	Complies
C1 - Development applications shall demonstrate that the proposed subdivision is consistent with the Desired Future Character of the area.	Two allotments are proposed. One is rectangular with front	Yes

BAYSIDE COUNCIL

Planning Assessment Report

Control	Proposed	Complies
	and rear boundaries of 9m and side boundaries of 33.5m The second lot is nearly rectangular, widening towards the rear. The front boundary is 6.4m and the rear 13.4m Figure 1 (pg. 3) in this report shows that the proposed subdivision is consistent with the existing pattern in the street and locality and will be consistent with the Desired Future Character of the area.	
C2 – Subdivision must not compromise any significant features of the existing or adjoining sites including streetscape character, landscape feature or trees.	No significant features exist.	Yes
C3 – Proposed Subdivision must have characteristics similar to the prevailing subdivision pattern of lots fronting the same street, in terms of area, dimensions, shape and orientation	The proposed lots will have site areas of 302m ² and 332m ² . The lots are oriented east-west with a frontage to Albert Street. They are consistent with lot shape, orientation and dimension of the subdivision pattern in the street and locality.	Yes
C4 – Development applications shall demonstrate that future development for the site can comply with all Parts of the DCP.	Building plans for the proposed development of the new lots with semi-detached dwellings form part of the application.	Yes
C5 – Applications must demonstrate that the following has been considered: i) Site topography and other natural and physical features ii) Existing services iii) Existing vegetation iv) Existing easements or the need for new easements. v) Vehicle access vi) Any land dedications required vii) Potential flood affectation and stormwater management requirements. viii) Contamination of the land ix) Existing building or structures	The application has been assessed as being appropriate for the site and the street, with all relevant matters considered.	Yes

BAYSIDE COUNCIL

Planning Assessment Report

Control	Proposed	Complies
x) Heritage items, Conservation Areas and adjoining Heritage items		
C7 All lots created shall have at least one (1) frontage to the street.	Both lots have a frontage to Albert Street.	Yes

3E.2.2 (C3) – Residential Torrens Title subdivision – prevailing pattern.

Council generally considers the prevailing subdivision pattern to be the typical characteristic of up to ten allotments on either side of the subject site and a corresponding number of allotments directly opposite the subject site.

Properties located in the surrounding streets do not usually form part of the streetscape character and therefore not taken into consideration when determining the prevailing subdivision pattern.

As part of this development application, the site will be subdivided into two (2) individual allotments as follows:

Proposed Lot	Frontage	Area
A	6.443m	332.09m ²
B	9.026m	302.76m ²

An assessment of the existing subdivision pattern within the locality has been undertaken below:

Address	Area (m ²)	Frontage (m)	Address	Area (m ²)	Frontage (m)
29 Albert Street	408	12.4	30 Albert Street	356	11.9
27 Albert Street	419	12.2	32 Albert	424	12.5
25 Albert Street	197	5.8	34 Albert	408	12.5
23 Albert Street	206	6	36 Albert	408	12
19 Albert Street	415	12	38 Albert	339	10.2
			40 Albert	313	13.6
13A Swinbourne Street	332	9.1			
13 Swinbourne Street	316	8.9			
15 Swinbourne Street	253	5.9			
17 Swinbourne Street	345	10.6			

The proposed subdivision will result in lot sizes and frontages which are slightly below the averages (see below) present in Albert Street. An examination of the subdivision pattern including the streets surrounding Albert Street show a subdivision pattern of lot sizes and frontages with smaller averages.

Albert Street subdivision pattern averages:

Average site area: 343m²

BAYSIDE COUNCIL

Planning Assessment Report

Average site frontage: 10.3m

The proposed subdivision is not inconsistent with existing subdivided properties in context of the site and the proposed subdivision is deemed to be satisfactory given;

- a) The proposed subdivision pattern is not dissimilar to lots which exist and have been previously subdivided within context of the site. The proposed subdivision is consistent with the existing and future subdivision pattern in the immediate vicinity of the subject site.
- b) The proposal is compatible with surrounding properties, the emerging 2-storey built form streetscape and the desired future character of the area.
- c) There are no adverse streetscape impacts as the widths of the proposed lots are in keeping with the widths of other lots within the immediate area.
- d) The lot size and width are consistent with the shape and size of other allotments within the Botany area. In addition to consistency with the subdivision pattern, it is also important to consider the other subdivision objectives including demonstration that development for the site can comply with the relevant parts of BBDCP 2013.
- e) The proposed lots are capable of supporting dwelling houses which achieve compliance with relevant controls such as building height, landscaping, setbacks, private open space, privacy, car parking, overshadowing and solar access. This is achieved without compromising on the quality of the design of the dwellings.
- f) The proposed layout of the lots does not contravene the desired future character of the Botany precinct. The lots retain and preserve the rectilinear pattern.
- g) The proposal will not result in adverse amenity impacts on neighbouring properties in terms of overshadowing, solar access and privacy.
- h) The subject site falls within a R2 zone, Torrens title subdivision is common in this area.

Given the above, the resultant subdivision is considered satisfactory with respect to the provisions and objectives of Botany Bay Local Environmental 2013 and Part 3E- Subdivision & Amalgamation of Botany Bay Development Control Plan 2013.

Part 3G – Stormwater Management

The table below compares the proposal with the relevant provisions of this Part of the DCP.

Control	Proposed	Complies
C1 – Development shall not be carried out on or for any lands unless satisfactory arrangements have been made with and approved by Council to carry out stormwater drainage works.	The application is accompanied by Concept Stormwater Plans prepared by APEX design and construction Pty Ltd, dated 23 July 2018 which Council's Development Engineer supported subject to suitable conditions.	Yes

BAYSIDE COUNCIL

Planning Assessment Report

Part 3H – Sustainable Design

The table below compares the proposal with the relevant provisions of this Part of the DCP.

Control	Proposed	Complies
C1 – For all proposed residential development where BASIX applies, the application is to be accompanied by a BASIX Certificate.	An assessment against the relevant provisions of the SEPP (BASIX) is undertaken in S. 4.15(1)(a)(i) above.	Yes

Part 3K – Contamination

The table below compares the proposal with the relevant provision of this Part of the DCP.

DCP Requirement	Proposed	Complies
O1 – <i>To ensure that the development of contaminated or potentially contaminated land does not pose a risk to human health or the environment.</i>	An assessment against the relevant provisions of the SEPP 55 is undertaken in S. 4.15(1)(a)(i) above.	Yes

Part 3L- Landscaping and Tree Management

The table below compares the proposal with the relevant provision of this Part of the DCP.

Control	Proposed	Complies
3L.1.2 – Submission Requirements		
C1 – Landscape documentation is required to be submitted in accordance with Table 1.	The application is accompanied by Landscape Plan, Drawing No. DA – 1000 Issue B, dated 11/07/2018	Yes
C3 – Landscape plan to include sufficient detail to enable Council to evaluate adequacy and suitability.	The Landscape plan is of sufficient detail to enable an appropriate assessment	Yes
3L.2 – General Requirements		
C1 – Existing trees including street trees must be preserved	There are no existing street trees in front of the property.	Yes
C2 – Landscaping will be designed to reduce the bulk, scale and size of buildings and to shade and soften hard paved areas.	The proposed planting in the front gardens, and the planting in the rear garden will mitigate impacts from the bulk and size of the proposed dwellings by a small amount. There is sufficient space to support large tree species (up to 10m height) in the front gardens, which would further reduce impacts as well as provide shade from the western sun. A condition will	Yes

BAYSIDE COUNCIL

Planning Assessment Report

Control	Proposed	Complies
	be included to require appropriate planting.	
C4 – Landscape screening or buffers are to be included and designed so as to enhance privacy between properties and softening of walls and facades.	Landscaping planting is provided around the perimeter of the site, where possible. This will assist in maintaining privacy and softening the appearance of the buildings.	Yes
C9 – A deep soil landscape zone is required for all developments.	Each semi-detached dwelling is provided with an area of approximately 55m ² in the rear garden which is capable of supporting lateral root growth, water penetration and air exchange and are therefore deep soil landscape zones.	Yes

Part 3N- Waste Minimisation and Management

The application is accompanied by a Waste Minimisation and Management Plan, prepared in accordance with the BBDCP 2013. The Plan addresses works involved including minor excavation and fill to the site, in addition to the construction of the works proposed and is acceptable with regards to the relevant parts of this Part of the BBDCP 2013.

BAYSIDE COUNCIL

Planning Assessment Report

Part 4A- Dwelling House

The table below compares the proposal with the relevant provision of this Part of the DCP.

Control	Proposed	Complies
4A.2.1 Design Excellence		
C1 – To achieve excellence in urban design, development should do (i) to (xvii) as listed in the DCP.	In general the proposal takes into account, is complementary to and ensures minimal impact on surrounding development, the streetscape, and the local character.	Yes
C2 – A development application for a new dwelling house or a major alteration to a dwelling must include a written statement to demonstrate how design excellence will be achieved in the proposed development.	A design excellence statement was not submitted. Design elements are addressed in the Statement of Environmental Effects.	No
4A.2.2 Site Analysis		
1 – A Site Analysis Plan shall be submitted with all Development Applications to Council.	A site analysis plan was submitted with the development application.	Yes
4A.2.3 Local Character		
C2 – Development must comply with the relevant Desired Future Character Statements in Part 8 – Character Precincts.	The application is assessed against the desired future character for the Botany Character Precinct later in this report.	Yes
4A.2.4 Streetscape Presentation		
C2 – Development must be designed to reinforce and maintain the existing character of the streetscape.	The streetscape of Albert Street is that of detached one and two dwellings with pitched roofs. The proposed development is a semi-detached, near-flat roof design which does not reflect the current streetscape, however as older housing stock is replaced in future and is reasonably likely to utilise the permissible development controls it is anticipated the streetscape will change to a modern design aesthetic similar to that proposed in the application.	Yes
C3 - Development must reflect dominant roof lines and patterns of the existing streetscape (refer to Figure 3.)	The development proposes a pitched roof behind a parapet, which appears from the street to therefore be a flat roof, which is inconsistent with the dominant pitched roofs along Albert Street. On balance, the gradual introduction of varied roof forms in the locality mean the	No

BAYSIDE COUNCIL

Planning Assessment Report

	proposed near-flat roof with street frontage parapet is acceptable.	
C4 – Buildings must appropriately address the street.	The proposed semi-detached homes address the street for both vehicular and pedestrian access.	Yes
C6 – The entrance to a dwelling must be readily apparent from the street.	The pedestrian access to the dwellings is readily apparent from the street.	Yes
C7 - Dwelling houses are to have windows to the street from a habitable room to encourage passive surveillance.	Both dwellings propose a bedroom and a balcony on the first floor facing the street.	Yes
C10 - Development must retain characteristic features prevalent in houses in the street, including verandas, front gables, window awnings, bay windows, face brickwork or stone details.	Albert Street contains dwellings from a range of architectural periods and styles. There are no prevalent characteristic features to be repeated in the proposed development.	Yes
C15 – A two storey dwelling is not considered appropriate where the majority of surrounding dwelling houses in a street are single storey.	The street contains a mix of one and two storeys dwellings. The proposed two storey semi-detached dwellings will not be located in a majority single storey dwelling street.	Yes
C20 – The two dwellings that constitute the semi form must be as consistent as possible in scale and material.	The proposed semis are largely mirror images of each other and are consistent in scale and material.	Yes
4A.2.5 Height		
C1 – The maximum height of buildings must be in accordance with the Height of Buildings Map and Clause 4.3 of the BBLEP 2013.	The height of the proposed buildings (7.8m) complies with the LEP control of 8.5m maximum.	Yes
C3 – New buildings are to consider and respond to the predominant and characteristic height and storeys of buildings within the neighbourhood; and consider the topography and shape of the site.	The proposal is for two storey dwellings. This design responds to the mix of one and two storey dwellings along the street.	Yes
4A.2.6 Floor space ratio		
C1 – The maximum FSR of development must comply with the Floor Space Ratio Map and Clause 4.4 and 4.4A of the BBLEP 2013	The FSR of the proposed semi-detached dwellings (0.59:1) does not comply with the LEP control of 0.5:1. The non-compliance is addressed previously in this report.	No
C3 - In determining an appropriate FSR, applicants must demonstrate to Council that the bulk and scale of development is acceptable and will not result in adverse	The proposed development is not anticipated to result in unacceptable impacts to adjoining dwellings or the streetscape from loss of privacy, natural	Yes

BAYSIDE COUNCIL

Planning Assessment Report

impacts within the development or on adjoining dwellings or the streetscape in terms of: (i) Loss of privacy (ii) Overshadowing/ loss of natural light (iii) Loss of views (iv) Visual amenity (bulk and scale) and (v) Increased traffic generation	light, views, visual amenity or traffic generation.	
4A.2.7 Site Coverage		
C3 - For sites greater than 300m ² the maximum site coverage is 50% of the site.	The proposed subdivision would result in two lots of 332.09m ² and 302.76m ² . The proposed site coverage is 48% for each lot.	Yes
4A.2.8 Building Setbacks		
C1 - Dwelling houses must comply with the minimum setbacks as set out in Table 1; Lot width less than 12.5m: Front = comply with prevailing in street or 6m Side = merit Rear = 4m Eaves = 450mm	The proposed subdivision will result in lots with frontages of 6.4m and 9m. Front = 6m Side = 900mm Rear = 7.6 Eaves = 900mm	Yes
C5 Side and rear setbacks should be stepped or walls articulated to avoid the appearance of bulky or long walls.	Modulation is provided in the proposal along both the side and rear of the proposal, through stepped walls and the incorporation of varying building materials and colours.	Yes
4A.2.9 Landscape Area		
C2 Development shall comply with the following minimum landscaped area requirements, based on the area of the site in Table 2 : 250-350m ² – 20%	The proposed landscape areas (in the rear yard) are: Lot A = 26% Lot B = 22% of the site areas.	Yes
C3 Landscaped Area is to be fully permeable deep soil zones which are areas of natural ground or soil, not planter boxes (refer to definition in Part 3L – Landscaping).	The proposed landscaped area (the rear garden and a portion of the front garden) is fully permeable, deep soil zones.	Yes
C8 The front setback is to be fully landscaped with trees and shrubs and is not to contain paved areas other than driveways and entry paths. Paving is restricted to a maximum of 50% of the front setback area.	Lot A will benefit from 51% of the front setback being landscaped Lot B will benefit from 55% of the front setback being landscaped.	Yes

BAYSIDE COUNCIL

Planning Assessment Report

	This allows sufficient space for deep soil planting including a canopy tree.	
C9 – The front setback area must contain at least one tree for frontages up to 11.5 metres in width.	A single tree could be grown successfully in the front setback of each dwelling. An appropriate condition will be included in the consent to require planting a tree of minimum 45 litre pot size.	Yes
4A.3.1 Materials and Finishes		
C1 – A Schedule of Finishes and a detailed Colour Scheme for the building façade must accompany all Development Applications involving building works.	A Schedule of Finishes including colours was submitted with the application.	Yes
C10 The exterior walls of new dwellings must incorporate different materials, colours and textures to add interest and articulate the facade.	The materials, colours, architectural detail and finishes are sympathetic to the surrounding locality, and add interest to the façade.	Yes
4A.3.2 Roofs and Attics/Dormer		
C1 Where roof forms in a street are predominantly pitched, then any proposed roof should provide a similar roof form and pitch.	The development will include a pitched roof, however it is concealed behind a parapet on the street-facing elevation, resulting in the appearance of a flat roof which is inconsistent with the predominantly pitched roofs in the street. Future development as housing stock is renewed is anticipated to include more flat or near-flat roofs and possibly parapets, along the street. As such the current non-compliance is acceptable.	No
4A.3.3 Fences		
C1 Front fences are to compliment the period or architectural style of the existing dwelling house.	No front fencing is proposed.	N/A
C7 Fences (or returns) that are higher than 1 metre are not encouraged along residential frontages but may be constructed to a maximum of 1.2 metres provided the top 600mm of the fence is 50% transparent or open style to allow for passive surveillance (refer to Figure 19).	No front fencing is proposed.	N/A
C17 – Access gates must be hung so that the direction of swing is inward.	No gates are proposed	N/A
C18 – Side fences of a height 1.8 metres are not to extend beyond the front building line. The side fence is to step or taper to the point	The site adjoins the rear of No. 13A Swinbourne Street, which has a rear yard single garage accessed from Albert	Yes

BAYSIDE COUNCIL

Planning Assessment Report

where it joins the front fence. Side fences behind the building line must comply with the <i>Dividing Fences Act</i> .	Street. The garage wall forms a portion of the side boundary fence for No. 31 Albert Street. The garage wall is forward of the Albert Street building line and approximately 2.5m in height.	
4A.3.5 Voids		
C1 – Void spaces must be designed so as not to be reasonably capable of future infill. Voids in development which exceed the permitted FSR will not be supported.	A void is proposed above the staircase in both dwellings. The void area in the north side dwelling is slightly larger than the stairwell space and could not reasonably be filled in, in future. The void within the south side dwelling is larger than the stairwell, and is important in the design to ensure light penetration to the ground floor of the semi on the south side. The void could not be infilled without compromising the amenity of the ground floor of the dwelling.	Yes
C2 - Voids shall only be supported where they are provided to increase the amenity to primary living area or circulation area, and not unreasonably impact on the amenity of adjoining properties.	The proposed voids increase the amenity of the dwellings by ensuring natural light penetration to the primary living and circulation areas.	Yes
C3 – Voids are to connect related uses and spaces, and should not compromise the useability of spaces.	The proposed voids connect living spaces on the ground and first floors as well as providing visual cues for circulation in the dwellings.	Yes
4A.4.1 Visual Privacy		
C2 Visual privacy for adjoining properties must be minimised by: <ul style="list-style-type: none"> ▪ using windows which are narrow or glazing which is translucent or obscured; ▪ Ensuring that windows do not face directly on to windows, balconies or courtyards of adjoining dwellings; ▪ Screening opposing windows, balconies and courtyards; and ▪ Increasing sill heights to 1.5 metres above floor level. 	The window selection and location are considered appropriate in providing internal amenity to the proposal, whilst minimising privacy impacts to neighbouring properties. First floor bedroom and rumpus room windows proposed to the side elevations will have a sill height of at least 1.5m. These measures are appropriate given the rumpus room window of the northern semi will permit overlooking of the neighbouring property.	Yes
C3 First floor balconies are only permitted when adjacent to a bedroom.	The proposed first floor balconies to the front of the semi-detached dwellings are accessed from a bedroom. The size and location of the balconies are unlikely to create adverse privacy impacts for neighbouring properties.	Yes

BAYSIDE COUNCIL

Planning Assessment Report

4A.4.3 Solar Access		
C1 Buildings (including alterations/ additions/ extensions) are to be designed and sited to maintain approximately 2 hours of solar access between 9am and 3pm on 21 June to windows in living areas (family rooms, rumpus, lounge and kitchens) and the principal open space areas such as swimming pools, patios and terraces, and drying areas of both the subject site and adjoining properties.	The adjoining properties to the south will experience increased overshadowing during mid-winter. However 2 hours of solar access between 9am and 3pm to windows in living areas and principal open space areas during mid-winter will be maintained.	Yes
4A.4.4 Private Open Space		
C1 Each dwelling is to have a private open space that: (i) Has at least one area with a minimum area of 36m ² ; (ii) Is located at ground level with direct access to the internal living areas of the dwelling; (iii) Maximises solar access; (iv) Is visible from a living room door or window of the subject development; (v) Minimises overlooking from adjacent properties; (vi) Is generally level; (vii) Is oriented to provide for optimal year round use; (viii) Is appropriately landscaped; and (ix) Is located or screened to ensure privacy; Note: Private open space is not to include: (i) Non-recreational structures (including garages, tool sheds and such like structures); (ii) Swimming pools; and (iii) Driveways, turning areas and car spaces, drying areas and pathways.	Each proposed semi-detached dwelling will be provided with a private open space area in the rear garden which is accessed via a living room, is level, can be appropriately landscaped, and is greater than 36m ² .	Yes
C5 – The primary private open space area is to be located at the rear of the property.	The primary private open space is located at the rear of the property.	Yes
4A.4.7 Vehicle Access		
C1 Driveways within a property shall have a minimum width of 3 metres. Note: An additional clearance of 300mm is required (for each side) if the driveway is located adjacent to a solid structure (i.e. masonry wall).	The proposed driveways are a minimum width of 3m, and are not adjacent to a solid structure.	Yes

BAYSIDE COUNCIL

Planning Assessment Report

C6 The number of vehicle crossings is to be limited to one (1) per allotment.	One (1) vehicle crossing is proposed to each of the proposed allotments in accordance with the provisions of this Clause.	Yes
4A.4.8 Car Parking		
C1 Development must comply with Part 3A – Car Parking	The proposed development incorporates two (2) off street parking spaces in accordance with the provisions of this Clause.	Yes
C3 Car parking is to be located at the rear of the site with access from a rear lane. If rear lane access is not possible, parking must be provided behind the front building alignment.	A rear lane is not present. Parking is provided from Albert Street, behind the front building alignment.	Yes
4A.4.9 Parking on Narrow Lots		
C1 – Double garage will not generally be permitted for development on sites with less than 12.5 metres frontage due to the impact on the streetscape	Lot A will have a frontage of 6.4m and Lot B a frontage of 9m. The impact on the streetscape from the proposed double garages to each semi-detached dwelling has been softened through design elements of the dwellings which intend to lessen the obtrusiveness of the garages, and landscaping including the planting of canopy trees in the front setbacks.	Yes

Part 70 – Swimming Pools

The table below compares the proposal with the relevant provision of this Part of the DCP.

DCP Requirement	Proposed	Complies
C1 – Development must comply with the maximum site coverage requirements. Lot size >300m ² = 50%.	The proposal will result in site coverage of 48% for both lots.	Yes
C2 – Swimming pools must be located at ground level	The site is level and the proposed pool is located at ground level.	Yes
C7 – Swimming pools are to be located at the rear of the property	The proposed pool is located in the rear garden area of the south side semi.	Yes
C8 – The following minimum setbacks area required for swimming pools: (i) 1m from side boundaries (ii) 1.5m or greater if adjoining a habitable room of a neighbouring dwelling (iii) Accommodate existing trees and root systems including trees on adjoining properties.	The proposed pool is setback a minimum of 1m from all boundaries. There are no existing trees on site or adjoining sites which may be affected.	Yes

BAYSIDE COUNCIL

Planning Assessment Report

DCP Requirement	Proposed	Complies
C12 – Equipment associated with a swimming pool must be located in a soundproof enclosure and setback from adjoining buildings.	The equipment for the proposed pool is shown as being within a sound proof enclosure and separated from buildings on adjoining lots.	Yes
C15 – Swimming pools are to be orientated to the northern aspect of the site to maintain a sufficient level of solar access or incorporate energy efficient heating systems if the swimming pool is to be heated.	The pool is located in the south east corner of the lot and will benefit from a northern orientation.	Yes

Part 8 – Botany Character Precinct

Part 8.4.2 Desired Future Character of the Botany Precinct has been considered in the assessment of the application in the below table and generally complies with the controls contained therein.

The following comments are made with respect to the relevant character guidelines desired by the DCP:

Item	Comment
<i>Function and Diversity</i>	The proposed development is considered to enhance the public domain and contribute to the existing low density residential amenity.
<i>Form, Massing, Scale and Streetscape</i>	The proposed development maintains low density residential development with the proposed massing, scale and roof pitch reflecting the likely future characteristics of Albert Street.
<i>Setbacks</i>	The proposed development complies with the prevailing street setbacks for Albert Street. The proposed side setbacks are appropriate for the street.
<i>Landscaping</i>	Appropriate landscaping is provided within the primary setbacks and rear private open space areas for each allotment. The scale and form of landscaping contributes to the privacy and amenity of adjoining dwelling houses.
<i>Heritage</i>	The site is not affected by heritage requirements.
<i>Fencing</i>	Fencing is to comply with the DCP.
<i>Noise</i>	The site is not affected noise criterion listed in this control.
<i>Subdivision</i>	The subject site is proposed to be subdivided into two lots which are generally rectilinear. This is in keeping with the existing subdivision pattern in the street and locality.
<i>Public Domain and Environment</i>	The proposed development will not raise any inconsistencies with the provisions of this control.
<i>Solar Access</i>	Matters relating to solar access are discussed in Part 4A.4.3 above.
<i>Traffic and Access</i>	Adequate off-street parking arrangements are provided for each dwelling house with negligible traffic and parking impacts to the surrounding street network.
<i>Views</i>	The proposed development does not detract from existing views to, from and across the site.
<i>Risk</i>	Not applicable in this instance.

BAYSIDE COUNCIL

Planning Assessment Report

S.4.15(1)(a)(iv) - Provisions of regulations

The proposed development is consistent with the relevant provisions of the *Environmental Planning and Assessment Regulation 2000*.

S. 4.15(1)(b) - Likely Impacts of Development

These matters have been considered in the assessment of the application and determined to have negligible environmental; social and/or economic impacts.

S. 4.15(1)(c) - Suitability of the site

These matters have been considered in the assessment of the development application. The subject site is not known to be affected by any natural hazards or other site constraints that are likely to have a significant adverse impact on the proposed development. The issue of likely site contamination has been considered, however, given the nature of the development, and the long standing use of the land for residential purposes, onsite investigation is not warranted.

Accordingly, it is considered that the site is suitable to accommodate the development.

S.4.15(1)(d) - Public Submissions

In accordance with Part 2 of the BBDCP 2013, the development application was notified to surrounding property owners for a 14 day period from 6 September 2018 to 24 September 2018. No submissions were received.

S.4.15(1)(e) - Public interest

Granting approval to the proposed development will have no adverse impact on the public interest. The proposal will facilitate the orderly development of the land.

Section 94 Contributions

The proposal attracts a s7.11 development contribution of \$20,000.00.

Conclusion

Development Application No. 2018/1161 for the demolition of existing structures and construction of two x 2 storey semi-detached residential dwellings at No. 31 Albert Street, Botany, has been assessed in accordance with the relevant requirements of the Environmental Planning and Assessment Act 1979 and is recommended for **approval** subject to conditions of consent.

BAYSIDE COUNCIL

Planning Assessment Report

Attachment

Schedule 1 – Conditions of Consent

Premises: 31 Albert Street, Botany

DA No: 2018/1161

SCHEDULE OF CONSENT CONDITIONS

GENERAL CONDITIONS

- The development is to be carried in accordance with the following plans and documentation listed below and endorsed with Council's stamp, except where amended by other conditions of this consent.

Drawing	Author	Dated
Architectural Plan Set		
Ground floor plan Drawing No. 1000 Sheet 2/17 Issue E	David Dechiara	11/07/2018 Rec: 29/04/2019
First floor plan Drawing No. 1000 Sheet 3/17 Issue E	David Dechiara	11/07/2018 Rec: 29/04/2019
Roof plan Drawing No: 1000 Sheet 4/17 Issue E	David Dechiara	11/07/2018 Rec: 29/04/2019
Front and Rear elevation Drawing No. 1000 Sheet 5/17 Issue E	David Dechiara	11/07/2018 Rec: 29/04/2019
Side elevations Drawing No: 1000 Sheet 6/17 Issue E	David Dechiara	11/07/2018 Rec: 29/04/2019
Section B.B and A.A Drawing No: 1000 Sheet 7/17 Issue E	David Dechiara	11/07/2018 Rec: 29/04/2019
Site plan and sediment control Drawing No: 1000 Sheet 8/17 Issue E	David Dechiara	11/07/2018 Rec: 29/04/2019
Landscape plan Drawing No: 1000 Sheet 10/17 Issue E	David Dechiara	11/07/2018 Rec: 29/04/2019
Subdivision Plan Drawing No: 1000 Sheet 13/17 Issue E	David Dechiara	11/07/2018 Rec: 29/04/2019
Pool Section and Driveway Sections Drawing No: 1000 Sheet 14/17 Issue E	David Dechiara	11/07/2018 Rec: 29/04/2019
Stormwater Plans		
Stormwater Drainage and Retention Details, Drawing No: HY-01 Issue A	Apex Design and Construction Pty Ltd	23 July 2018 Rec: 21/12/2018

Reference Documents	Author	Dated
BASIX Certificate No. 948096M	Sustainability –Z Pty Ltd	26 July 2018

BAYSIDE COUNCIL

Planning Assessment Report

2. This Consent relates to land in Lot 20 Sec E DP 60879 and, as such, building works must not encroach on to adjoining lands or the adjoining public place.
3. The following shall be complied with:
 - a) All building work must be carried out in accordance with the provisions of the Building Code of Australia;
4. In accordance with Clause 94 *Environment Planning & Assessment Regulation 2000*, an automatic smoke detection and alarm system for early warning of occupants must be installed in the dwellings. The installation must satisfy the following:-
 - a) smoke alarms must comply with AS3786 - 1993;
 - b) smoke alarms must be connected to the consumer mains power where consumer power is supplied to the building; and

be located in a position as required by Vol 2. BCA.
5. Pursuant to clause 97A(3) of the *Environmental Planning & Assessment Regulation 2000*, it is a condition of this development consent that all the commitments listed in the relevant BASIX Certificates for the development are fulfilled.

Note: Relevant BASIX Certificate means:

- i) A BASIX Certificate that was applicable to the development when this development consent was granted (or, if the development consent is modified under Section 96 of the Act, a BASIX Certificate that is applicable to the development when this development consent is modified); or
- ii) If a replacement BASIX Certificate accompanies any subsequent application for a construction certificate, the replacement BASIX Certificate.

BASIX Certificate has the meaning given to that term in the *Environmental Planning and Assessment Regulation 2000*.

6. The consent given does not imply that works can commence until such time that:
 - a) Detailed plans and specifications of the building have been endorsed with a Construction Certificate by:-
 - i) The consent authority; or,
 - ii) An accredited certifier; and
 - b) The person having the benefit of the development consent:-
 - i) Has appointed a Certifying Authority; and
 - ii) Has notified the consent authority and the Council (if the Council is not the consent authority) of the appointment; and

BAYSIDE COUNCIL

Planning Assessment Report

- c) The person having the benefit of the development consent has given at least 2 days' notice to the council of the persons intention to commence the erection of the building.

DEVELOPMENT SPECIFIC CONDITIONS

7. The existing and future owners (Registered Proprietor) of the property will be responsible for the operation and maintenance of the retention system. The registered proprietor will:
- a) Permit stormwater to be retained by the system;
 - b) Keep the system clean and free of silt, rubbish and debris;
 - c) Maintain, renew and repair the whole or parts of the system so that it functions in a safe and efficient manner, and in doing so, complete the same within the time and in the manner specified in written notice issued by the Council;
 - d) Carry out the matters referred to in paragraphs (ii) and (iii) at the proprietors expense;
 - e) Not make any alterations to the system or elements thereof without prior consent in writing of the Council;
 - f) Permit the Council or its authorised agents from time to time upon giving reasonable notice (but at any time and without notice in the case of emergency) to enter and inspect the land for compliance with the requirements of this Clause;
 - g) Comply with the terms of any written notice issued by the Council in respect to the requirements of this Clause within the time stated in the notice.
8. If the swimming pool is to be heated an energy efficient heating system is to be installed.

CONDITIONS WHICH MUST BE SATISFIED PRIOR TO THE ISSUE OF ANY CONSTRUCTION CERTIFICATE

9. A section 7.11 contribution of \$20,000.00 shall be paid to Council. The contribution is calculated according to the provisions contained within Council's adopted Former City of Botany Bay s7.11 Development Contributions Plan 2016 (Amendment 1) and having regard to the Ministerial Directive of 21 August 2012 (the \$20,000 cap). The amount to be paid is to be adjusted at the time of payment, in accordance with the review process contained in the Contributions Plan. The contributions is to be paid prior to the issue of any compliance certificate, subdivision certificate or construction certificate. The contributions are only used towards the provision or improvement of the amenities and services identified below.

Total levy.....\$20,000.00

Community facilities.....\$1,637.16
 Recreation and open space.....\$16,890.83
 Transport facilities.....\$1,326.38
 Administration.....\$145.62

BAYSIDE COUNCIL

Planning Assessment Report

10. First floor windows on side elevations shall have a minimum sill height of 1.5m.
11. An application for Property Address Allocation and the associated fee are required to be submitted to Council. All new addresses will be allocated in accordance with AS/NZ 4819:2011 Rural and Urban Addressing Standard and Section 5.2 of the NSW Address Policy.

The form is available for download at:

<https://www.bayside.nsw.gov.au/services/development-construction/building-or-altering-property/commonly-used-forms>

Derivation and production of address data components are governed by the NSW Addressing User Manual to ensure consistency of application. The manual is available for download at:

http://www.gnb.nsw.gov.au/_data/assets/pdf_file/0007/199411/2018_NSW_Addressng_User_manual.pdf

12. Any portion of the proposed structure within 3m of the proposed detention tank or absorption trench shall be constructed on a pier and beam foundation with piers extending 300mm below the bottom of the tank or trench base. This requirement shall be reflected on the Construction Certificate plans and supporting documentation.
13. Stormwater management requirements for the development site, including the final discharge/end connection point, must comply with Botany DCP Part 10 – Stormwater Management Technical Guidelines.
14. Detail design and construction plans in relation to stormwater management and disposal system for the development shall be submitted to the Principal Certifying Authority for assessment and approval. A copy of the detailed design plans shall be provided to Bayside Council where Bayside Council is not the Principal Certifying Authority. The detail drawings and specifications shall be prepared by a suitably qualified and experienced civil engineer and to be in accordance with Botany Bay Council Development Control Plan 'Stormwater Management Technical Guidelines', AS/NSZ 3500 – Plumbing and Drainage Code and the BCA. All drawings shall correspond with the approved architectural plans.

The plans shall incorporate measures such as:

- a) The provisions made in the Stormwater Concept Plans by Apex Design and Construction Pty Ltd, Drawing No. HY-01, Issue a, dated 18/12/2018,
- b) The provision for an On-site Stormwater Infiltration System designed to retain all 1 in 100 year storm events and satisfying all relevant Council and Australian Standards. The design must utilize the soil absorption rate determined through geotechnical testing,
- c) In order to contribute to environmental sustainability and apply Water Sensitive Urban Design (WSUD) principles, a rainwater tank system shall be provided with a minimum capacity of 3000L capacity for each lot. The rainwater tanks must be designed to service the toilets, clothes washers and all landscaping in accordance with the requirements of Sydney Water and AS/NZS 3500 –

BAYSIDE COUNCIL

Planning Assessment Report

National Plumbing and Drainage Code. First flush device shall also be incorporated into the tank systems. Overflow from the rainwater tank shall connect to the proposed site drainage system,

- d) Detailed calculations supporting the proposal.

All plans and documentation shall be certified by a suitably qualified engineer as specified in Botany DCP Part 10 Section 2.1.

15. Any part of the proposed building within 3m of the proposed underground rainwater tank or absorption trench shall be constructed on a pier and beam foundation with piers extending no less than 300mm below the bottom of the tank or trench base. This requirement shall be reflected on the Construction Certificate plans and supporting documentation.
16. A longitudinal driveway profile shall be submitted to the Principal Certifier for assessment and approval. The profile shall start in the centre of the road and be along the critical edge (worst case) of the driveway. Gradients and transitions shall be in accordance with Council's Code. The profile shall be drawn to a scale of 1 to 25 and shall include all relevant levels, grades (%), clearances and lengths. All existing levels at the boundary of the property shall remain, no fill or cut is to be proposed within Council land.
17. All vehicular crossings shall be designed to conform to the current Australian Standards AS 2890.1 and Council's Infrastructure Specifications. These include but are not limited to E-01, E-04, E-07 and E-16.

As part of this development, a new concrete driveway shall be constructed. Two new three (3) metre wide driveway laybacks shall be constructed as part of the new driveways. A minimum of one (1.0) metre of kerb and gutter either side of the driveway layback shall be replaced to enable the correct tie-in with the existing kerb and gutter. All services within the verge and road reserve that need to be relocated for the construction of the driveways shall be relocated at no cost to Council.

All existing levels at the boundary of the property shall remain, no fill or cut is to be proposed within Council land.

All redundant vehicular crossings shall be removed and replaced to fit the main footpath cross-section. If any applicant wants to retain an existing vehicular crossing an application still has to be submitted with the matter highlighted. The design should be submitted to the PCA for approval. The approved design form part of the future road opening permit application.

18. The approved plans must be submitted to Sydney Water Tap in™ online service to determine whether the development will affect any Sydney Water sewer or water main, stormwater drains and/or easement, and if further requirements need to be met.

Sydney Water's Tap in™ online service is available at: <https://www.sydneywater.com.au/SW/plumbing-building-developing/building/sydney-water-tap-in/index.htm>

BAYSIDE COUNCIL

Planning Assessment Report

19. A suitably qualified engineer is to certify that the structure can withstand the forces of floodwater, scour, debris and buoyancy in a 1% AEP flood event.

All building materials shall be flood resistant, or flood compatible to a height of 500mm above the 1% AEP flood, or flow level. All internal electrical switches, power points or similar utilities liable to flood damage shall be set at a minimum of 500mm above the 1% AEP flood, or flow level. Details shall be provided and approved prior to the issue of a construction certificate.

20. The required Long Service Levy payable under Section 34 of the Building and Construction Industry Long Service Payments Act 1986 has to be paid. The Long Service Levy is payable at 0.35% of the total cost of the development, however this is a State Government Fee and can change without notice.

21. The following fees are to be paid prior to the issue of a Construction Certificate:-

Builders Security Deposit	\$2570.00
Development Control (Environmental Enforcement Fee)	\$1325.00
Footpath Inspection Fee	\$155.00

22. The applicant shall contact "Dial Before You Dig on 1100" to obtain a Service Diagram for, and adjacent to, the property. The sequence number obtained from "Dial Before You Dig" shall be forwarded to Principal Certifying Authority. Any damage to utilities/services will be repaired at the applicant's expense.
23. A Waste Management Plan prepared in accordance with Part 3N of Council's DCP 2013 shall be prepared and submitted to the satisfaction of the PCA, prior to the release of the Construction Certificate. The Waste Management Plan shall include the size and storage of bins, the collection point for the waste contractor recycling contractor, maintenance of the bins and the provision of recycling and composting facilities.

CONDITIONS WHICH MUST BE SATISFIED PRIOR TO THE COMMENCEMENT OF ANY DEVELOPMENT OR WORK (INCLUDING DEMOLITION)

24. Where demolition is proposed, the following shall be provided to Council at least forty-eight (48) hours prior to the commencement of demolition:
- Written notice, indicating the date when demolition of the building is to commence.
 - This persons full name and address.
 - Details of Public Liability Insurance.
25. The Principal Certifying Authority must be satisfied that: -

BAYSIDE COUNCIL

Planning Assessment Report

- a) In the case of work to be done by a licensee under the Home Building Act:
 - i) Has been informed in writing of the licensee name and contractor licence number, and;
 - ii) Is satisfied that the licensee has complied with the requirements of Part 6 of the Home Building Act 1989; or,
 - b) In the case of work to be done by any other person: -
 - i) Has been informed in writing of the person's name and owner-builder permit number, or;
 - ii) Has been given a declaration signed by the owner of the land that states that the reasonable market cost of the labour and materials involved in the work is less than the amount prescribed for the purposes of the definition of *owner builder work* in Section 29 the Home Building Act 1989.
 - c) And is given appropriate information and declarations under paragraphs (a) and (b) whenever arrangements for the doing of the work are changed in such a manner as to render out of date any information or declaration previously given under either of those paragraphs.
26. The applicant must inform Council, in writing, of:
- a) The name of the contractor, and licence number of the licensee who has contracted to do, or intends to do, the work: or
 - b) The name and permit number of the owner-builder who intends to do the work;
27. The Council also must be informed if: -
- a) A contract is entered into for the work to be done by a different licensee; or
 - b) Arrangements for the doing of the work are otherwise changed.
28. Dewatering is not permitted on this site without NSW-EPA approval.
29. If an excavation associated with the proposal extends below the level of the base of the footings of a building on an adjoining allotment of land or the common boundary fence the person causing the excavation to be made:
- a) Must preserve and protect the building/ fence from damage; and,
 - b) If necessary, underpin and support such building in an approved manner;
 - c) Must at least be 7 days before excavating below the level of the base of the footings of a building on an adjoining allotment of land, give notice of the intention to do so to the owner of the adjoining allotment of land and, furnish particulars of the excavation to the owner of the building being erected or demolished;

BAYSIDE COUNCIL

Planning Assessment Report

- d) Existing structures and or services on this and adjoining properties are not endangered during any demolition excavation or construction work associated with the above project. The applicant is to provide details of any shoring, piling, or underpinning prior to the commencement of any work. The construction shall not undermine, endanger or destabilise any adjacent structures.
- e) If the soil conditions required it:
 - i) Retaining walls associated with the erection of a building (swimming pool) or other approved methods of preventing movement or other approved methods of preventing movement of the soil must be provided and:-
 - ii) Adequate provision must be made for drainage.
- 30. The site to which this approval relates must be adequately fenced or other suitable measures employed that are acceptable to the Principal Certifying Authority to restrict public access to the site and building works. Such fencing or other measures must be in place before the approved activity commences.
- 31. Building plans must be lodged through a Sydney Water Tap In Service for approval prior to commencement of works.
- 32. This Consent shall not preclude the demolisher from giving notice to other statutory authorities, such as Sydney Water Corporation, WorkCover, etc.
- 33. Soil and Water Management Plan shall be prepared in accordance with *Soil and Water Management for Urban Development Guidelines* produced by the Southern Sydney Region Organisation of Councils and a copy of the Plan submitted to Council's Customer Service Centre for registration. The Plan must include details of the proposed erosion and sediment controls to be installed on the building site and must be kept on site at all times and made available upon request.

Sediment control devices shall not be located beneath the dripline of any trees nominated for retention.
- 34. Soil and sedimentation controls are to be put in place prior to the commencement of any work on site. The controls are to be maintained in effective working order during construction.
- 35. A licensed demolisher who is registered with WorkCover NSW must prepared a Work Method Statement to the satisfaction of the Principal Certifying Authority (Council or an accredited certifier) and a copy shall be sent to Council (if it is not the PCA). A copy of the Statement shall also be submitted to WorkCover NSW.

The statement must be in compliance with AS2601:1991 – 'Demolition of Structures', the requirements of WorkCover NSW and conditions of the Development Approval, and shall include provisions for:

 - a) Enclosing and making the site safe, any temporary protective structures must comply with the "Guidelines for Temporary Protective Structures (April 2001)";
 - b) Induction training for on-site personnel;

BAYSIDE COUNCIL

Planning Assessment Report

- c) Inspection and removal of asbestos, contamination and other hazardous materials (by appropriately licensed contractors);
 - d) Dust control – Dust emission must be minimised for the full height of the building. A minimum requirement is that perimeter scaffolding, combined with chain wire and shade cloth must be used, together with continuous water spray during the demolition process. Compressed air must not be used to blow dust from the building site;
 - e) Disconnection of Gas and Electrical Supply;
 - f) Fire Fighting – Fire fighting services on site are to be maintained at all times during demolition work. Access to fire services in the street must not be obstructed;
 - g) Access and Egress – No demolition activity shall cause damage to or adversely affect the safe access and egress of this building;
 - h) Waterproofing of any exposed surfaces of adjoining buildings;
 - i) Control of water pollution and leachate and cleaning of vehicles tyres – Proposals shall be in accordance with the "Protection of the Environmental Operations Act 1997";
 - j) Working hours, in accordance with this Development Consent;
 - k) Confinement of demolished materials in transit;
 - l) Proposed truck routes, in accordance with this Development Consent;
 - m) Location and method of waste disposal and recycling in accordance with the "Waste Minimisation and Management Act 1995".
 - n) Sewer – common sewerage system ad08
36. Application(s) shall be made to Council's Customer Services Counter for the following approvals and permits on Council's property/road reserve under Road Act 1993 and Local Government Act 1993 as appropriate: -
- (It should be noted that any works shown within Council's road reserve or other Council Lands on the development approval plans are indicative only and no approval for these works is given until this condition is satisfied.)
- a) Permit to erect hoarding on or over a public place, including Council's property/road reserve
 - b) Permit to construction works, place and/or storage building materials on footpaths, nature strips
 - c) Permit for roads and footways occupancy (long term/ short term)
 - d) Permit to construct vehicular crossings, footpath, kerb and gutter over road reserve
 - e) Permit to open road reserve area, including roads, footpaths, nature strip, vehicular crossing or for any purpose whatsoever
 - f) Permit to place skip/waste bin on footpath and/or nature strip
 - g) Permit to use any part of Council's road reserve or other Council lands

BAYSIDE COUNCIL

Planning Assessment Report

CONDITIONS TO BE SATISFIED DURING WORKS

37. The proposed development shall comply with the following:
- a) A sign must be erected in a prominent position on any work site on which work involved in the erection or demolition of a building is being carried out:
 - i) Stating that unauthorised entry to the work site is prohibited;
 - ii) Showing the name of the person in charge of the work site and a telephone number at which that person may be contacted outside working hours;
 - iii) The Development Approval number; and
 - iv) The name of the PCA including an after-hours contact telephone number.
 - b) Any such sign is to be removed when the work has been completed.
38. Inspections must be conducted by Council's Engineer at the following occasions:
- a) Formwork inspection of driveway layback and adjacent kerb and gutter prior to laying of concrete,
 - b) Formwork inspection of Council's kerb and gutter prior to laying of concrete,
 - c) Formwork inspection of Council's footpath prior to laying of concrete,
 - d) Final inspection of driveway layback and adjacent kerb and gutter,
 - e) Final inspection of Council's kerb and gutter,
 - f) Final inspection of Council's footpath.
39. During Demolition, Excavation and Construction, care must be taken to protect Council's infrastructure, including street signs, footpath, kerb, gutter and drainage pits etc. Protecting measures shall be maintained in a state of good and safe condition throughout the course of construction. The area fronting the site and in the vicinity of the development shall also be made safe for pedestrian and vehicular traffic at all times. Any damage to Council's infrastructure (including damage caused by, but not limited to, delivery vehicles, waste collection, contractors, sub-contractors, concrete delivery vehicles) shall be fully repaired in accordance with Council's specification and AUS-SPEC at no cost to Council.
40. All recommendations contained in the Geotechnical Investigation report prepared by Morrow Geotechnics Pty Ltd, Ref: P1584_01, Dated 4 December 2018 shall be implemented prior to the issue of the Construction Certificate.
41. All absorption trenches/modular drainage cell installations must be inspected prior to back filling and proceeding to subsequent stages of construction to the satisfaction of

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Planning Assessment Report

principal Certifying Authority. Supporting evidence shall be issued by a professional Civil Engineer experienced in stormwater system design and construction.

42. The maximesh screens and removable geotextile are to be installed in the absorption system prior to connection of the downpipes to ensure the effective performance of the system during construction and the long term viability of the system.
43. No demolition material shall be burnt or buried on the site.
44. Should the demolition process require a building waste container(s) (builders' skip), then such container must not be placed or left upon the public road, footpath, reserve or the like without the prior approval of Council. The use of any part of Council's road reserve must also have prior approval of Council.
45. The approved Waste Management Plan shall be complied with at all times during demolition, construction and on-going use of the site.
46. All possible and practicable steps shall be taken to prevent nuisance to the inhabitants of the surrounding neighbourhood from wind-blown dust, debris, noise and the like.
47. Stockpiles are not permitted to be stored on Council property (including the nature strip) unless prior approval has been granted. In addition, stockpiles of topsoil, sand, aggregate, soil or other material shall be stored clear of any drainage line or easement, natural watercourse, kerb or road surface.
48. Demolition operations shall not be conducted on the roadway or public footway or any other locations which could lead to the discharge of materials into the stormwater drainage system.
49. Building and demolition operations such as brickcutting, washing tools or paint brushes and mixing mortar shall not be performed on the roadway or public footway or any other locations which could lead to the discharge of materials into the stormwater drainage system.
50. Precautions to be taken shall include compliance with the requirements of the WorkCover Authority of New South Wales, including but not limited to:
 - a) Protection of site workers and the general public.
 - b) Erection of hoardings where appropriate.
 - c) Asbestos handling and disposal where applicable.
 - d) Any disused service connections shall be capped off.
 - e) The disposal of refuse is to be to an approved waste disposal depot.
51. Hazardous or Special Wastes arising from the demolition process shall be removed and disposed of in accordance with the requirements of WorkCover NSW and the Department of Environment, Climate Change and Water and with the provisions of the:
 - a) Occupational Health and Safety Act, 2000;
 - b) Occupational Health and Safety Regulation 2001;

BAYSIDE COUNCIL

Planning Assessment Report

- c) Protection Of the Environment Operations Act 1997 (NSW); and
 - d) NSW Department of Environment and Climate Change Waste Classification Guidelines (2008).
52. Any material containing asbestos found on site during the demolition process the shall be removed and disposed of in accordance with
- a) WorkCover NSW requirements. An appropriately licensed asbestos removalist must complete all asbestos works if they consist of the removal of more than 10m² of bonded asbestos and/or any friable asbestos;
 - b) Protection of the Environment Operations Act 1997;
 - c) Protection of the Environment Operation (Waste) Regulation;
 - d) DECC Waste Classification Guidelines 2008; and
 - e) No demolition materials shall be burnt or buried on the site.
53. The demolition and disposal of materials incorporating lead such as lead paint and dust shall be conducted in accordance with:
- a) AS2601-2001 - Demolition of structure.
 - b) AS4361.2-1998 – Guide to Lead Paint Management-Residential and Commercial Buildings.
54. In order to ensure safe handling of asbestos materials, the re-use or sale of asbestos building materials is strictly prohibited.
55. Building, demolition and construction works not to cause stormwater pollution and being carried out in accordance with Section 2.8 of Council's Stormwater Pollution Control Code 1993. Pollutants such as concrete slurry, clay and soil shall not be washed from vehicles onto roadways, footways or into the stormwater system. Drains, gutters, roadways and access ways shall be maintained free of sediment. Where required, gutters and roadways shall be swept regularly to maintain them free from sediment.
- Note: The Applicant may be liable to prosecution under the Environmental Planning and Assessment Act 1979 for a breach of an approval condition, or under the Protection of the Environment Operations Act 1997, if its employees, agents or sub-contractors allow sediment, including soil, excavated material, building materials, or other materials to be pumped, drained or allowed to flow to the street, stormwater pipes or waterways. The Applicant shall ensure that its employees, agents or sub-contractors understand and maintain sediment control measures.
56. All services (Utility, Council, etc.) within the road reserve (including the footpath) shall be relocated/adjusted to match the proposed/existing levels as required by the development.
57. To ensure that utility authorities and Council are advised of any effects to their infrastructure by the development, the applicant shall: -

BAYSIDE COUNCIL

Planning Assessment Report

- i) Carry out a survey of all utility and Council services within the site including relevant information from utility authorities and excavation if necessary to determine the position and level of services.
 - ii) Negotiate with the utility authorities (eg Energy Australia, Sydney Water and Telecommunications Carriers) and Council in connection with: -
 - 1 The additional load on the system; and
 - 2 The relocation and/or adjustment of the services affected by the construction.
- 58. Any costs in the relocation, adjustment, and provision of land or support of services as requested by the service authorities and Council are to be the responsibility of the developer.
- 59. All excavations and backfilling shall be executed safely and in accordance with appropriate professional standards; and all excavations shall be properly guarded and protected to prevent them from being dangerous to life or property.
- 60. As the development involves an excavation that extends below the level of the base of the footings of a building on adjoining land, the person having the benefit of the development consent must, at the person's own expense:
 - a) Protect and support the adjoining premises from possible damage from the excavation, and
 - b) Where necessary, underpin the adjoining premises to prevent any such damage.
- 61. The following shall be complied with during construction and demolition:
 - a) Construction Noise
 - i) Noise from construction activities associated with the development shall comply with the NSW Environment Protection Authority's Interim Construction Noise Guideline and the Protection of the Environment Operations Act 1997.
 - ii) Level Restrictions

Construction period of 4 weeks and under:

The L10 sound pressure level measured over a period of not less than 15 minutes when the construction site is in operating must not exceed the background level by more than 20dB(A).

Construction period greater than 4 weeks and not exceeding 26 weeks:

The L10 sound pressure level measured over a period of not less than 15 minutes when the construction site is in operating must not exceed the background level by more than 10 dB(A).

BAYSIDE COUNCIL

Planning Assessment Report

b) Time Restrictions

Monday to Friday 07:00am to 05:00pm

Saturday 08:00am to 01:00pm

No Construction to take place on Sundays or Public Holidays.

c) Silencing

All possible steps should be taken to silence construction site equipment.

62. The applicant shall conduct all construction and related deliveries wholly on site. If any use of Council's road reserve is required then separate applications are to be made at Council's Customer Services Centres.

63. In order to prevent vehicles tracking soil or other materials onto public roads and washing of materials into the street drainage system or watercourse, during Excavation, Construction and Deliveries, access to the site shall be available in all weather conditions. The area shall be stabilised and protected from erosion; and,

In addition, concrete trucks and any other trucks that used for the transportation of building materials or similar, shall not traffic soil cement or other materials onto the road reserve. Hosing down of vehicle tyres shall only be conducted in a suitable off-street area where wash waters do not enter the stormwater system or enter Council's land.

Hosing down or hosing/washing out of any truck (concrete truck), plant (eg concrete pumps) or equipment (eg wheelbarrows) on Council's road reserve or other property is strictly prohibited. Fines and cleaning costs will apply to any breach of this condition.

Pavement surfaces adjacent to the ingress and egress points are to be swept and kept clear of earth, mud and other materials at all times and in particular at the end of each working day or as directed by Council's Engineer.

64. During construction work the Council nature strip shall be maintained in a clean and tidy state at all times. The nature strip shall be suitably replaced where damaged due to construction work in accordance with Council Specification at the completion of construction, and at the Applicant's expense.

CONDITIONS WHICH MUST BE SATISFIED PRIOR TO THE ISSUE OF ANY SUBDIVISION CERTIFICATE

65. For compliance with the conditions of consent, a separate application must be made for a subdivision certificate. The application is to be accompanied by documentary evidence demonstrating compliance with all conditions of consent. Submission of a subdivision certificate application must be accompanied by a linen plan with six (6) copies and appropriate fee.
66. Prior to the issue of a Subdivision Certificate, a Section 73 Compliance Certificate under the Sydney Water Act 1994 must be obtained. Application must be made

BAYSIDE COUNCIL

Planning Assessment Report

through an authorised Water Servicing Coordinator. Please refer to "Your Business" section of Sydney Water's web site at www.sydneywater.com.au then the 'e-developer' icon or telephone 13 20 92.

- a) Following application a 'Notice of Requirements' will detail water and sewer extensions to be built and charges to be paid. Please make early contact with the Co-ordinator, since building of water/sewer extensions can be time consuming and may impact on other services and building, driveway or landscape design.
 - b) The Section 73 Certificate must be submitted to the Principal Certifying Authority prior to the release of the linen plan or occupation of the development.
67. Prior to the issue of a Subdivision Certificate, a Certificate of Survey from a Registered Surveyor shall be submitted to the Principal Certifying Authority showing all the structures are wholly located within the property boundary

CONDITIONS WHICH MUST BE SATISFIED PRIOR TO THE ISSUE OF AN OCCUPATION CERTIFICATE

68. Prior to the issue of any Occupation Certificate, the approved subdivision is to be registered. The linen plans are to be submitted to Council, prior to the release of the Occupation Certificate, and proof of registration with the Land and Property Information office is to be submitted prior to occupation and use of any building.
69. The approved elements including driveways, stormwater connections, (etc.) prevail over the location of existing utility services and power poles. All services shall be adjusted at the applicants cost to suit the construction of approved design elements. Applicants must seek approval from the relevant public utility, state authority or service provider.
70. A registered surveyor shall certify that the driveway(s) over the footpath and within the property have been constructed in accordance with the approved driveway profile(s). The certification shall be based on a survey of the completed works. A copy of the certificate and a works-as-executed driveway profile shall be provided to Council if Council is not the Principal Certifying Authority.
71. A certificate from a registered Surveyor shall be provided to the Principal Certifying Authority certifying that the habitable floor level is constructed a minimum of 500mm above the 1% Annual Exceedance Probability (AEP) flood level. A copy of the certificate shall be provided to Council where Council is not the Principal Certifying Authority.
72. Inspection reports (formwork and final) for the works on the road reserve shall be obtained from Council's engineer and submitted to the Principal Certifying Authority attesting that this condition has been appropriately satisfied.
73. A Chartered Professional Engineer shall certify that the stormwater system has been constructed in accordance with the approved plans and as required by the Botany DCP Part 10 – Stormwater Management Technical Guidelines. The Certificate shall include an evaluation of the completed drainage works. A works-as-executed drainage plan shall be prepared by a registered surveyor based on a survey of the

BAYSIDE COUNCIL

Planning Assessment Report

completed works. A copy of the Certificate and works-as-executed plan shall be supplied to the satisfaction of the PCA. A copy shall be provided to Council for registration if Council is not the PCA.

74. All absorption trenches must be inspected, and a compliance certificate under Part 4A of the EP&A Act issued prior to back filling and proceeding to subsequent stages of construction. Copies of the certificate are to be maintained by the principal certifying authority and be made available to Council officers upon request.
75. A certificate from a Registered Surveyor shall be provided to the Principal Certifying Authority certifying that the garage/parking level is either constructed at or above 15 AEP Flood level OR (in the case of the garage floor/parking level being below the 1% AEP flood level the garage floor/parking level is protected from inundation to a minimum of 500mm above the 1% AEP flood level. A copy of the certificate shall be provided to Council where Council is not the Principal Certifying Authority.
76. Flow through open form fencing (louvres or pool fencing) is require for all new front fence and all internal fences and gates up to 1% AEP flood level. Any new boundary fences adjoining private property shall have an 80mm gap at the bottom to allow flows through. Documentation shall be provided to the Principal Certifying Authority. Details of approved types of flow through fencing can be obtained from Council.
77. The development shall comply with the Botany Development Control Plan (DCO 2013, and the Planning Considerations and Development Controls listed in the Flood Advice letter issued by Council 22 August 2018, Ref: FA-2018/94 and Flood Investigation Report and Flood Risk Management Plan prepared by ACOR consultants, Ref: SY181046, dated 17 December 2018.

The approved recommendations from the Flood Management Report shall be implemented prior to occupation.

78. A silt/litter arrestor pit as detailed in Botany DCP Part 10 – Stormwater Management Technical Guidelines shall be provided prior to discharge of stormwater from the site.
79. The owner of the premises is required to comply with the following requirements when installing a rainwater tank:
 - a) The overflow from the rainwater tank shall be directed to the stormwater system.
 - b) All plumbing work proposed for the installation and reuse of rainwater shall comply with the NSW Code of Practice: Plumbing and Drainage and be installed in accordance with Sydney Water "Guidelines for Rainwater Tanks on Residential Properties".
 - c) A first flush device shall be installed to reduce the amount of dust, bird faeces, leaves and other matter entering the rainwater tank.
80. Certification from a licenced plumber shall be provided certifying the installation of the required minimum capacity 3000L rainwater tank(s) in each lot in accordance with the requirements of Sydney Water and AS/NZS 3500 – National Plumbing and Drainage Code. The rainwater tanks shall be certified as servicing the toilets, clothes washers

BAYSIDE COUNCIL

Planning Assessment Report

and all landscaping on the site. First flush device shall be installed and overflow from the rainwater tank shall be connected to the proposed site drainage system.

81. Documentation from a professional civil engineer shall be submitted to the Principal Certifying Authority certifying that the stormwater drainage system has been constructed generally in accordance with the approved stormwater management construction plan(s) and all relevant standards.
82. A restriction on Use of Land and Positive Covenant(s) shall be imposed on the development. The following covenants shall be imposed under Section 88(E) of the Conveyancing Act 1919 and lodged with the NSW Land and Property Information;
 - a) Positive Covenant and Restriction on Use of Land for On-Site Infiltration System. Refer to appendix A of the Stormwater Management Technical Guidelines for suggested wording.
83. The pool area shall be enclosed by a 1200mm high pool safety fence all associated gates shall be fitted with a self-latching device in accordance with AS1926.

Note: A dividing fence will be accepted as part of the pool safety fence provided the fence complies with the requirements of AS 1926.
84. A warning notice must be erected near swimming pools/spas. There shall be at all times maintained, in a prominent position in the immediate vicinity of the swimming pool, a sign erected and bearing the notice: "Young children should be supervised when using this swimming pool", together with details of resuscitation techniques (for adults, children and infants) in accordance with the document entitled "Cardio-Pulmonary Resuscitation" published by the Australian Resuscitation Council. The warning notice may be purchased from Bayside Council or the Royal Life Saving Society.
85. Pool covers are to be installed to minimise evaporation.
86. At least one (1) native or ornamental tree of at least 45 litre pot size and capable of growing to a minimum height of three (3) metres shall be planted in the front setbacks of each lot on completion of the building works and prior to the final inspection.
87. At least one replacement street tree, *Tristanopsis laurina*, is to be planted in Council's nature strip adjoining the property.
88. All landscape works are to be carried out in accordance with the approved Landscape Plan and certified by a suitably qualified Landscape Architect.

ONGOING USE

89. The stormwater drainage system (including all pits, pipes, absorption, detention structures, treatment devices, infiltration systems and rainwater tanks) shall be regularly cleaned, maintained and repaired to ensure the efficient operation of the system from time to time and at all times. The system shall be inspected after every rainfall event to remove any blockage, silt, debris, sludge and the like in the system. All solid and liquid waste that is collected during maintenance shall be disposed of in a manner that complies with the appropriate Environmental Guidelines.

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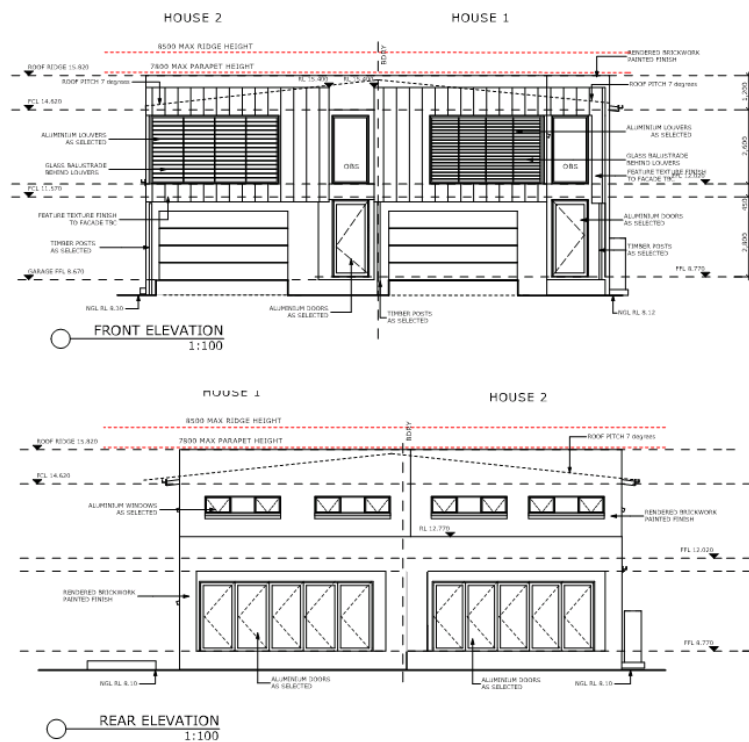
The water from the rainwater tank should not be used for drinking, the rainwater tank shall be routinely desludged and all contents from the desludging process disposed.

- Solids shall be disposed to the waste disposal,
- De-sludged liquid shall be disposed to the sewer.

90. The use of mechanical plant including air conditioners, fans, compressors, freezers, swimming pool or spa pumps shall not give rise to an 'offensive noise' as defined under the provisions of the Protection of the Environment Operations Act, 1997.
91. Residential air conditioners shall not cause 'offensive noise' as defined by the Protection of the Environment Operations Act 1997 or contravene provisions of the Protection of the Environmental (Noise Control) Regulation 2008 where emitted noise from a residential air conditioner can be heard within a habitable room in any other residential premises at night.
92. All existing and proposed lights shall comply with the Australian Standard As4282 – 1997 "Control of Obtrusive Effects of Outdoor Lighting". In this regard, the lighting of the premises, including swimming pools, shall be directed so as not to cause nuisance to the owners or occupiers of adjacent/adjoining premises or to motorists on adjoining or nearby roads.

ADVISORY NOTES

The water from the rainwater tank should not be used for drinking. Sydney Water shall be advised of the installation of the approved rainwater tanks.



Proposed new
Semi Detached
dwelling and
subdivision

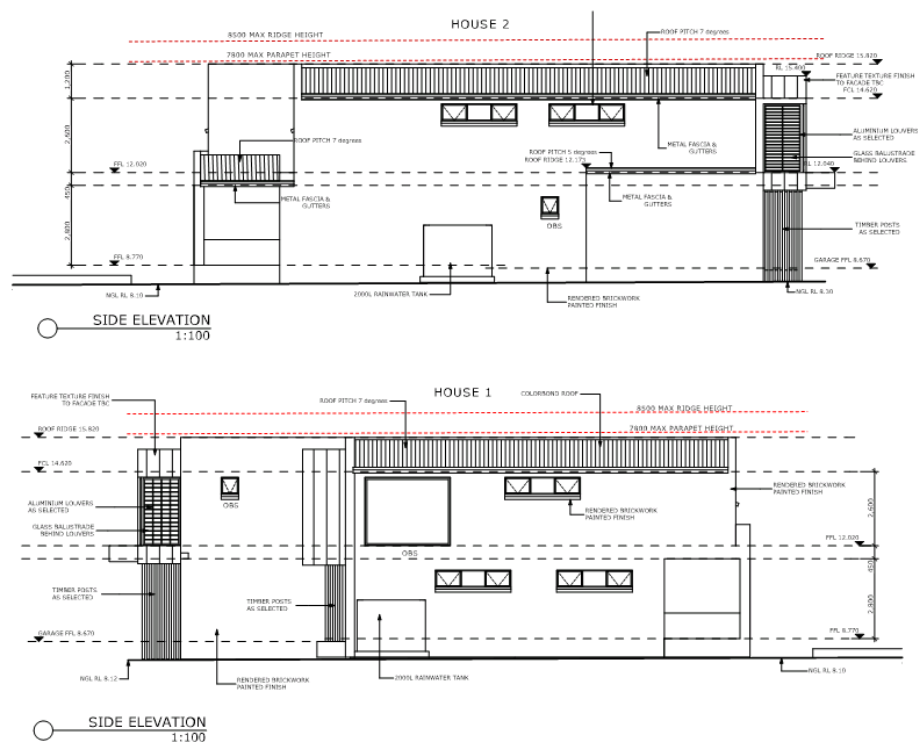
CLIENT
Mathew Kraljevic

JOB:
31 Albert street
Botany 2019, lot
20 DP 60879

DRAWING
FRONT AND REAR
ELEVATIONS

SHEET SIZE TO SCALE:	DATE:
A3	11/07/2018
DRAWING No:	SHEET:
1000	5/17
	ISSUE:
	E

PHONE: 0418 986 767
Email: david_dachian@hotmail.com



Proposed new
Semi Detached
dwelling and
subdivision

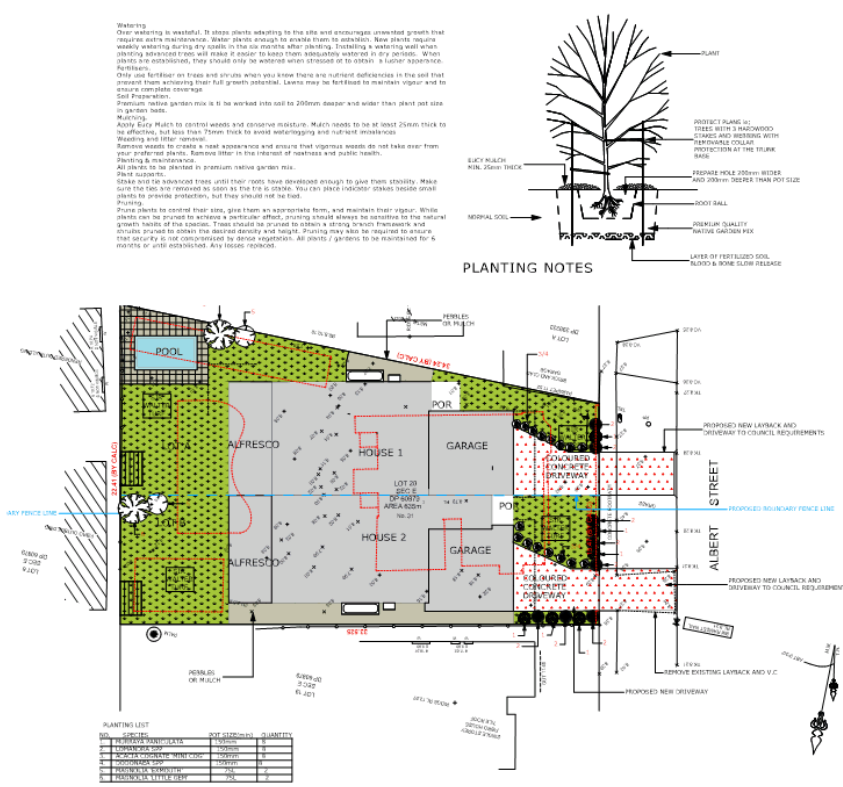
CLIENT
Mathew Kraljevic

JOB:
31 Albert street
Botany 2019, lot
20 DP 60879

DRAWING
SIDE ELEVATIONS

SHEET SIZE TO SCALE: A3	DATE: 11/07/2018
DRAWING No: 1000	SHEET: 6/17
	ISSUE: E

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Proposed new
Semi Detached
dwelling and
subdivision

CLIENT
Mathew Kraljevic

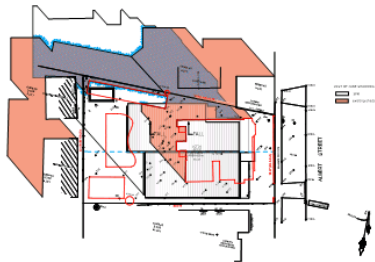
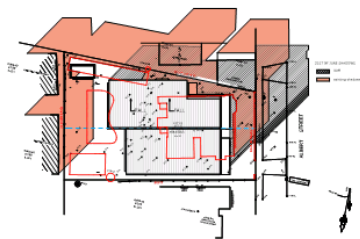
JOB:
31 Albert street
Botany 2019, lot
20 DP 60879

DRAWING
LANDSCAPE PLAN

SHEET SIZE TO SCALE: A3	DATE: 11/07/2018
DRAWING No: 1000	SHEET: 10/17
ISSUE: E	

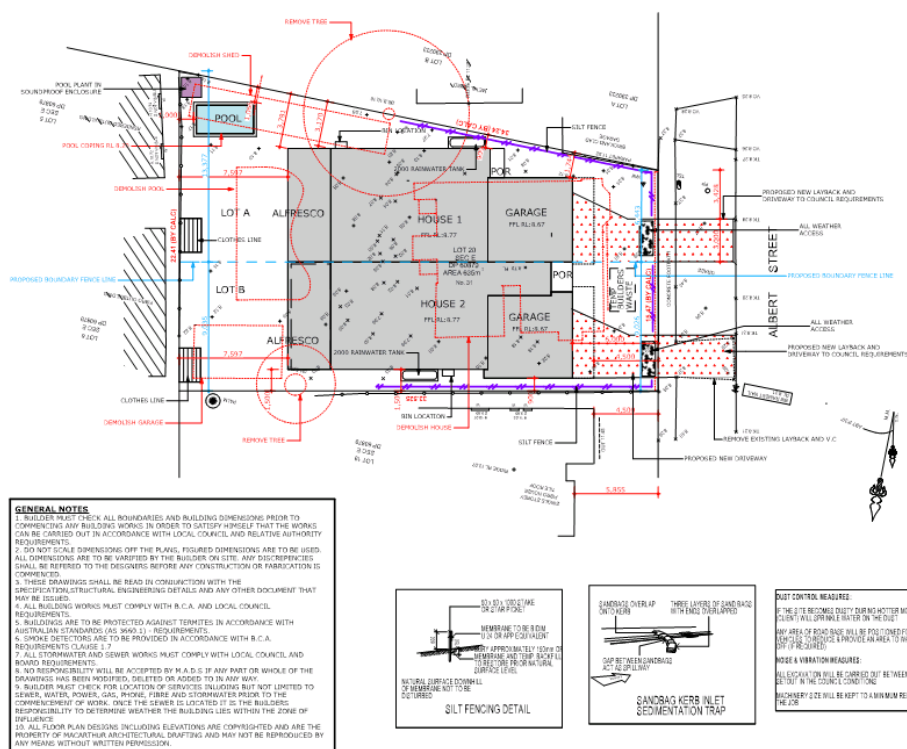
PHONE: 0418 986 767
Email: david.dechamps@hotmail.com

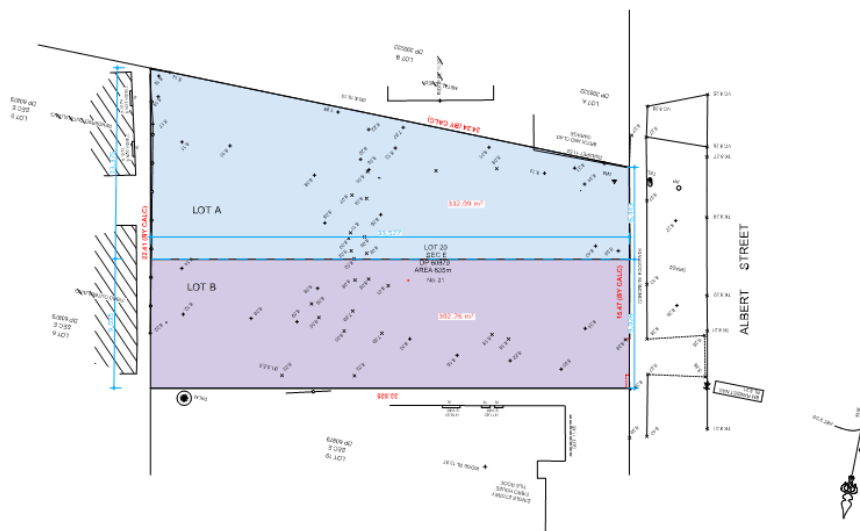




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Proposed new Semi Detached dwelling and subdivision		
CLIENT Mathew Kraljevic		
JOB: 31 Albert street Botany 2019, lot 20 DP 60879		
DRAWING 21ST JUNE SHADOW DIAGRAMS		
SHEET SIZE TO SCALE: A3	DATE: 11/07/2018	
DRAWING No: 1000	SHEET: 15/17	ISSUE: E
		
PHONE: 0418 986 767 Email: david_dechamps@hotmail.com		





<p>Proposed new Semi Detached dwelling and subdivision</p>			
<p>CLIENT</p> <p>Mathew Kraljevic</p>			
<p>JOB:</p> <p>31 Albert street Botany 2019, lot 20 DP 60879</p>			
<p>DRAWING</p> <p>SUBDIVISION PLAN</p>			
<p>SHEET SIZE TO SCALE</p> <p>A3</p>		<p>DATE:</p> <p>11/07/2019</p>	
<p>DRAWING No:</p> <p>1000</p>		<p>SHEET:</p> <p>13/17</p>	
		<p>ISSUE:</p> <p>E</p>	
			
<p>PHONE: 0419 888 767 Email: david.dechena@hotmail.com</p>			

F.S.R Variation:**Clause 4.6 Variation to Clause 4.4 Floor Space Ratio**

The applicant requests a variation to the Floor Space Ratio (FSR) development standard, as prescribed in clause 4.4 of Botany Bay LEP 2013. This request is made pursuant to clause 4.6 Exceptions to Development Standards.

The following is a summary of the proposal for easy reference:

Requirement	FSR: 0.5:1
Proposed	FSR: 0.599:1
Is the planning control in question a development standard?	Yes
Is the non-compliance with the clause requirement a Numerical and / or Performance based variation?	Numerical
If numerical enter a % variation to requirement	Change in FSR is 19.9%

Introduction

A Development Application is submitted to Bayside Council for demolition of an existing dwelling and construction of two semi-detached dwellings on the development site. The development site currently comprises two lots, therefore each will be sited on its own allotment. Any minor boundary adjustment to site the two dwellings evenly on the land will be Exempt Development under SEPP (ECDC) 2008.

This submission contends that strict compliance with the maximum floor space ratio is unreasonable and/or unnecessary in the circumstances of the case and that the variation sought can be supported and that the Clause 4.6 exception to the development standard should be supported.

Clause 4.4 of the Botany Bay LEP 2013 provides:**4.4 Floor space ratio**

(1) The objectives of this clause are as follows:

to establish standards for the maximum development density and intensity of land use,

to ensure that buildings are compatible with the bulk and scale of the existing and desired future character of the locality,

to maintain an appropriate visual relationship between new development and the existing character of areas or locations that are not undergoing, and are not likely to undergo, a substantial transformation,

to ensure that buildings do not adversely affect the streetscape, skyline or landscape when viewed from adjoining roads and other public places such as parks, and community facilities,

to minimise adverse environmental effects on the use or enjoyment of adjoining properties and the public domain,

to provide an appropriate correlation between the size of a site and the extent of any development on that site,

to facilitate development that contributes to the economic growth of Botany Bay.

(2) The maximum floor space ratio for a building on any land is not to exceed the floor space ratio shown for the land on the Floor Space Ratio Map.

(2A) Despite subclause (2), if an area of land in Zone R3 Medium Density Residential or Zone R4 High Density Residential exceeds 2,000 square metres, the floor space ratio of a building on that land may exceed the maximum floor space ratio shown for the land on the Floor Space Ratio Map but must not exceed 1.5:1.

(2B) Subclause (2A) does not apply to land identified as "Area 1" on the Floor Space Ratio Map.

(2C) Despite subclause (2), if an area of land identified as "Area 2" on the Floor Space Ratio Map has a site area exceeding 1,900 square metres, the maximum floor space ratio for a building on that land may exceed the maximum floor space ratio shown for the land on the Floor Space Ratio Map by no more than 0.65:1.

(2D) Despite subclause (2), if a building is permissible under clause 9A of Schedule 1 on land identified as "Area 4" on the Floor Space Ratio Map, the maximum floor space ratio for the building must not exceed

1.5:1.

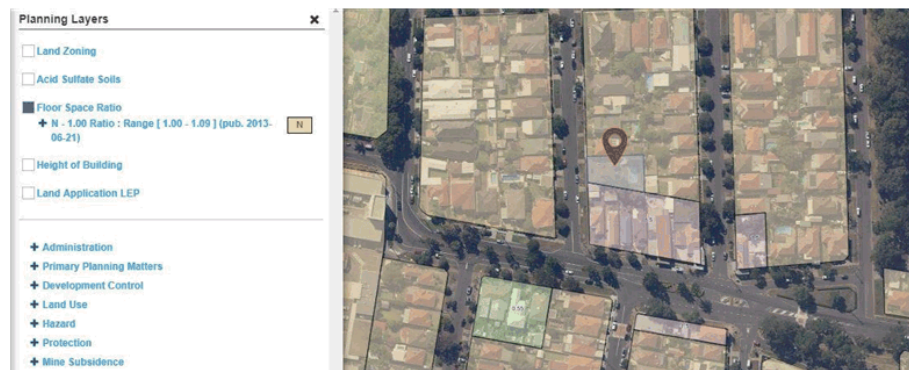


Figure 1: Extract of BBLEP 2013 Floor Space Ratio map (1:1)

Reason for a variation

The Botany Bay LEP 2013 contains provisions under Clause 4.6 which allow for the consent authority to consider certain variations to the principal development standards listed under Part of the LEP. The variations may only be considered reasonable where they have been suitably justified by an applicant to be 'unreasonable or unnecessary' in the circumstances of the case, pertaining to site conditions, surrounding character of the built form, etc. The provisions of Clause 4.6 are reproduced below:

4.6 Exceptions to development standards

(1) The objectives of this clause are as follows:

to provide an appropriate degree of flexibility in applying certain development standards to particular development,

to achieve better outcomes for and from development by allowing flexibility in particular circumstances.

Development consent may, subject to this clause, be granted for development even though the development would contravene a development standard imposed by this or any other environmental planning instrument. However, this clause does not apply to a development standard that is expressly excluded from the operation of this clause.

Development consent must not be granted for development that contravenes a development standard unless the consent authority has considered a written request from the applicant that seeks to justify the contravention of the development standard by demonstrating:

that compliance with the development standard is unreasonable or unnecessary in the circumstances of the case, and

that there are sufficient environmental planning grounds to justify contravening the development standard.

(4) Development consent must not be granted for development that contravenes a development standard unless:

(a) the consent authority is satisfied that:

the applicant's written request has adequately addressed the matters required to be demonstrated by subclause (3), and

the proposed development will be in the public interest because it is consistent with the objectives of the particular standard and the objectives for development within the zone in which the development is proposed to be carried out, and

(b) the concurrence of the Secretary has been obtained.

(5) In deciding whether to grant concurrence, the Secretary must consider:

whether contravention of the development standard raises any matter of significance for State or regional environmental planning, and

the public benefit of maintaining the development standard, and

any other matters required to be taken into consideration by the Secretary before granting concurrence.

(6) Development consent must not be granted under this clause for a subdivision of land in Zone RU1 Primary Production, Zone RU2 Rural Landscape, Zone RU3 Forestry, Zone RU4 Primary Production Small Lots, Zone RU6 Transition, Zone R5 Large Lot Residential, Zone E2 Environmental Conservation, Zone E3 Environmental Management or Zone E4 Environmental Living if:

the subdivision will result in 2 or more lots of less than the minimum area specified for such lots by a development standard, or

the subdivision will result in at least one lot that is less than 90% of the minimum area specified for such a lot by a development standard.

Note.

When this Plan was made it did not include Zone RU1 Primary Production, Zone RU2 Rural Landscape, Zone RU3 Forestry, Zone RU4 Primary Production Small Lots, Zone RU6 Transition, Zone R5 Large Lot Residential, Zone E3 Environmental Management or Zone E4 Environmental Living.

After determining a development application made pursuant to this clause, the consent authority must keep a record of its assessment of the factors required to be addressed in the applicant's written request referred to in subclause (3).

This clause does not allow development consent to be granted for development that would contravene any of the following:

a development standard for complying development,

a development standard that arises, under the regulations under the Act, in connection with a commitment set out in a BASIX certificate for a building to which [State Environmental Planning Policy \(Building Sustainability Index: BASIX\) 2004](#) applies or for the land on which such a building is situated,

(b1) clause 4.3 (2A),

(b2) clause 4.4B (3),

clause 5.4.

Response:

Having regard to the above, in summary a development standard can be varied if a submission is made (in writing) by the applicant justifying a contravention to the development standard on the grounds that:

compliance with the development standard is unreasonable or unnecessary in the circumstances of the case, and

that there are sufficient environmental planning grounds to justify contravening the development standard.

The consent authority must however be satisfied that:

the applicant's written request has adequately addressed the matters required to be demonstrated by sub-clause (3), and

the proposed development will be in the public interest because it is consistent with the objectives of the particular standard and the objectives for development within the zone in which the development is proposed to be carried out.

The current LEP map identifies No. 31 Albert Street being within an "Area 3".

This means we must also take into account clause 4.4A of the BBLEP2013.

Clause 4.4A (3)(d) states " the maximum floor space ratio for all other development for the purpose of residential accommodation is 0.5:1"

Semis are "other development for the purposes of residential accommodation." Also An FSR of 0.7:1 is permitted for a dwelling house under clause 4.4A (3)(a), but Unfortunately the DA proposes semi-detached dwellings, not a dwelling house.

In our opinion this requirement is unfair, because a single dwelling is able to build on a 0.7:1 and this bulk and scale would be much greater than a 0.5:1 for a semidetached dwelling as indicated for a semidetached dwelling.

If we were to subdivide the block, each block would be able to build two house of 0.7:1, this show that a greater bulk and scale development can occur, showing that our variation only minor.

The proposed semidetached dwelling is now currently 0.59:1 which sit between 0.5:1 and 0.7:1 and our opinion still meets design objectives for this area, but also has been design to have open plan living, good size rooms for the owners, we believe this is a small variation to consider as there are a number of development in the area which go to a 1:1 F.S.R.

Is the planning control in question a development standard?

Clause 4.4 provides inter-alia that (2) *The maximum floor space ratio for a building on any land is not to exceed the floor space ratio shown for the land on the Floor Space Ratio Map.*

'Development Standards' has the following meaning ascribed to it under Section 4(1) of the Environmental Planning and Assessment Act, 1979:

"development standards" means provisions of an environmental planning instrument in relation to the carrying out of development, being provision by or under which requirements are specified or standards are fixed in respect of any aspect of that development, including, but without limiting the generality of the foregoing, requirements or standards in respect of -

the area, shape or frontage of any land, the dimensions of any land, buildings or works, or the distance of any land, building or work from any specified point:

the proportion or percentage of the area of a site which a building or work may occupy:

the character, location, siting, bulk, scale, size, height, density, design or external appearance of a building or work;

the cubic content or floor space of a building;

the intensity or density of the land, building or work, the provision of facilities for the standing, movement, parking, servicing, manoeuvring, loading or unloading of vehicles;

the provision of public access, open space, landscaped space, tree planting or other treatment for the conservation, protection or enhancement of the environment;

the provision of facilities for the standing, movement, parking, servicing, manoeuvring, loading or unloading of vehicles;

the volume, nature and type of traffic generated by the development; (i) road patterns;

drainage;

the carrying out of earthworks;

the effects of development on patterns of wind, sunlight, daylight or shadows;

the provisions of services, facilities and amenities demanded by development;

the emission of pollution and means for its prevention or control or mitigation; and (o) such other matters as may be prescribed;”

The Clause relevant in this instance is:

(c) the character, location, siting, bulk, scale, size, height, density, design or external appearance of a building or work;

On this basis, it is my opinion that Clause 4.4 of the Botany Bay LEP 2013, although referred to as a local standard is a development standard and not a “prohibition” in respect of development, and one amenable to an objection under Clause 4.6. This would be consistent with Council’s intention.

Is compliance with the development standard unreasonable or unnecessary in the circumstances?

It is considered that strict compliance with FSR controls on the site is unreasonable and unnecessary for the following reasons:

Notwithstanding non-compliance with the numerical controls of the standard (Clause 4.4 of BBLEP) the proposal meets the objectives of the standard, as demonstrated in the SEE.

The variation to the FSR standard is consistent with the potential environmental impacts that may otherwise be reasonably expected by a complying development with regards to:

- the desired future character of the locality;
- the preservation of the residential amenity of surrounding developments having particular regard to overshadowing and privacy impact; and
- achieving general compliance with the other applicable planning controls.
- providing acceptable rear and front setbacks when compared with the prevailing setbacks and likely future setbacks in the area.

The consideration of solar access, overshadowing and visual privacy is addressed within the SEE and also denoted on the architectural plans and solar diagrams submitted in support of this application. The site faces Albert Street. The shadow affectation on properties east and west of the site is somewhat mitigated by the combination of the overall depth of the site and the reduced height of the dwellings resulting directly from the low pitch roof form. This effectively internalises the overshadowing impacts to within the parameters of the site and relatively minor additional overshadowing to adjoining properties as a result of the development. Similar impacts would occur from a complying development large, two storey single dwelling on the site.

Habitable room windows at the upper level are narrow awning style openings that do not promote overlooking from those low traffic areas but allow natural ventilation and light to the rooms.

The attached rear timber deck areas are buffered by the existing rear shed on one side and average domestic rear yard space on the other. Screens along the edge of the terraces are not added as there is not perceived privacy affectation in this case.

A development under the Exempt and Complying Development SEPP would permit a similar if not larger dwelling

Council has supported similar variations for low scale, low density residential development in the surrounding area. A search on Council's clause 4.6 register has revealed five (5) DA's since July 2017 supported by Council with FSR variations, some over 20%.

The above factors demonstrate that strict compliance with the BBLEP FSR standard is unreasonable and unnecessary in this circumstance.

Is it consistent with the objectives of the standard and objectives for the zone?

The objectives of the FSR standard are:

To establish standards for the maximum development density and intensity of land use.

To ensure that buildings are compatible with the bulk and scale of the existing and desired future character of the locality.

To maintain an appropriate visual relationship between new development and the existing character of areas or locations that are not undergoing, and are not likely to undergo, a substantial transformation.

To ensure that buildings do not adversely affect the streetscape, skyline or landscape when viewed from adjoining roads and other public places such as parks, and community facilities.

To minimise adverse environmental effects on the use or enjoyment of adjoining properties and the public domain.

To provide an appropriate correlation between the size of a site and the extent of any development on that site.

To facilitate development that contributes to the economic growth of Botany Bay.

Response:

the bulk and scale of the building, whilst more extensive than that of the immediately adjoining dwellings, is consistent with that of other semi-detached developments in the LGA and provides a characteristic form and streetscape;

the development does not detract from the character of the local area. In order for the development to be compatible it does not necessarily need to be the same;

the development does not impact upon the visual relationship between adjoining buildings and has been designed to limit the height of the building to retain a consistent roof line along Albert Street;

the proposal incorporates a modern and contemporary design which will add innovation and visual interest to the streetscape, similar to other recent semi-detached developments in the immediate area;

the design of the proposal including its provided setbacks, limited roof form and materials has had regard to the potential adverse impacts on adjoining neighbours and has sought to mitigate impacts of overshadowing and privacy;

there are no additional adverse impacts that stem directly from the FSR departure;

it is considered that an appropriate correlation between the size of the site and the size of the proposed development has been achieved particularly if one is to consider the housing shortage in Sydney at present (demand outstrips supply causing rising rental prices);

the redevelopment of the site for the purposes of a new architecturally designed building represents the orderly economic development of the site which ultimately contributes to the broader economic growth of the locality.

The objectives of the R2 zone are:

To provide for the housing needs of the community within a low density residential environment.

To enable other land uses that provide facilities or services to meet the day to day needs of residents.

To encourage development that promotes walking and cycling.

Response:

As addressed previously, it is considered that the development satisfies the objectives of the R2 zone. The development provides additional housing in the form of two separately titled residential dwellings to accommodate the future housing needs of the community within a low density environment. The scale, bulk and height of the development does not detract from the existing one-two storey character of dwellings in the area and has done everything to limit the extent of potential environmental impacts to adjoining properties.

Conclusion

The proposed use is aligned with Council's, and the wider community's, objectives and demands for creating appropriately located accommodation. This is clear from the above consideration of planning policies that apply to the land, and from the above consideration of potential impacts.

The development will achieve its objective of providing additional accommodation opportunities for the area. The proposed development satisfies the guidelines of the Act through providing an efficient land use, and makes orderly and efficient usage of existing infrastructure within the locality. Moreover, there are no significant adverse impacts on the 'public goods' such as air quality, noise, views and amenity.

The proposal is considered to be a suitable development for the site on which it is proposed and meets the relevant heads of consideration under Section 79(c) of the Act.

It is considered that the development will have no adverse environmental effects and has been designed to be cohesive with the characteristics of the site and the locality. The social and economic consequences on the locality are considered to be positive.

The variation to the FSR development standard is considered to be well founded and strict application of the 0.61:1 control is unnecessary in the circumstances of the case. The development is entirely consistent with the FSR objectives and the R2 zone. The proposal represents a modest increase in the residential density without detracting from the established low density, one-two storey character of dwellings in the area.

All potentially negative impacts arising from the development have been sufficiently considered during the design phases.

As the above submission demonstrates that:

compliance with the development standard are unreasonable or unnecessary in the circumstances of the case; and

there are sufficient environmental planning grounds to justify contravening the development standard; and

the matters required to be demonstrated by 4.6(3) have been addressed;

the proposed development will be in the public interest because it is consistent with the objectives of the particular standard and the objectives for development within the zone in which the development is proposed to be carried out,

The variation to the standard is worthy of support, which is fundamental to the approval of the development application.

In summation, the development proposed is in the interest of both Council and the broader public, and it will provide significant benefits within the locality over the long term.

The proposal is recommended for this site and is considered positive and Council is requested to approve the application.

David De Chiara (BARCH)

Bayside Local Planning Panel

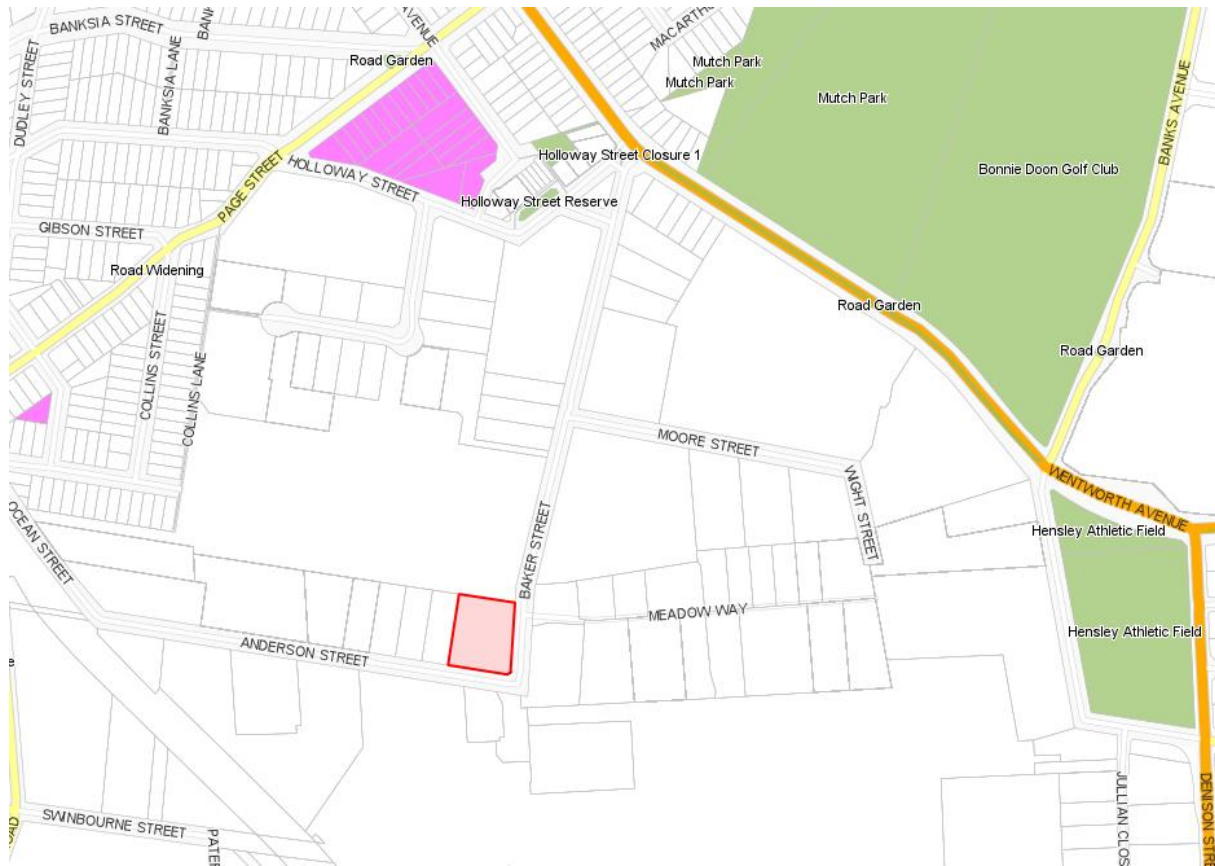
28/05/2019

Item No	6.2
Application Type	Development Application
Application No	DA-17/1249
Lodgement Date	21/12/2017
Property	1 Baker Street, Banksmeadow
Ward	Port Botany
Owner	Boral Resources NSW Pty Ltd
Applicant	Boral Resources NSW Pty Ltd
Proposal	Designated and Integrated Development - Expansion of the existing concrete batching plant through the construction of additional infrastructure at the Botany Concrete Batching Plant to increase production from 90,000m ³ to a maximum capacity of 200,000m ³ of concrete product (500,000 tonnes per annum).
No. of Submissions	Seventeen (17)
Cost of Development	\$5,700,000.00
Report by	Michael McCabe, Director City Futures

Officer Recommendation

- 1 That the Bayside Local Planning Panel approve Development Application 2017/1249 for Designated and Integrated Development - Expansion of the existing concrete batching plant through the construction of additional infrastructure at the Botany Concrete Batching Plant to increase production from 90,000m³ to a maximum capacity of 200,000m³ of concrete product (500,000 tonnes per annum) and subject to the conditions of consent attached to this report.
 - 2 That any objectors be notified of the determination made by the Bayside Local Planning Panel.
-

Location Plan



Attachments

- 1 Supplementary Assessment Report [↓](#)
- 2 Plans [↓](#)
- 3 Air Quality Response to Submissions [↓](#)
- 4 Planning Report to Bayside Local Planning Panel Meeting 18 December 2018 [↓](#)

BAYSIDE COUNCIL

Supplementary Planning Assessment Report

Application Details

Application Number:	2017/1249
Date of Receipt:	21 December 2017
Property:	1 Baker Street, Banksmeadow Lot: 1 DP: 602703
Owners:	Boral Resources NSW Pty Ltd
Applicant:	Boral Resources NSW Pty Ltd
Proposal:	Designated and Integrated Development - Expansion of the existing Concrete Batching plant through the construction of additional infrastructure at the Botany Concrete Batching Plant to increase production from 90,000m ³ to a maximum capacity of 200,000 m ³ of concrete product (500,000 tonnes per annum).
Recommendation:	Approve the development, subject to conditions.
No. of submissions:	Seventeen (17)
Author:	Lincoln Lawler, Senior Development Assessment Planner
Date of Report:	3 May 2019

Key Issues

On 18 December 2018, the subject Application was referred to the Bayside Local Planning Panel (BPP) for determination. The report recommended that the application be refused. The reasons for refusal largely revolved around the two issues of Traffic and Air Quality.

At the meeting of 18 December 2018 the Panel resolved as follows:

"That this item be deferred for the following reasons:

- 1. To allow the Council to facilitate peer reviews of the traffic and air quality reports.*
- 2. To allow the applicant an opportunity for further discussion with Council's planning staff in relation to the matters raised in the draft reasons for refusal.*
- 3. To allow the applicant an opportunity to address in more detail the objectives and provisions of the Three Ports SEPP.*
- 4. To allow more precise information to be provided in respect to the timing of the signalisation of the intersection of Baker and Wentworth Streets."*

This Supplementary report provides a response to the above reasons for deferral and consideration of additional information provided by the applicant to address the issues raised by the Panel.

Meetings were held with the applicant and Council staff and their respective experts to discuss the issues.

Amended Application

The applicant has formally amended the application and agreed to restrict the concrete plant volumes to current approved volumes (90,000m³ pa), until such time as the 2 intersections (Page Street/ Wentworth Ave and Baker Street/Wentworth Ave) are upgraded. After this time, the plant would increase to a maximum capacity of 200,000m³ of concrete product (500,000 tonnes per annum). Boral are pursuing this approach as the existing plant is old and there are safety issues for the business to address on top of the desire to increase production volumes.

Air Quality

Discussions were held between Council's Expert and the applicant in regards to air quality. The issues around the background data were resolved due to the change in measurement systems used to capture background data. This was agreed by both experts.

The PM_{2.5} issue was addressed through Boral providing more detail on the mitigation measures proposed to reduce impacts on air quality. Particular emphasis was focused around material handling on the site where dust filters can be used to achieve appropriate outcomes. The applicants Air Quality expert has advised that dust filters will provide at least a 90% mitigation measure for air quality. The mitigation measure will be as per AP42 Emission Factor.

The applicant was requested to provide a simple explanation of what AP 42 Emission Factor is. The applicant advised on 1 May 2015 the following:

AP-42, Compilation of Air Pollutant Emission Factors, has been published since 1972 as the primary compilation of EPA's emission factor information.

It contains emissions factors and process information for more than 200 air pollution source categories.

A source category is a specific industry sector or group of similar emitting sources.

The emissions factors have been developed and compiled from source test data, material balance studies, and engineering estimates. The Fifth Edition of AP-42 was published in January 1995. Since then EPA has published supplements and updates to the fifteen chapters available in Volume I, Stationary Point and Area Sources.

Council in response to this and for consistency with the recent approval at 2 Anderson Street, Banksmeadow will recommended conditions for a dust management plan which will include the following:

Within 6 months of commencement of operations, independent proof of performance monitoring of the fine particle, including PM_{2.5} emissions, from these silo will be performed by a suitably qualified and experienced independent NATA accredited testing authority. Measures should also be included to demonstrate review measures that are to be implemented in the event that emissions which fail to meet EPA requirements or the requirements of these conditions of consent occur. Maintenance of records or monitoring for a period of at least 5 years and provision to Council on request.

All emissions and the cumulative ground level impact of those emissions shall not exceed those levels specified in the National Environment Protection Measure (Ambient Air) and the Approved Methods for Modelling and Assessment of Air Pollutants in New South Wales (2016).

The applicant is to provide all necessary construction details including manufacturer's specifications of the provision and construction of a high efficiency fabric filter particle collector to be installed on each silo. These collectors will provide 100 % collection efficiency of particles less than 2.5 micron EAD and greater than 1.0 micron EAD. The manufacturer's specification will include type of fabric and configuration of coating or membrane, air to cloth ratio or filtration velocity, filter area, pressure drop, fabric cleaning pulse pressure, pulse rate and warrant the collection efficiency.

The applicant has also provide a comprehensive response to submitters concerns in particular around health impacts. This is attached in **Attachment B**.

It is noted that Council, specifically requested NSW EPA to review the applicant's air quality report previously and their recommended conditions are also included.

Accordingly subject to the imposition of conditions outlined and made reference to above, the Air Quality issue is considered resolved.

Traffic

Council commissioned a peer review of Boral's Traffic Report. The traffic report has looked at traffic growth at the year 2024 under various scenarios and has included signalised and unsignalised scenarios and with development and no development.

Other developments that have been approved and would be operational including Orica development, Bunnings, the Former British American Tobacco Site, 13-19 Baker Street and 2 Baker Street.

The level of service for all scenarios is Level F in the AM peak is as follows:

Baker and Wentworth Intersection Am Peak

Year	Scenario	Average Delay
2024	Unsignalised with no development	210 seconds
2024	Unsignalised development with	510 seconds
2024	signalised with no development	110 seconds
2024	Signalised with development	140 seconds

As can be seen, a result from the development under signalised operation of the intersection at its maximum capacity is an additional 30 second delay.

Baker and Wentworth Intersection PM Peak

Year	Scenario	Average Delay
2024	Unsignalised with no development	350 seconds
2024	Unsignalised development with	940 seconds
2024	signalised with no development	200 seconds
2024	Signalised with development	220 seconds

Table 4 within the Peer Review has also modelled the impact on the Page Street intersection

This shows that at most the development adds a 30 second additional delay in the AM Peak with no change to the PM Peak.

The two intersections were modelled as given their proximity to each other, what happens in one can impact on the other.

All of this modelling was undertaken on the basis that clearways are not installed on Wentworth Avenue. It is noted that if clearways are installed, significant improvement in traffic flow and relative level of service at each of the intersections will improve.

The recommended conditions of consent include the limitation of production capacity (to existing levels) and associated truck movements until the traffic lights are installed at the intersection of Baker Street and Wentworth Ave and the upgrade of intersection of Page Street and Wentworth Ave has occurred.

The additional information provided has been reviewed and the application is recommended for approval subject to amended conditions of consent attached to this supplementary report.

Recommendation

It is RECOMMENDED:

1. That the Bayside Local Planning Panel approve Development Application 2017/1249 for Designated and Integrated Development - Expansion of the existing Concrete Batching plant through the construction of additional infrastructure at the Botany Concrete Batching Plant to increase production from 90,000m³ to a maximum capacity of 200,000m³ of concrete product (500,000 tonnes per annum).
2. That any objectors be notified of the determination made by the Planning Panel.

Assessment of the Panel's deferment

The Panel resolved to defer the item for the following 4 reasons:

1. To allow the Council to facilitate peer reviews of the traffic and air quality reports.

Comment: The peer reviews have been completed and the issues discussed above and later in the 'Statutory Considerations' section of this supplementary report. Subject to the peer reviews and amendment to the application, the proposal is found to be acceptable.

2. To allow the applicant an opportunity for further discussion with Council's planning staff in relation to the matters raised in the draft reasons for refusal.

Comment: The applicant has had dialogue with Council officers around the draft reasons for refusal. The reasons for refusal largely revolved around the two issues of Traffic and Air Quality. These matters have been the focus of peer reviews and, subject to the amended application which restricts capacity of production to existing levels until the intersection has been signalised, have been adequately resolved. Refer also to the 'Statutory Considerations' section of this supplementary report.

3. To allow the applicant an opportunity to address in more detail the objectives and provisions of the Three Ports SEPP.

Comment: The applicant has provided the following response:

"The use of the site as a concrete batching plant is not a matter for contention in this application. The site has operated for this purpose since 1971 and will continue to operate for this purpose notwithstanding the outcome of the current DA.

The subject of the current DA is the intensification of the site's existing use. It is put to the panel that this intensification is consistent with the aims of the Three Port SEPP for the following reasons:

- Boral has found an efficient way to redevelop the existing site, improving its operational capacity whilst not impacting the use of other sites within the precinct for port purposes.*
- In doing so, Boral has avoided the need to expand of the existing concrete batching facility into other sites throughout the precinct, allowing these other sites to be utilised for port related purposes".*

4. To allow more precise information to be provided in respect to the timing of the signalisation of the intersection of Baker and Wentworth Streets.

Comment: Council's Major Projects team have responded as follows to the question above.

"Funding is just one of the uncertainties in relation to the Wentworth Ave Intersections We received advice from the RMS on 24th April that they had no intention of funding the shortfall and we have received no response in respect to Cycleway funding.

The 80% design was submitted to RMS 4 weeks ago and we have received no feedback.

The General Manager has advised Major Projects to complete the design of both intersections and tender the works in separable portions.

The intention is to award a contract for one intersection only (presumably Baker Street).

We are not confident that RMS will permit the projects to be separated. They contend that both Page and Baker require upgrading to address congestion in Wentworth Ave

RMS would not allow us to submit the designs in separable portions."

Statutory Considerations

An assessment of the amended application has been carried out under the provisions of Section 4.15 of the Environmental Planning and Assessment Act, 1979. The matters of relevance to this application have been considered, noting that the supplementary report should be read in conjunction with the report to the Panel dated 18 December 2018.

S.4.15(1) - Matters for Consideration – General**S.4.15(1)(a)(i) - Provisions of Environmental Planning Instruments**

The following Environmental Planning Instruments are relevant to this amended application:

State Environmental Planning Policy – Three Ports 2013 (SEPP 3 Ports)

Principal Provisions of SEPP (Three Ports) 2013	Compliance Yes/No	Comment
Does the proposed use/works meet the objectives of the zone?	Yes –	<p>The proposed development is consistent with the objectives of the IN1 – general industry zone which are as follows:</p> <ul style="list-style-type: none"> • To provide a wide range of industrial and warehouse land uses. • To encourage employment opportunities. • To minimise any adverse effect of industry on other land uses. • To facilitate and encourage port related industries that will contribute to the growth and diversification of trade through the port. • To enable development for the purposes of business premises or office premises associated with, and ancillary to, port facilities or industries. • To encourage ecologically sustainable development. <p>Comment: The applicant has advised</p> <ul style="list-style-type: none"> • <i>Boral has found an efficient way to redevelop the existing site, improving its operational capacity whilst not impacting the use of other sites within the precinct for port purposes.</i> • <i>In doing so, Boral has avoided the need to expand of the existing concrete batching facility into other sites throughout the precinct, allowing these other sites to be utilised for port related purposes.</i> <p>The applicant has addressed the issue of air quality through specific mitigation measures as discussed above, which in conjunction with conditions of the dust management plan requirement will ensure that that impacts are minimal. Further the traffic impacts are addressed through the</p>

Principal Provisions of SEPP (Three Ports) 2013	Compliance Yes/No	Comment
		<p>staged increase in production to align to the upgrades of the two intersections. In summary, the air quality will be improved from the existing situation given the age of the existing plant, this aligns with the principles of ecologically sustainable development. The eventual expansion of the plant capacity will encourage employment opportunities.</p> <p>The proposed concrete batching plant by Boral has been identified in the applicants EIS (Pg 56) as <i>"not specifically a port-related development, it is considered that the concrete plant is a beneficial development within Port Botany as it provides an opportunity for local and cost-effective supply of concrete products for the development of various port related infrastructure if required. The position of the site is located a sufficient buffer from prime port-related land uses and as such the development would not obstruct or impede a future port-related development."</i> (emphasis added)</p>

S.4.15(1)(a)(ii) - Provisions of any Draft EPI's

There are no current Draft EPIs applicable to this development

S4.15(1)(a)(iii) - Provisions of any Development Control Plan

Development Control Plan 33

This Development Control plan is still in force as it applies to the Three Ports SEPP land

Relevant Objectives of the DCP

O4 To improve the environmental and aesthetic amenity of industrial areas for those who visit and/or work in the areas.

O5 To encourage the development of cleaner, well-landscaped industrial zoned areas with well maintained industrial/commercial buildings and sites.

O7 To ensure that development incorporates safe, effective and convenient provision for servicing, parking, pedestrian and vehicular access and movements.

O12 To encourage ecologically sustainable development.

Comment: The proposed development is consistent with objective O4 and O12 through the improvement in air quality through the upgrade in plant at the site using improved technologies and achievement of appropriate air quality impacts through a through dust management plan achieved through a recommended condition of consent.

P5 The need for a compatible and workable relationship between industrial and non-industrial uses.

Local road networks within the City are not to be adversely effected as a result of the operations of an industrial or commercial use.

Comment: The road network is proposed to be adversely affected by the development however the extent of the effect is described above. The impact will be delayed until such time as the regional road network is able to be upgraded to accommodate the additional movements.

Objectives for Banksmeadow industrial Precinct

O7 To ensure that any risk to human health, property or the natural environment arising from the operation of the development is minimised and addressed.

Comment: The proposed development has demonstrated how the risk to human health and natural environment have been minimized or addressed, in particular the applicant's air quality expert has provided a comprehensive response to submitters concerns and is attached. Further NSW EPA and Council have recommended a range of conditions to ensure the environment is protected.

C6 Development is not to adversely impact on the surrounding established residential areas through noise, traffic, pollution and risk.

Comment: Throughout the assessment contained in the report it is demonstrated that there are likely adverse impacts arising from the development, however the information now supplied to Council has demonstrated that the air quality will be improved through the removal of the existing aged plant and the delay in any impact through the increased production until the regional road network can accommodate the impacts.

Botany Bay Development Control Plan 2013

Botany Bay Development Control Plan 2013 (BBDCP 2013) does not apply to land subject to the SEPP (Three Ports) 2013.

A detailed assessment against Council's DCP would not ordinarily be required in this case as the DCP does not apply. However, Council has consistently used the DCP controls as a guide to development in this locality. The following matters have been considered in order to determine the merits of this application without strict application of the development controls.

Notwithstanding the above, an assessment of the proposal in terms of its permissibility and future impact under BBDCP 2013 is provided as a guide below:

Control	Requirement	Proposed	Complies
Part 3 General Provisions			
3A.2 Car Parking	General: Table 1 provides that office premises are required to provide 1 space per 40m ² of GFA.	The GFA of the office/admin building is approximately 160 m ² . The proposed parking spaces meet this requirement of 4 spaces.	Yes

Control	Requirement	Proposed	Complies
	<p>Bicycle Parking:</p> <p>C7 In every new building, where the floor space exceeds 600m² GFA (except for houses and multi unit housing) bicycle parking equivalent to 10% of the required car spaces or part therefore as required in Table 1 shall be provided.</p>	As the proposal is for alterations to the existing building and not a new building, there is no requirement to provide bicycle parking.	N/A
3A.3.1 Car Park Design	<p>General:</p> <p>C1 All off-street parking facilities shall be designed in accordance with current Australian Standards AS2890.1 and AS2890.6 (for people with disabilities).</p>	A Traffic and Parking Report was submitted with the application which addresses compliance with the standards relating to the car park design.	Yes
	<p>Location:</p> <p>C10 Off-street parking facilities are not permitted within the front setbacks.</p> <p>C11 Car parks must provide a direct and safe access to a building's entry and exit (well lit and free of concealment opportunities).</p> <p>C12 Off-street parking facilities must not dominate the streetscape and are to be located away from the primary frontages of the site.</p>	<p>The location of the car parking spaces at the site are located within the front setbacks and side setback.</p> <p>This is in areas where trucks have been parking, however it is unclear whether this has been previously regularised or not.</p> <p>The applicant has advised that "<i>Parking spaces would be required along the site boundary fronting Baker Street. Parking is required along the perimeter due to operational logistics and safety requirements. Despite location of parking spaces along the primary frontage of the site, parking would not dominate the streetscape given the industrial setting of the locality, existing trees that will be retained and proposed landscape planting.</i>"</p>	No but given the size of the site, appropriate screening can be achieved as indicated by the applicant.

Control	Requirement	Proposed	Complies
	<p>Access:</p> <p>C13 Pedestrian entrances and exits shall be separated from vehicular access paths.</p> <p>C14 A maximum of one vehicle access point is permitted per property. Council may consider additional vehicle access points for large scale developments.</p>	<p>All vehicular access to the site has been designed to ensure all vehicles enter and exit the site in a forward direction. Formalised pedestrian networks are not located on this side of the Baker or Anderson Street.</p> <p>Pedestrian access is separated from vehicular access.</p> <p>The existing development is provided with existing vehicular access via two crossings to Baker Street and one access way to Anderson Street.</p>	Yes
	<p>At-Grade Parking:</p> <p>C25 At-grade parking shall be avoided for large scale residential and commercial development.</p>	<p>All parking is at grade with minimal screening proposed.</p>	Yes
	<p>Non-Residential:</p> <p>C29 Car parking areas shall be adequately finished with fully sealed surfaces, internal drainage systems, line markings, appropriate kerbing, paved aisle dividers and/or wheel stops.</p> <p>Pavement:</p> <p>C32 All off-street parking areas and internal circulation roadways shall be sealed with hard-standing all weather materials or approved alternatives to Council's satisfaction.</p>	<p>All parking and manoeuvring areas will be sealed and finished in accordance with Council requirements. Relevant conditions are proposed.</p>	Yes – achievable.

Control	Requirement	Proposed	Complies
	Lighting: C34 Adequate lighting shall be provided if the parking facility is expected to be used at night. Design of lighting shall be in accordance with relevant Australian Standards and be consistent with the relevant requirements to allow drivers to manoeuvre vehicles safely into and out of parking spaces.	No detail has been provided to ensure lighting will be provided in accordance with the relevant Australian Standards.	No, however this is to be conditioned.
	Accessible parking: C35 Accessible parking spaces for people with disabilities shall be designed in accordance with AS2890.6.	The applicant has advised that they won't provide any.	No –however an accessible space will be provided through a condition of consent.
	Waste Collection Points: C40 The waste collection point shall be designed to: (i) Allow waste loading operations to occur on a level surface away from parking areas, turning areas, aisles, internal roadways and ramps; and (ii) Provide sufficient side and vertical clearance to allow the lifting arc for automated bin lifters to remain clear of any walls or ceilings and all service ducts, pipes and the like.	No detail provided – however a waste management plan will be required through a condition of consent. Given the site is able to accommodate B Double truck movements, A garbage truck will be able to manoeuvre on site.	No – however achieved through a condition.

Control	Requirement	Proposed	Complies
3A.3.3 Traffic and Transport Plans and Reports	<p>C1 A Traffic and Parking Impact Assessment Report shall be provided for development:</p> <p>(i) Listed in Schedule 3 of State Environmental Planning Policy (Infrastructure) 2007; and</p> <p>(ii) Where, in the opinion of Council, the proposed development is likely to generate significant traffic and/or parking demand or land use.</p> <p>C2 The Traffic and Parking Impact Assessment Report shall be prepared by a qualified and experienced traffic engineer.</p>	<p>A Traffic and Parking Report prepared accompanies the application which addresses compliance with the car parking requirements and standards relating to the car park design,</p>	<p>Traffic report provided</p> <p>Refer to discussions above.</p>
3A.3.4 On Site Loading and Unloading	<p>C2 - The number of service bays shall be provided in accordance with Table 2. Where calculated provision of servicing bays numbers results in a fraction, the requirements shall be rounded up to the nearest whole number.</p>	<p>The nature of the development inherently relates to loading and unloading.</p> <p>The rearrangement of the site facilities will allow for better handling of the operation. Notwithstanding this, appropriate conditions of consent will be recommended to ensure that there will be no waiting on Baker Street causing safety concerns.</p>	<p>Traffic report provided</p> <p>Refer to discussions above.</p>
3C Access and Mobility	<p>Commercial and industrial developments:</p>	<p>The applicant categorically states in their EIS(Pg 68)</p> <p><i>"It is not possible for Boral to employ a person with a</i></p>	<p>No – as an access report has not confirmed the development is exempt in</p>

Control	Requirement	Proposed	Complies
	<p>A Statement of consistency is to be lodged with the DA.</p> <p>Appropriate access to and within all areas normally used by the occupants, designed in accordance with the BCA and relevant Australian Standards.</p> <p>General access for all persons to appropriate sanitary facilities and other common facilities including kitchens, lunch room, shower facilities, indoor and outdoor recreational facilities.</p> <p>In a vehicle parking area containing 6-49 vehicle spaces, one accessible vehicle space, designed in accordance with relevant Australian Standards will be provided.</p>	<p><i>disability at the site due to the industrial nature of the workplace and relevant operational logistics and workplace health and safety requirements. Therefore no accessible vehicle space will be provided.</i></p> <p><i>This justification forms the statement of consistency required by Table 1.</i></p> <p><i>Appropriate access to and within areas normally used by personnel with access arrangements (i.e. the proposed administration building), would be designed in accordance with the Building Code of Australia and relevant Australian Standards.</i></p> <p><i>General access would be provided for all persons to appropriate sanitary facilities and other common facilities including kitchens, lunch room, and amenity facilities."</i></p>	<p>accordance with D3.4 of BCA/NCC vol.1</p> <p>Condition 24 requires the provision of a disabled space or an access report stating that one is not required, subject to the approval of the Principal Certifying Authority.</p>
3D Signage	Not applicable.	No signage is proposed as part of this application	Not Applicable
3G Stormwater Management	<p>Stormwater Management:</p> <p>Stormwater runoff generated from the development site shall be collected and discharged in accordance with Council's Part 10 – Stormwater Management Technical Guidelines.</p>	<p>Water reuse initiatives have been incorporated into the design of the Project. Stormwater and process water is reused in the concrete batching process wherever feasible and discharge to Council's stormwater network would only occur in extreme rainfall events where the capacity of the stormwater management system is exceeded.</p>	<p>Yes</p> <p>On site detention is not feasible due to flooding extent, Site benefits from existing recycle/reuse of stormwater and no increase of impervious area (site is completely sealed).</p> <p>No changes proposed to existing stormwater collection system.</p>

Control	Requirement	Proposed	Complies
3H Sustainable Design	To ensure commercial and industrial development incorporates ecologically sustainable design principles.	No opportunities exist on this Project. The proposed administration building must be positioned in order to ensure operational logistics of the concrete plant are maintained.	Not Applicable
3I Crime Prevention, Safety and Security	The building is to be designed in accordance with CPTED principles.	The proposed development provides opportunities for natural surveillance to the surrounding streets. The entries to the development will be appropriately lit at night to enhance safety, visibility and legibility. Effective access control has been achieved through the provision of physical barriers to attract, channel and/or restrict the movement of people within the development. The internal areas within the development such as the entrances and lobbies will be well used.	Yes
3J Aircraft Noise & OLS	In certain circumstances and subject to Council's discretion, Council may grant consent to development where the building site has been classified as "conditional" or "unacceptable" under Table 2.1 of AS2021-2000 Pursuant to Part 3J.3 of the DCP if a building is located within a specific area identified on the OLS map or seeks to exceed the height limit specified in the map the application must be referred to Civil Aviation Safety Authority and Air	The site is located outside of the 20-25 contour on the Aircraft Noise Exposure Forecast (ANEF) chart, as such there is no further assessment required in regards to the Australian Standard AS 2021 for aircraft noise As the site is within the area identified on the OLS map and the building exceeds 15.24 metres, Council is required to refer the application to the Sydney Airport for assessment. Sydney Airport have provided their approval to the proposed development.	Yes – Condition of consent

Control	Requirement	Proposed	Complies
	services Australia for assessment.		
3K Contamination	Contamination of the site is to be investigated in accordance with SEPP 55 and the Managing Land Contamination: Planning Guidelines.	A full assessment of potential contamination has been undertaken – Refer to SEPP 55 discussion	Yes
3L Landscaping and Tree Management	A Landscape Plan is to be prepared. A deep soil zone is required for all developments within boundary setbacks, communal and private open space and green corridors. A minimum of 80% of a planting scheme is to consist of native plants.	A landscape Plan has been prepared for the project by a landscape architect. Given existing concrete hardstand at the site is to be maintained along most boundary setbacks, limited opportunities for provision of landscaping exists for the Project. Where landscaping is to be implemented at the site, shrubs would be planted at densities suitable for the nominated species. The plan has taken into consideration the requirements detailed within the BBDCP.	Yes – Landscape plan provided. The intensification of the site with no attempt to soften the impact through landscaping is less desirable than providing limited screening to the edges of the site. This can be achieved through additional conditions of consent.
3N Waste Minimisation and Management	Demolition, construction and ongoing waste is to be minimised. A Site Waste Minimisation Plan is to be submitted for all development applications.	If required, a site waste minimisation and management plan would be prepared and submitted to Council prior to construction of the Project.	No – Able to comply through condition of consent

6.3 General Provisions

6.3.12 Noise and Hours of Operation	To ensure appropriate noise attenuation measures are incorporated into	The site is located in an industrial area proposed to operate 24/7 all year round. The noise report submitted with the application is	Yes
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	building design and site layout.	considered to have addressed the relevant criteria	
6.3.13 Waste	Development must comply with Part 3N - Waste Management and Minimisation. Sufficient space shall be provided for on-site separation and storage of recyclables and garbage.	A Waste Management Plan has not been submitted with the application however waste management has been addressed within the EIS.	Yes
6.3.14 Environmental Protection	To ensure that development takes account of and minimises any adverse effects upon the environment. To limit the potential for noise, air (including odour), ground water, soil and surface water pollution	The proposed expansion has the potential to generate air pollution where the peak production of fine particulate matter has been identified. It is noted that the air quality data presented has now satisfied Council's concerns and through upgraded plant and appropriate conditions air quality will be improved at the site. Further, the EPA confirmed in their letter to Council dated 29 November 2018 that the development requires an environmental protection licence as described previously in the report. This will be met through a condition of consent.	Yes
6.3.15 Risk	To ensure that any risk to human health, property or the natural environment arising from the operation of the development is minimised and addressed.	The use will involve the hazardous substance of Portland Cement and Crystalline silica. The applicants air quality expert has provided a detailed response to the submitters concerns. The air quality report has demonstrated how the increase in PM 2.5 is acceptable in terms of health impacts and these impacts will be mitigated through the implementation of specific mitigation measures achieved through a comprehensive dust management plan for the site.	Yes

S.4.15(1)(a)(iv) - Provisions of regulations

The proposed development is not inconsistent with the relevant provisions of the *Environmental Planning and Assessment Regulation 2000*.

S.4.15(1)(b) - Likely Impacts of Development

As outlined in the assessment above, the proposed development will have acceptable adverse environmental, social and economic impacts in the locality. The issue of air quality will see an improvement and modernisation of the plant with dust mitigation measures required through a dust management plan. It is noted that a significant mitigation measure proposed by the applicant is that of dust filters utilised through the material handling process.

The dust management plan will address numerous aspects of air quality but specifically will address the following:

- The issue of baseline data is further addressed through the inclusion of the monitoring after operation commences condition.

Within 6 months of commencement of operations, independent proof of performance monitoring of the fine particle, including PM_{2.5} emissions, from the silos will be performed by a suitably qualified and experienced independent NATA accredited testing authority. Measures should also be included to demonstrate review measures that are to be implemented in the event that emissions which fail to meet EPA requirements or the requirements of these conditions of consent occur. Maintenance of records or monitoring for a period of at least 5 years and provision to Council on request.

- Baseline impact deemed acceptable in the state of New South Wales and Australia any non-compliance with this will require remedial work from the applicant through the following condition.

All emissions and the cumulative ground level impact of those emissions shall not exceed those levels specified in the National Environment Protection Measure (Ambient Air) and the Approved Methods for Modelling and Assessment of Air Pollutants in New South Wales (2016).

- Specific dust mitigation measures consistently applied by Bayside Council.

The applicant is to provide all necessary construction details including manufacturer's specifications of the provision and construction of a high efficiency fabric filter particle collector to be installed on each silo. These collectors will provide 100 % collection efficiency of particles less than 2.5 micron EAD and greater than 1.0 micron EAD. The manufacturer's specification will include type of fabric and configuration of coating or membrane, air to cloth ratio or filtration velocity, filter area, pressure drop, fabric cleaning pulse pressure, pulse rate and warrant the collection efficiency.

S.4.15(1)(c) - Suitability of the site

The location of the site and truck access means all truck movements are concentrated through one intersection which is at capacity now as a give way and will be at capacity after signalisation. The peer review has indicated that even without the proposed development the

intersection will be at capacity. The applicant has amended the application to delay any expansion of the capacity of the plant until such time as two intersections of Baker/Wentworth and Page and Wentworth are upgraded. The largest delay expected at the most peak production at the peak time of the intersection is an additional 30 seconds which is considered the maximum additional delay for the intersection. Given this and the issue of air quality being improved from the current operation and that the propose development utilises the existing site, the site is considered suitable.

S.4.15(1)(d) - Public Submissions

The amended material has not been renotified. The submissions that are unrelated to traffic and air quality have been assessed in the original report. Air Quality has been further assessed and is considered acceptable.

The applicants detailed addressing of the submitters concerns (Attached) which has found that there will no health impacts as a result of the development and through a dust management plan, the air quality impacts are acceptable.

Traffic – The applicant will not increase capacity until the intersections are upgraded. Further at that stage clearways will most likely operate which will improve the level of service, however this has not been relied upon in this assessment. The traffic impacts are discussed above.

S.4.15(1)(e) - Public interest

It is considered that granting approval to the proposed development will not have significant impact on the public interest.

Section 7.12 – Development Contributions

The City of Botany Bay Section 94A Plan is applicable to the site, as such 1 percent of the value of works is the contribution required. Accordingly, at a cost of works of \$5,700,000.00. The resultant contribution is \$57,000.00

Therefore, the total additional contributions for the proposed modification is \$57,000.00.

Conclusion

Development Application No. 2017/1249 for expansion of the existing concrete batching plant to allow for 200,000 cubic metres (m3) or approximately 500,000 tonnes of pre-mixed concrete products per annum to be produced at 1 Baker Street, Banksmeadow has been assessed in accordance with the relevant requirements of the *Environmental Planning and Assessment Act 1979* and is recommended for **approval**.

An assessment against the relevant SEPP's and the BBDCP 2013 have been carried out, and peer reviews have been undertaken of the key issues of traffic and air quality in accordance with the Panels resolution of 18 December 2018. The proposal as amended to restrict capacity until the intersection upgrade works have been completed is found to be acceptable.

The submissions received as part of the re-notification of the latest round of plans have been considered and the issues raised have been addressed or are existing circumstances approved in the original DA.

Attachment**Schedule 1 – Conditions of Consent****PART B - GENERAL CONDITIONS**

- 1 The development is to be carried in accordance with the plans and documentation listed below, except where amended by other conditions of this consent:

Drawing No.	Author	Dated/Received
The Project (Site) - Figure 6	Element Environment	21 December 2017
The Project ((elevations) – Figure 7	Element Environment	21 December 2017
Transport Routes – Figure 9	Element Environment	21 December 2017
Environmental Impact Statement dated 16 March 2016	Element Environmental	21 December 2017
Traffic and Transport Impact Assessment dated 23 November 2017 Ref 16167r1 and supplementary report dated 14 August 2018	Transport and Urban Planning Pty Ltd	Various
Noise and vibration Impact Assessment dated November 2017	Wilkinson Murray	21 December 2017
Air Quality Assessment dated 30 November 2017 Job Number 16090607 and supplementary report dated 16 April 2019.	Todoroski Air Sciences Pty Ltd	Various.
Acid Sulfate Soil Management Plan dated June 2017	Environmental Compliance Services	21 December 2017
Surface Water, Groundwater and Flooding Assessment Report Ref 166532 Dated December 2017	Northrop	21 December 2017
Arboricultural Impact Assessment dated 6 November 2017, Revision 1	Urban Tree Management	21 December 2017
Landscape Plans	Mansfield Urban	21 December 2017

DA- SP – 03 titled landscape plan and SP 01 Site Analysis dated 7.12.17 issue A (2 Plans)		
Risk Assessment and Evaluation dated 15 December 2017	Arriscar	21 December 2017
Phase 1 Environmental Site Assessment	Environmental Compliance Services	21 December 2017
Phase 2 Environmental Site Assessment	Cleanaway Industrial Solutions	21 December 2017

No construction works (including excavation) shall be undertaken prior to the issue to the Construction Certificate.

- 2 This location lies within an area defined in schedules of the Civil Aviation (Buildings Control) Regulations which limit the height of structures to 15.24 metres above existing ground height (AEGH) without prior approval of the Civil Aviation Safety Authority.
The application sought approval for the PROPERTY DEVELOPMENT to a height of 35.0 metres Australian Height Datum (AHD).

In my capacity as Airfield Design Manager and an authorised person of the Civil Aviation Safety Authority (CASA) under Instrument Number: CASA 229/11, in this instance, I have no objection to the erection of this development to a maximum height of 27.0 metres AHD.

The approved height is inclusive of all lift over-runs, vents, chimneys, aerials, TV antennae, construction cranes etc.

Should you wish to exceed this height a new application must be submitted.

Should the height of any temporary structure and/or equipment be greater than 15.24 metres AEGH, a new approval must be sought in accordance with the Civil Aviation (Buildings Control) Regulations Statutory Rules 1988 No. 161.

Construction cranes may be required to operate at a height significantly higher than that of the proposed development and consequently, may not be approved under the Airports (Protection of Airspace) Regulations.

Sydney Airport advises that approval to operate construction equipment (ie cranes) should be obtained prior to any commitment to construct.

- 3 Development is to be carried out in accordance with the approved Operational Management Plan and its Annexures. Any amendments to the Operational Management Plan or its Annexures may only be made with the prior written approval of Council.
- 4 This Consent relates to land in Lot 1 DP 602703 and, as such, building works must not encroach on to adjoining lands or the adjoining public place.
- 5 This approval only permits the following maximum production capacity:

- (a) Unsignalised intersection of Baker Street and Wentworth Ave
- (i) a maximum production capacity of 90,000m³ of concrete per year, and
- (ii) a maximum vehicle movement of

	Type and Size of vehicles e.g. Class 6	Number of each type of vehicle	Vehicle movements per day e.g. In / Out = 2 trips
Employee (private)	1 Class 1 - Cars	13	13 x 2 = 26
	2		
	3		
	4		
Company	1 Class 4 - Agitator trucks	11	11 x 6 = 66
	2 Class 8 - Cement tankers		3 x 2 = 6
	3 Class 8 - Aggregate		12 x 2 = 24
	4		
	5		
	6		
	7		
Delivery / Courier / Container	1 Class 1 - Visitors		3 x 2 = 6
	2 Class 3 - deliveries		1 x 2 = 2
	3		
	4		
	5		
	6		
	7		

- (b) Signalised intersection of Baker Street and Wentworth Ave and upgrade of Page Street and Wentworth Ave.
- (i) A maximum production capacity of 200,000m³ of concrete per year
- (ii) a maximum truck movement (one way) as follows:

Truck type and number of loads	Proposed operations		
	Average per day	Peak per day	Peak per hour
Aggregate truck	50	94	12
Cement tanker	10	19	3
Agitator truck	133	250	33
Trucks transporting concrete waste	2	4	1

6

- (a) All building work must be carried out in accordance with the requirements of the Building Code of Australia;
- (b) The buildings prior to the use and occupation must contain Category 1 fire safety provisions; and
- (c) Pursuant to Clause 94 of the Environmental Planning and Assessment Regulations 2000, the whole of the site and buildings must be protected by

hydrant installations, the design and installation of which must satisfy AS2419.1 – 2005.

- 7 The consent given does not imply that works can commence until such time that:
- (a) Detailed plans and specifications of the building have been endorsed with a Construction Certificate by:
 - (i) The consent authority; or
 - (ii) An accredited certifier; and
 - (b) The person having the benefit of the development consent:
 - (i) Has appointed a principal certifying authority (**PCA**); and
 - (ii) Has notified the consent authority and the Council (if the Council is not the consent authority) of the appointment; and
 - (iii) The person having the benefit of the development consent has given at least 2 days notice to the council of the persons intention to commence the erection of the building.

CONDITIONS IMPOSED BY AN EXTERNAL AUTHORITY

- 8 The following conditions are imposed by Ausgrid:
- (a) Any work undertaken near Overhead Power lines needs to be done in accordance with WorkCover Document ISSC 23 "Working Near Overhead Power Lines" -Ausgrid Network Standards -Ausgrid Electrical Safety Rules;
 - (b) The location of underground cables by using Dial Before You Dig and comply with the requirements of Ausgrids Network Standard 156: Working Near or Around Underground Cables before any excavation works are undertaken;
 - (c) Existing Ausgrid easements, leases and/or right of way must be maintained at all times to ensure 24 hour access. No temporary or permanent alterations to this property tenure can occur without written approval from Ausgrid. For further details refer to Ausgrid's Network Standard 143.
 - (d) The developer is required to make a formal submission to Ausgrid by means of a duly completed Preliminary Enquiry and/ or Connection Application form, to allow Ausgrid to assess any impacts on its infrastructure and determine the electrical supply requirements for the development (eg. whether a substation is required on site).
 - (e) The developer is to ensure that the proposed works do not contravene Ausgrid's technical standards and statutory requirements, in regards to the safe and reliable operation of Ausgrid's network.
- 9 The following conditions are imposed by **Water NSW**:
- (a) A Water Supply Work Approval from WaterNSW must be obtained prior to commencing dewatering activity on the proposed site. Please complete an Application for approval for water supply works, and/or water use.
 - (b) An application for a Water Supply Works Approval will only be accepted upon receipt of supporting documentation, and payment of the applicable fee (see Application fees for New or amended Works and/or Use Approvals). The

information required for the processing of the water supply work application may include preparation of a dewatering management plan. Please refer to checklist attached.

- (c) If approved, the Approval will be issued for a period of up to 24 months to cover the dewatering requirements during the construction phase. It will include conditions to ensure that impacts are acceptable and that adequate monitoring and reporting procedures are carried out. The Approval will be issued subject to the proponent meeting requirements of other agencies and consent authorities. For example, an authorisation by either Sydney Water or the local Council, depending where the water will be discharged. If contaminants are likely, or are found to be present in groundwater, and are being discharged to stormwater, including high salinities, a discharge licence under the Protection of the Environment Operations Act 1997 (NSW) may also be required.
- (d) WaterNSW prefers "tanking" (ie. total water proofing below the seasonal high water table) of basement excavations, and avoids the ongoing extraction of groundwater after the initial construction phase. It is also advised to adopt measures to facilitate movement of groundwater post construction (eg. a drainage blanket behind the water-proof membrane).
- (e) If the basement is not "tanked", the proponent will require a Water Access Licence (WAL) and need to acquire groundwater entitlements equivalent to the yearly ongoing take of groundwater. Please note: Acquiring groundwater entitlements could be difficult, and may cause delay in project completion. If a WAL is required, please complete an Application for a new water access licence with a zero share component.

New South Wales – Environmental Protection Authority

10

Water Management

- (a) The proponent must implement erosion and sediment control measures to prevent pollution of waters in accordance with the Soils and Construction: Managing Urban Stormwater (2004) - 'the Blue Book'.
- (b) All stormwater quality management controls installed at the premises, during both construction and operation, must be inspected:
 - (i) regularly during normal construction hours
 - (ii) daily during rainfall events
 - (iii) within 24 hours of the cessation of a rainfall event causing run off to occur from the premises.
- (c) The proponent must keep written records of all observations and actions made in relation to the above inspections, including any works undertaken to repair and/or maintain stormwater management controls.

Noise and Vibration Impacts

- (d) All works and activities undertaken at the premises must be undertaken in a manner that will minimise noise and vibration impacts at sensitive receivers.
- (e) • Noise generated at the premises should not exceed the project specific noise goals defined in 'Table 5-3 — Project-Specific Amenity Criteria', 'Table 5-4 — Project-Specific Noise Limits' and 'Section 5.2 — Sleep Disturbance Criteria' of the Noise and Vibration Impact Assessment prepared by Wilkinson Murray Pty Limited (report number 16340, November 2017).

- (f) If noise emissions exceed the identified project specific noise goals, the proponent must investigate the cause of the exceedance and implement all reasonable and feasible measures to avoid a repeat of the exceedance.
- (g) A post-commissioning report produced by an independent organisation that is eligible for membership with the Association of Australian Acoustic Consultants must be provided to the NSW Environment Protection Authority within 3 months of the premises commencing operations, to validate that the site is operating within the established noise goals in the document titled Noise and Vibration Assessment, Wilkinson Murray Pty Limited (report number 16340, November 2017).

Air Quality

- (h) The proponent must not cause or permit the emission of any offensive odour from the premises
- (i) The premises must be maintained in a condition which minimises or prevents the emission of dust from the premises.
- (j) Activities that occur in or on the premises are to be carried out in a manner that minimises the generation of dust from the premises.
- (k) The proponent must prepare and implement an Air Quality Management Plan (AQMP), the AQMP must include, but is not limited to:
 - (l) Proactive and reactive management strategies;
- (m) A Site Specific benchmarking of best management practice particulate emission controls
 - (i) Key Performance indicators for emission controls;
 - (ii) Monitoring methods, including location, frequency and location;
 - (iii) Response mechanisms;
 - (iv) Responsibilities, and
 - (v) Record keeping and compliance.
- (n) An Environment Protection licence is required before the operation of the plant.

Dangerous Goods and Chemical Transport, Storage and Handling

- (o) The proponent must ensure that environmental risks associated with the storage, processing and handling of hazardous materials and dangerous goods are minimised. Storage and handling of any dangerous goods must be undertaken in accordance with the most the up-to-date version of The Storage and Handling of Dangerous Goods Code of Practice. The current version as at the date of this letter is 2005 and it can be viewed online at:
http://www.safework.nsw.gov.au/data/assets/pdf_file/0005/50729/storage-handling-dangerousgoods-1354.pdf
- (p) The type, quantity and location of all dangerous goods, chemicals and waste should be easily identified by site personnel, and included in relevant environmental management plans/documentation for the premises.
- (q) The proponent must develop and implement effective controls for the storage, processing and handling of materials at the premises. These controls should include operating and maintaining bunds or spill containment systems where necessary to minimise the risk of pollution from potential spills and leaks. Information on bunding and spill management can be found online at:

<http://www.epa.nsw.gov.au/mao/bundingspill.htm>

Management Plans and Record Keeping

- (r) All written records must be:
 - (i) in a legible form, or in a form that can readily be reduced to a legible form;
 - (ii) kept for at least 4 years after the monitoring or event to which they relate took place; and
 - (iii) produced in a legible form to any authorised officer of the EPA who asks to see them.
- (s) Prior to the commencement of any construction works, an appropriately qualified person must prepare a detailed Construction Environment Management Plan ("CEMP"), which includes, but is not necessarily limited to:
 - (i) dust (air quality) management strategy
 - (ii) procedures for validation of imported fill material and the proposed means of disposing overburden
 - (iii) waste and materials re-use on-site
 - (iv) community response and management procedure outlining the course of action to be undertaken following receipt of a complaint
 - (v) Chemical Handling and Dangerous Goods Management Plan
 - (vi) Pollution Incident Response Management Plan
 - (vii) Noise Management Plan

Roads and Maritime Services

11

- (a) A Construction Traffic Management Plan detailing construction vehicle routes, number of trucks, hours of operation, access arrangements and traffic control should be submitted to Council for approval prior to the issue of a Construction Certificate.
- (b) A Road Occupancy Licence (ROL) should be obtained from Transport Management Centre for any works that may impact on traffic flows on the state road network during construction activities. A ROL can be obtained through <https://myrta.com/oplinc2/pages/security/oplincLogin.jsf>
- (c) All works and signposting associated with the subject development shall be at no cost to Roads and Maritime.

CONDITIONS WHICH MUST BE SATISFIED PRIOR TO THE ISSUE OF ANY CONSTRUCTION CERTIFICATE

- 12 Prior to the issue of any Construction Certificate, the applicant shall provide an Operational Management Plan to the written satisfaction of Council's Manager Development Services to address the following matters:

- (A) Traffic Management Plan

The Traffic Management Plan is to include provisions to the effect that:

- (a) no trucks servicing the site are to be parked on the road. Employee vehicles are also to be parked on site.
- (b) allocating responsibility to the site manager to ensure that no trucks servicing the site will be parked on the road;
- (c) provision is to be made for any truck drivers collecting or delivering to the site that are not employees of Boral. Details to provided of:
 - (i) a provision in any contract with such drivers requiring each driver and contracting company to be bound by the Plan of Management;
 - (ii) a requirement for each driver to undergo site induction and read the Plan of Management and agree to comply with it before servicing the site;
 - (iii) disciplinary measures for contractor truck drivers where they do not meet the requirements of the Plan of Management or conditions of consent including termination of services for continual breaches;
- (d) provision for the relevant procedures under the dust management plan including water spraying of trucks carrying raw material to ensure dust emissions are avoided.
- (e) maintenance of site haulage and delivery records (section 5.2) for at least 5 years and provision for such records to be made available to Council on request.
- (f) the traffic management plan is to attach and incorporate the requirements of approved traffic report in Condition 1 and other relevant conditions of consent including maximum capacity and truck movements from the site.
- (g) the Truck Management Plan is to specify the maximum length and dimensions of the vehicles to be used. No vehicles are to exceed the dimensions specified as a B-Double vehicle with an overall length of 19.56mm.
- (h) The traffic management plan requires education to all staff and drivers on the maximum capacity and maximum truck movements permitted each day.
- (i) The Traffic Management Plan will require records of all truck movements to and from the site to be kept on a daily basis and shall be made immediately available to any Council officer upon request

(B) Operational Management Plan

The Operational Management Plan is to incorporate details of how buildings are to be maintained including details of how each building can be accessed for maintenance. The operational management plan must not be inconsistent and /or incorporate any requirement under any other management plan required by this consent.

(C) Noise Management Plan

The Noise Management Plan is to include:

- (a) incorporate a reference to the requirements of conditions 130 and 140 of these conditions;

- (b) Incorporate the maximum truck movement numbers
- (c) the noise levels are to comply with Council's night time levels of LAeq 40dB(A) when assessed on any residential property.
- (d) how restrictions will be imposed on the use of air braking or jake brakes at night time on site, on Anderson Street or Baker Street (including at the intersection with Wentworth Avenue).

(D) Dust Management Plan

The dust management plan is to address the following matters:

- (i) Details of the management of deliveries of raw material to the site including but not limited to the use of water sprays to ensure that there is no emission of airborne dust or fine particles from the delivery trucks or storage areas as a consequence of the delivery process.

Examples of detail required includes location of water sprays, frequency and time period of use, area of application, and collection of runoff. Provision is also to be made for the supervision of each delivery by staff on site to ensure that this occurs. Documentation of this is also to be included.

- (ii) Installation, monitoring and maintenance of a high efficiency fabric filter particle collection system to be installed on each silo and maintained for the life of the development. Details of the maintenance program including records of maintenance to be kept on site for at least 5 years. Such records are to be made available to Council upon written or oral request.
- (iii) Further detail is to be provided within the plan of management plan to ensure that it is tailored to the specific development, including a plan of the plant identifying locations for each of the dust management practices and performance metrics identified in the amended Air Quality Report dated 16 April 2019
- (iv) Within 6 months of commencement of operations, independent proof of performance monitoring of the fine particle, including PM_{2.5} emissions, from these silo will be performed by a suitably qualified and experienced independent NATA accredited testing authority. Measures should also be included to demonstrate review measures that are to be implemented in the event that emissions which fail to meet EPA requirements or the requirements of these conditions of consent occur. Maintenance of records or monitoring for a period of at least 5 years and provision to Council on request.

- (v) Further details as to how any dust will be prevented from being tracked on to any public road including but not limited to:
 - (i) details as to how the road surfaces on the site will be maintained and cleaned (frequency, responsibility and measures to be used);
 - (ii) a review mechanism to ensure that measures are amended and improved to Council's satisfaction in the event that any dust is tracked on to the road;
 - (iii) emergency procedures such as the sweeping of the public road in the event that dust is tracked from the site.
- (v) Further details as to how any dust will be prevented from being tracked on to any public road including but not limited to:
 - (i) details as to how the road surfaces on the site will be maintained and cleaned (frequency, responsibility and measures to be used);
 - (ii) a review mechanism to ensure that measures are amended and improved to Council's satisfaction in the event that any dust is tracked on to the road;
 - (iii) emergency procedures such as the sweeping of the public road in the event that dust is tracked from the site.
- (vi) Details of measures to be employed for the concrete recycling/ reclamation system so as to ensure that there is no resulting emission of dust or tracking of excess and waste products off site.
- (vii) DMP is to provide that the use of the premises shall not give rise to air impurities in contravention of the *Protection of the Environment Operations Act and Regulation (Clean Air)*. Waste gases and dusts released from the premises shall not cause a public nuisance nor be hazardous or harmful to human health or the environment.
- (viii) **Cumulative Impact of Air Emissions**
 All emissions and the cumulative ground level impact of those emissions shall not exceed those levels specified in the National Environment Protection Measure (Ambient Air) and the Approved Methods for Modelling and Assessment of Air Pollutants in New South Wales (2016).

- (ix) DMP is to outline potential sources of particulate emission from this proposed concrete batching works which include:
- Paved trafficked areas;
 - Stockpiles of sand and aggregate;
 - Overhead bins;
 - Conveyor belts and raw materials transfer;
 - Aggregate weigh bins;
 - Cement and fly-ash receivals, transfer and storage;
 - Silo over-fill protection and emergency shut-down;
 - Silo discharge to weigh hopper
- (x) DMP is to address measures to address the majority of dust emissions from the site with the following inclusions:
- Silos**
- The applicant is to provide all necessary construction details including manufacturer's specifications of the provision and construction of a high efficiency fabric filter particle collector to be installed on each silo. These collectors will provide 100 % collection efficiency of particles less than 2.5 micron EAD and greater than 1.0 micron EAD. The manufacturer's specification will include type of fabric and configuration of coating or membrane, air to cloth ratio or filtration velocity, filter area, pressure drop, fabric cleaning pulse pressure, pulse rate and warrant the collection efficiency.
- Metrics**
- All metrics or measurements of performance presented in DMP will be recorded for inspection by Council as required.
- (xi) Details of a complaints register which is to require recording details of complaint, complainant, and means by which complaint has been addressed.

Development is to be carried out in accordance with the documents lodged and approved under this condition.

13 Further amended plans and documents

Prior to the issue of any construction certificate, the applicant is to submit amended plans and documents to the written satisfaction of Council's Manager Development Services addressing the following matters:

- (a) Final plans showing details for all buildings including the facades, roofs, windows, doors landings and stairs generally as shown on the approved developmental application plans, prior to issue of the construction certificate. The final plans, and any necessary accompanying documentation, shall have sufficient detail to demonstrate how all parts of the buildings can be accessed for maintenance, including the cement storage silos proximate to the northern boundary of the site.
- (b) Final plans including elevations of the proposed additional roof and acoustic mitigation measures identified on the plans

- (c) A final schedule of materials and colours.
- (d) Detailed design to comply with the stormwater and groundwater measures to address the issues including but not limited to:
 - (i) plans to demonstrate that the underground stormwater reuse tank shall be constructed as a fully tanked structure to prevent the ingress of potentially contaminated groundwater into the reuse system.
 - (ii) Design of the managed aquifer recharge system to Council's satisfaction.
- (f) detailed landscape plans consistent with the requirements of these conditions of consent;
- (g) all lighting details are to be submitted to Council to establish that they will not result in unsatisfactory light spill contrary to the controls in *AS4282-1997 Control of the obtrusive effects of outdoor lighting*;
- (h) certification from a suitably qualified traffic engineer is to be provided to confirm that the engineering/architectural plans meet the parking, maneuverability and swept path requirements of relevant Australian standards and accommodate the swept paths within the traffic report and addendums as referenced in Condition 1.

Development is to be carried out in accordance with the plans and documents approved pursuant to this condition.

- 14 Prior to the issue of any Construction Certificate a report shall be provided by a suitably qualified acoustical consultant/engineer, who is eligible for membership of the Australian Acoustic Society (AAS) and/or be a member of a firm which is a member of the AAAC, confirming the required noise control measures specified in the Development Application documentation have been incorporated into the proposed development and identified on the construction certificate plans.
- 15 Prior to the issue of any Construction Certificate, the applicant is to provide all necessary construction details including manufacturer's specifications to the Council's written satisfaction of the provision and construction of a high efficiency fabric filter particle collector to be installed on each silo. These collectors will provide 100 % collection efficiency of particles less than 2.5 micron EAD and greater than 1.0 micron EAD. The manufacturer's specification will include type of fabric and configuration of coating or membrane, air to cloth ratio or filtration velocity, filter area, pressure drop, fabric cleaning pulse pressure, pulse rate and warrant the collection efficiency. Details should include a detailed maintenance program for the life of the development. These filters are to be installed and maintained in good working order and the development is to be carried out in accordance with the details approved under this condition.

- 16 The applicant must prior to the issue of the Construction Certificate, pay the following fees:
 - (a) Development Control: \$3,081.00;
 - (b) Footpath Crossing Deposit: \$148,200.00 ;
 - (c) Section 94 Contribution..... \$57,000.00
- 17 A Footpath Reserve Restoration Deposit of \$148,200.00 shall be paid to Council prior to the issue of a construction certificate. This is to cover repair of any damages, or other works to be done by Council. This includes construction, removal, or repair as required to: kerb and guttering, existing or new driveways; paved areas and concrete footpaths. Where the Deposit is in the form of a Bank Guarantee, this shall be provided on Council's Bank Guarantee Form. If payment is made after the end of the financial year, the amount shall be adjusted in accordance with Council's adopted fees and charge.
- 18 The payment of the following monetary contributions in accordance with Council's Section 94A Contributions Plan 2016:

Total = \$57,000.00 (this is 1% of the value of works)

This results in a total contribution of \$57,000.00 to be paid to Council prior to the issue of the Construction Certificate. The Section 94 Contribution fees are subject to annual review and the current rates are applicable for the financial year in which your consent is granted. If you pay the contribution in a later financial year you will be required to pay the fee applicable at the time.
- 19 Prior to the issue of the Construction Certificate, the required Long Service Levy payable under Section 34 of the Building and Construction Industry Long Service Payments Act 1986 must be paid. The Long Service Levy is payable at 0.35% of the total cost of the development, however this is a State Government fee and can change without notice.
- 20 Prior to the issue of any Construction Certificate, at the proposed point of construction site entry, photographic survey showing the existing conditions of Council's infrastructure shall be submitted to Council and Principal Certifying Authority.

The survey shall detail the physical conditions and identify any existing damage to the roads, kerbs, gutters, footpaths, driveways, street trees, street signs and any other Council assets fronting the property and extending to a distance of 50m from the development. Failure to do so may result in the applicant/developer being liable for any construction related damages to these assets. Any damage to Council's infrastructure during the course of this development shall be restored at the applicant's cost.
- 21 Prior to the issue of the Construction Certificate, the applicant shall contact "Dial Before You Dig on 1100" to obtain a Service Diagram for, and adjacent to, the property. The sequence number obtained from "Dial Before You Dig" shall be forwarded to Principal Certifying Authority. Any damage to utilities/services during the course of this development will be repaired at the applicant's expense.

- 22 Prior to the release of the Construction Certificate, a plan (written and/or diagrammatic) shall be submitted and approved by the Engineering and Regulatory Services Department, showing the method of access of building materials and plant to the property, and storage location on the property during construction and shall include all existing structures.
- 23 Prior to the release of the Construction Certificate, the following required section(s) are to be submitted to and approved by Council:
 - (a) All driveways/access ramps/vehicular crossings shall conform to Australian Standards AS 2890.2 and Council requirements;
 - (b) All service vehicles shall enter the property front in front out;
 - (c) The applicant shall provide 24 car parking spaces (including 1 disabled space) that must be clearly linemarked and signposted as per the manoeuvring and parking plan approved in accordance with these conditions;
 - (d) The applicant shall provide a plan demonstrating how all concrete agitator trucks will be parked onsite at times when the plant is not operational. The plan is to provide for the parking spaces to be clearly linemarked and signposted to Council's satisfaction to reflect the availability of car spaces and to ensure that there is no off site parking and clearly marked spaces (e.g. dotted lines and markings).
- 24 Prior to the release of the Construction Certificate, the following required section(s) are to be submitted to and approved by Council:
 - (a) A minimum of one (1) disabled car parking spaces shall be provided and clearly marked as per Australian Standards AS 2890.6 and Council requirements or an access report provided to justify why one disabled space is not required to the approval of the Principal Certifying Authority, and
 - (b) All off street disabled parking shall have access to all relevant areas and the adjacent road(s) as per Australian Standards AS 2890.6 and Council requirements.
- 25 Prior to the issue of the Construction Certificate, design certification, prepared by a suitably qualified engineer shall be submitted to Principal Certifying Authority certifying the parking arrangement, loading/unloading area and vehicle access shown on the construction plans have been designed in accordance with AS 2890.1, AS 2890.2 and Austroads.
- 26 Prior to the issue of the construction certificate, a suitable qualified engineer is to certify that the structure can withstand the forces of floodwater, scour, debris and buoyancy in a 1% AEP flood event.
- 27 Prior to the issue of the construction certificate the drawings shall be amended to indicate that all building materials shall be flood resistant, or flood compatible to a height of 500mm above the 1% AEP flood, or flow level. All internal electrical switches, power points or similar utilities liable to flood damage shall be set at a minimum of 500mm above the 1% AEP flood, or flow level. Details shall be provided and approved prior to the issue of a construction certificate.

- 28 Prior to the issue of any Construction Certificate, detail design and construction plans in relation to stormwater management and disposal system for the development shall be submitted to the PCA for approval.
- (The detail drawings and specifications shall be prepared by a suitably qualified and experienced civil engineer and to be in accordance with Council's Development Control Plan 'Stormwater Management Technical Guidelines', AS/NSZ 3500 – Plumbing and Drainage Code, Sydney Water regulations and the BCA. All drawings shall correspond with the approved architectural plans.)
- The plans shall incorporate but not be limited to the following:
- (a) Any proposed new inlet pits or the reconstruction of existing Council inlet pits shall have a minimum 2.4 metre lintel and a steel galvanised grate.
- 29 Prior to the issue of the Construction Certificate, the applicant shall obtain a compliance certificate for the design of stormwater management system of the development from an Accredited Certifier (stormwater management facilities design compliance).
- 30 A qualified practitioner, with a certificate of attainment in NWP331A Perform Conduit Evaluation, shall undertake a closed circuit television (CCTV) inspection and then report on the existing condition of Council's Stormwater Infrastructure located along the length of the site boundaries fronting Baker and Anderson Streets. The camera and its operation shall comply with the following:
- (a) The internal surface of the drainage pipe/culvert shall be viewed and recorded in a clear and concise manner;
- (b) The CCTV camera used shall be capable to pan, tilt and turning at right angles to the pipe axis over an entire vertical circle to view the conduit joints;
- (c) Distance from the manholes shall be accurately measured, and
- (d) The inspection survey shall be conducted from manhole to manhole.
- The written report, together with a copy of the digital video footage of the pipeline shall be submitted to Council prior to the commencement of any works. A written acknowledgment shall be obtained from Council (attesting to this condition being appropriately satisfied) and submitted to the Principal Certifying Authority.
- Note: If the existing pipe is full of debris preventing the effective inspection of the pit and pipe system, the contractor shall clear the pipe to a degree where CCTV inspection is possible at the applicants expense.
- 31 Prior to the issue of the Construction Certificate, structural drawings shall show all the footings for buildings and/or other structures located adjacent to easements and/or Council drainage pipes shall be located outside of Council's easement. Footings shall extend to at least 100mm below the invert of the Council's pipe unless the footings are to be placed on competent bedrock. If there is no pipe within the easement, a 1.8 metres depth is to be assumed for the future pipe. Design certification, prepared by a qualified structural engineer, shall be submitted to PCA, showing the above requirements have been complied with.
- 32 Any underground rainwater reuse tank (stormwater reuse tank) shall be tanked to prevent the ingress of potentially contaminated groundwater into the reuse system.

Details of this shall be provided to Council prior to the issue of any Construction Certificate.

- 33 To ensure that utility authorities and Council are advised of any effects to their infrastructure by the development, the applicant shall:

- (a) Carry out a survey of all utility and Council services within the site including relevant information from utility authorities and excavation if necessary to determine the position and level of services;
- (b) Negotiate with the utility authorities (eg AusGrid, Sydney Water, Telecommunications Carriers and Council in connection with:
 - (i) The additional load on the system; and
 - (ii) The relocation and/or adjustment of the services affected by the construction.

Any costs in the relocation, adjustment or support of services as requested by the service authorities, beneficiaries and Council are to be the responsibility of the developer.

- 34 When any water in any below ground rainwater (stormwater) storage tank is to be reused onsite and is acting as the first flush volume capture, a risk assessment must be undertaken on the on-site stormwater reuse system and proposed uses in accordance with 'Australian Guidelines for Water Recycling: Managing Health and Environmental Risks (Phase 2) – Stormwater Harvesting and Reuse' (2009) to determine if any treatment to protect the health and environment for onsite reuse is required.

Should this risk assessment require further treatment of the harvested stormwater to protect health and safety prior to reuse in the plant, the treatment of harvested stormwater for onsite reuse shall be appropriate for the main pollutants of concern from the activities in the development, being sediments (including cement, sand and aggregates), chemical admixtures, fuels and lubricants and shall address the exposure risk. The details installation and management of any treatment system shall be incorporated into an Operational Environmental Management Plan (OEMP).

Details of this shall be provided to Council for concurrence prior to the issue of any construction certificate.

- 35 A detailed construction Traffic Management Plan for the pedestrian and traffic management of the site and Baker and Anderson Streets during construction shall be prepared and submitted to the relevant road authority (Council or Roads and Maritime Services) for approval. The plan shall:

- (a) be prepared by a suitably accredited consultant;
- (b) nominate a contact person who is to have authority without reference to other persons to comply with instructions issued by Council's Traffic Engineer or the Police, and
- (c) if required, implement a public information campaign to inform any road changes well in advance of each change. The campaign may be required to be approved by the Traffic Committee;

Note: Any temporary road closure shall be confined to weekends and off-peak hour times and is subject to Council's Traffic Engineer's approval. Prior to implementation of any road closure during construction, Council shall be advised of these changes and

Traffic Control Plans shall be submitted to Council for approval. This Plan shall include times and dates of changes, measures, signage, road markings and any temporary traffic control measures.

- 36 Prior to issue of any Construction Certificate, a Dilapidation Report of the immediate adjoining properties and public infrastructure (including Council and public utility infrastructure) shall be prepared by a Practising Structural / Geotechnical Engineer and submitted to Council. The report shall include records and photographs of the adjoining properties that will be impacted by the development:
- a) Prior to commencement of any works on-site, a dilapidation report of the immediate adjoining properties and public infrastructure (including Council and public utility infrastructure) shall be prepared by a qualified person and submitted to Council. The report shall include records and photographs of the all properties immediately adjoining the site;
 - b) In relation to Council's infrastructure, the report shall include at the proposed point of construction site entry, photographic survey showing the existing conditions of Council's infrastructure. The survey shall detail the physical conditions and identify any existing damage to the roads, kerbs, gutters, footpaths, driveways, street trees, street signs and any other Council assets fronting the property and extending to a distance of 50m from the development.
 - c) Prior to commencement of the surveys, the applicant/ owner shall advise (in writing) all property owners of buildings to be surveyed of what the survey will entail and of the process for making any future claim regarding property damage. A copy of this communication shall be submitted to Council.
 - d) The applicant shall bear the cost of all restoration works to buildings/ structures and public infrastructure that has been damaged during the course the demolition, site clearing and site remediation works. Any damage to buildings/structures, infrastructures, roads, lawns, trees, gardens and the like shall be fully rectified by the applicant/developer, at the applicant/developer's expense.
 - e) A copy of the dilapidation report together with the accompanying photographs shall be given to all immediately adjoining properties owners and public utility authorities, including Council;
 - f) A second dilapidation report, including a photographic survey shall then be submitted no later than one month after the completion of all works identifying all damage that has occurred as a result of the construction and the rectification works required. A copy of the second dilapidation report together with the accompanying photographs shall be given to Council, public utilities authorities and all adjoining properties owners.
- (Note:** Prior to commencement of the surveys, the applicant/ owner of the development shall advise (in writing) all property owners of buildings to be surveyed of what the survey will entail and of the process for making a claim regarding property damage. A copy of this information shall be submitted to Council.)

- 37 A Construction Management Program shall be submitted to, and approved in writing by the Council prior to the issue of a Construction Certificate. The program shall detail:
- (a) The proposed method of access to and egress from the site for construction vehicles, including access routes through the Council area and the location and type of temporary vehicular crossing for the purpose of minimising traffic congestion and noise in the area, with no access across public parks or public reserves being allowed;
 - (b) The proposed phases of construction works on the site and the expected duration of each construction phase;
 - (c) The proposed order in which works on the site will be undertaken, and the method statements on how various stages of construction will be undertaken;
 - (d) The proposed manner in which adjoining property owners will be kept advised of the timeframes for completion of each phase of development/construction process;
 - (e) The proposed method of loading and unloading excavation and construction machinery, excavation and building materials, formwork and the erection of any part of the structure within the site. Wherever possible mobile cranes should be located wholly within the site;
 - (f) The proposed areas within the site to be used for the storage of excavated materials, construction materials and waste containers during the construction period;
 - (g) The proposed method/device to remove loose material from all vehicles and/or machinery before entering the road reserve, any run-off from the washing down of vehicles shall be directed to the sediment control system within the site;
 - (h) The proposed method of support to any excavation adjacent to adjoining properties, or the road reserve. The proposed method of support is to be designed and certified by an Accredited Certifier (Structural Engineering), or equivalent;
 - (i) Proposed protection for Council and adjoining properties, and
 - (j) The location and operation of any on site crane. Please note that a crane may require prior approval from Sydney Airports Corporation';
 - (k) The location of any Construction Zone (if required) approved by Council's Traffic Committee, including a copy of that approval.
- 38 Stockpiles are not permitted to be stored on Council property (including nature strip) unless prior approval has been granted. In addition stockpiles of topsoil, sand, aggregate, soil or other material shall be stored clear of any drainage line or easement, natural watercourse, kerb or road surface.
- 39 Building and demolition operations such as brickcutting, washing tools or paint brushes, and mixing mortar shall not be performed on the roadway or public footway or any other locations which could lead to the discharge of materials into the stormwater drainage system.
- 40 All disturbed areas shall be stabilised against erosion within 14 days of completion, and prior to removal of sediment controls.
- 41 Building, demolition and construction works not to cause stormwater pollution and being carried out in accordance with Section 2.8 of Council's Stormwater Pollution Control Code 1993. Pollutants such as concrete slurry, clay and soil shall not be washed from vehicles onto roadways, footways or into the stormwater system. Drains, gutters, roadways and access ways shall be maintained free of sediment.

Where required, gutters and roadways shall be swept regularly to maintain them free from sediment.

- 42 **Note:** The Applicant may be liable to prosecution under the Environmental Planning and Assessment Act 1979 for a breach of an approval condition, or under the Protection of the Environment Operations Act 1997, if its employees, agents or sub-contractors allow sediment, including soil, excavated material, building materials, or other materials to be pumped, drained or allowed to flow to the street, stormwater pipes or waterways. The Applicant shall ensure that its employees, agents or sub-contractors understand and maintain sediment control measures.
- 43 Council's warning sign for soil and water management must be displayed on the most prominent point on the building site, visible to both the street and site workers. The sign must be displayed throughout construction. A copy of the sign is available from Council.

CONDITIONS WHICH MUST BE SATISFIED PRIOR TO THE COMMENCEMENT OF ANY WORKS

- 44 Project arborist
A suitably qualified project arborist (AQF level 5 or greater) is to be engaged to advise on compliance with conditions of consent relating to the protection of trees at the site and to supervise the installation and maintenance of tree protection measures and arboricultural monitoring program required by this consent and the approved arboricultural impact assessment. Evidence of engagement of a project arborist is to be submitted to and approved by Council.
- 45 This Consent shall not preclude the demolisher from giving notice to other statutory authorities, such as Sydney Water Corporation, WorkCover, etc.
- 46 All surface runoff from the site shall pass through a pollution control device capable of removing sediment and other pollutants prior to entering the public stormwater system. The design must be in compliance with EPA First Flush Principles.
- Details of the pollution control device shall be submitted to Council for approval. If physical works are required on site, a Construction Certificate is to be obtained prior to any works commencing. A copy of Council's approval letter is to be submitted to the PCA to demonstrate that this condition has been satisfied.
- 47 In order to ensure that trees indicated for retention in the approved arborist report are protected during construction, and its health and structural stability ensured, the following is required :
- (a) Trees to be retained are to be tagged with clearly visible marking tape at a height of approx. 2 metres from ground and numbered with the corresponding number in the Approved Arboricultural Impact Assessment Report prepared by Urban Tree Management, revision 1 dated 6 November and received by Council on 21 December 2017 (**Arborist's Report**);
 - (b) Prior to commencing demolition/any works the trees are to be physically protected by fencing underneath the canopy dripline using 1.8 metre high

- chainwire fence to form the Tree Protection Zone (TPZ). The fence shall remain in place until construction is complete;
- (c) The area within *the* fencing of is required to be mulched with leaf mulch to a depth of 100mm and a temporary automatic drip irrigation installed to operate for the entire demolition and construction phase. The system must operate a minimum of twice weekly for 30 minutes;
 - (d) Subject to the Arborist's Report, if the project arborist is of the opinion that there is insufficient space to erect fencing in a particular area, as required under, wrap the trunk with hessian or carpet underlay to a height of 2.5 metres or to the tree's first lateral branch, whichever is greater, and affix timber palings around the tree with strapping or wire (not nails);
 - (e) Before any works commence on site, the Applicant is required to contact Council for an inspection and/or provide photographic evidence of the fenced TPZ's, mulch and irrigation system. Council approval is required prior to the commencement of any work.
- 48 Prior to commencement of any works, application(s) shall be made to Council's Customer Services Counter and obtained the following approvals and permits on Council's property/road reserve under the *Roads Act 1993* and *Local Government Act 1993* **as appropriate**:
- (It should be noted that any works shown within Council's road reserve or other Council Lands on the development approval plans are indicative only and no approval for these works is given until this condition is satisfied.)
- (a) Permit to erect hoarding on or over a public place, including Council's property/road reserve;
 - (b) Permit to construct works, place and/or store building materials on footpaths, nature strips;
 - (c) Permit to install temporary ground anchors in public land;
 - (d) Permit to discharge ground water to Council's stormwater drainage system;
 - (e) Permit for roads and footways occupancy (long term/ short term);
 - (f) Permit to construct vehicular crossings, footpaths, kerbs and gutters over road reserve;
 - (g) Permit to open road reserve area, including roads, footpaths, nature strip, vehicular crossing or for any purpose whatsoever, such as relocation / re-adjustments of utility services;
 - (h) Permit to place skip/waste bins on the footpath and/or nature strip, and
 - (i) Permit to use any part of Council's road reserve or other Council lands.
- 49 For any water from site dewatering to be permitted to go to the stormwater, the water must meet ANZECC 2000 Water Quality Guidelines for Fresh and Marine Water for the 95% protection trigger values for marine water. The results of all testing must be completed by a NATA accredited laboratory.
- All laboratory results must be accompanied by a report prepared by a suitably qualified person indicating the water meets these guidelines and is acceptable to be released into council's stormwater system. If it is not acceptable, details of treatment measures to ensure that the water is suitable for discharge to council's stormwater shall be provided in this report.

Reports shall be provided to council prior to discharge of any groundwater to the stormwater system.

- 50 To ensure that relevant engineering and water quality provisions are met during the period of dewatering for construction, prior to any water from site dewatering to be permitted to go to council's stormwater system a permit to discharge to the stormwater shall be obtained from Council. If discharging into Council's stormwater system, dewatering shall not commence until this is issued by Council.
- 51 A Soil and Water Management Plan (SWMP) shall be prepared in accordance with the Landcom Managing Urban Stormwater – Soils and Construction 4th Edition (2004). All management measures recommended and contained within the Soil and Water Management Plan (SWMP) shall be implemented in accordance with the Landcom Managing Urban Stormwater – Soils and Construction 4th Edition (2004). This plan shall be implemented prior to commencement of any site works or activities. All controls in the plan shall be maintained at all times during construction. A copy of the SWMP shall be kept on-site at all times and made available to Council Officers on request.
- 52 The vehicular entry/exits to the site must be protected from erosion and laid with a surface material which will not wash into the street drainage system or watercourse.
- 53 Erosion and sediment control devices shall be installed and functioning prior to the commencement of any demolition, excavation or construction works upon the site in order to prevent sediment and silt from site works (including demolition and/or excavation) being conveyed by stormwater into public stormwater drainage system, natural watercourses, bushland and neighbouring properties. In this regard, all stormwater discharge from the site shall meet the legislative requirements and guidelines including the Protection of the Environment Operations Act 1997.
- These devices shall be maintained in a serviceable condition AT ALL TIMES throughout the entire demolition, excavation and construction phases of the development and for a minimum one (1) month period after the completion of the development, where necessary.
- 54 Prior to commencement of any works in the public domain area, written approval shall be obtained from Council's engineer to ensure the engineering drawings of the civil works in public domain area (including road reserve) is satisfactory.
- 55 Where any shoring is to be located on or is supporting Council's property, or any adjoining private property, engineering drawings certified as being adequate for their intended purpose by an appropriately qualified and practising engineer, showing all details, including the extent of encroachment and the method of removal (or any other method) and de-stressing of shoring elements, shall be submitted with the Construction Certificate to the PCA along with Council's (or other) consent if the works intrude on Council's (or other) property.
- 56 **Demolition and Construction Air Quality Management Plans**
A Construction Management Program shall be submitted to, and approved in writing by the Council prior to the commencement of any works. The program shall detail:

- (a) The proposed phases of demolition and construction works on the site and the expected duration of each construction phase, potential for such works to emit dust or fumes and proposed mitigation measures,
- (b) The proposed order in which works on the site will be undertaken, and the method statements on how various stages of construction and associated air quality management will be undertaken,
- (c) The proposed areas within the site to be used for the storage of excavated materials, construction materials and waste containers during the construction period and associated dust management plan,
- (d) The proposed method/device including dust control measures to remove loose material from all vehicles and/or machinery before entering the road reserve. If a wet control measure is used then any run-off from the washing down of vehicles shall be directed to the sediment control system within the site,
- (e) The proposed method of dust control and vehicle emissions during any excavation adjacent to adjoining properties, or the road reserve. The proposed method of control/mitigation is to be designed and certified by an Accredited Certifier or equivalent,
- (f) Proposed air quality impacts protection during both demolition and construction for Council and adjoining properties,

DURING WORKS

57

- (a) The applicant shall conduct all construction and related deliveries wholly on site. If any use of Council's road reserve is required then separate applications are to be made at Council's Customer Services Department;
- (b) Construction operations such as brick cutting, washing tools or brushes and mixing mortar shall not be carried out on public roadways or footways or in any other locations which could lead to the discharge of materials into the stormwater drainage system or onto Council's lands;
- (c) Hosing down or hosing/washing out of any truck (concrete truck), plant (eg concrete pumps) or equipment (eg wheelbarrows) on Council's road reserve or other property is strictly prohibited. Fines and cleaning costs will apply to any breach of this condition;
- (d) Pavement surfaces adjacent to the ingress and egress points are to be swept and kept clear of earth, mud and other materials at all times and in particular at the end of each working day or as directed by Council's Engineer;
- (e) Shaker pads are to be installed at the entry/exit points to the site to prevent soil material leaving the site on the wheels of vehicles and other plant and equipment.
- (f) Council nature strip shall be maintained in its current state at all times during construction works.

58 Air quality associated with construction operations

- (a) The applicant shall conduct all construction works and any related deliveries/activities including dust emitted shall be wholly contained within the site.

- (b) Construction operations such as brick cutting, washing tools or brushes and mixing mortar shall not be carried out on park/road reserve or in any other locations which could lead to the discharge of materials which may dry out and turn to an airborne emission,
 - (c) Hosing down or hosing/washing out of any truck (concrete truck), plant (eg concrete pumps) or equipment (eg wheelbarrows) shall be wholly contained within the site's waste water management system,
 - (d) To minimize any tracked dust or dust emissions pavement surfaces adjacent to the ingress and egress points are to be swept and kept clear of earth, mud and other materials at all times and in particular at the end of each working day or as directed by Council's Engineer.
- 59 Inspections must be conducted by Council's Engineer at the following occasions:
- (a) Formwork inspection of driveway layback prior to laying of concrete;
 - (b) Formwork inspection of Council's kerb and gutter prior to laying of concrete;
 - (c) Formwork inspection of Council's footpath prior to laying of concrete;
 - (d) Inspection of Council's stormwater pit prior to concrete pour / backfill;
 - (e) Inspection of stormwater pipe / culvert prior to backfill;
 - (f) Inspection of road pavement prior to and following laying of new asphalt;
 - (g) Final inspection of driveway layback;
 - (h) Final inspection of Council's kerb and gutter;
 - (i) Final inspection of Council's footpath;
 - (j) Final inspection of Council's stormwater inlet pits, and
 - (k) Final inspection of new road pavement.
- 60 Results of the monitoring (if required) of any field parameters such as soil, groundwater, surface water, dust or noise measurements shall be made available to Council Officers on request throughout the construction works and any remediation works.
- 61 Any new information that comes to light during demolition or construction which has the potential to alter previous conclusions about site contamination and remediation must be notified to Council and the accredited certifier immediately. All work on site shall cease until the council is notified and appropriate measures to assess and manage the contamination in accordance with any relevant NSW EPA adopted guidelines have been completed by, and in accordance with recommendations of, an appropriately qualified and experienced environmental consultant.
- 62 The management of potential and actual acid sulfate soils shall be conducted in accordance with all recommendations within the 'Acid Sulfate Soil Management Plan – Boral Concrete – 1 Baker Street, Banksmeadow NSW 2019' completed by Environmental Compliance Services dated June 2017.
- 63 For any water from site dewatering to be permitted to go to the stormwater system, the water must meet ANZECC 2000 Water Quality Guidelines for Fresh and Marine Water for the 95% protection trigger values for Marine Water. All testing must be completed by a NATA accredited laboratory. All laboratory results must be

accompanied by a report prepared by a suitably qualified and experienced person indicating the water is acceptable to be released into Council's stormwater system. If it is not acceptable, details of treatment measures to ensure that the water is suitable for discharge to council's stormwater shall be provided in this report. Reports shall be provided to council prior to discharge of any groundwater to the stormwater system. Prior to any water from site dewatering to be permitted to go to council's stormwater system a permit to discharge to the stormwater shall be obtained from Council. Dewatering shall not commence until this is issued by Council.

- 64 During construction, care must be taken to protect Council's infrastructure, including street signs, footpath, kerb, gutter and drainage pits etc. Protecting measures shall be maintained in a state of good and safe condition throughout the course of construction. The area fronting the site and in the vicinity of the development shall also be made safe for pedestrian and vehicular traffic at all times. Any damage to Council's infrastructure (including damage caused by, but not limited to, delivery vehicles, waste collection, contractors, sub-contractors, concrete delivery vehicles shall be fully repaired in accordance with Council's specification and AUS-SPEC at no cost to Council.
- 65 During construction, it is the full responsibility of the Applicant and their contractors to:
- (a) Ascertain the exact location of the Council drainage infrastructure traversing the site in the vicinity of the works; and
 - (b) Take full measures to protect the in-ground Council drainage system, and
 - (c) Ensure dedicated overland flow paths are satisfactorily maintained through the site.

All proposed structures and construction activities shall be located clear of Council drainage pipes, drainage easements and/or watercourses on the site. Trunk or dedicated overland flow paths shall not be impeded or diverted by fill or structures unless otherwise approved by Council. In the event of a Council drainage pipeline being uncovered during construction, all work in the vicinity of this area shall cease and the PCA and Council shall be contacted immediately for advice. Any damage caused to a Council drainage system must be immediately repaired in full as directed, and at no cost to Council.

- 66 During demolition, construction and deliveries, access to the site shall be available in all weather conditions. The area shall be stabilised and protected from erosion to prevent any construction-related vehicles (including deliveries) tracking soil materials onto street drainage system/watercourse, Council's lands, public roads and road-related areas. Hosing down of vehicle tyres shall only be conducted in a suitable off-street area where wash waters do not enter the stormwater system or enter Council's land.
- 67 Soil and sedimentation controls are to be put in place prior to commencement of any work on site. The controls are to be maintained in effective working order during construction.

The controls are to be designed and installed in accordance with the Soil and Water Management for Urban Development Guidelines produced by the Southern Sydney Regional Organisation of Council. Copies of the guidelines are available from Council.

- 68 During construction, the applicant shall ensure that all works and measures have been implemented in accordance with approved Erosion and Sediment Control Plan, Traffic Management Plan and Construction Management Plan at all times.
- 69 All works carried out on the public roads shall **only** be inspected and approved by Council's engineer. Documentary evidence of compliance with Council's requirements shall be obtained prior to proceeding to the subsequent stages of construction, encompassing not less than the following key stages:
- (a) Initial pre-construction on-site meeting with Council's engineers to discuss concept and confirm construction details, traffic controls and site conditions/constraints prior to commencement of the construction of the civil works associated with the road widening;
 - (b) Prior to connection to the existing Council's stormwater drainage system;
 - (c) Prior to placement of concrete (kerb and gutter, footpath, pram ramp, and vehicular crossing);
 - (d) Final inspection;
- Council's inspection fee will apply to each of the above set inspection key stages. Additional inspection fees may apply for additional inspections required to be undertaken by Council.
- 70 The following shall be complied with:
- (a) A sign must be erected in a prominent position on any work site on which work involved in the erection or demolition of a building is being carried out:
 - (i) Stating the unauthorized entry to the work site is prohibited;
 - (ii) Showing that unauthorized entry to the work site is prohibited;
 - (iii) The Development Approval number; and
 - (iv) The name of the Principal Certifying Authority including an after hours contact telephone number;
 - (b) Any such sign is to be removed when the work has been completed.
- 71 Toilet facilities are to be provided at or in the vicinity of the work site on which work involves:
- (a) Erection of the building being carried out, at the rate of one toilet for every 20 persons or part of 20 persons employed at the site;
 - (b) Each toilet provided:
 - (i) must be standard flushing toilet; and,
 - (ii) must be connected:
 - (1) to a public sewer; or
 - (2) if connection to a public sewer is not practicable to an accredited sewerage management facility approved by the Council; or,
 - (3) if connection to a public sewer or an accredited sewerage management facility is not practicable to some other sewerage management facility approved by the Council.

- (c) The provisions of toilet facilities in accordance with this clause must be completed before any other work is commenced.
- 72 If an excavation associated with the proposal extends below the level of the base of the footings of a building on an adjoining allotment of land or the common boundary fence the person causing the excavation to be made:
- (a) Must preserve and protect the building/ fence from damage; and
 - (b) If necessary, underpin and support such building in an approved manner;
 - (c) Must at least be 7 days before excavating below the level of the base of the footings of a building on an adjoining allotment of land, give notice of the intention to do so to the owner of the adjoining allotment of land and, furnish particulars of the excavation to the owner of the building being erected or demolished;
 - (d) Any retained existing structures and or services on this and adjoining properties are not endangered during any demolition excavation or construction work associated with the above project. The applicant is to provide details of any shoring, piercing, or underpinning prior to the commencement of any work. The construction shall not undermine, endanger or destabilise any adjacent structures.
 - (e) If the soil conditions required it:
 - (i) Retaining walls associated with the erection of a building or other approved methods of preventing movement or other approved methods of preventing movement of the soil must be provided, and
 - (ii) Adequate provision must be made for drainage.
- 73 The following shall be complied with during construction:
- (a) Construction Noise
 - (i) Noise from construction activities associated with the development shall comply with the NSW Environment Protection Authority's Interim Construction Noise Guideline and the Protection of the Environment Operations Act 1997. At residential boundaries the "Noise affected RBL + 10 dB" limit shall apply – not the highly affected 75 dB(A) limit.
 - (b) Time Restrictions
 - (i) Monday to Friday 07:00am to 06:00pm
 - (ii) Saturday 08:00am to 04:00pm
 - (iii) No Construction to take place on Sundays or Public Holidays.
 - (c) Silencing

All possible steps should be taken to silence construction site equipment.
- 74 All possible and practicable steps shall be taken to prevent nuisance to the inhabitants of the surrounding neighbourhood from wind-blown dust, debris noise and the like.
- 75 Throughout the construction period, Council's warning sign for soil and water management shall be displayed on the most prominent point of the building site, visible

- to both the street and site workers. A copy of the sign is available from Council's Customer Service Counter.
- 76 The construction of the premises shall not give rise to the transmission of vibration to any affected residential premises that exceeds the acceptable vibration dose values for intermittent vibration set out in Table 2.4 vibration of the DEC's "Assessing Vibration: a technical guideline" dated February 2006.
- 77 The land to which this consent relates must be fenced and enclosed to protect the entry or access to the land and demolition site by unlawful persons.
- (a) The fencing must be in place before the demolition commences, and
 - (b) Must remain in place during the construction of the development.
- 78
- (a) All materials excavated from the site (fill or natural) shall be classified in accordance with the NSW Environment Protection Authority (EPA) f Guidelines 2014 prior to being disposed of to a NSW approved landfill or to a recipient site;
 - (b) To prevent contaminated soil being used onsite, all imported fill shall be certified Virgin Excavated Natural Material and shall be validated in accordance with the EPA approved guidelines to ensure that it is suitable for the proposed development. Imported fill should be accompanied by documentation from the supplier, which certifies that the material is suitable for the proposed land use.
- 79 Any material containing asbestos found on site during the demolition process shall be removed and disposed of in accordance with:
- (a) SafeWork NSW requirements. An appropriately licensed asbestos removalist must complete all asbestos works if they consist of the removal of more than 10m² of bonded asbestos and/or any friable asbestos;
 - (b) Protection of the Environment Operations Act 1997;
 - (c) Protection of the Environment Operations (Waste) Regulation 2014;
 - (d) NSW Environment Protection Authority Waste Classification Guidelines 2014.
- 80 To prevent contaminated soil being used onsite and to ensure that it is suitable for the proposed land use, all imported fill shall be appropriately certified material and shall be validated in accordance with the:
- (a) Any EPA approved guidelines; and
 - (b) Protection of the Environment Operations Act 1997; and
 - (c) Protection of the Environment Operations (Waste) Regulation 2014.
- All imported fill shall be accompanied by documentation from the supplier which certifies that the material has been analysed and is suitable for the proposed land use.
- 81 The principal contractor or owner builder must install and maintain water pollution, erosion and sedimentation controls in accordance with:
- (a) The Soil and Water Management Plan;

- (b) "Managing Urban Stormwater - Soils and Construction" (2004) Landcom ('The Blue Book'); and
 - (c) Protection of the Environment Operations Act 1997.
- 82 Hazardous and/or intractable wastes arising from the demolition or construction processes shall be removed and disposed of in accordance with the requirements of the relevant statutory authorities, together with the relevant regulations, including:
- (a) The Work Health and Safety Act 2011 (NSW);
 - (b) The Work Health and Safety Regulation 2011;
 - (c) WorkCover Construction Work Code of Practice July 2014.
- 83 At all times during works:
- (a) The works shall not give rise to air impurities in contravention of the Protection of the Environment Operations Act 1997 and shall be controlled in accordance with the requirements of this Act;
 - (b) Liquid and solid wastes generated on the site shall be collected, transported and disposed of in accordance with the Protection of the Environment Operation Act 1997. Records shall be kept of all liquid and solid wastedisposals from the site, and be made available to Council Officers on request;
 - (c) The works shall be conducted in a manner which does not pollute water as defined by the Protection of the Environment Operations Act. Treated overflow or other discharge shall not cause pollution of the council's stormwater system in accordance with the Protection of the Environment Operations Act 1997. Management of the site shall be undertaken in accordance with measure outlined in the Operational Environmental Management Plan (OEMP);
 - (d) The operations of the premises shall be conducted in such a manner as not to interfere with or materially affect the amenity of the neighbourhood by reason of noise, vibration, odour, fumes, vapour, steam, soot, ash, dust, particulate matter, waste water, waste products or other impurities which are a nuisance or injurious to health.
 - (e) Waste gases released from the premises shall not cause a public nuisance nor be hazardous or harmful to human health or the environment.
- 84 The operation and maintenance of the first flush system shall be undertaken in accordance with the NSW EPA current version of the "Stormwater First Flush Pollution" guidelines on their website at <http://www.epa.nsw.gov.au/mao/stormwater.htm>. The first-flush stormwater detention basin and its ancillaries shall be inspected after every rainfall event to check for any blockage in the drainage outlet. Such blockages, if any, shall be cleared immediately. "Rainfall event" is any rain that produces or causes run-off. This area is to be appropriately fenced to ensure safety.
- 85 During construction, the applicant shall ensure that all works and measures have been implemented in accordance with approved Traffic Management Plan and Construction Management Plan at all times.

- 86 In order to ensure that all trees to be retained are protected during construction, and its health and structural stability ensured, the following is required:
- (a) Engage the project arborist required to be appointed in accordance with these conditions, for all protective, pruning and maintenance work to these trees;
 - (b) The Applicant shall comply with the recommendations and requirements and management plan contained within the Arborist's Report;
 - (c) All trees are to be protected in accordance with AS 4970 : 2009 – Protection of Trees on Development Sites. Council will not support the removal of tree # 9 at any time and measure must be employed to ensure its health and stability during construction/works;
 - (d) All detailed Construction Certificate plans shall show trees to be protected and the TPZ;
 - (e) Except as provided in the Arborist's Report, all TPZ's as well as the Council nature strip are a "No-Go" zone. Except as provided in the Arborist's Report, there shall be no access, no stockpiling, storage or sorting of waste or building materials, no construction work, no concrete mixing, strictly no washing down of concrete mixers or tools, no chemicals mixed/disposed of, no excavation or filling, no service trenching in the TPZs. Any unavoidable work within the fenced zone shall be under the direction of Council's Tree Officer or the Project Arborist;
 - (f) Where unavoidable foot access is required in the TPZ, provide temporary access with timber sheets to minimise soil compaction, spillage or root damage;
 - (g) Specific engineering design of the driveway on Baker and Anderson Streets has been undertaken to ensure suitable levels without compromising tree health or structural stability via root pruning;
 - (h) Excavation within the TPZ of any tree shall be carried out manually using hand tools to minimise root damage or disturbance, unless otherwise approved by the project arborist;
 - (i) Tree roots 35mm in diameter or greater that require pruning shall be pruned only under the direction of Council's Tree Officer or the project arborist after a site inspection so as not to unduly impact or stress the tree;
 - (j) Ensure that there is no damage to the canopy, trunk or root system (including the surrounding soil) of any tree that is to be retained. There shall be no canopy pruning unless approval has been granted by Council's Tree Officer under separate application via a tree pruning application. Approved pruning shall be undertaken by a qualified Arborist in accordance with AS 4373. Any masonry boundary fencing or walls shall be of pierced or bridged construction to minimise damage to major or structural tree roots. Trench or strip footings are not permitted. If a tree root 35mm diameter or greater is in the location of a pier and the root cannot be cut without compromising the tree (must be obtained after Council or project arborist inspection and advice), the pier will need to be relocated and the root bridged;
 - (k) There shall be no walls retaining or otherwise, pavements, change in levels, trenching for new subsurface utilities or the location of new overheard services within the primary root zone or canopy of any tree to be retained. Any such structures in close proximity to trees must accommodate tree roots without damage or pruning.

- (l) All waste concrete and debris shall be removed from tree bases and areas to be landscaped on the site at the completion of works to minimise soil contamination;
- (m) The Applicant shall undertake any tree maintenance/remedial pruning as required by the Project Arborist at the completion of construction

If there is any contravention of these tree preservation conditions, or a tree was found to be damaged (including roots), in decline, dead or pruned without permission, then Council may claim all or part of the lodged Tree Preservation Bond prior to its release as well as require remedial pruning work. Epicormic growth is evidence of root damage.

CONDITIONS WHICH MUST BE SATISFIED PRIOR TO THE ISSUE OF AN OCCUPATION CERTIFICATE

- 87 Prior to use and occupation of the building an Occupation Certificate must be obtained under Section 109C(1)(c) and 109M of the Environmental Planning and Assessment Act 1979.
- 88 Prior to the issue of an Occupation Certificate, the applicant/developer shall fully rectify buildings/ structures and public infrastructure that been damaged during the course of the demolition and construction, at the applicant/developer's expense, to the written satisfaction of Council.
- 89 Prior to the issue of the Occupation Certificate a final fire safety certificate must be prepared and issued to Council. This certificate must state that each essential fire safety measures specified in the current fire safety schedule for the building to which the certificate relates:
 - (a) has been assessed by a properly qualified person;
 - (b) was found when assessed to be capable of performing to a standard not less than that required by the current fire safety schedule for the building for which the certificate is issued; and
 - (c) the date of assessment which must be within the period of 3 months prior to the date on which the final fire safety certificate is issued;

Note:

 - (i) The choice of person to carry out the assessment is up to the owner of the building;
 - (ii) The person who carries out the assessment:
 - (1) must inspect and verify the performance of each fire safety measure being assessed; and,
 - (2) must test the operation of each new item of equipment installed in the building premises that is included in the current fire safety schedule for the building;
 - (iii) As soon as is practicable after a final fire safety certificate is issued the owner of the building to which it relates:

- (1) must cause a copy of the certificate (together with a copy of the current fire safety schedule to be given to the Commissioner of the New South Wales Fire & Rescue; and,
 - (2) must cause a further copy of the certificate (together with a copy of the current fire safety schedule) to be prominently displayed in the building.
- 90 Any damage not shown in the photographic survey submitted to Council before site works have commenced will be assumed to have been caused by the site works (unless evidence is provided to prove otherwise). All damage as a result of site works shall be rectified at the applicant's expense to Council's satisfaction, prior to the release of the damage deposit.
- 91 Vehicles shall enter and exit the site in a forward direction at all times. A plaque with minimum dimensions 300mm x 200mm shall be permanently fixed to the inside skin of the front fence, or where there is no front fence a prominent place approved by the Principal Certifying Authority, stating the following: "Vehicle shall enter and exit the site in a forward direction at all times".
- 92 Prior to completion of the building works, a full width vehicular entry is to be constructed to service the property. Any obsolete vehicular entries are to be removed and reconstructed with kerb and gutter. This work may be done using either a Council quote or a private contractor. There are specific requirements for approval of private contractors.
- 93 The minimum habitable/commercial floor level shall be constructed 500mm above the 1% Annual Exceedance Probability (A.E.P) flood. The floor level shall be certified by a registered surveyor prior to pouring of floor slab or installation of flooring.
- 94 The drainage system shall be constructed in accordance with the approved drainage plans and any amendments in red. All stormwater drainage plumbing work shall comply with the NSW Code of Practice: Plumbing and Drainage and Australian Standard AS3500.
- 95 All footpath, or road and drainage modification and/or improvement works to be undertaken in the road reserve shall be undertaken by Council, or by a Private Licensed Contractor subject to the submission and approval of a Private Contractor Permit, together with payment of all inspection fees. An estimate of the cost to have these works constructed by Council may be obtained by contacting Council on 9562 1670. The cost of conducting these works will be deducted from the Footpath Reserve Restoration Deposit, or if this is insufficient the balance of the cost will be due for payment to Council upon completion of the work.
- 96 Any driveway works to be undertaken in the footpath reserve by a private contractor requires an "Application for Consideration by a Private Contractor" to be submitted to Council together with payment of the application fee. Works within the footpath reserve must not start until the application has been approved by Council.
- 97 Prior to the issue of the Occupation Certificate, all acoustic mitigation measures as recommended in the approved acoustic reports and the referred to in the approved noise management plan are to be installed. Certification is to be provided to the written satisfaction of Council's Manager Development Services from a suitably qualified acoustical consultant/engineer who is eligible for membership of the Australian Acoustic Society (AAS) and/or be a member of a firm which is a member of the AAAC, that the mitigation measures have been installed and are compliant. Certification is also to be provided to the PCA (if an alternative PCA is appointed).

- 98 Prior to the issue of the Occupation Certificate:
- (a) If required as a consequence of the development, all services (Utility, Council, etc) within the road reserve (including the footpath) shall be relocated/adjusted to match the proposed/existing levels as required by the development; and
- the applicant is responsible for the installation and protection of all Council's regulatory/parking/street signs fronting the property. Any damaged or missing street signs as a consequence of the development and associated construction works shall be replaced at full cost to the applicant.
- 99 Prior to the issue of the Occupation Certificate, the internal road network, truck access roadway, off-street parking area, truck loading/unloading area and truck queuing and waiting area shall be provided and clearly designated, sign posted and line marked. Signage and line marking shall comply with the current version of Australian Standards.
- Documentation from a practising civil engineer shall be submitted to the Principal Certifying Authority certifying that the internal road network, truck access roadways, off-street parking area, truck loading/unloading area and truck queuing and waiting area have been constructed generally in accordance with the approved construction plan(s) and comply with AS2890.1 and AS2890.2 requirements.
- 100 Prior to the issue of the Occupation Certificate:
- (a) the construction of the stormwater drainage system of the proposed development shall be completed generally in accordance with the approved stormwater management construction plan(s), Council's '*Guidelines for the Design of Stormwater Drainage Systems within City of Botany Bay*', AS 3500 and BCA; and
- (b) documentation from a practicing civil engineer shall be submitted to the Principal Certifying Authority certifying that the stormwater drainage system has been constructed generally in accordance with the approved stormwater management construction plan(s) and accepted practice.
- 101 Prior to the issue of the Occupation Certificate, all 24 off-street parking areas bays shown on the plans approved pursuant to this consent and internal roadways are to be sealed with hard standing all weather materials or approved alternatives to Council's satisfaction. All car parking bays shall be maintained for the life of the development.
- 102 Prior to the issue of the Occupation Certificate, the applicant shall obtain compliance certificates for the construction and compliance of the stormwater management system of the development from the following categories of Accredited Certifier:
- (a) Accredited Certifier (stormwater management facilities construction compliance); and
- (b) Accredited Certifier (stormwater compliance).
- 103 Written certification from a structural engineer with chartered status shall be submitted to Council and Principal Certifying Authority to certify that all footings for buildings and

/or structures adjacent to Council's stormwater drainage lines and/or easement have been constructed outside of Council's drainage easement and at least 100mm below the invert of the Council's stormwater drainage pipes unless the footings are placed on competent bedrock.

- 104 Prior to the issue of the Occupation Certificate, the redundant vehicular crossing, together with any necessary works shall be removed and the footpath, nature strip and kerb and gutter shall be reinstated in accordance with Council's specification.
- 105 Prior to issue of the Occupation Certificate, all civil works required in public domain area (including kerb and guttering, footpath paving, stormwater construction, landscaping, line marking and signage) shall be completed to Council's satisfaction. The following documentation shall be submitted to the PCA attesting this condition has been appropriately satisfied.
- (a) Written confirmation / completion certificate obtained from Council's engineer to show the completion of civil works in the public domain area.
 - (b) Inspection reports (formwork and final) obtained from Council's engineer to ensure inspection have been carried out to the civil works in the public domain area.
 - (c) all services (Utility, Council, etc) within the road reserve (including the footpath) shall be relocated/adjusted to match the proposed/existing levels as required by the development.
- 106 At the completion of all construction works, a qualified practitioner, with a certificate of attainment in NWP331A Perform Conduit Evaluation, shall undertake a closed circuit television (CCTV) inspection and then report on the condition of any newly constructed public stormwater infrastructure and Council's existing Stormwater Infrastructure on Baker and Anderson Streets.
- The camera and its operation shall comply with the following:
- (a) The internal surface of the drainage pipe/culvert shall be viewed and recorded in a clear and concise manner;
 - (b) The CCTV camera used shall be capable to pan, tilt and turning at right angles to the pipe axis over an entire vertical circle to view the conduit joints;
 - (c) Distance from the manholes shall be accurately measured, and
 - (d) The inspection survey shall be conducted from manhole to manhole.
- The written report, together with a copy of the digital video footage of the pipeline shall be submitted to Council for review. Any damage to the culvert/pipeline since the commencement of construction on the site shall be repaired in full to the satisfaction of Council. A written acknowledgement shall be obtained from Council (attesting this condition being appropriately satisfied) and submitted to the Principal Certifying Authority.
- 107 Prior to the issue of any Occupation Certificate, the applicant shall carry out the following works:
- (a) On Baker St, adjacent to development, reconstruct existing kerb and gutter for the full length of the property in accordance with Council's Infrastructure

Specifications, if shown to be damaged in the second dilapidation report required by these conditions;

- (b) On Anderson St, adjacent to development, reconstruct existing kerb and gutter for the full length of the property in accordance with Council's Infrastructure Specifications, if shown to be damaged in the second dilapidation report required by these conditions;
- (c) On Baker St, adjacent to development, construct new footpath as per Council's Infrastructure and Landscape Architect specifications;
- (d) On Anderson St, adjacent to development, construct new footpath as per Council's Infrastructure and Landscape Architect specifications;
- (e) On both Baker St and Anderson Street, adjacent to the development, reconstruct the stormwater inlet pit(s) with minimum 2.4metre lintel and a steel galvanised grate in accordance with Council's Infrastructure Specifications, in the event of the following:
 - (i) those works are shown to be required in the engineering plans approved as part of the construction certificate; or
 - (ii) any damage is caused to the stormwater inlet pit is caused during construction as shown in the second dilapidation report required by these conditions.
- (f) On both Baker St and Anderson St, for the portion of those streets fronting the development site, pavement reconstruction and/or repairs shall be carried out as follows to the extent necessary to repair any damage caused during construction as identified in the second dilapidation report to meet Council's standards for local roads suitable for heavy vehicles in industrial areas, being 220mm MILL & FILL (2 Layers of 85AC20, top layer of 50AC14).

Written approval of Council is to be obtained for the proposed pavement design and repairs.

- 108 Prior to the issue of the Occupation Certificate, a restriction on Use of Land and Positive Covenant(s) shall be imposed on the development. The following covenants shall be imposed under Section 88(E) of the Conveyancing Act 1919 and lodged with the NSW Land and Property Information:
 - (a) Restriction on Use of Land for Stormwater Quality Improvement Device. Refer to Appendix E of the SMTG for suggested wording.
- 109 Prior to the issue of the Occupation Certificate, a Certificate of Survey from a Registered Surveyor shall be submitted to the Principal Certifying Authority showing all the building structures are wholly located within the property boundary.
- 110 Prior to the issue of the Occupation Certificate, any electrical kiosk, fire booster assembly or similar utilities must be located in an unobtrusive or concealed but accessible location away from entrances to the property and preferably not within the landscaped street setbacks. The utilities must be screened by a built screen enclosure and/or. The location of, and screening treatment surrounding these utilities is to be approved by Council's Landscape Architect prior to their installation.

- 111 Prior to the issue of the Occupation Certificate, the Applicant is to remove the street trees nominated as such for the proposed driveway crossovers at their own expense. The trees may only be removed after the Construction Certificate has been issued and removal shall be undertaken by the Applicant at their own expense. A qualified Arborist with their own public liability insurance must be engaged. All work is to take place on the Council road reserve with the appropriate safety and directional signage implemented to ensure public safety and access otherwise road and footpath closures require a Council Road Occupancy Permit. A Dial-Before-You-Dig enquiry is required prior to stump grinding the trunk and shall occur without damage to Council infrastructure or underground services/utilities. Council will take no responsibility for any damage incurred to persons, property or services during the tree removal works.
- 112 A Section 73 Compliance Certificate under the Sydney Water Act 1994 must be obtained prior to the issue of the Occupation Certificate. Application must be made through an authorised Water Servicing Coordinator. Please refer to "Your Business" section of Sydney Water's web site at www.sydneywater.com.au then the "e-developer" icon or telephone 132092. Following application a "Notice of Requirements" will detail water and sewer extensions to be built and charges to be paid. Please make early contact with the Coordinator, since building of water / sewer extensions can be time consuming and may impact on other services and building, driveway or landscape design.
- 113 To retain soil and mulch finishes and in pedestrian/parking areas, a raised concrete edge shall be installed around landscape areas/planter beds to contain soil and mulch finishes from spilling out onto adjoining pavements and to keep vehicles out of landscaped areas. The edge shall be raised a minimum of 150mm above the adjoining pavement. Timber retaining edges are unsuitable. Existing retaining masonry walls/edges shall be repaired and made good. Edges shall be maintained in good structural order and appearance at all times
- 114 Concrete wheel stops shall be installed in all car spaces adjoining garden beds in accordance with Council specifications and Australian Standard AS/NZS 2890.1:2004 prior to the issue of an Occupation Certificate to prevent overhang and vehicle damage to garden beds.
- 115 Landscaping shall be installed in accordance with the approved landscape plan and shall include the following:
- (a) A greater density of tree planting (small, medium and large) within the Baker Street setback, Tree densities based on species however 3m for small trees, 4-7m for medium trees and 8-12 metres for large trees. Understorey screen shrubbery is still required
 - (b) The landscaped areas on the property shall be installed in accordance with the approved landscape documentation and the conditions of consent;
 - (c) An experienced Landscape Contractor shall be engaged by the proponent to undertake the landscaping work and shall be provided with a copy of both the approved landscape drawing and the conditions of approval to satisfactorily construct the landscape. The contractor shall be engaged weekly for a minimum period of 26 weeks from final completion of landscaping for maintenance and defects liability, replacing plants in the event of death,

damage, theft or poor performance. After that time regular and ongoing maintenance is required.

- 116 At the completion of landscaping on the site, the Applicant is required to obtain a Certificate of Compliance from the Landscape Consultant to certify that the landscaping has been installed in accordance with the approved landscape plan. The Certificate is to be submitted to the Council prior to the issue of an Occupation Certificate.
- 117 To ensure satisfactory growth and maintenance of the landscaping, a fully automatic drip irrigation system is required in all landscape areas, installed by a qualified landscape contractor. The system shall provide full coverage of all planted areas with no more than 300mm between drippers, automatic controller and backflow prevention device and shall be connected to a recycled water source, where provided. Irrigation shall comply with both Sydney Water and Council requirements as well as Australian Standards, and be maintained in effective working order at all times.
- 118 A minimum of Six (6) new street trees, min. height 1.6 metres and pot size 75 litre, shall be installed in the Anderson and Baker Street nature strip as replacement for street trees removed:
- (a) The nominated tree for Baker Street is Lillypilly (*Syzygium australe*) Trees shall be installed by a qualified landscape contractor and sourced from a reputable nursery that grows to the Australian Standard;
 - (b) The Applicant is required to obtain a Council inspection of new street tree planting stock prior to planting;
 - (c) A Dial-Before-You-Dig enquiry is required prior to all tree planting;
 - (d) The trees shall be planted in accordance with Council's Street Tree Masterplan and include a water holding additive and fertiliser, and is to be mulched with leaf mulch to a depth of 100mm. The trees are to be double staked; and
 - (e) Council is not liable for any damage to infrastructure of services with the planting of new street trees.
- 119 Prior to the issue of an occupation certificate the applicant is to provide evidence to Council's satisfaction of installation of the approved high efficiency fabric filter particle collector to be installed on each silo.

CONDITIONS WHICH MUST BE SATISFIED DURING THE ONGOING USE OF THE DEVELOPMENT

- 120 The stormwater drainage system (including all pits, pipes, absorption, detention structures, treatment devices, detention systems and rainwater tanks) shall be regularly cleaned, maintained and repaired in accordance with the maintenance schedule submitted to Council to ensure the efficient operation of the system from time to time and at all times. The system shall be inspected on a monthly basis to determine whether there is any blockage, silt, debris, sludge and the like in the system. In the event of potential blockage this material shall be removed. All solid and liquid waste

that is collected during maintenance shall be disposed of in a manner that complies with the appropriate Environmental Guidelines.

- 121 The 24 off-street parking bays as shown on the approved plans shall be made available at all times during business hours for staff and visitors.

122

- (a) The operations of the site must at all times fully comply with the requirements of the Operational Management Plan for the site; and

At all times the site operator must implement an effective Emergency Response Management Plan in the event of any on site or off site situations that may arise.

- 123 The maximum number of staff employed on-site at one-time shall not exceed 32 full time (or full time equivalent) employees. Any additional staff employed on-site shall be subject to Council's written consent.

- 124 The operation of the site and movements of vehicles shall comply with the following requirements:

- (a) The maximum size and dimensions of vehicle accessing the site shall be limited to the vehicle dimensions as a B-Double vehicle with an overall length of 19.56m and height of 3415mm.
- (b) The movement of all commercial heavy vehicles shall be restricted to the following:
- (i) Enter and exit the site via the following designated traffic route:
- (1) Wentworth Avenue - Baker Street;
- (c) No commercial vehicles shall be allowed to queue, wait and stop within 250m of the vehicle access points of the site. All trucks must enter the site and queue on site. There is to be no parking of commercial heavy vehicles on the public road.
- (d) All vehicles shall enter and exit the site in a forward direction;
- (e) All manoeuvring movements of vehicles shall be carried out wholly within the site and vehicle manoeuvring area shall be kept clear at all times;
- (f) All vehicles shall be parked in the marked parking bays and all parking bays on-site shall be set aside for parking purpose only and shall not be used for storage of goods or machinery;
- (g) Any gate at the vehicular entrance of the site shall be left open during the operation hours;
- (h) All loading and unloading of vehicles in relation to the use of the premises shall only be carried out in the dedicated loading area. No deliveries to the premises/site shall be made direct from a public places, public streets or any road related areas (eg. footpath, nature strip, road shoulder, road reserve, public carpark, service station etc);
- (i) Under no circumstance shall vehicles queue on public places, public streets or any road related area (eg. footpath, nature strip, road shoulder, road reserve etc) prior to entering the site;

- (j) The occupier shall ensure that any person employed on the premises shall park their vehicles, if any, in the employee parking area provided. No employee shall be permitted to park on a common driveway, public streets or any road related areas (eg. footpath, nature strip, road shoulder, road reserve, public carpark etc).
- 125 No signs or advertising which require consent shall be installed or displayed at the property without a development application being lodged with Council and consent thereto being given by Council.
- 126
- (a) The use of the premises shall not give rise to air impurities in contravention of the *Protection of the Environment Operations Act 1997* and shall be controlled in accordance with the requirements of this Act.
 - (a) Liquid and solid wastes generated on the site shall be collected, transported and disposed of in accordance with the *Protection of the Environment Operation Act 1997*. Records shall be kept of all liquid and solid waste from the site, and be made available to Council Officers on request.
 - (b) The operation of the premises shall be conducted in a manner which does not pollute water as defined by the Protection of the Environment Operations Act. Treated overflow or other discharge shall not cause pollution of the council's stormwater system in accordance with the Protection of the Environment Operations Act 1997. Management of the site shall be undertaken in accordance with measure outlined in the Operational Environmental Management Plan (OEMP).
 - (c) The operations of the premises shall be conducted in such a manner as not to interfere with or materially affect the amenity of the neighbourhood by reason of noise, vibration, odour, fumes, vapour, steam, soot, ash, dust, particulate matter, waste water, waste products or other impurities which are a nuisance or injurious to health.
- 127 Discharge from the approved wash bay must meet the following requirements:
- (a) The floor must be sealed and graded to an internal drainage point, so that all wastewater and surface spillage is directed and drains to the approved treatment and disposal point;
 - (b) The wash bay is to be roofed and bunded so that all uncontaminated stormwater from the roof areas and uncovered areas, are directed away from the bay;
 - (c) The roof to the wash bay roof must be a minimum height of 2.5 m;
 - (d) A bund must be constructed and maintained around the perimeter of the bay. The bund is to be protected from the entry of external surface waters, by either; a minimum 2% change in grade; or combination of a minimum 2% grade change and a grated drainage system;
 - (e) All uncontaminated stormwater/rainwater must be directed to the dedicated stormwater drainage systems;
 - (f) The collection pit shall be a minimum of 1000 litres;
 - (g) A *Permission to Discharge Trade Wastewater* certificate issued by Sydney Water must be obtained prior to the approval of the development.

- 128 Sufficient supplies of appropriate absorbent materials shall be kept on site to recover any liquid spillage. Liquid spills shall be cleaned up using dry methods, by placing absorbent material on the spill, and sweeping or shovelling the material into a secure bin. Absorbent materials used to clean up spills shall be disposed of to an appropriately licensed waste facility.
- 129 Should the external fabric of the building(s), walls to landscaped areas and like constructions be subject to graffiti or like vandalism, then within seven (7) days of this occurrence, the graffiti must be removed and the affected surface(s) returned to a condition it was in before defilement.
- 130 Acoustic conditions
- (a) Vehicle trips and movements are not to exceed those stipulated in this consent
 - (b) .
 - (c) No heavy vehicles associated with the development are to access the site via Ocean Street.
 - (d) Heavy vehicles associated with the development are not to use air braking or jake brakes at night time on site, on Anderson Street or Baker Street (including at the intersection with Wentworth Avenue).
 - (e) All acoustic mitigation measures referred to in the noise management plan approved under these conditions are to be installed prior to the issue of an occupation certificate.
 - (f) The use of the premises shall not give rise to any of the following:
 - (i) Offensive noise as defined in the Protection of the Environment Operations Act 1997 and the Protection of the Environment Operations Act (Noise Control Regulation) 2000
 - (ii) The operation of all equipment, vehicle movements and unloading/loading operations occurring on the site shall not give rise to an equivalent continuous (LAeq) sound pressure level at any point on any residential property greater than 5dB(A) above the existing background LA90 level (in the absence of the noise under consideration).
 - (iii) The operation of all equipment, vehicle movements and unloading/loading operations occurring on the site when assessed on any residential property shall not give rise to a sound pressure level that exceeds LAeq 50dB(A) day time, LAeq 50 dB(A) in the evening, and LAeq 40dB(A) night time.
 - (iv) The operation of all equipment, vehicle movements and unloading/loading operations occurring on the site when assessed on any neighbouring commercial/industrial premises shall not give rise to a sound pressure level that exceeds LAeq 65dB(A) day time/night time. For assessment purposes, the above LAeq sound levels shall be assessed over a period of 10-15 minutes and adjusted in accordance with EPA guidelines for tonality, frequency weighting, impulsive characteristics, fluctuations and temporal content where necessary.
 - (f) Within 6 months of the commencement of operations on the site, the operator is to submit a report to Council's satisfaction from a suitably qualified

independent acoustic engineer approved by the Council. The engineer must be eligible for membership of the Australian Acoustical Society (AAS) and/or be a member of a firm which is a member of the AAAC. The independent consultant cannot have previously been involved with advising on the development for the proponent/operator or been a member of a firm that has advised on the development for the proponent/operator. The report is to audit compliance with all of the acoustic requirements referred to in paragraph (e) above. The report is to be based on readings taken at any affected receiver. Certification is to be provided from the engineer that the date of those readings was not disclosed to the operator and no prior warning of the audit monitoring was given. Costs of the report is to be borne solely by the operator.

- (g) In the event that the independent acoustic auditor identifies a non-compliance with the requirements in paragraph (e) above, the operator is to include recommendations within the report to Council's written satisfaction which in the opinion of the auditor will ensure that any breach of the requirements within paragraph (e) above are addressed.
- (h) Any recommendations to ensure acoustic compliance within paragraph (e) above are to be implemented immediately. Within 28 days of implementation of the recommended noise controls the operator is to submit to Council's satisfaction a further report from the independent auditor certifying that the measures have addressed the non-compliance having regard to measurements conducted at any affected receivers.

Note: This condition does not authorise development (e.g. the erection of acoustic walls) that would otherwise require development consent under the *Environmental Planning and Assessment Act 1979*. Any such consent must be obtained and in the intervening period the operator must take other measures (e.g. reduction in truck movements or ceasing of 24 hour operation) to ensure that the acoustic requirements are satisfied.

131 Air quality conditions

- (a) Within 6 months of commencement of operations, independent proof of performance monitoring of the fine particle, including PM_{2.5} emissions, from the silos is to be performed by a suitably qualified and experienced independent NATA accredited testing authority. Details are to be submitted to Council.
- (b) The use of the premises shall not give rise to air impurities in contravention of the *Protection of the Environment Operations Act and Regulation (Clean Air)*. Waste gases and dusts released from the premises shall not cause a public nuisance nor be hazardous or harmful to human health or the environment.
- (c) All emissions and the cumulative ground level impact of those emissions shall not exceed those levels specified in the National Environment Protection Measure (Ambient Air) and the Approved Methods for Modelling and Assessment of Air Pollutants in New South Wales (2016).

132 Traffic conditions relating to Baker Street, Page Street and Wentworth Avenue Intersection

This condition applies until such time as the installation of traffic signals at the intersection of Baker Street and Wentworth Avenue together with the upgrade of Page Street and Wentworth Avenue.

- (a) All heavy vehicles associated with the development (including trucks operated by contractors not employed by the operator) are to turn left only out of Baker Street into Wentworth Street.
- 133 Any intruder alarms shall be fitted with a timing device in accordance with the requirements of AS2201 - 2008 Intruder Alarm Systems.
- 134
- (a) Ongoing maintenance of the nature strip shall be undertaken by the occupier/owner. Maintenance includes mowing, watering, the removal of weeds and rubbish and maintaining an even coverage of grass at all times;
- The landscaped areas on the property shall be maintained in accordance with any approved landscape plan and the conditions of development approval at all times. The landscaped areas shall be maintained in a clean and tidy state and with a dense, even coverage of plants to Council's satisfaction at all times.
- 135 The existing and future owners (Registered Proprietor) of the property will be responsible for the operation and maintenance of the detention system.
- The Registered Proprietor will:
- i) permit stormwater to be temporarily detained by the system;
 - ii) keep the system clean and free of silt, rubbish and debris;
 - iii) maintain, renew and repair the whole or parts of the system so that it functions in a safe and efficient manner; and in doing so complete the same within the time and in the manner specified in written notice issued by the Council;
 - iv) carry out the matters referred to in paragraphs (ii) and (iii) at the proprietor's expense;
 - v) not make alterations to the system or elements thereof without prior consent in writing of the Council.
 - vi) permit the Council or its authorised agents from time to time upon giving reasonable notice (but at any time and without notice in the case of emergency) to enter and inspect the land for compliance with the requirement of this clause;
 - viii) comply with the terms of any written notice issued by the Council in respect to the requirements of this clause within the time stated in the notice.
- 136 All wastewater and stormwater treatment devices (including drainage systems, sumps and traps) shall be regularly maintained in order to remain effective. All solid and liquid wastes collected from the device shall be disposed of in accordance with the Protection of the Environment Operations Act, 1997.
- 137 Any lighting on the site shall be designed so as not to cause nuisance to other residences in the area or to motorists on nearby roads, and to ensure no adverse impact on the amenity of the surrounding area by light overspill. All lighting shall comply with *AS4282-1997 Control of the obtrusive effects of outdoor lighting*.

- 138 All trucks servicing the development are to park on the site. No trucks are to park in Anderson or Baker Street or surrounding local roads.
- 139 No lighting shall be affixed to, or directed to the cement storage silos near the northern boundary of the site.
- 140 On an annual basis from the issue of an Occupation Certificate the operator is to submit an acoustic audit report meeting all of the requirements within Condition 130, with verification that all the required noise control measures are installed and have been maintained to the satisfaction of the auditor. This requirement applies without exception for a period of 3 years following the issue of an Occupation Certificate. Thereafter the annual audit report is to be carried out by the operator on request of the Council.

FIGURE 1
REGIONAL CONTEXT

Botany Concrete Batching Plant Upgrade - Environmental Impact Statement

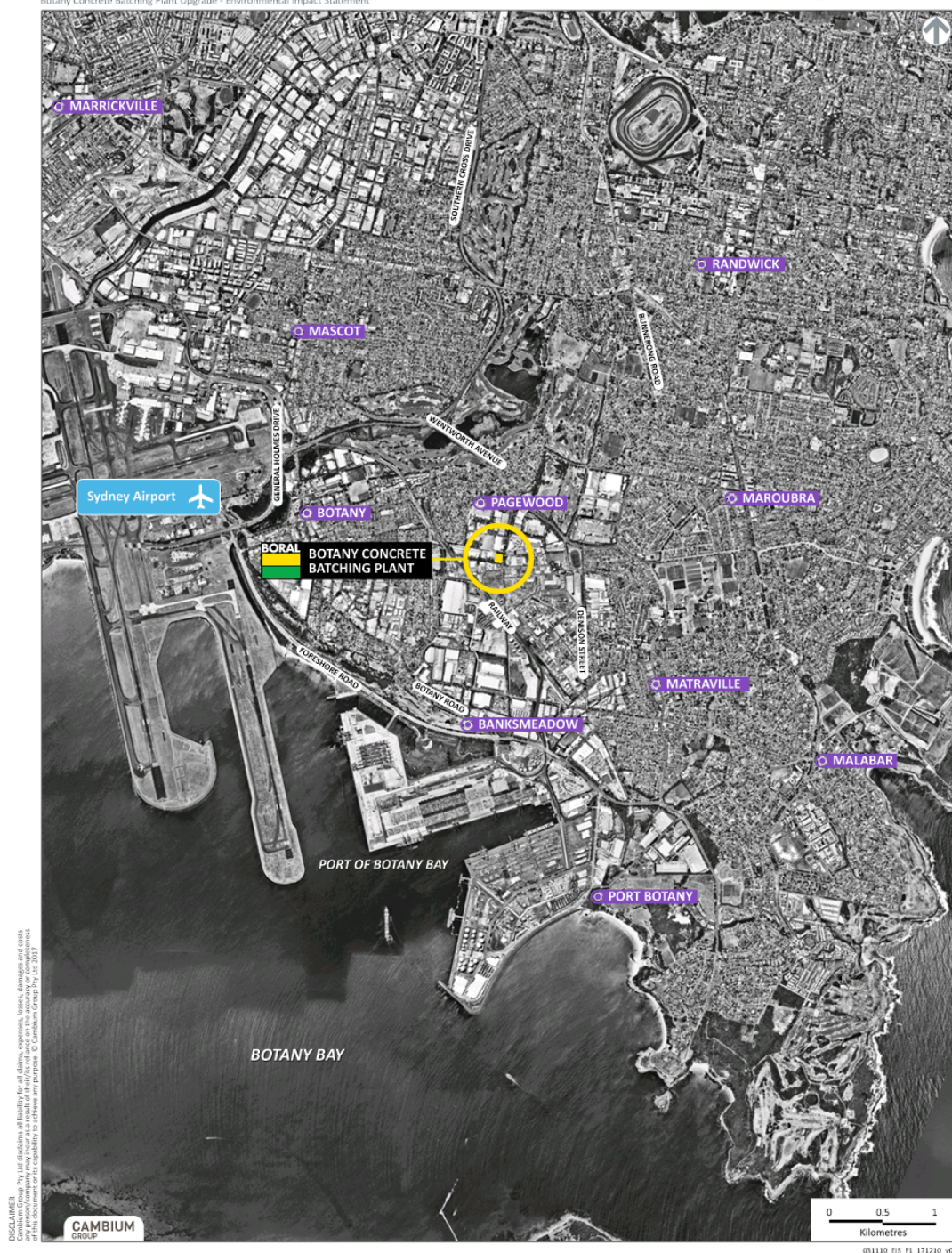


FIGURE 2
LOCAL CONTEXT

Botany Concrete Batching Plant Upgrade - Environmental Impact Statement

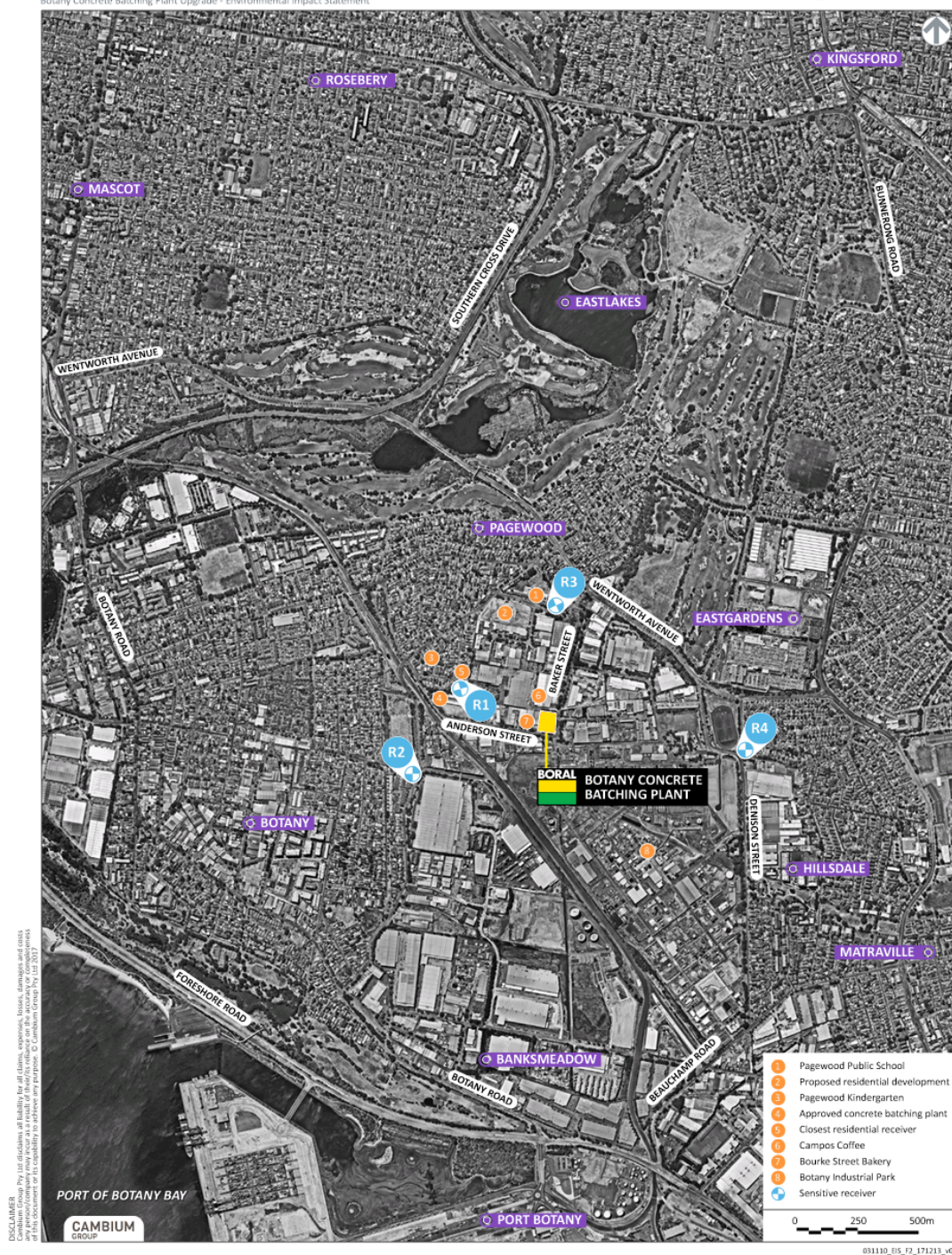


FIGURE 3
ZONING

Botany Concrete Batching Plant Upgrade - Environmental Impact Statement

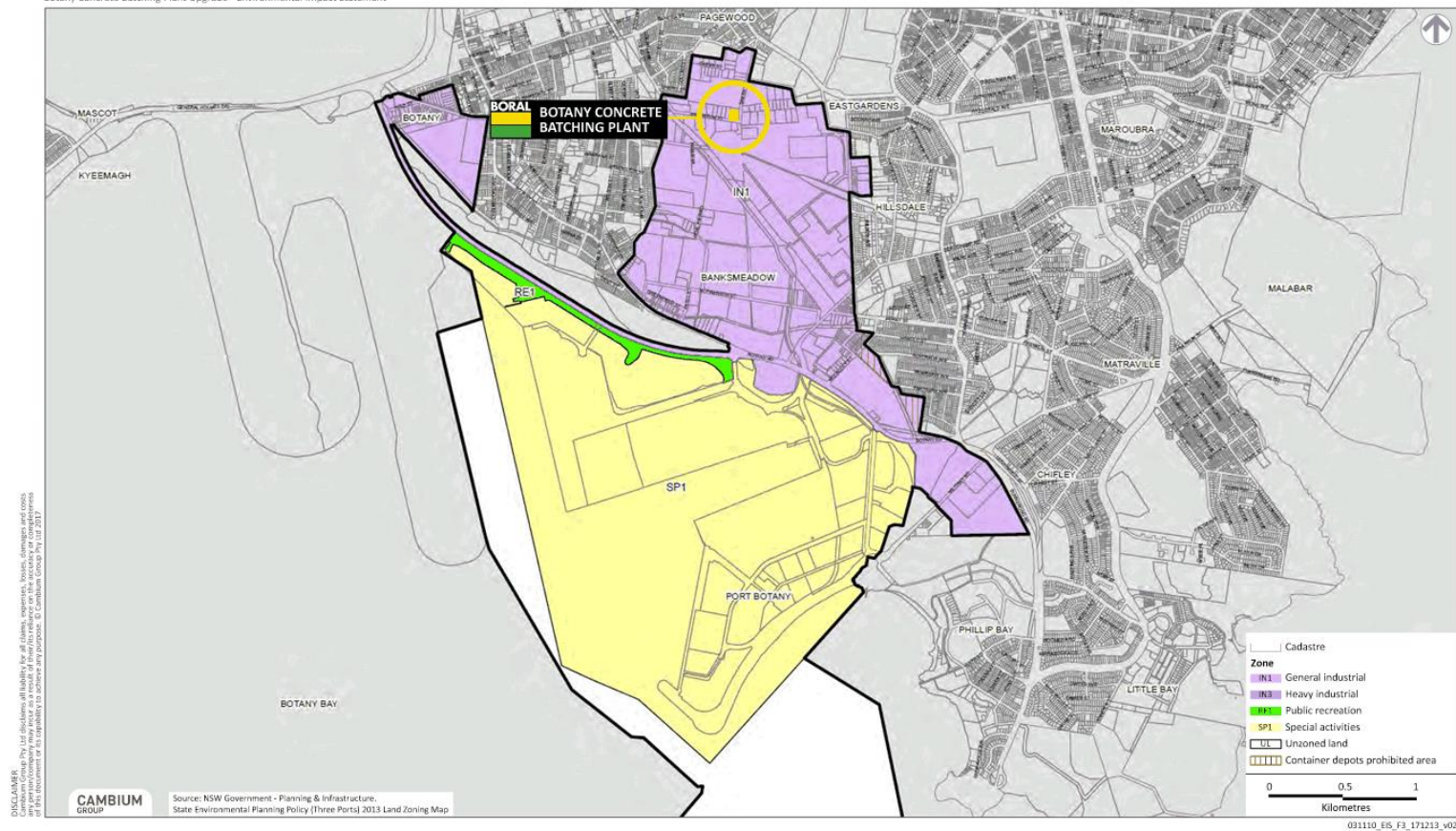


FIGURE 4

OPERATIONAL PROCESS

Botany Concrete Batching Plant Upgrade - Environmental Impact Statement

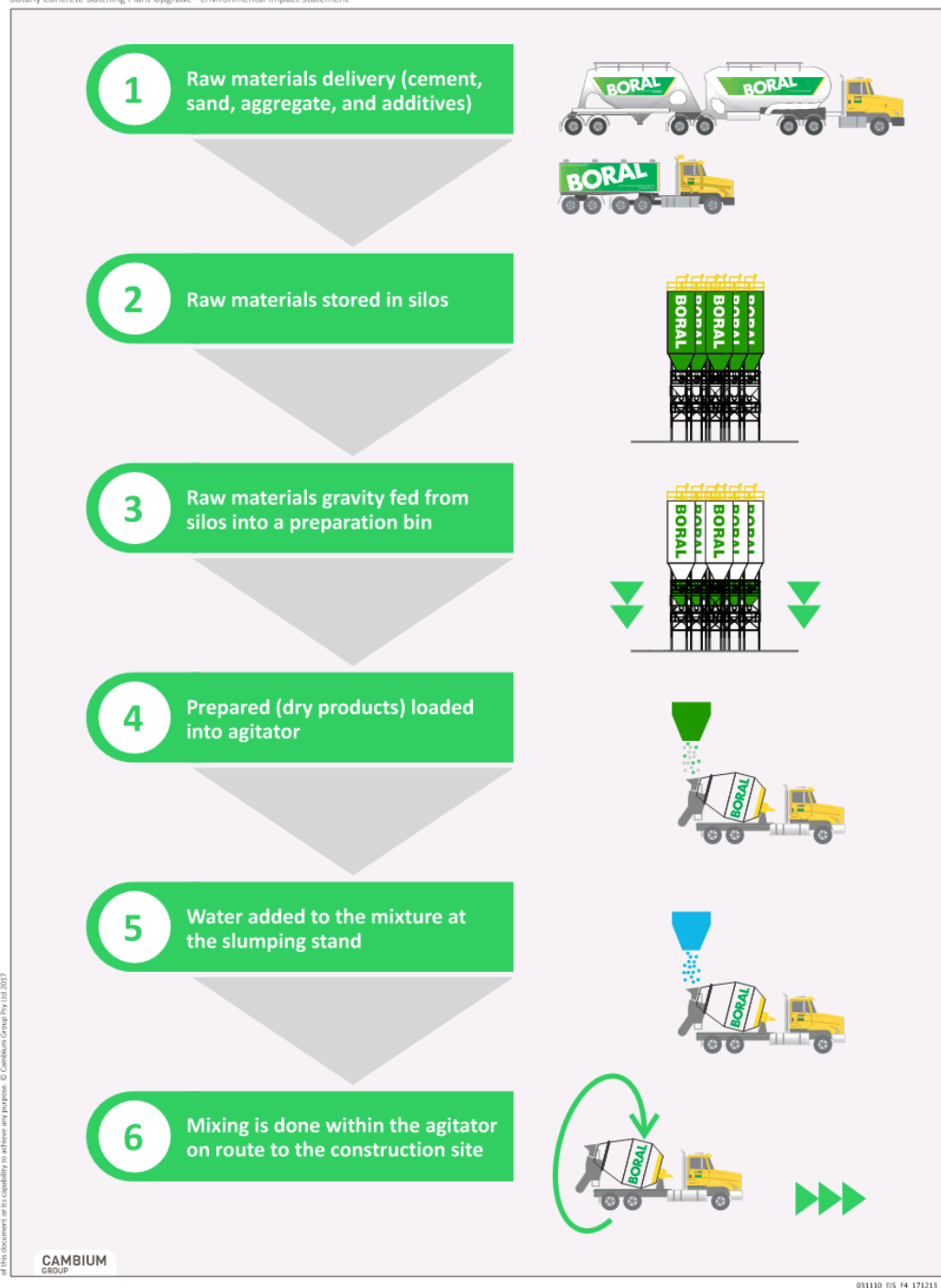




Plate 1: View from the northern perimeter of the site south towards Anderson Street.



Plate 2: View from the north-western corner of the site south-east towards Baker Street.

FIGURE 5

EXISTING OPERATIONS

Botany Concrete Batching Plant Upgrade - Environmental Impact Statement



FIGURE 6
THE PROJECT

Botany Concrete Batching Plant Upgrade - Environmental Impact Statement



FIGURE 7

THE PROJECT (ELEVATIONS)

Botany Concrete Batching Plant Upgrade - Environmental Impact Statement

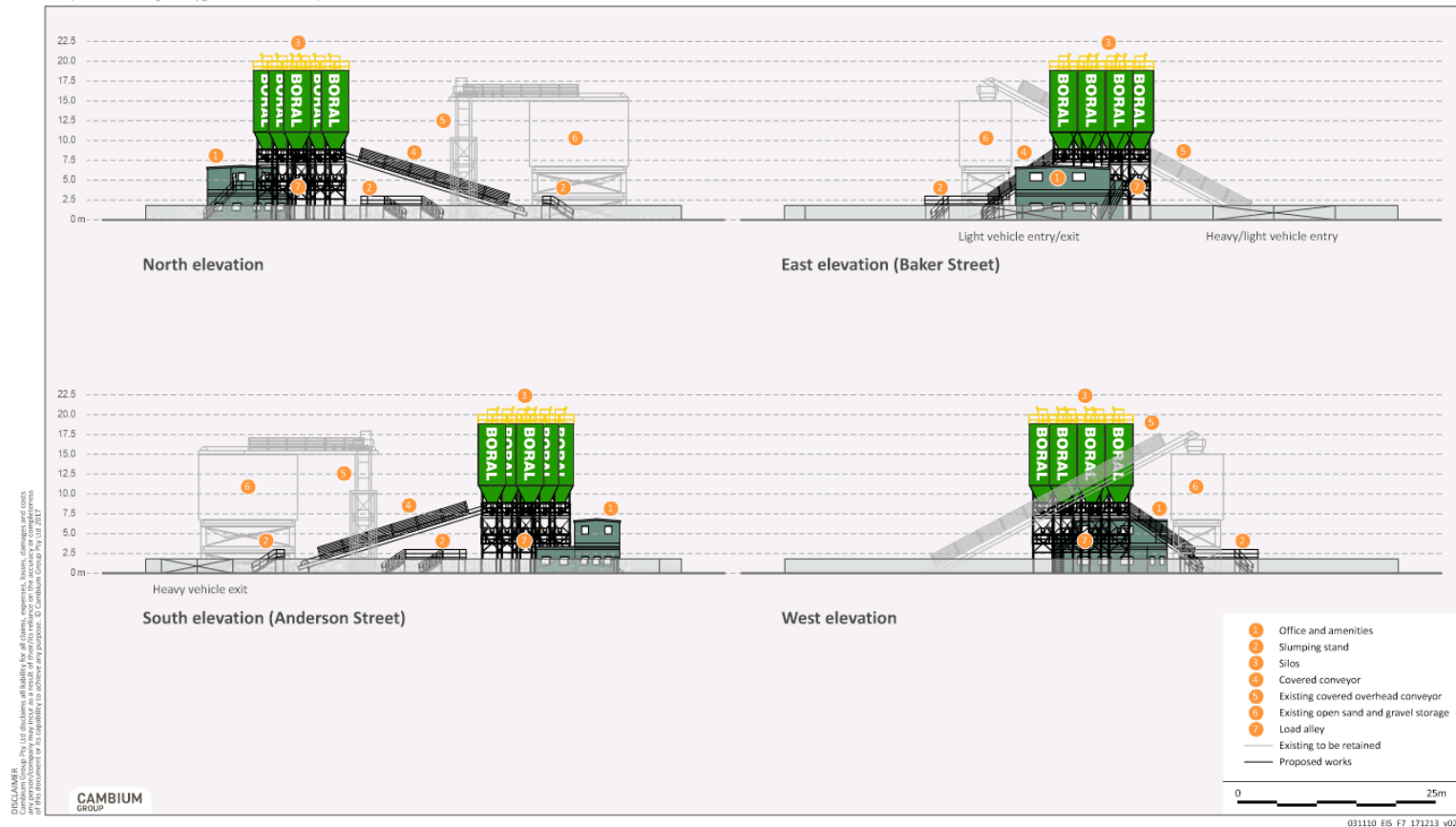


FIGURE 8
CUMULATIVE ANNUAL AVERAGE PM₁₀ CONCENTRATIONS
Botany Concrete Batching Plant Upgrade - Environmental Impact Statement

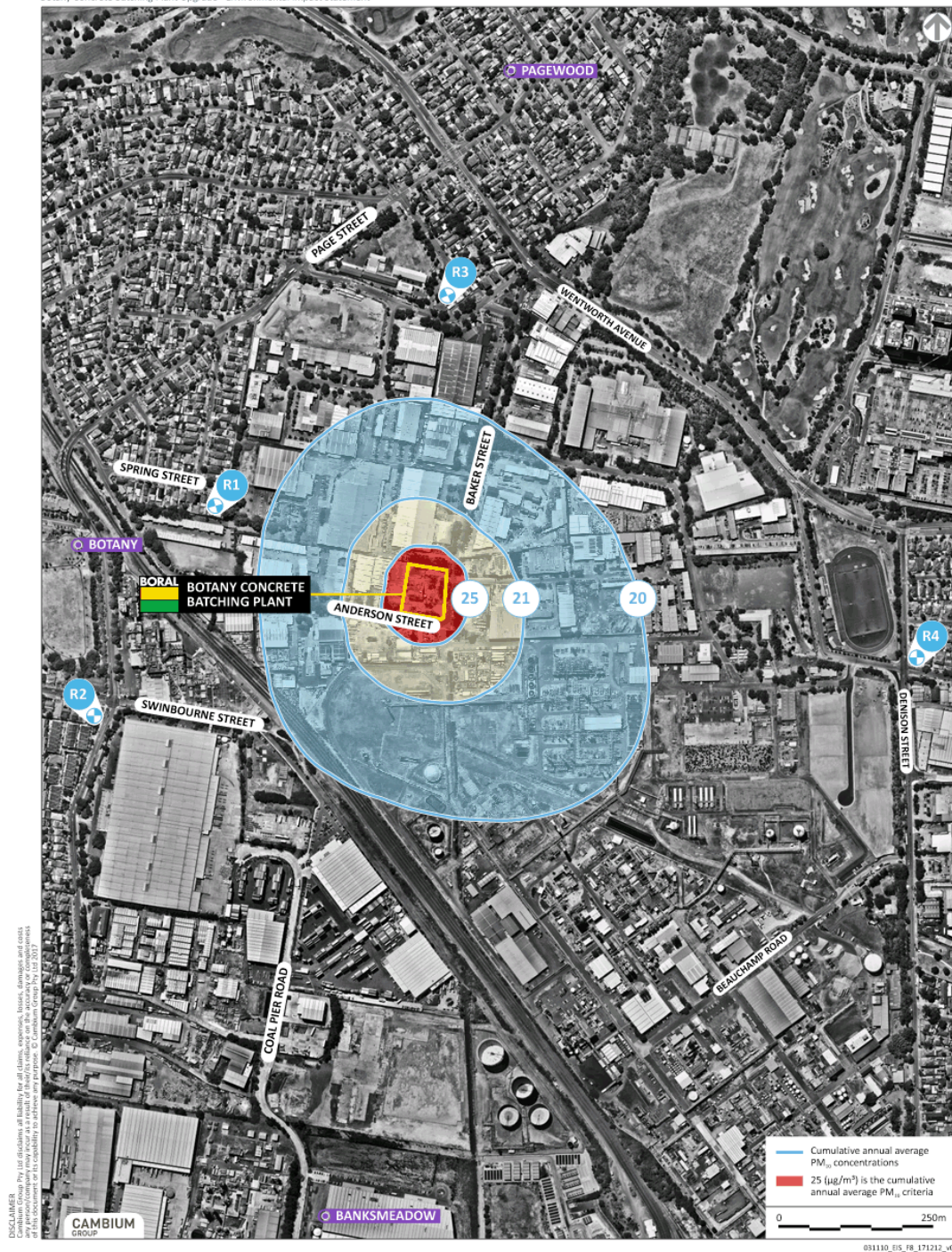


FIGURE 9
TRANSPORT ROUTES

Botany Concrete Batching Plant Upgrade - Environmental Impact Statement



FIGURE 10
PEAK HOUR TRAFFIC VOLUMES ON ADJACENT ROAD NETWORK
Botany Concrete Batching Plant Upgrade - Environmental Impact Statement

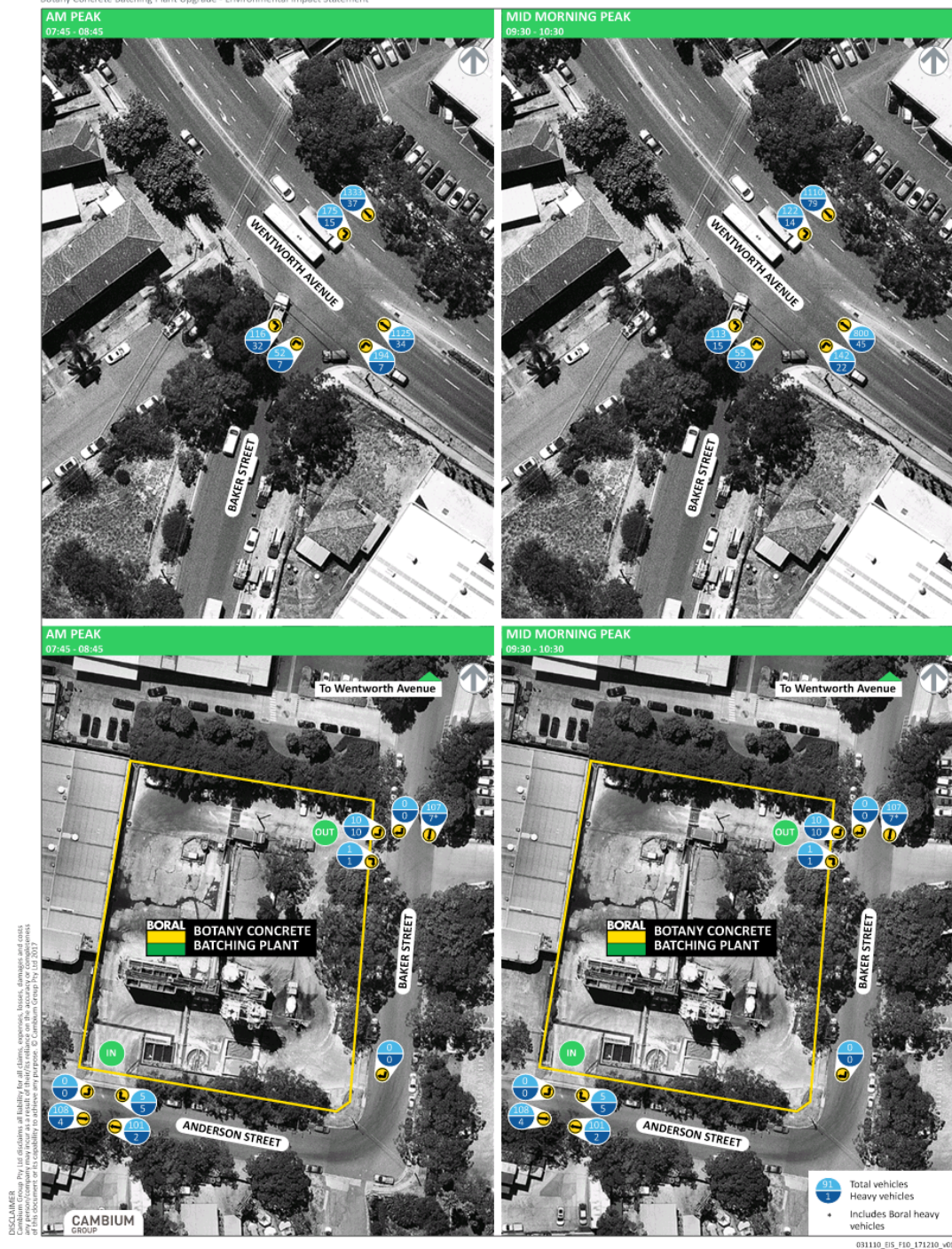


FIGURE 11
MAXIMUM HOUR TRAFFIC VOLUMES GENERATED BY THE PROJECT
 Botany Concrete Batching Plant Upgrade - Environmental Impact Statement



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FIGURE 12
SAMPLE EXCEEDANCES OF SOIL ASSESSMENT CRITERIA
Botany Concrete Batching Plant Upgrade - Environmental Impact Statement



FIGURE 13
SAMPLE EXCEEDANCES OF GROUNDWATER INVESTIGATION LEVELS

Botany Concrete Batching Plant Upgrade - Environmental Impact Statement



FIGURE 14
EXISTING STORMWATER MANAGEMENT SYSTEM
Botany Concrete Batching Plant Upgrade - Environmental Impact Statement



FIGURE 15
PROPOSED STORMWATER MANAGEMENT SYSTEM
Botany Concrete Batching Plant Upgrade - Environmental Impact Statement

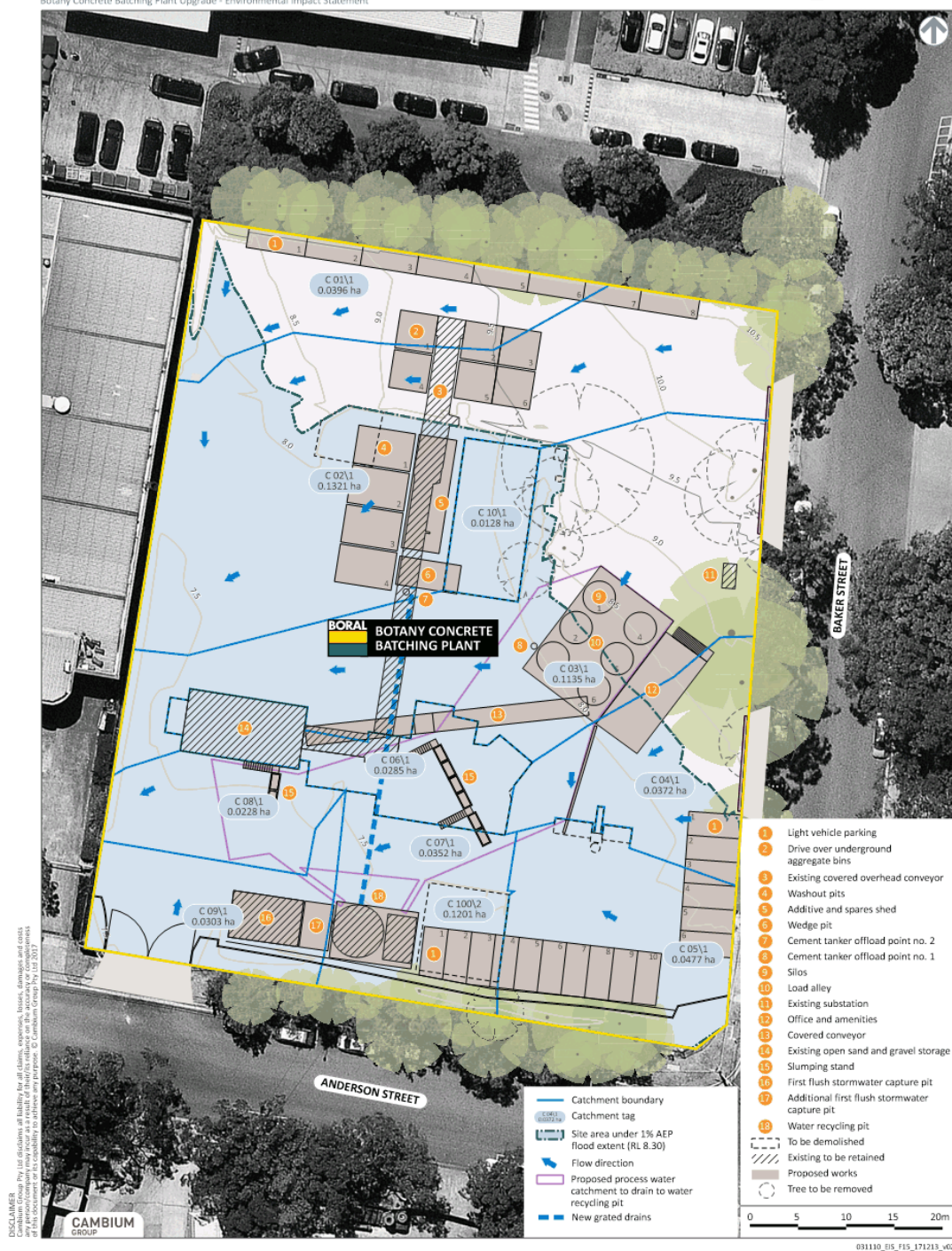




Plate 3: View of the site from adjacent property at 20 Anderson Street.



Plate 4: View east along Anderson Street towards the site.



Plate 5: View south along Baker Street towards the site.



Plate 6: View east towards the site from the end of Spring Street, Pagewood.



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16 April 2019

Adnan Voloder
Planning & Development Manager (NSW & ACT)
Boral Land & Property Group
Via email: adnan.voloder@boral.com.au

RE: Response to Public Comments for Botany Concrete Batching Plant Upgrade

Dear Adnan,

The following outlines additional information and clarification to address the Public comments for the Boral concrete batching plant at Banksmeadow (hereafter referred to as the Project) assessed in the *Air Quality Impact Assessment Botany Concrete Batching Plant Upgrade* (AQIA) (Todoroski Air Sciences, 2017).

Each of the public comments raised are set out in **Table 1** and are addressed in the same row.

The comments relate to public concerns about potential health impacts, effects on nearby locations, crystalline silica, and also management and control of the site dust. The AQIA shows that there would not be any health impacts at receptors or neighbouring locations, and also describes the management measures to be applied.

The issue of crystalline silica is raised. This is a problematic issue for workers exposed to dust from high speed cutting, drilling or grinding actions on quartz. This does not occur for the site processes or the activities producing the materials used on site, hence it is not an issue for the Project. Nevertheless, a more detailed assessment showing that this is the case is provided in **Table 1**.

Further detail is also provided regarding the mitigation measures to be applied, and the control levels achievable with such measures, as set out in **Table 2**. An Air Quality Management Plan for the Project will be developed as per the Conditions of Approval.

Please feel free to contact us if you would like to clarify any aspect of this report.

Yours faithfully,
Todoroski Air Sciences

A handwritten signature in dark ink, appearing to read 'A. Todoroski', is written over a light blue horizontal line.

Aleks Todoroski

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Table 1: Emissions Inventory – Peak Scenario

Sub mission ID	Submitted Comment	Response to Submitted Comment
1	"...Also the health concerns of concrete dust so close to Pagewood school, Residents and Cafes."	<p>The Pagewood school is located approximately 450m from the site. The closest residential receiver is located 330m metres away. In comparison, another recently approved but new concrete plant in this industrial area is located 30m away from residential receptors.</p> <p>The current proposal seeks to upgrade the existing plant and associated equipment, to current best practice standards, thereby reducing the potential impacts associated with the current level of production by approximately half. The net increase in dust levels arising from the combination of the upgrade and the increased level of production (by approximately double) would be small relative to the dust from the existing plant.</p> <p>The Air Quality Impact Assessment (AQIA) has assessed the potential effect of the proposed Project on air quality in the surrounding environment. The air quality impacts have been assessed against the assessment criteria in the NSW EPA Approved Methods. These assessment criteria are benchmarks set to protect the general health and amenity of the community in relation to air quality.</p> <p>The AQIA predicts that all the assessed air pollutants generated by the construction and operation of the Project would comply with the applicable assessment criteria at all sensitive receivers and therefore would not lead to any unacceptable level of environmental harm or impact in the surrounding area.</p>
2	<p>"Health and Safety: Boral is 150m from Pagewood School and a mere 25m from the very popular Bourke Street Bakery HQ where many local business staff, and parents with children go to sit and eat outside.</p> <p>The health concerns that arise from the concrete plants are frightening. For example, the air quality for all residents, local workers, the trees and plant life, and most particularly for those young children at the local public school."</p>	<p>The Pagewood school is located approximately 450m from the site. The closest residential receiver is located 330m metres away. In comparison, another recently approved but new concrete plant in this industrial area is located 30m away from residential receptors.</p> <p>The bakery café in question is located approximately 30m from the site and was approved in 2013, some 41 years after the commencement of operation of the Boral site. In 2015 the bakery was approved to enclose the outdoor seating area for the café.</p> <p>The current proposal seeks to upgrade the existing plant and associated equipment, to current best practice standards, thereby reducing the potential impacts associated with the current level of production by approximately half. The net increase in dust levels arising from the combination of the upgrade and the increased level of production (by approximately double) would be small relative to the dust from the existing plant.</p> <p>The Air Quality Impact Assessment (AQIA) has assessed the potential effect of the proposed Project on air quality in the surrounding environment. The air quality impacts have been assessed against the assessment criteria in the NSW EPA Approved Methods. These assessment criteria are benchmarks set to protect the general health and amenity of the community in relation to air quality.</p> <p>The AQIA predicts that all the assessed air pollutants generated by the construction and operation of the Project would comply with the applicable assessment criteria at all sensitive receivers and therefore would not lead to any unacceptable level of environmental harm or impact in the surrounding area.</p>

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3

		<p>The AQIA has predicted the potential effect of the proposed Project on air quality at sensitive receptors and also the wider surrounding environment. The isopleth diagrams in Appendix C show the predicted extent of impact for the assessment air pollutants in the wider surrounding environment.</p> <p>The predicted dust levels at the nearby locations including, the Pagewood Primary School and Bourke Street Bakery HQ, are shown on these isopleth diagrams. The predicted levels at these locations would be below the applicable assessment criteria and show the Project can operation without causing impact at these locations.</p>
3	<p>" The increase in production of concrete at the Boral plant on Baker Street Banksmeadow will cause considerable effect on the local residents, business owners and worker in our area. Workers and residents will be subject to a known carcinogenic on a consistent basis.</p> <p>... Given the proximity to workers and residents it is unreasonable to impact on the health of local populations of residents and workers, by subjecting them to harmful pollutants such as concrete dust on a 24 hour basis. This presents a total unacceptable risk."</p>	<p>It is noted that many businesses in the area do not operate on a 24 hour basis. Being an industrial area, it is highly unlikely that people will remain within the area, for any other purpose than for the purposes of employment or associated activities. There are no public facilities in close proximity which would encourage people to remain within the area for any other purpose.</p> <p>The current proposal seeks to upgrade the existing plant and associated equipment, to current best practice standards, thereby reducing the potential impacts associated with the current level of production by approximately half. The net increase in dust levels arising from the combination of the upgrade and the increased level of production (by approximately double) would be small relative to the dust from the existing plant.</p> <p>The Air Quality Impact Assessment (AQIA) has assessed the potential effect of the proposed Project on air quality in the surrounding environment. The air quality impacts have been assessed against the assessment criteria in the NSW EPA Approved Methods. These assessment criteria are benchmarks set to protect the general health and amenity of the community in relation to air quality.</p> <p>The AQIA predicts that all the assessed air pollutants generated by the construction and operation of the Project would comply with the applicable assessment criteria at all sensitive receivers and therefore would not lead to any unacceptable level of environmental harm or impact in the surrounding area.</p> <p>The AQIA has predicted the potential effect of the proposed Project on air quality at sensitive receptors and also the wider surrounding environment. The isopleth diagrams in Appendix C show the predicted extent of impact for the assessment air pollutants in the wider surrounding environment.</p> <p>The predicted dust levels at the nearby locations including, the Pagewood Primary School and Bourke Street Bakery HQ, are shown on these isopleth diagrams. The predicted levels at these locations would be below the applicable assessment criteria and show the Project can operation without causing impact at these locations.</p>

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4	<p>"The effects of cement dust will present a considerable health risk to all.</p> <p>...Silicosis caused from cement dust is a serious health concern and a known carcinogenic."</p>	<p>The current proposal seeks to upgrade the existing plant and associated equipment, to current best practice standards, thereby reducing the potential impacts associated with the current level of production by approximately half. The net increase in dust levels arising from the combination of the upgrade and the increased level of production (by approximately double) would be small relative to the dust from the existing plant. This will result in improved material handling and processing systems being implemented.</p> <p>The Air Quality Impact Assessment (AQIA) has assessed the potential effect of the proposed Project on air quality in the surrounding environment. The air quality impacts have been assessed against the assessment criteria in the NSW EPA Approved Methods. These assessment criteria are benchmarks set to protect the general health and amenity of the community in relation to air quality.</p> <p>The AQIA predicts that all the assessed air pollutants generated by the construction and operation of the Project would comply with the applicable assessment criteria at all sensitive receivers and therefore would not lead to any unacceptable level of environmental harm or impact in the surrounding area.</p> <p>The NSW EPA do not have an air quality impact assessment criteria for crystalline silica. This is because silica in the ambient environment is not a cause of health problems, but it is noted that exposure to very high concentrations of crystalline silica can impact on the health of workers using high speed cutting, boring or grinding tools on quartz materials. Such high speed cutting, boring or grinding is not a part of the processing activities on the site. Nevertheless, to directly address the comments, it is noted that the Victorian EPA (VIC EPA) have an impact assessment criterion for respirable crystalline silica (as PM_{2.5}) of 3 µg/m³ assessed as an annual average.</p> <p>Based on the assessment results in AQIA, the most affected sensitive receptor has a total maximum predicted incremental annual average PM_{2.5} concentration level of <0.1 µg/m³. This level is due to the total dust from the site, and only a small portion of this dust may contain some amount of silica.</p> <p>As the total level is more than thirty times below the VIC EPA criteria of 3 µg/m³ for respirable crystalline silica, the actual level from the Project would be significantly below the criteria and thus, the Project would not result in an unacceptable level of respirable crystalline silica in the ambient air at sensitive receptors.</p> <p>The isopleth diagram for incremental annual average PM_{2.5} predict a maximum level of approximately 1 µg/m³ beyond the site boundary. This level is also below the VIC EPA criteria of 3 µg/m³ and areas beyond this can also only be lower.</p>
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5	<p>"...Whilst the Boral plant is already in production and the submission does not challenge their right to remain in production, measures should be undertaken to further prevent the plants impacts on residents and works especially with regard to concrete dust emissions and traffic hazards. ...Given the proximity to workers and residents it is unreasonable to impact on the health of local populations of residents and workers, by subjecting them to harmful pollutants such as concrete dust on a 24 hour basis.</p> <p>...Workers and residents will be subject to a known carcinogenic on a consistent basis. The accumulated dust deposited onto and inside neighbouring properties will be replenished on a daily basis. This builds up and causes an ongoing threat to workers and residents. This presents a totally unacceptable risk. The area is a high wind area, particulate matter will have far reaching affects across areas that are very heavily populated such as the Meriton development that is situated further afield."</p>	<p>The current proposal seeks to upgrade the existing plant and associated equipment, to current best practice standards, thereby reducing the potential impacts associated with the current level of production by approximately half. The net increase in dust levels arising from the combination of the upgrade and the increased level of production (by approximately double) would be small relative to the dust from the existing plant. This will result in improved material handling and processing systems being implemented.</p> <p>It is noted that many businesses in the area do not operate on a 24 hour basis. Being an industrial area, it is highly unlikely that people will remain within the area, for any other purpose than for the purposes of employment or associated activities. There are no public facilities in close proximity which would encourage people to remain within the area for any other purpose.</p> <p>The Air Quality Impact Assessment (AQIA) has assessed the potential effect of the proposed Project on air quality in the surrounding environment. The air quality impacts have been assessed against the assessment criteria in the NSW EPA Approved Methods. These assessment criteria are benchmarks set to protect the general health and amenity of the community in relation to air quality.</p> <p>The AQIA predicts that all the assessed air pollutants generated by the construction and operation of the Project would comply with the applicable assessment criteria at all sensitive receivers and therefore would not lead to any unacceptable level of environmental harm or impact in the surrounding area.</p> <p>The AQIA has predicted the potential effect of the proposed Project on air quality at sensitive receptors and also the wider surrounding environment. The isopleth diagrams in Appendix C show the predicted extent of impact for the assessment air pollutants in the wider surrounding environment. The predicted dust levels at the nearby locations including, the Pagewood Primary School and Bourke Street Bakery HQ, are shown on these isopleth diagrams. The predicted levels at these locations would be below the applicable assessment criteria and show the Project can operation without causing impact at these locations.</p>
6	<p>"... this is a terrible proposal, right next door to Children participating in Athletics & less than 250 metres from Residential Housing."</p>	<p>The Pagewood school is located approximately 450m from the site. The closest residential receiver is located 330m metres away. In comparison, the Gunlake facility is located 30m away from a residential property. There is no athletics track in close proximity to the site.</p>



7	<p>" I object on the following .Hensley athletics field due to the community.</p> <p>...One other point the amount of fine dust and silica."</p>	<p>The Hensley athletics field is located 630m from the subject site.</p> <p>The current proposal seeks to upgrade the existing plant and associated equipment, to current best practice standards, thereby reducing the potential impacts associated with the current level of production by approximately half. The net increase in dust levels arising from the combination of the upgrade and the increased level of production (by approximately double) would be small relative to the dust from the existing plant.</p> <p>The Air Quality Impact Assessment (AQIA) has assessed the potential effect of the proposed Project on air quality in the surrounding environment. The air quality impacts have been assessed against the assessment criteria in the NSW EPA Approved Methods. These assessment criteria are benchmarks set to protect the general health and amenity of the community in relation to air quality.</p> <p>The AQIA predicts that all the assessed air pollutants generated by the construction and operation of the Project would comply with the applicable assessment criteria at all sensitive receivers and therefore would not lead to any unacceptable level of environmental harm or impact in the surrounding area.</p> <p>The NSW EPA currently do not have an air quality impact assessment criteria for crystalline silica. In its absence, the Victorian EPA (VIC EPA) have an impact assessment criterion for respirable crystalline silica (as PM2.5) of 3µg/m³ assessed as an annual average.</p> <p>Based on the assessment results in AQIA, the most affected sensitive receptor has a total maximum predicted incremental annual average PM2.5 concentration level of <0.1µg/m³. This level is due to the total dust from the site, and only a small portion of this dust would contain silica.</p> <p>As the total level is thirty times below the VIC EPA criteria of 3µg/m³ for respirable crystalline silica, the actual level from the Project would be significantly below the criteria and thus, the Project would not result in an unacceptable level of respirable crystalline silica in the ambient air at sensitive receptors.</p> <p>The isopleth diagram for incremental annual average PM2.5 predict a maximum level of approximately 1µg/m³ beyond the site boundary. This levels is below the VIC EPA criteria of 3µg/m³ and areas beyond this would also only be lower.</p>
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8	<p>"The Air Quality and Noise and Vibration Assessments provided with the DA have determined that only residential properties are identified as sensitive receivers. However there is a restaurant that is located in close proximity to the site (14A Baker Street) which should be considered a sensitive land use that may be likely impacted by dust, noise and vibration.</p> <p>Although Orora is located a sufficient distance from the subject site so as not to be adversely impacted by increased noise or vibration, any increase in airborne dust has the potential to impact upon stock hygiene for Orora's packaging and distribution centre on Moore Street, as well as the welfare of staff, local residents and surrounding businesses.</p> <p>Accordingly, we would like to ensure that these impacts are appropriately mitigated by way of conditions of consent, in the event that the DA is recommended for approval."</p>	<p>The current proposal seeks to upgrade the existing plant and associated equipment, to current best practice standards, thereby reducing the potential impacts associated with the current level of production by approximately half. The net increase in dust levels arising from the combination of the upgrade and the increased level of production (by approximately double) would be small relative to the dust from the existing plant.</p> <p>The Air Quality Impact Assessment (AQIA) has assessed the potential effect of the proposed Project on air quality in the surrounding environment. The air quality impacts have been assessed against the assessment criteria in the NSW EPA Approved Methods. These assessment criteria are benchmarks set to protect the general health and amenity of the community in relation to air quality.</p> <p>The AQIA predicts that all the assessed air pollutants generated by the construction and operation of the Project would comply with the applicable assessment criteria at all sensitive receivers and therefore would not lead to any unacceptable level of environmental harm or impact in the surrounding area.</p> <p>The AQIA has predicted the potential effect of the proposed Project on air quality at sensitive receptors and also the wider surrounding environment. The isopleth diagrams in Appendix C show the predicted extent of impact for the assessment air pollutants in the wider surrounding environment.</p> <p>The predicted dust levels at the nearby locations including, the Pagewood Primary School and Bourke Street Bakery HQ, are shown on these isopleth diagrams. The predicted levels at these locations would be below the applicable assessment criteria and show the Project can operation without causing impact at these locations.</p> <p>It needs to be noted that the Project would modernise the existing plant and generate less dust per unit of activity relative to the existing plant. This is relevant as it means the actual change in dust levels would be lower than the levels predicted in the AQIA (by an amount equal to the levels from the existing plant). Section 9 of the AQIA includes a range of potential dust mitigation options which can be applied to the Project.</p> <p>It is good practice to have dust mitigation and management measures and such measures would be used to ensure dust from the site is minimised.</p> <p>An Air Quality Management Plan for the Project will be developed as per the Conditions of Approval.</p>
9	<p>"...My other concern is safety for the children and residents of the area. How will this increase affect quality of air?</p> <p>...Health and Safety: Boral is only 150m from Pagewood School, 25m from Bourke Street Bakery where we take our kids to site and eat outside. The health concerns from the concrete plants are massive Eg: air quality particularly for those young children at the local public schools not to mention the safety of residents including Children when Boral trucks overtake the area."</p>	<p>The current proposal seeks to upgrade the existing plant and associated equipment, to current best practice standards, thereby reducing the potential impacts associated with the current level of production by approximately half. The net increase in dust levels arising from the combination of the upgrade and the increased level of production (by approximately double) would be small relative to the dust from the existing plant.</p> <p>The AQIA has predicted the potential effect of the proposed Project on air quality at sensitive receptors and also the wider surrounding environment. The isopleth diagrams in Appendix C show the predicted extent of impact for the assessment air pollutants in the wider surrounding environment.</p> <p>The predicted dust levels at the nearby locations including, the Pagewood Primary School and Bourke Street Bakery HQ, are shown on these isopleth diagrams. The predicted levels at these locations would be below the applicable assessment criteria and show the Project can operation without causing impact at these locations.</p>



Table 2: Summary of dust control measures

Source	Mitigation Measure/ Condition	Control level	Application of mitigation measure/ condition
General	Activities to be assessed during adverse weather conditions and modified as required (e.g. cease activity where reasonable levels of dust cannot be maintained using the available means)	N/A	
	Weather forecast to be checked prior to undertaking material handling or processing	N/A	
	Engines of on-site vehicles and plant switched off when not in use	100%	Applies to vehicles without a driver, or when on standby from more than 5 minutes.
	Vehicles and plant fitted with pollution reduction devices	Variable	Per manufacturer's specification.
	Maintain and service vehicles according to manufacturer's specifications	N/A	
	Any incidental spills to be cleaned up	100%	Spills to be cleaned up immediately, incidental gravel sand etc.
	Overflow alarms and pressure control valves installed on silos	100%	In order to prevent accidental release.
Stockpiling material	Minimise area and amount of stockpiled material	100%	Maintain stockpile area to the minimum size needed for efficient operations.
	Water suppression on stockpiles if material found to be excessively dusty	50%	Application of water on stockpiles when any continuous visible dust plume extends beyond the premises boundary.
Material handling	Reduce drop heights from loading and handling equipment where practical	30%	Minimise drop height of front end loader from approx. 3m to approx. 1.5m to reduce dust.
	Dampen aggregates and other material when excessively dusty	50%	Application of water on aggregates and materials when handling results in a continuous visible dust plume beyond the premises boundary.
	Continuous dust extraction system at loading point	> 90%	Per AP42 Emission Factor.
	Cement silos fitted with dust filters	>90%	Per AP42 Emission Factor.
Hauling activities	Sealed driving surfaces of the site to be cleaned regularly	N/A	Incidental gravel sand etc. to be cleaned up daily.
	Apply site speed limits	50-85%	Reduction from 65km/hr to 30km/hr
	Cover vehicle loads when transporting material off-site	N/A	For all vehicles leaving or existing the site.
	Street cleaning to remove dirt tracked onto sealed roads	N/A	To be conducted regularly as required to prevent a continuous visible plume of wheel generated dust beyond half the vehicle length past the vehicle.

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BAYSIDE COUNCIL

Planning Assessment Report

Application Details

Application Number:	2017/1249
Date of Receipt:	21 December 2017
Property:	1 Baker Street, Banksmeadow
Lot & DP/SP No:	Lot: 1 DP: 602703
Owner:	Boral Resources NSW Pty Ltd
Applicant:	Boral Resources (NSW) Pty Ltd
Proposal:	Designated and Integrated Development - Expansion of the existing Concrete Batching plant through the construction of additional infrastructure at the Botany Concrete Batching Plant to increase production from 90,000m ³ to a maximum capacity of 200,000 m3 of concrete product (500,000 tonnes per annum). On the northern side of Anderson Street and western side of Baker Street at the intersection of Baker and Anderson Street
Property Location:	
Value:	\$5,700,000.00
Recommendation:	That this Development Application be refused pursuant to Section 4.16(1)(a) of the Environmental Planning and Assessment Act 1979
Zoning:	IN1 – General Industrial State Environmental Planning Policy (Three Ports) 2013
Author:	Lincoln Lawler- Senior Development Assessment Officer
Date of Report:	6 October 2018
Present Use:	Concrete Batching Plant
No. of submissions:	14

Key Issues

The key issues with this application include the traffic generation and impacts on the intersection of Baker Street and Wentworth Ave which in turn creates impacts on this industrial precinct.

The issues of dust and air quality remain an issue with the peak production fine particulate matter not being modelled.

The development application has been assessed in accordance with the relevant requirements of the *Environmental Planning and Assessment Act 1979* and is recommended for refusal.

Recommendation

1. That development application DA-2017/1249 for the expansion of the existing concrete batching plant to allow for 200,000 cubic metres (m3) or approximately 500,000 tonnes of pre-mixed concrete products per annum to be produced at 1 Baker Street, Banksmeadow, be **refused**.
2. That the submitters be advised of the Panel's Decision.

Site Description

The subject site is located on the northern side of Anderson Street and the western side of Baker Street at the intersection of the aforementioned streets. Meadow way (a Private Road) is located to the east, on the eastern side of Baker Street

The site is generally rectangular in shape and has an area of 4959 m2 with a 75 metre frontage to Baker Street and a 65 metre frontage to the Anderson Street frontage. The site contains an existing concrete batching plant operated by Boral. The Anderson Street frontage has a driveway adjacent to the northern boundary directly opposite Meadow Way. Located almost at the intersection of Baker Street and Anderson Street is another vehicle crossing and located adjacent the western boundary on Anderson Street is another vehicle crossing. All crossings are utilised.

The site is located approximately 480 metres south of the intersection of Baker Street and Wentworth Ave.



Figure 1. Locality Map

2/41

The surrounding area is characterised by commercial and industrial premises, with the following key land uses immediately adjacent to the site:

North – Botany Grove -an industrial estate owned by Goodman containing Campos Coffee and a range of other commercial/industrial undertakings. Additional commercial/industrial premises are immediately adjacent to the north of the site, with further commercial and industrial premises along Baker Street beyond.

South – to the south of Anderson Street are commercial and industrial properties (including Air Liquide plant and a storage container yard near the site). Further to the south-east is the Botany Industrial Park, including a chlor-alkali plant operated by Orica Australia Limited and a polyethylene manufacturing plant operated by Qenos Pty Ltd.

East – to the east are commercial and industrial premises along Baker Street and Meadow Way including Price and Speed Container Depot, a metal recycler and Nurti Soy production facility.

West – to the west of the site are commercial and industrial premises along Anderson Street, including ICF, a freight company, and Bourke Street Bakery warehouse. In addition at 2 Anderson Street is the recent approval of Gunlake Concrete and their Batching Plant.

The closest residential dwellings to the site are along Spring Street, with the closest residential receiver approximately 330 m to the west north-west of the site.

Other sensitive receivers in the locality include Pagewood Public School, which is 413 m north west of the site, and Pagewood Kindergarten, which is approximately 480 m west north-west of the site along Dudley Street, Pagewood.

Site History

The site benefits from a number of approvals both Pre and Post Environmental Planning and Assessment Act of 1979. The approvals are detailed as follows:

Development Consent No. 71-T-38 (Lot 3)

Development Consent No. 71-T-38 was approved for the use of the site as a Concrete Plant. This was approved by Council on 19 March 1971

Development Consent 71 – T -44 (Lot 2)

Development Consent No. 71-T-44 was approved for the use of the site as a ready mixed Concrete Plant. This was received by Council on 3 March 1971 approved by Council on 15 March 1971

Development Application 1748

The application was lodged with Council for a proposed new silo at the existing concrete batching plant on 30th March, 1988. This was approved on the 20th June 1988.

Development Application 2006/327

Development Application 06/327 was lodged with Council on 17 March 2006 for alterations to the existing concrete plant including the replacement of existing cement silos, water recycling tank and admixture storage area, with new ones in similar locations. This application was approved on 9 August 2006. The conditions of approval includes a condition that relies on the

3/41

information submitted with the application. In particular Condition 26 states "The applicant being informed that this approval shall be regarded as being otherwise in accordance with the information and particulars set out and described in the Development Application registered in Council's records as Development Application No. 06/327 dated as 17 March 2006 and that any alteration, variation, or extension to the use, for which approval has been given, would require further Approval from Council."

A review of the applicants Stamped and Approved Statement of Environmental Effects to which they must operate in accordance with in light of the above condition states.

	Type and Size of vehicles e.g. Class 6	Number of each type of vehicle	Vehicle movements per day e.g. In / Out = 2 trips
Employee (private)	1 Class 4 - Cars	13	$13 \times 2 = 26$
	2		
	3		
	4		
Company	1 Class 4 - Agitator trucks	11	$4 \times 6 \times 2 = 66$
	2 Class 8 - Cement tankers		$3 \times 2 = 6$
	3 Class 8 - Aggregate		$12 \times 2 = 24$
	4		
	5		
	6		
	7		
Delivery / Courier / Container	1 Class 1 - Visitors		$3 \times 2 = 6$
	2 Class 3 - deliveries		$1 \times 2 = 2$
	3		
	4		
	5		
	6		
	7		

The consent was also limited to a maximum of 13.5 employees.

Development Application 2007/96

DA-07/96 was received by Council on 8 September 2006 for alterations to existing concrete plant including replacement of cement silos, above ground water recycling tank and admixture storage area. This was approved as deferred commencement on 15 January 2007 for a period of 12 months. On 30 March 2007, the consent was issued as operational.

Condition 26 states

"The applicant being informed that this approval shall be regarded as being otherwise in accordance with the information and particulars set out and described in the Development Application registered in Council's records as Development Application No. DA07/096 dated as 8 September 2006 and that any alteration, variation, or extension to the use, for which approval has been given, would require further Approval from Council."

The Statement of environmental effects states

	Type and Size of vehicles e.g. Class 6	Number of each type of vehicle	Vehicle movements per day e.g. In / Out = 2 trips
Employee (private)	1 Class 1 - Cars	13	$13 \times 2 = 26$
	2		
	3		
	4		
Company	1 Class 4 - Agitator Trucks	11	$11 \times 6 \text{ max} = 66$
	2 Class 8 - Cement tankers		$3 \times 2 = 6$
	3 Class 8 - Aggregate		$12 \times 2 = 24$
	4		
	5		
	6		
	7		
Delivery / Courier / Container	1 Class 4 - Visitors		$3 \times 2 = 6$
	2 Class 3 - Deliveries		$1 \times 2 = 2$
	3		
	4		
	5		
	6		
	7		

And again reconfirms that the operation is limited to a maximum of 13.5 employees.

Existing operation

Chapter 3 of Boral's Environmental Impact Statement lodged with the current application has described in detail how the existing Concrete Batching Plant at the site currently operates. This is discussed as follows:

Section 3.4 – Employment and Operating Hours states “The site employs a total of 27 personnel, including 11 agitator drivers. The current operating hours of the site are 6am to 9pm Monday to Friday, 6am to 12pm Saturday, and closed Sundays and Public Holidays.”

Chapter 4 provides a comparison between the current operation of the plant and the proposed expanded facility.

Of note Table 7 of Chapter 4 discusses one way truck movements – total truck movements would be double the figures below:

Table 7: Comparison of existing and proposed truckloads (one way movement)

Truck type and number of loads	Existing operations			Proposed operations		
	Average per day	Peak per day	Peak per hour	Average per day	Peak per day	Peak per hour
Aggregate truck	22	42	6	50	94	12
Cement tanker	4	8	2	10	19	3
Agitator truck	60	113	17	133	250	33
Trucks transporting concrete waste	1	2	1	2	4	1

Description of Development

The Development Application seeks Council consent for the demolition and modification of the existing infrastructure at the site, install a total of six 130 tonne blended product dispatch silos and associated infrastructure (air slides and dust controls), and construction of additional infrastructure required to operate the concrete plant at its new operational capacity. The additional infrastructure will be integrated into the existing concrete plant and will allow the dispatch of up to 200,000 cubic metres (m3) or approximately 500,000 tonnes of pre-mixed concrete products per annum.

The proposed upgrade to the concrete plant will generate a peak of 367 truck movements per day during operation.

The specifics of the proposal are contained in the applicants EIS and are repeated as follows:

The construction and commissioning of the upgrade to the concrete plant will involve the following stages:

- Demolition of existing administration building and associated infrastructure (including removal of existing landscape vegetation at the site);
- Construction of a new double storey administration and amenities building along the eastern perimeter of the site;
- Relocation of utility services (if required);
- Demolition of three existing silos and replacement with a total of six modern silos. Each silo will be delivered on the back of a 40 tonne truck;
- Piling, where the proposed silos will be founded on approximately 600 mm piles, which would be installed through the existing concrete hardstand to a depth of approximately 4 m (or until appropriate load bearing material is reached). Pile caps will be constructed on top of each pile;
- Installation of six silo mounting frames, which will be secured to the pile caps. The dimensions for the mounting frames are 2.34 m long, 2.34 m wide and 8.37 m high. An 80 t crane will lower the silos onto the mounting frames and secured in place;
- Installation of other infrastructure to connect the silos to the existing batching plant and load alley and will include connecting airslides; pneumatic proportional flow control valves and shut-off valves and air bag filters, dirty air fans and motors; testing, fault finding and checks will be run before full operation of the silos;
- Demolition of existing two concrete washout pits and construction of four new concrete washout pits in the centre of the site;
- Construction of additional in-ground unloading bins along the northern perimeter of the site;
- Improvements to above ground open materials stockpile areas at the north-western corner and centre of the site;
- Demolition of existing two slump stands and construction of four new slump stands in the centre of the site;
- Construction of an additional first flush stormwater pit and reconstruction of a single, larger water recycling pit along the southern perimeter of the site;
- Relocation of existing entrance gate along Baker Street and additional driveway paving at the northern gate within the road verge of Baker Street;
- Erection of new 1.8 m security perimeter fencing and upgraded access gates, including provision of access to existing electrical substation for Endeavor Energy; and

6/41

- Construction of additional parking spaces on-site for light and heavy vehicles.

Statutory Considerations

Environmental Planning and Assessment Act, 1979

An assessment of the application has been undertaken pursuant to the provisions of the *Environmental Planning and Assessment Act, 1979*.

Integrated Development – Part 4, Division 4.8 – Integrated Development and Environmental Planning and Assessment Regulations 2000 – Part 6, Division 3

The relevant requirements under Division 4.8 of the EP&A Act and Part 6, Division 3 of the EP&A Regulations have been considered in the assessment of the development applications.

Water Management Act 2000

The development application is Integrated Development in accordance with the Water Management Act 2000 as the development involves interference with the aquifer as the proposed construction works intercept groundwater.

Before granting development consent to an application, the consent authority must, in accordance with the regulations, obtain from each relevant approval body the general terms of any approval proposed to be granted by the approval body in relation to the development.

In this regard, the development application was referred to WaterNSW. In a letter dated 28 March 2018, WaterNSW has provided its General Terms of Approval for the proposed development, which can be imposed upon the development in the Schedule of Consent Conditions should consent be granted.

Protection of the Environment Operations Act 1997 – POEO Act

Clause 48 of the Act outlines that an Environmental Protection licence ("EPL") (separate application) is required for any scheduled activities to be undertaken at a premise at which Schedule 1 of the Act indicates that a licence is required.

Schedule 1 includes the following:

13 Concrete works

(1) This clause applies to concrete works, meaning the production of concrete products, but does not include the production of pre-mixed concrete (concrete batching).

(2) The activity to which this clause applies is declared to be a scheduled activity if it has a capacity to produce more than 30,000 tonnes per year of concrete products.

The applicant has comments: The Project would involve production of pre-mixed concrete, commonly referred to as 'concrete batching'. As such, the scheduled activity of concrete works is not applicable to the site, and the Project does not trigger an additional scheduled activity under the POEO Act.

Discussion with the applicant was held around whether the application triggered an EPL under Clause 6 of Schedule 1 – Cement or lime works.

Council's opinion is that the application involves cement handling, in accordance with the definition and breaches the capacity threshold.

Clause 6 identifies cement **or lime handling**, meaning the handling of cement, fly ash, powdered lime (other than agricultural lime) or any other similar dry cement products.

An EPL is required where the facility has capacity to handle more than 150 tonnes of cement or lime per day or 30,000 tonnes of cement or lime per year. The applicants EIS states that they will make approximately 500,000 tonnes of concrete. And further indicates on page 23 that water and cement powder constitute roughly 15% of the mix volume while aggregates are between 65-80%. The application then goes to say that the raw materials (cement) are delivered in a dry state and stored in purpose built silos. Looking at the number of truck movements (maximum) associated with cement trucks. The project specifies a maximum of 19 Cement tanker trucks per day. The cement tankers volume varies with the minimum of a semi-trailer being 28 Tonnes and on a b double 32 tonnes.

The application is for 24/7 operation 365 days a year. The maximum capacity or cement handling is therefore 19 (trucks) X 32 tonnes (minimum capacity) x 365 days in a year. This equates to 221,900 tonnes of cement, more than reaching the trigger of 30,000 tonnes per year.

Accordingly, an EPL is considered to be necessary for this project.

The applicant has provided a comment from the Director of Regulatory Reform and Advice at the NSW EPA stating that

"making reference to the potential amendments that aim to address the issue of concrete batching plants that handle significant quantities of cement and/or lime, and trigger a requirement to hold an environment protection license under the POEO Act (as cement or lime handling activities). As previously stated in our meetings (and stated at the ASBG seminar) this is contrary to the EPA's policy intention to remove the need for concrete batching plants to hold a license.

As you know, the EPA is proposing amendments to the Act so that the 'cement or lime handling' licensing trigger does not apply if the handling is being undertaken as part of the production of pre-mixed concrete."

At the time of writing the report the legislation requiring the activity to operate under an Environment Protection License is still in force.

Further the above only relates to Cement or lime handling and still fails to discuss Clause 19 Extractive industries which require an EPL.

This clause defines the activity as follows

"land-based extractive activity, meaning the extraction, processing or storage of extractive materials, either for sale or re-use, by means of excavation, blasting, tunnelling, quarrying or other such land-based methods. "

Clause 19(2) states"

"extractive materials means clay, sand, soil, stone, gravel, rock, sandstone or similar substances that are not minerals within the meaning of the [Mining Act 1992](#).

Again the trigger for a license is for a facility to have a capacity in excess 30,000 tonnes of extractive materials per year.

In regards to this application the storage of extractive materials (aggregate) are broken down as follows:

The proposal involves a maximum of 94 aggregate trucks per day with a maximum capacity of 35 tonnes per truck over 365 days a year for production equates to 1,200,850 tonnes of aggregate per year proposed. This meets the trigger for the storage of extractive material of 30,000 and as such needs an Environment Protection License.

The NSW Environment and Protection Agency has not provided comment in regards to the need for an Environment Protection License in their official referral response.

The NSW EPA have confirmed in their letter of 29 November 2018 that if the thresholds are met and/or exceeded then the proponent will require an Environmental Protection licence.

The EPA have also advised that *"where a licence is required under clause 6 of Schedule 1 of the POEO or another clause of Schedule 1, a planning proposal should be referred to the EPA as integrated development."*

Environmental Planning and Assessment Act, 1979 and Environmental Planning and Assessment Regulations 2000 (EP and A Regs)

Section 77A of the Act defines designated development to be development that is declared designated development by an EPI or the Regulations.

Designated Development

Consideration has been given to Schedule 3 of the Environmental Planning and Assessment Regulation 2000 (Regulations), which relates to designated development. Clause 14 – Concrete works, provides the criteria for concrete works, and an assessment of the proposal against this criteria shows that the activity is 'designated development' for the following reasons:

In accordance with Clause 14 of Schedule 3, which stipulates the following:

- 14 - Concrete works that produce pre-mixed concrete or concrete products and:
 - (a) that have an intended production capacity of more than 150 tonnes per day or 30,000 tonnes per year of concrete or concrete products,

Comment:

Given the development is producing up to 500,000 tonnes of concrete per year, it satisfies the requirement for Designated Development, in accordance with Clause 4 of the EP and A Regulations.

Environmental Impact Statement

In accordance with Section 4.12(8) of the Act an environmental impact statement has been submitted. This statement is considered to be consistent with the requirements of Schedule 2 of the Regulations, which stipulates the information to be included within an environmental impact statement. The applicants EIS does not satisfy the SEARS issued by the Department of Planning as demonstrated in the table below:

9/41

Secretary' Environmental Assessment Requirements

Secretary's Environmental Assessment Requirements	
Strategic Context	The applicant has failed to identify the required licenses in relation to the Protection of the Environment
Air Quality	<p>A description of all potential sources of air emissions including dust is required. The applicant has advised:</p> <p><i>The main sources of air pollution in the wider area include emissions from anthropogenic activities such as motor vehicle exhaust, urban activity and various commercial and industrial Activities.</i></p> <p>This does not include the operation of nearby Concrete Batching Plant (under construction) at 2 Anderson Street or the significant open air storage of salt to the south east of the site within the Botany Industrial Park.</p> <p>The cumulative impact on air quality has not been discussed. It is therefore considered that the EIS has not addressed the requirement of the Secretary.</p>
Water Resources	<p>The application does not detail the approval required under the Water Management Act 2000 for the controlled activity of Aquifer interference. However, Council advised that it was integrated development for the above and approval was needed under the Water Management Act 2000. The applicant stated in their EIS that</p> <p><i>"The Project does not require approvals under the aforementioned legislation and is therefore not classified as integrated development under Section 91(1) of the EP&A Act."</i></p>
Soil and water	This is considered to be satisfied with a description of local soils being provided and potential impacts on quality and quantity of surface and groundwater resources, sediment and erosion controls and site water balance. Discussion was also provided around stormwater and wastewater systems, contamination and mitigation and monitoring measures

10/41

Noise and Vibration	Sources of noise and vibration and an assessment of such with mitigation and monitoring measures is satisfied.
Traffic and Transport	Detail of road transport routes and access, road traffic predictions during construction and operation, impacts to safety and function of road network and any road upgrades required for the development. How this is addressed is discussed within the body of the report (refer Traffic discussion).
Waste Management	Details of waste handling and reuse have been detailed within the EIS as required by the SEARS.
Hazards and Risk	The EIS must include a preliminary risk in accordance with SEPP 33. This has been provided.
Biodiversity	Description of vegetation clearing and flora and fauna impacts. This is included in the EIS
Visual	Visual impact assessment at private and public receptors. This is achieved
Heritage	Aboriginal and non Aboriginal Cultural Heritage considered as adequate.

S.4.15(1) - Matters for Consideration – General

S.4.15(1)(a)(i) - Provisions of Environmental Planning Instruments

The following Environmental Planning Instruments are relevant to this application:

State Environmental Planning Policy No. 55 – Remediation of Land

The provisions of SEPP 55 have been considered in the assessment of the development application, along with the requirements of BBDCP Part 3K Contamination, relating to Contaminated Land.

Clause 7 of SEPP 55 requires the consent authority to consider whether land is contaminated prior to granting consent to carrying out of any development on that land and if the land is contaminated, it is satisfied that the land is suitable in its current state or will be suitable.

The application was supported by the following reports:

- 1) 'Phase 1 Environmental Site Assessment: Boral Concrete, 1 Baker Street, Banksmeadow NSW' completed by Environmental Compliance Services dated November 2016.
- 2) 'Phase 2 Environmental Site Assessment – 1 Baker Street, Banksmeadow NSW' completed by Cleanaway dated May 2017.

- 3) 'Acid Sulfate Soil Management Plan – Boral Concrete – 1 Baker Street, Banksmeadow NSW 2019' completed by Environmental Compliance Services dated June 2017.

These reports have been assessed by Council's Environmental Scientist who makes the following comments:

The Phase 1 and Phase 2 reports did not show any contaminants of concern for commercial/industrial use that require management. Acid sulfate soil was detected at 5m bgl, and an Acid Sulfate Soil Management Plan for works below 4m has been provided. It is noted that during construction that groundwater will be encountered and dewatering required.

As the site is maintaining the current commercial/industrial use, and information indicates that the site is suitable for the proposed development, the Environmental scientist has not objected to the proposal and recommended conditions of consent.

Given the above, Council is satisfied that the applicant has provided information for it to be satisfied of the Clause 7 requirements of SEPP 55.

On this basis, the site is suitable in its present state for the proposed development. No further investigations of contamination are considered necessary.

State Environmental Planning Policy – Three Ports 2013 (SEPP 3 Ports)

Under SEPP 2013, Clause 6 relates to the relationship to other environmental planning instruments. Subject to section 74 (1) of the Act, in the event of an inconsistency between this Policy and another environmental planning instrument whether made before or after the commencement of this Policy, this Policy prevails to the extent of the inconsistency. Therefore, the provisions of Botany Local Environmental Plan (LEP) 2013 do not apply to the subject site.

Principal Provisions of SEPP (Three Ports) 2013	Compliance Yes/No	Comment
Land use Zone	Yes	The site is zoned IN1 – General Industrial
Is the proposed use/works permitted with development consent?	Yes	<p>The proposed use is permissible with Council's consent under the BBLEP 2013. The use has been categorized as General Industries.</p> <p>Clause 4(3) of the SEPP – Definitions calls up the words having the same meaning as those described at the end of Standard Instrument (Local Environmental Plans) Order 2006.</p> <p>General industry means a building or place (other than a heavy industry or light industry) that is used to carry out an industrial activity.</p>

12/41

Principal Provisions of SEPP (Three Ports) 2013	Compliance Yes/No	Comment
		<p>Industrial Activity means the manufacturing, production, assembling, altering, formulating, repairing, renovating, ornamenting, finishing, cleaning, washing, dismantling, transforming, processing, recycling, adapting or servicing of, or the research and development of, any goods, substances, food, products or articles for commercial purposes, and includes any storage or transportation associated with any such activity</p> <p>Comment: The proposed use does not fall into the definition of light industry nor heavy industry (Where relevant controls mitigate impacts). The applicant has undertaken an assessment of Hazardous and offensive industry in accord with SEPP 33 and determined that it is neither and as such does not meet the criteria for heavy industry.</p> <p>Given the nature of the concrete batching plant it is considered to be an industrial activity and as such in light of the above falls into the definition of general industry.</p>
Does the proposed use/works meet the objectives of the zone?	No – Refer Note 1	<p>The proposed development is consistent with the objectives of the IN1 – general industry zone which are as follows:</p> <ul style="list-style-type: none"> • To provide a wide range of industrial and warehouse land uses. • To encourage employment opportunities. • To minimise any adverse effect of industry on other land uses. • To facilitate and encourage port related industries that will contribute to the growth and diversification of trade through the port. • To enable development for the purposes of business premises or office premises associated with, and ancillary to, port facilities or industries.

Principal Provisions of SEPP (Three Ports) 2013	Compliance Yes/No	Comment
		<ul style="list-style-type: none"> To encourage ecologically sustainable development. <p>Comment: The development provides a type of industrial use which will encourage employment opportunities.</p> <p>Given the proposed use and the significant impact of truck movements and that the current operation is operating well beyond the current approval for the site, then the development has not sought to minimise the adverse traffic impacts.</p> <p>The proposed concrete batching plant by Boral has been identified in the applicants EIS (Pg 56) as <i>"not specifically a port-related development, it is considered that the concrete plant is a beneficial development within Port Botany as it provides an opportunity for local and cost-effective supply of concrete products for the development of various port related infrastructure if required. The position of the site is located a sufficient buffer from prime port-related land uses and as such the development would not obstruct or impede a future port-related development."</i></p> <p>It is unclear from the applicants EIS as to how the proposed concrete batching plant will facilitate and encourage port related industries that will contribute to the growth and diversification of trade through the port.</p> <p>The development does not involve business or office premises.</p> <p>The development is to encourage ecologically sustainable development This is discussed below within Note 1.</p>
Clause 17 – Demolition requires consent	Yes	Demolition is proposed.
Clause 22 - Earthworks	Yes	Clause (2) - Development consent is required for earthworks unless:

14/41

Principal Provisions of SEPP (Three Ports) 2013	Compliance Yes/No	Comment
		<ul style="list-style-type: none"> the earthworks are exempt development under this Policy or another applicable environmental planning instrument, or the earthworks are ancillary to development that is permitted without consent under this Policy or to development for which development consent has been given. <p>Comment: Development Consent is required for earthworks as the proposal does not satisfy either of the above clauses.</p> <p>Clause (3) - Before granting development consent for earthworks (or for development involving ancillary earthworks), the consent authority must consider the following matters:</p> <ul style="list-style-type: none"> the likely disruption of, or any detrimental effect on, drainage patterns and soil stability in the locality of the development, the effect of the development on the likely future use or redevelopment of the land, the quality of the fill or the soil to be excavated, or both, the effect of the development on the existing and likely amenity of adjoining properties, the source of any fill material and the destination of any excavated material, the likelihood of disturbing relics, the proximity to, and potential for adverse impacts on, any waterway, drinking water catchment or environmentally sensitive area, any appropriate measures proposed to avoid, minimise or mitigate the impacts of the development, the potential impact on groundwater and groundwater dependent ecosystems. <p>Comment:</p>

15/41

Principal Provisions of SEPP (Three Ports) 2013	Compliance Yes/No	Comment
		<p>The proposed earthworks are unlikely to alter the drainage patterns of the area and the area is not known as being unstable land. The effect of the earthworks would not preclude future redevelopment of the land for a future purpose.</p> <p>Appropriate conditions can be recommended in relation to the quality of any excavated material and quality of any imported fill. The conditions would ensure that the source of any fill will be of a high quality.</p> <p>The applicant has advised that in accordance with the Heritage Act 1977 that the site does not support any items of historic heritage value and as such the likelihood of disturbing relics would be low.</p> <p>The site is located well away from any waterway and is in an area where the groundwater is contaminated as such impacts on waterways as a result of earthworks are negligible.</p> <p>The applicant has also undertaken an assessment of Acid Sulfate soils. Appropriate conditions can be included to effectively manage any impacts associated with the excavation. The application is integrated and as such appropriate conditions from the NSW Office of water will ensure the protection of groundwater.</p>

Note 1 – Objectives of the zone

In reference to the above table, the following is noted in regards to consistency of the proposed development with the objectives of the zone.

The development continues to allow a range of uses and encourages employment opportunities. It is considered that the development does not facilitate the growth of the Port.

In regards to whether the development encourages ecologically sustainable development the following is discussed.

The term **environment** is defined in the Environmental Planning and Assessment Act 1979 as “**environment** includes all aspects of the surroundings of humans, whether affecting any human as an individual or in his or her social groupings.”

Of note – Clause 4 of Schedule 2 of the EP and A Regulations 2000, in relation to Environmental Impact Statements notes:

(4) *The principles of ecologically sustainable development are as follows:*

- (a) *the **precautionary principle**, namely, that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.*

In the application of the precautionary principle, public and private decisions should be guided by:

- (i) *careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and*
 - (ii) *an assessment of the risk-weighted consequences of various options,*
- (b) ***inter-generational equity**, namely, that the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations,*
- (c) ***conservation of biological diversity and ecological integrity**, namely, that conservation of biological diversity and ecological integrity should be a fundamental consideration,*
- (d) ***improved valuation, pricing and incentive mechanisms**, namely, that environmental factors should be included in the valuation of assets and services, such as:*
- (i) *polluter pays, that is, those who generate pollution and waste should bear the cost of containment, avoidance or abatement,*
 - (ii) *the users of goods and services should pay prices based on the full life cycle of costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste,*
 - (iii) *environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, that enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems.*

Comment:

Precautionary Principle

In accordance with the principle, the lack of certainty about the extent of Environmental damage, being the impacts to the road network. Then in accordance with the principle, the application should be determined. It is through the assessment guided by the EP and A Act that the evaluation is made to avoid, where practicable, serious or irreversible environmental damage.

If the application were approved, it is considered that there would be irreversible damage to the environment. The environment is made up of the built environment including the road network and this accords with the definition of environment as it includes all aspects of the surroundings of humans.

Inter-Generational equity – The maintenance of the productivity of the environment is compromised by the proposed development through the significant increase in traffic movements proposed, to the extent that even after Council installs the asset of traffic lights at the intersection of Baker Street and Wentworth Ave to provide a service of better traffic flows in the area, the proposed development would then take the level of service of the asset to the worst level being "F". This flies in the face of the fundamentals of intergenerational equity as the level of service is not maintained or enhanced.

17/41

Conservation of biological diversity and ecological integrity

The proposed development is not considered to impact the ecological integrity of the area. Minimal tree removal is proposed and given the surrounds, this is not anticipated to impact on the biological diversity in the locality.

Improved valuation, pricing and incentive mechanisms.

The applicant is a significant use of the proposed good and service of the pending upgraded intersection of Baker Street and Wentworth Ave. The amount that they propose to use, is not able to be accurately measured as the applicants existing operation at the site is operating outside the realms of their current approval and already utilising more capacity at the existing intersection than permitted to. The existing intersection already operates at the worst service level again being "F"

The applicant has advised in their EIS (Pg 169) that:

"Boral acknowledges and accepts the financial costs associated with all the measures required for the Project to avoid, minimise, mitigate and manage potential environmental and social impacts."

The applicant has not demonstrated how it will avoid, minimise, mitigate or manage the environmental impact associated with the significant traffic increase through both the existing and upgraded intersection and nor have they identified how they would contribute financially to these measures.

The objectives and provisions of SEPP (Three Ports) 2013 have been considered in relation to the subject development application. The proposal is considered unsatisfactory in terms of the BBLEP 2013.

S.4.15(1)(a)(ii) - Provisions of any Draft EPI'sDraft State Environmental Planning Policy (Three Ports)

The draft Amendment to the SEPP (Three Ports) was placed on exhibition on 20 September 2018 until 1 November 2018.

The amendments include the provisions of additional categories of exempt and complying development that can occur at the three ports, additional land within the Port Kembla and Port of Newcastle lease area, rezone certain land near Hale Street and Wentworth Avenue, Botany, outline options to discourage the subdivision of industrial land at Port Botany and other housekeeping amendments and operational improvements.

The draft SEPP goes on to discuss four options specifically in relation to the protecting of land at Port Botany for freight and container depots.

The four options are

Option 1- Heads of consideration provision – additional circumstances to be considered on assessment

Option 2 – introduce a 2ha minimum lot size for land zoned IN1 – General Industrial

Option 3 – Restricting uses in the zone IN1 to container storage and port related uses, and other ancillary uses that would not affect the operation of the Port such as roads and signage.

Option 4 – Do Nothing

Comment: Of relevance to this application, is that if Option 3 was the preferred option then the applicant has advised that the concrete batching plant is not strictly port related and as such would only benefit from existing use rights if the option were adopted. Given the draft amendment and its relative infancy in the process, the amendment is not considered imminent or certain and as such minimal weight should be given to it.

Draft SEPP 55

The new SEPP aims for the better management of remediation works by aligning the need for development consent with the scale, complexity and risks associated with the proposed works. For remediation works that can be undertaken without development consent, the mandatory use of certified contaminated land consultants and standard operational requirements, will provide greater certainty for councils, planning authorities and the community, that remediation work is properly carried out and appropriately validated. The draft while relevant to the project, given its relative infancy in the process and that the Department is in the process of identifying and considering issues identified in the submissions, the draft is not considered certain or imminent

S4.15(1)(a)(iii) - Provisions of any Development Control Plan

Development Control Plan 33

This Development Control plan is still in force as it applies to the Three Ports SEPP land

Relevant Objectives of the DCP

O4 To improve the environmental and aesthetic amenity of industrial areas for those who visit and/or work in the areas.

O5 To encourage the development of cleaner, well-landscaped industrial zoned areas with well maintained industrial/commercial buildings and sites.

O7 To ensure that development incorporates safe, effective and convenient provision for servicing, parking, pedestrian and vehicular access and movements.

O12 To encourage ecologically sustainable development.

Comment: It is inconsistent with objective O4, O5, O7 and O12

P5 The need for a compatible and workable relationship between industrial and non-industrial uses.

Local road networks within the City are not to be adversely effected as a result of the operations of an industrial or commercial use.

Comment: The road network is proposed to be adversely affected by the development however the extent of the effect is not quantified.

Objectives for Banksmeadow industrial Precinct

O7 To ensure that any risk to human health, property or the natural environment arising from the operation of the development is minimised and addressed.

Comment: The proposed development has not demonstrated how the risk to human health and natural environment have been minimized or addressed.

C6 Development is not to adversely impact on the surrounding established residential areas through noise, traffic, pollution and risk.

Comment: Throughout the assessment contained in the report it is demonstrated that there are likely adverse impacts arising from the development, however the information is not fully contained within the application material.

Botany Bay Development Control Plan 2013

Botany Bay Development Control Plan 2013 (BBDCP 2013) does not apply to land subject to the SEPP (Three Ports) 2013.

A detailed assessment against Council's DCP would not ordinarily be required in this case as the DCP does not apply. However, Council has consistently used the DCP controls as a guide to development in this locality. The following matters have been considered in order to determine the merits of this application without strict application of the development controls.

Notwithstanding the above, an assessment of the proposal in terms of its permissibility and future impact under BBDCP 2013 is provided as a guide below:

Control	Requirement	Proposed	Complies
Part 3 General Provisions			
3A.2 Car Parking	General: Table 1 provides that office premises are required to provide 1 space per 40m ² of GFA.	The GFA of the office/admin building is approximately 160 m ² . The proposed parking spaces meet this requirement of 4 spaces.	Yes
	Bicycle Parking: C7 In every new building, where the floor space exceeds 600m ² GFA (except for houses and multi unit housing) bicycle parking equivalent to 10% of the required car spaces or part therefore as required in Table 1 shall be provided.	As the proposal is for alterations to the existing building and not a new building, there is no requirement to provide bicycle parking.	N/A
3A.3.1 Car Park Design	General: C1 All off-street parking facilities shall be designed in	A Traffic and Parking Report was submitted with the application which addresses compliance with the	Yes

20/41

Control	Requirement	Proposed	Complies
	accordance with current Australian Standards AS2890.1 and AS2890.6 (for people with disabilities).	standards relating to the car park design.	
	<p>Location:</p> <p>C10 Off-street parking facilities are not permitted within the front setbacks.</p> <p>C11 Car parks must provide a direct and safe access to a building's entry and exit (well lit and free of concealment opportunities).</p> <p>C12 Off-street parking facilities must not dominate the streetscape and are to be located away from the primary frontages of the site.</p>	<p>The location of the car parking spaces at the site are located within the front setbacks and side setback.</p> <p>This is in areas where trucks have been parking, however it is unclear whether this has been previously regularised or not.</p> <p>The applicant has advised that <i>"Parking spaces would be required along the site boundary fronting Baker Street. Parking is required along the perimeter due to operational logistics and safety requirements. Despite location of parking spaces along the primary frontage of the site, parking would not dominate the streetscape given the industrial setting of the locality, existing trees that will be retained and proposed landscape planting."</i></p>	No
	<p>Access:</p> <p>C13 Pedestrian entrances and exits shall be separated from vehicular access paths.</p> <p>C14 A maximum of one vehicle access point is permitted per property. Council may consider additional vehicle access points for large scale developments.</p>	<p>All vehicular access to the site has been designed to ensure all vehicles enter and exit the site in a forward direction. Formalised pedestrian networks are not located on this side of the Baker or Anderson Street.</p> <p>Pedestrian access is separated from vehicular access.</p> <p>The existing development is provided with existing vehicular access via two</p>	Yes

21/41

Control	Requirement	Proposed	Complies
		crossings to Baker Street and one access way to Anderson Street.	
	At-Grade Parking: C25 At-grade parking shall be avoided for large scale residential and commercial development.	All parking is at grade with minimal screening proposed.	Yes
	Non-Residential: C29 Car parking areas shall be adequately finished with fully sealed surfaces, internal drainage systems, line markings, appropriate kerbing, paved aisle dividers and/or wheel stops. Pavement: C32 All off-street parking areas and internal circulation roadways shall be sealed with hard-standing all weather materials or approved alternatives to Council's satisfaction.	All parking and manoeuvring areas will be sealed and finished in accordance with Council requirements. Relevant conditions are proposed.	Yes – achievable.
	Lighting: C34 Adequate lighting shall be provided if the parking facility is expected to be used at night. Design of lighting shall be in accordance with relevant Australian Standards and be consistent with the relevant requirements to allow drivers to manoeuvre vehicles	No detail has been provided to ensure lighting will be provided in accordance with the relevant Australian Standards.	No

22/41

Control	Requirement	Proposed	Complies
	safely into and out of parking spaces.		
	Accessible parking: C35 Accessible parking spaces for people with disabilities shall be designed in accordance with AS2890.6.	The applicant has advised that they won't provide any.	No – as an access report has not confirmed the development is exempt in accordance with D3.4 of BCA/NCC vol.1
	Waste Collection Points: C40 The waste collection point shall be designed to: (i) Allow waste loading operations to occur on a level surface away from parking areas, turning areas, aisles, internal roadways and ramps; and (ii) Provide sufficient side and vertical clearance to allow the lifting arc for automated bin lifters to remain clear of any walls or ceilings and all service ducts, pipes and the like.	No detail provided - unable to assess	No
3A.3.3 Traffic and Transport Plans and Reports	C1 A Traffic and Parking Impact Assessment Report shall be provided for development: (i) Listed in Schedule 3 of State Environmental Planning Policy (Infrastructure) 2007; and	A Traffic and Parking Report prepared accompanies the application which addresses compliance with the car parking requirements and standards relating to the car park design, The report has incorrectly assumed the existing traffic generation from the site is	Traffic report provided Refer Note 1:

23/41

Control	Requirement	Proposed	Complies
	<p>(ii) Where, in the opinion of Council, the proposed development is likely to generate significant traffic and/or parking demand or land use.</p> <p>C2 The Traffic and Parking Impact Assessment Report shall be prepared by a qualified and experienced traffic engineer.</p>	approved and as such the integrity of the impacts proposed and existing local traffic conditions are unable to be relied upon.	
3A.3.4 On Site Loading and Unloading	C2 - The number of service bays shall be provided in accordance with Table 2. Where calculated provision of servicing bays numbers results in a fraction, the requirements shall be rounded up to the nearest whole number.	<p>The nature of the development inherently relates to loading and unloading.</p> <p>However the existing operations already cause traffic issues and complaints from the community with trucks utilising the road way as a waiting bay. Given the operation is spilling onto the road network in order to operate at present the proposed expansion will further exacerbate this situation.</p> <p>The fact that the operation spills out on the to the road questions the suitability of the site not only for the current operations but the proposed operations.</p>	No.
3C Access and Mobility	<p>Commercial and industrial developments:</p> <p>A Statement of consistency is to be lodged with the DA.</p>	<p>The applicant categorially states in their EIS(Pg 68)</p> <p><i>"It is not possible for Boral to employ a person with a disability at the site due to the industrial nature of the workplace and relevant</i></p>	No – as an access report has not confirmed the development is exempt in accordance with

24/41

Control	Requirement	Proposed	Complies
	<p>Appropriate access to and within all areas normally used by the occupants, designed in accordance with the BCA and relevant Australian Standards.</p> <p>General access for all persons to appropriate sanitary facilities and other common facilities including kitchens, lunch room, shower facilities, indoor and outdoor recreational facilities.</p> <p>In a vehicle parking area containing 6-49 vehicle spaces, one accessible vehicle space, designed in accordance with relevant Australian Standards will be provided.</p>	<p><i>operational logistics and workplace health and safety requirements. Therefore no accessible vehicle space will be provided.</i></p> <p><i>This justification forms the statement of consistency required by Table 1.</i></p> <p><i>Appropriate access to and within areas normally used by personnel with access arrangements (i.e. the proposed administration building), would be designed in accordance with the Building Code of Australia and relevant Australian Standards.</i></p> <p><i>General access would be provided for all persons to appropriate sanitary facilities and other common facilities including kitchens, lunch room, and amenity facilities."</i></p>	D3.4 of BCA/NCC vol.1
3D Signage	Not applicable.	No signage is proposed as part of this application	Not Applicable
3G Stormwater Management	<p>Stormwater Management:</p> <p>Stormwater runoff generated from the development site shall be collected and discharged in accordance with Council's Part 10 – Stormwater Management Technical Guidelines.</p>	<p>Water reuse initiatives have been incorporated into the design of the Project. Stormwater and process water is reused in the concrete batching process wherever feasible and discharge to Council's stormwater network would only occur in extreme rainfall events where the capacity of the stormwater management system is exceeded.</p>	<p>Yes</p> <p>On site detention is not feasible due to flooding extent, Site benefits from existing recycle/reuse of stormwater and no increase of impervious area (site is completely sealed).</p> <p>No changes proposed to existing stormwater collection system.</p>

Control	Requirement	Proposed	Complies
3H Sustainable Design	To ensure commercial and industrial development incorporates ecologically sustainable design principles.	No opportunities exist on this Project. The proposed administration building must be positioned in order to ensure operational logistics of the concrete plant are maintained.	No – In addition refer to discussion on Ecologically Sustainable development.
3I Crime Prevention, Safety and Security	The building is to be designed in accordance with CPTED principles.	The proposed development provides opportunities for natural surveillance to the surrounding streets. The entries to the development will be appropriately lit at night to enhance safety, visibility and legibility. Effective access control has been achieved through the provision of physical barriers to attract, channel and/or restrict the movement of people within the development. The internal areas within the development such as the entrances and lobbies will be well used.	Yes
3J Aircraft Noise & OLS	In certain circumstances and subject to Council's discretion, Council may grant consent to development where the building site has been classified as "conditional" or "unacceptable" under Table 2.1 of AS2021-2000 Pursuant to Part 3J.3 of the DCP if a building is located within a specific area identified on the OLS map or seeks to exceed the height limit specified in the map the application must be referred to	The site is located outside of the 20-25 contour on the Aircraft Noise Exposure Forecast (ANEF) chart, as such there is no further assessment required in regards to the Australian Standard AS 2021 for aircraft noise As the site is within the area identified on the OLS map and the building exceeds 15.24 metres, Council is required to refer the application to the Sydney Airport for assessment. Sydney Airport have provided their approval to the proposed development.	Yes – Condition of consent

Control	Requirement	Proposed	Complies
	Civil Aviation Safety Authority and Air services Australia for assessment.		
3K Contamination	Contamination of the site is to be investigated in accordance with SEPP 55 and the Managing Land Contamination: Planning Guidelines.	A full assessment of potential contamination has been undertaken – Refer to SEPP 55 discussion	Yes
3L Landscaping and Tree Management	<p>A Landscape Plan is to be prepared.</p> <p>A deep soil zone is required for all developments within boundary setbacks, communal and private open space and green corridors.</p> <p>A minimum of 80% of a planting scheme is to consist of native plants.</p>	<p>A landscape Plan has been prepared for the project by a landscape plan.</p> <p>Given existing concrete hardstand at the site is to be maintained along most boundary setbacks, limited opportunities for provision of landscaping exists for the Project.</p> <p>Where landscaping is to be implemented at the site, shrubs would be planted at densities suitable for the nominated species.</p> <p>The plan has taken into consideration the requirements detailed within the BBDCP.</p>	<p>Yes – Landscape plan provided.</p> <p>The intensification of the site with no attempt to soften the impact through landscaping is less desirable than providing limited screening to the edges of the site.</p>
3N Waste Minimisation and Management	<p>Demolition, construction and ongoing waste is to be minimised.</p> <p>A Site Waste Minimisation Plan is to be submitted for all development applications.</p>	If required, a site waste minimisation and management plan would be prepared and submitted to Council prior to construction of the Project.	No – Able to comply through condition of consent

6.3 General Provisions

6.3.12 Noise and Hours of Operation	To ensure appropriate noise attenuation measures are incorporated into building design and site layout.	The site is located in an industrial area proposed to operate 24/7 all year round. The noise report submitted with the application is considered to have addressed the relevant criteria	Yes
6.3.13 Waste	Development must comply with Part 3N - Waste Management and Minimisation. Sufficient space shall be provided for on-site separation and storage of recyclables and garbage.	A Waste Management Plan has not been submitted with the application however waste management has been addressed within the EIS.	Yes
6.3.14 Environmental Protection	To ensure that development takes account of and minimises any adverse effects upon the environment. To limit the potential for noise, air (including odour), ground water, soil and surface water pollution	The proposed expansion has the potential to generate air pollution where the peak production of fine particulate matter has not been identified. Further Council is of the opinion that the development requires an environmental protection licence as described previously in the report.	No – Refer Note 2
6.3.15 Risk	To ensure that any risk to human health, property or the natural environment arising from the operation of the development is minimised and addressed.	The use will involve the hazardous substance or Portland Cement and Crystalline silica. The air quality report has not demonstrated how the increase in PM 2.5 is acceptable in terms of health impacts	No

Note 1: Traffic and Parking.

The application has been supported by a Traffic Impact assessment in support of the application which advises that the level of service is considered suitable and that there are no impacts to the road network.

The applicant has summarised the *“Traffic impacts on adjoining intersections and the local road network will be minor, with no real change in the level of service of local intersections, and with improvements to intersections proposed by Bayside Council in the near future, the Project would result in only very small increases in vehicle delays over existing and future*

28/41

projected conditions. The Project will not have any adverse impacts on other road users including public transport, pedestrians and/or cyclists."

The proposed development seeks to produce 500,000 tonnes of concrete with the maximum peak production requiring the site to be serviced by the following

- 94 one way aggregate truck movements (188 total truck movements per day)
- 19 one way Cement Tanker movements (38 total truck movements per day)
- 250 agitator truck movements (500 total truck movements per day)

Given the location of the concrete batching plan, all truck movements must be directed through one intersection being that of Baker Street and Wentworth Ave.

The Baker Street and Wentworth Ave Intersection is currently an unsignalled intersection and is subject to a Give way Control.

The applicant's traffic consultant has modelled the impacts on the intersection based on the intersection being upgraded to a signalized intersection.

In October 2016, Council reviewed traffic in the area in light of another concrete batching plant at 2 Anderson Street. Council was aware of this intended application and modelled expected traffic flows for 1 Baker Street in addition to those generated from 2 Anderson Street.

The Council's review indicates that the Baker Street and Wentworth Ave intersection will be at level of service of D in the morning period and a level of Service F in the afternoon after signalisation of the intersection. It is noted that this data was compiled in 2016.

The level of service is generically indicated in the table below:

LEVEL OF SERVICE CRITERIA FOR INTERSECTIONS

Level of Service	Average Delay per Vehicle (secs/veh)	Traffic Signals, Roundabout	Give Way & Stop Signs
A	<14	Good operation	Good operation
B	15 to 28	Good with acceptable delays and spare capacity	Acceptable delays and spare capacity
C	29 to 42	Satisfactory	Satisfactory, but accident study required
D	43 to 56	Operating near capacity	Near capacity and accident study required
E	57 to 70	At capacity; at signals, incidents will cause excessive delays. Roundabouts require other control mode	At capacity, requires other control mode
F	> 70	Intersection is oversaturated	Oversaturated, requires other control mode

Source: Table 4.2 Guide to Traffic Generating Developments October 2002. Roads and Traffic Authority

On 15 June 2018 the applicant was advised the level of service was F and advised that as per Council's Pre DA advice that the cumulative impacts of the area need to be considered as part of the traffic assessment.

On 20 June 2018 the applicant responded advising that their Traffic impact assessment included:

Future cumulative impacts in 2024 AM and PM periods which included the additional traffic from:

- *The Gunlake proposal at peak production;*
- *The residential development for [32 Page Street](#) Pagewood;*
- *A 25% increase in the 2017 base traffic volumes using Wentworth Avenue; and*
- *The Boral proposal at maximum production.*

Cumulative impacts from surrounding more recent applications, but before lodgment of the application have not been included in the applicants Traffic Impact assessment including the business development at 32 Page Street. The residential development at 2A Baker Street and Warehousing and self-storage development at 13-19 Baker Street.

Further it is noted that a 25% base traffic increase has only been applied to Wentworth Ave and not surrounding feeder roads.

On **12 July 2018**- Council contacted the applicant and identified key issues with the traffic report which may demonstrate the different outcomes than Council had previously measured at the intersection. This are as follows:

- *The Level of Service analysis in the traffic report has only considered the existing situation and the proposal, not the cumulative impacts of other developments including the development at 13 Baker Street which was lodged in August of 2017.*
- *Council has modelled the Boral facility expansion in 2016 along with the development at 2 Anderson Street and this modelling demonstrates that the intersection will have a level of service of D for AM and F for PM. This modelling did not include new developments which are now under consideration by Council*
- *The proposal will create 46 additional truck movements per hour which is not considered minor.*
- *The modelling submitted with this application has incorrectly assumed that there are 'No Parking' restrictions along Wentworth Ave, and that Wentworth Avenue is therefore three (3) lanes in each direction. Parking is currently permitted along this section of Wentworth Avenue and it is our understanding that RMS will not agree to clearway restrictions.*
- *The modelling must link the two nearby intersections (Baker Street / Wentworth Ave and Page Street / Wentworth Ave)*
- *It is also our understanding that, based on the traffic report submitted with 13 Baker Street, the right hand turn bay (of signalised intersection) from Wentworth Avenue east bound into Baker Street is also at capacity.*
- *It is also worthy to note that the intersections of Page Street and Wentworth Ave and Baker Street and Wentworth Ave are linked due to the queue interaction and this can*

30/41

impact the Level of Service. This line of assessment needs to be confirmed by your traffic consultant.

On 7 August 2018, Council and the applicant and respective traffic consultants met to discuss the traffic aspect of the development. The meeting discussed the issues and the outcome of the meeting was for the applicant to provide written confirmation from RMS that a clearway would be installed on Wentworth Ave, once the intersection reached Service level F. The applicant's traffic consultant advised that this would occur for any intersection along Wentworth Ave once the intersections are overcapacity.

The application for the residential component at 32 Page Street, indicated in their traffic report the Page Street and Wentworth Ave Intersection both currently and in the future post that development would be at a service level F. This was confirmed in the application dated 16 April 2014.

The applicant provided a summary of the Clearways strategy and how it is enacted with confirmation from RMS as to how the strategy is enacted. The summary provided was in broad terms and not specifically relating to the intersection.

It is also noted that there is car parking on both sides of Wentworth Ave in proximity to Page Street, i.e the same scenario as being discussed with Boral. Based on the applicants assertion that the clearway should be instigated is not able to be relied upon, as based on their advice, RMS should have instigated a clearway program for Wentworth and Page Street intersections. Further the reliance on the clearway has been clarified with RMS in their email of 25 July, discussions were held with RMS who confirmed to Council that the applicant should not consider Wentworth Ave as a clearway in their modelling. The applicant's traffic model assumes a clearway on Wentworth Ave. The applicant was advised of this the same day.

The proposed development not only currently operates beyond its existing approval in terms of truck movements. This limit of truck movements was related to the maximum capacity of the Concrete Batching Plant.

As discussed the existing operation (vs existing approval) and the proposed operation will have a significant impact on the efficiency of the surrounding road network and limit development of surrounding sites that rely on the intersection. The site is located within the State Environmental Planning policy Three Ports) - The objectives of which is to ensure that the area recognises its importance in terms of servicing the port and other port related activities. This is reinforced through the proposed amendment to the SEPP Three ports currently on exhibition.

The draft SEPP is a clear response to the Greater Sydney Commissions – Eastern City District Plan which includes the likes of: Planning Priority E9 – Growing international trade gateways, In particular Objective 16 – Freight and logistics network is competitive and efficient.

In light of the above commentary it is considered that in this instance that the proposed traffic generation is incompatible with the existing and proposed road network.

Note 2: Air Quality

The air quality report is based on maximum production capacity of up to 200,000 metres cubed (m³) of concrete with an average daily volume of 800m³ and peak daily volume of 1,500m³.

31/41

The NSW Environmental Protection Agency has reviewed the application and were specifically asked to review the applicants Air Quality Impact Assessment on 7 May 2018. THE NSW EPA provided updated conditions and made the following comments

- The assessment does not predict exceedances of the impact assessment criteria for particulate matter at the assessed residential receptors; and
- The assessment advises that a peak production scenario has been assessed. EPA believes this refers to the proposed daily peak production. It is further noted that peak scenario modelling results have only been presented for PM₁₀ and not for PM_{2.5} (refer to Table 8-1 of the AQIA; there is no column for peak 24-hour average for PM_{2.5}).

Council's approach to concrete batching plants, as applied to the Concrete Batching plant at 2 Anderson Street is that a nil increase be permitted in the PM_{2.5} to ensure acceptable air quality. The modelling shows increases in the PM_{2.5} during average production days but as identified by NSW EPA there is no data for the maximum production including night time.

The average truck movements per day is 199 (day and night), based on lowest capacity agitator truck of 23 tonnes or 6 cubic metres as outlined in the applicants EIS, then the average production is 1194 cubic metres over a 24 hour period. The average production over a year based on this, equates to 435,810 m³. The air quality report has only modelled night production for the peak period and not the average night production.

The requirement to maintain PM_{2.5} efficiency is considered appropriate, particularly in circumstances where the proposal is in close proximity to food production/processing, transport facilities and also residential areas including a school and child care such as the case with this application.

The proposed maximum truck movements of 500 agitator trucks/ per 24 hour period, with the smallest capacity in terms of tonnage of 23 tonnes equates to a production of 2,599 tonnes of concrete /24 hours period. Over an operation as proposed of 24/7 – 365 days a years, this equates to a production capacity of 4,197,500 tonnes of concrete a year. This would be approximately the maximum capacity of the plant based on truck movements.

There is a clear disparity between the capacity of the concrete plant that is related to truck movements and the capacity that the applicant is applying for. This disparity is further inconsistent with the modelled air quality impacts which accompany the application. The air quality report based on the figures modelled has used background data from air monitoring stations located at least 5km away from the site. There is no way of knowing whether the quality of the air at this locality is suitable and whether the additional particulate matter crosses any thresholds in regards to suitability or impacts to human health.

Further it is unclear as to whether the modelling has taken into consideration the approved plant at 2 Anderson Street, Banksmeadow or other proposed Concrete Batching Plants. This facility Council was insistent that the facility was enclosed with appropriate filters for dust management.

Portland cement is highly alkaline, so it can cause chemical burns, skin, eye and respiratory irritation or with severe exposure lung cancer. The highly corrosive nature of the cement powder has a higher probability of causing corrosion and therefore soiling or degrading of nearby amenities.

The cement powder is known to contain hazardous components such as crystalline silica and hexavalent chromium; these are both classified by the International Agency for Research on Cancer (IARC) as Category 1 human carcinogens. No comment is made on the hazardous nature of the particulate,

It is the cumulative addition of both the background particulate level data and off site referenced data that is used here in conjunction with dispersion modelling which provides the predicted results for dust fallout at ground level. Therefore, collection of data from the site for background levels before the construction of the proposed plant would have provided a more accurate/relevant reference point for evaluating accumulative particulate risks from the proposed concrete batching plant.

As discussed above, there is insufficient information to make an informed decision in regards to air quality.

S.79C(1)(a)(iv) - Provisions of regulations

Clause 92 of the Regulation has been considered and there are no other applicable provisions to the development.

S.79C(1)(b) - Likely Impacts of Development

The proposed development will have a significant impact to the road network as discussed above. The air quality of the development is unable to accurately be represented given no site specific background data was used in the modeling, no cumulative impacts and the inconsistency between the production amounts modelled and the capacity based on truck movements. Given this the air quality impacts and the derived human health impacts are unable to be ascertained, the impacts of the development are not able to be assessed.

S.79C(1)(c) - Suitability of the site

The site is located in the IN1 –General Industry zone within the SEPP (Three Ports) 2013 and accommodates an existing concrete batching plant. The subject site is affected by several site constraints which have been discussed within this report. The issue of site and groundwater contamination, and acid sulphate soils have been considered with suitable mitigation measures able to be adopted through conditions of consent should consent be granted. The cumulative air quality impacts of the area has only been predicted through modelling of impacts which the EPA have verified are acceptable. Council is of a differing opinion as the total impacts of peak production are unknown and the cumulative impact from all concrete batching plants in the area has not been determined. The EPA and the applicant have been unable to determine cumulative air quality impacts and no baseline air quality from the location has been sampled.

The proposed maximum truck movements of 500 (one way) agitator trucks/ per 24 hour period, with the smallest capacity in terms of tonnage of 23 tonnes equates to a production of 2,599 tonnes of concrete /24 hours period. Over an operation as proposed of 24/7 – 365 days a years, this equates to a production capacity of 4,197,500 tonnes of concrete a year.

The applicant has advised that the maximum produced will be 500,000 tonnes or 200,000 cubic metres. This does not equate to the proposed truck movements

The location of the site and truck access means all truck movements are concentrated through one intersection which is at capacity now as a give way and will be at capacity after signalisation. Given these constraints and the proposed truck movements, the site is not considered suitable for the proposed expansion.

S.79C(1)(d) - Public Submissions

In accordance with Part 2 of Botany Bay DCP 2013 – Notification and Advertising, the development application was notified to surrounding property owners for a thirty (30) day Period. Due to issues with the advertising this was notified three times to ensure the advertisement was notified in the manner set down by the regulations. This notification ended on 7 December 2018.

Submissions were received in response to the notification. The submissions raise the following issues:

- *Traffic*
 - *Heavy Congestion – existing and proposed*
 - *Cumulative traffic impacts, especially from other Concrete Batching Plants;*
 - *Parking – no on street parking.*
 - *Trucks queuing along the street and backed up along the streets*
 - *Baker Street at capacity*
 - *Trucks waiting to go into site are waiting in on street car parking or more often double parking on the street*
 - *Trucks blocking safe access to surrounding businesses*
 - *Lack of pedestrian safety*
 - *Traffic data is three years old*
 - *Accumulative impacts from nearby Gunlake Pty Ltd concrete batching plant located at 2 Anderson St, Banksmeadow, and Hanson Concrete Plant proposal DA 2018/1175, will present significant issues for the current road infrastructure along Baker Street. Increase in production will require the need for additional truck movements, affecting parking and causing considerable safety risks to residents, workers and children from nearby Pagewood Public School. Baker street traffic is regularly at a standstill, concrete trucks are often parked across driveways to other premises as well as being doubled parked along Baker Street. This is currently causing disruption to businesses and workers as well as presenting a dangerous hazard to vehicles and pedestrians. An expansion in production will only increase these issues.*
 - *measures should be undertaken to further prevent the plants impacts on residents and workers especially with regard to concrete dust emissions and traffic hazards.*

Comment: The current operation of the concrete batching plant is beyond that of the existing approval. As such the impacts are not contained within the site and are now overflowing and impacting other sites. The data presented is skewed given the baseline data is beyond what has been approved at the site. The reference to three year old data refers to Council's Traffic study for the area which included future traffic predictions. There would be the ability to ground

truth these predictions given the base data is three years old. These issues outlined are discussed previously within Note 1.

- *Air Quality*
 - *Pollution*
 - *Only located 25 metres from Bourke Street Bakery HQ – health concerns*
 - *Air quality for all residents, local works, trees and plant life and especially young children at local school.*
 - *Dust – and associated health risks, especially silicosis with cement dust being carcinogenic*
 - *any increase in airborne dust has the potential to impact upon stock hygiene for Orora's packaging and distribution centre on Moore Street, as well as the welfare of staff, local residents and surrounding businesses.*
 - *measures should be undertaken to further prevent the plants impacts on residents and workers especially with regard to concrete dust emissions and traffic hazards.*

Comment: As discussed in Note 2- the air quality report or the EIS have not concluded that there are no health impacts as a result of the proposed development. As identified by the NSW EPA there is no column for peak 24-hour average for PM2.5 and as such the only reasonable conclusion is that it has not been modelled. As such Council is unable to establish the maximum air quality impacts. Further Council does not support any addition to the PM 2.5 as this is the same approach taken for the approval of the Concrete batching plans at 2 Anderson Street, Banksmeadow to ensure satisfactory air quality.

- *Negative impact on property value.*

Comment The value of property is not a planning consideration

- *The development will be unsightly.*

Comment: The development is located in an industrial area, the applicant has taken a visual impact analysis. Largely the plant will remains similar to the existing. The site benefits from being screened by significant vegetation. It is noted that the visual impact has not been presented post removal of 6 trees adjacent to the northern driveway.

- *Long term impacts on Westfields, residents and sporting field*

Comment: The short and long term impacts on the surrounds in terms of traffic appear to be unacceptable. The air quality impacts are unable to be ascertain given the missing information and no recognition of the current proposals or the cumulative impact.

- *Safety for all inhabitants, particularly given the increase in truck movements*

Comment: The application was referred to the Department of Planning in terms of risk and was found to be acceptable. The human health aspect to the proposal in particular regard to air quality and cement has not been able to be assessed.

- *Noise and vibration*

Comment: The applicant has provided a noise report in support of the application. The report indicates that the noise impacts are acceptable. The Noise and vibration report concludes that no significant sources of vibration from construction or operational activities have been identified for the Project, and therefore a detailed assessment of potential construction and operation vibration impacts is not considered necessary.

- *The redevelopment of the Boral Concrete Plant is in conflict with principles in the Botany Bay Strategy 2031. The strategy principles include enhancement of existing and future urban character, improve amenities and protect areas of cultural and environmental significance. Consolidate residential activity in and around existing centres and support their revitalisation and improved quality of, and access to, open space in the local government area.*

Comment: The development is in conflict as it seeks to ensure employment areas near the Port are protected and able to accommodate Port-related activity and business. The applicant has identified in their EIS that they are not Port related.

- *The application should not be granted an environment protection licence from NSW Environmental Protection Authority as it cannot guarantee the health and safety of persons working in the area, residents and toxicity in the surrounding environment. Heavy vehicle traffic carrying carcinogenic materials places workers, visitors and the general community in danger.*

Comment: The applicant has not identified the application as integrated development for the requirement of needing an Environment Protection Licence. Council is of the opinion that one is required given the capacity available within the facility.

- *Negative effect on businesses and property value in the area. When air quality and safety of workers, visitors, residents and the ecological environment is compromised, businesses are discouraged from establishing services in this area.*

Comment: As discussed above the air quality has failed to address the correct production for the fine particulate matter and the air quality impact report has not addresses the relevant health impacts.

- *Expanding the concrete plant on the fringe of light industry IN2 and amongst residential development and a school is out of character for the area.*

Comment: The site already contains an existing concrete batching plant so to say it is out of character is incorrect. The intensification of the activity and associated impacts have been addressed largely through the report.

- *The small business sector that currently constitutes the IN2 zoned area currently serving to protect residents from heavy industry should be maintained and encouraged.*

Comment: This application does not seek to change this.

- *Concrete plants are characterised as designated development – Designated Development refers to developments that are high-impact developments (e.g. likely to*

generate pollution) or are located in or near an environmentally sensitive area (e.g. a wetland).

Given the proximity to workers and residents it is unreasonable to impact on the health of local populations of residents and workers, by subjecting them to harmful pollutants such as concrete dust on a 24 hr basis.

Cement batching pollutants include Kiln dust which increases particulate matter, sulphur dioxide, nitrous oxides, aggregate, sand and fly ash. Not to mention the innate hazardous nature of both sulphur dioxide and nitrous oxides, crystalline silica found in cement-based materials are of more and immediate concern. Long term exposure to Crystalline silica found in cement-based materials can lead to silicosis, currently an incurable lung disease. It can also contribute to lung cancer, renal cancer and chronic obstructive pulmonary disease (COPD). On average there is around 30% silica in concrete aggregate and of course 96-100% in sand and sandstone.

Workers and residents will be subjected to known carcinogenic on a consistent basis. The accumulated dust deposited onto and inside neighbouring properties will be replenished on a daily basis. This builds up and causes an ongoing threat to workers and residents.

Comment: Refer to Air Quality discussion within the body of the report.

- *This presents a totally unacceptable risk. The area is also a high wind area, particulate matter will have far reaching affects across areas that are very heavily populated such as the Meriton development that is situated further afield.*

Comment: The modelled dispersion for particulate matter does not reach the Meriton Development. However, there are issues with the totality of the air quality report and the cumulative impact if other concrete batching plants including existing ones are tested and modelled. There is not enough information to fully address this.

- *There are many existing issues that affect Banksmeadow residents and workers such as pollution, traffic congestion and dangerous goods routes. Residents and workers have the right to not be subjected to further hazards.*

Comment: The total impacts resulting from the proposal are unable to be ascertained so Council is unable to undertake a full assessment and address these comments

- *It is of concern, that this development may preceded by a number of years, any significant traffic management remedies that may be planned, further increasing traffic issues within the Banksmeadow Industrial Estate. The report was dated November 2017 and it is understood that there is still no finite timeframe for the upgrading of the intersection of Baker Street and Wentworth Avenue.*

It is requested a firm commitment from the proponent, Bayside Council and RMS as to the timing of the signalisation of the intersection of Baker Street and Wentworth Avenue and consider that there can be no further increase in traffic to the Banksmeadow Industrial Estate until such time an upgraded, signalised intersection at the intersection of Baker Street and Wentworth Avenue is implemented.

Comment: The exact timeframe of the upgrade has not been ascertained as the design is still being progressed with relevant stakeholders. Given there is not 100% design approval of the

37/41

intersection and in line with the precautionary principle, the impacts are oversaturate the intersection to possibly failure without signalisation.

- *There are concerns about the impact of congestion to the Banksmeadow Industrial Estate as a consequence of this DA. The estate is presently gridlocked numerous times a day due to the issues of entry to, and egress from the estate. Due to Baker Street being the approved Heavy Vehicle and B-Double access route to the Banksmeadow Industrial Estate, the present levels of congestion that are presently experienced are to be severely impacted by the addition of further heavy vehicle traffic relating to this development. It is accepted that private, light vehicles may use alternate routes of entry to the site, however the proposed peak hour increase of some 90% solely relating to heavy vehicles will be utilising the intersection of Baker Street and Wentworth Avenue for entry and exit to the Banksmeadow Industrial Estate. The impact solely from Boral will make traffic movement throughout the estate unbearably congested throughout the peaks. Something that will be further exacerbated with the cumulative impact of the additional developments presently proposed.*

Comment: The current traffic situation hasn't been modelled by the applicant nor have they offered to avoid, remedy or mitigate the impacts until signalisation.

- *The traffic issues from the Boral Development Application and the cumulative impact of the other DA's presently submitted are likely to cause a safety risk. There is inadequate pedestrian access throughout the Banksmeadow Industrial Estate with a lack of defined footpaths. Pedestrians routinely cross the roads between workplaces and other areas within the estate for the purposes of transport, public transport or amenities such as cafes. These pedestrian routes often involve crossing at multiple points of Baker Street and Anderson Street from within parked vehicles across the live traffic lanes. The increased traversing of these roads by heavy vehicles will increase the risk of an accident.*

Comment: The cumulative impact from all current and approved operations has not been modelled and as such the total cumulative impact is unknown. The pedestrian environment and respective safety has not been discussed within the Traffic Impact Assessment

- *The traffic issues are not solely of a safety risk to pedestrians. The significant traffic impact on the Banksmeadow Industrial Estate affects vehicle movements also. Vehicles that have become frustrated with the delays in traffic and blocked crossovers tend to undertake riskier manoeuvring such as u-turns to find faster travel paths out of the estate or overtaking double-parked vehicles where there may be limited room in which to do so.*

Comment: The Traffic impact assessment has addressed road user safety through their assessment of accidents.

- *The traffic assessment report as submitted to council At 4.2, states "The modelling assumes that the intersection will be operating under traffic signal control". If it is the intention of Boral to operate the facility prior to the intersection of Baker Street and Wentworth Avenue being under the control of signals, It is requested that modelling of the actual likely scenario is undertaken. It is an incorrect and flawed assumption to base a traffic impact against a hypothetical signalisation of an intersection.*

Comment: The Traffic impact assessment has assumed upgrade of the intersection which with no specific timeframe of upgrade is likely to have impacts that are unacceptable. However Council has not modelled this and is unable to fully assess the impacts.

- It is considered that the proposed intensification of the concrete batching plant and the significant increase in truck movements to be generated have the potential to result in adverse traffic impacts on this particular locality. If there is the potential for ongoing adverse traffic impacts despite intersection upgrades, the problem should not be exacerbated by any new developments. Thought should be given to limiting the maximum truck movements permitted per hour or reducing the scale of the proposed development in order to reduce traffic impacts.
This is particularly important to consider given the potential for adverse traffic impacts to stifle future land uses and changes in this part of the larger industrial area.*

Comment: The total cumulative impact from existing and proposed developments is needed in order to make an informed decision about the traffic within the precinct and on Wentworth Ave.

- In preparing the report the traffic consultant undertook a traffic count between 7am and 1pm on Wednesday 12 October 2016 to examine the existing traffic conditions. It is noted that the traffic count did coincide with the peak hours of operation for the plant; however, DA 2017/1249 is proposing 24 hours a day, 7 days a week operation, and therefore the impacts of operating in the evenings and on weekends is unknown. Additional traffic counts should be undertaken to ensure that the proposed development will not result in any adverse impacts on the existing traffic conditions on the road network outside of what is the plant's normal operating hours.*

Comment: The sample size for traffic counts is considered inadequate given it doesn't represent the total operation of the proposed concrete batching plant.

- From the swept path diagrams (Figures 9A-9G) included within the report it is unclear whether on-street car parking will be impacted by the proposed truck movements. Further investigation is required to ensure that on-street car parking along Baker and Anderson Streets is not comprised by the proposed development.*

Comment: The applicant has not lodged any vehicle crossing permits that would determine whether on street parking is affected or applied for the removal of on-street parking. The writer concurs in regards to whether the applicant proposes to remove on street car parking.

- Concerns are raised by any suggestion that larger vehicles (e.g. B-Doubles) may be using the site given the existing volumes of large vehicle traffic and provision of on-street car parking on either side of Baker Street.*

Comment: The applicant has not lodged any vehicle crossing permits that would determine whether on street parking is affected. The writer concurs in regards to whether the applicant proposes to remove on street car parking.

S.79C(1)(e) - Public interest

It is considered that granting approval to the proposed development would not be in the public interest.

Other Matters**External Referrals –****Roads and Maritime Services**

The Roads and Maritime Services first raised objection to the additional crossing proposed as part of the application, the applicant amended the proposal to keep the existing crossing and RMS were not accepting of this approach. The applicant then further amended the proposal to remove the crossing and hardstand and install landscaping on the provision that this was undertaken through a condition of consent. RMS provided their concurrence based on the above on 9 May 2018.

On 25 July 2018, RMS confirmed to Council that Wentworth Ave should not be modelled as a clearway.

Sydney Airport Corporation Limited (SACL)

The application was referred to Sydney Airport as the building and the proposed additions are above 15.24 (50 feet). Sydney Airport gave their approval to the proposed development on 7 February 2018 for the building to constructed to a height of 35m AHD.

Port Authority of New South Wales

The application was referred to the above as the site is within proximity to the Vessel Traffic Service, line of sight links. The Port Authority raised no objection to the proposed development in their correspondence of 13 February 2018.

NSW – Environment Protection Agency

The application was referred to the EPA given the application is for a concrete batching plant and is designated and integrated development.

The EPA provided their initial response on 13 February 2018, with an amended response in regards to air quality being provided to Council on 4 July 2018. EPA recommended conditions of consent.

On 29 November 2018 James Goodwim of the NSW EPA confirmed if the proposal has the capacity to meet or exceed the threshold then an Environment Protection license is required from the EPA and that the application is integrated.

Roads and Maritime Services

The application was referred to RMS with a response provided on 23 February 2018, the response was subject to conditions of consent. The RMS c

Water NSW

The application was referred to the agency of Water NSW. WaterNSW has determined that the proposed development will encounter groundwater during the excavation process, and is subject to a Water Supply Work Approval under the Water Management Act 2000 for dewatering during the construction phase. This determination is subject to appropriate construction methods to be employed to minimise volume of groundwater take during the construction phase. WaterNSW provided General Terms of Approval on 28 March 2018.

Internal Referrals

The application was referred to Council's environmental scientist, tree preservation officer, development engineer and environmental health. Conditions of consent were recommended.

Disability Discrimination Act 1992

The application has not been supported by an access report. The applicant has advised the following in their EIS.

"It is not possible for Boral to employ a person with a disability at the site due to the industrial nature of the workplace and relevant operational logistics and workplace health and safety requirements. Therefore no accessible vehicle space will be provided.

This justification forms the statement of consistency required by Table 1.

Appropriate access to and within areas normally used by personnel with access arrangements (i.e. the proposed administration building), would be designed in accordance with the Building Code of Australia and relevant Australian Standards.

General access would be provided for all persons to appropriate sanitary facilities and other common facilities including kitchens, lunch room, and amenity facilities."

Comment: The applicant has indicated that no one with a disability is able to work at the site and as such they are not designing to accommodate anyone with a disability. However the applicant has not provided a justification from a qualified access consultant to fully address the exemption provisions of D3.4 of BCA/NCC Vol.1

Section 7.12 – Development Contributions

The city of Botany Bay Section 94A Plan is applicable to the site, as such 1 percent of the value of works is the contribution required. Accordingly, at a cost of works of \$5,700,000.00. The resultant contribution is \$57,000.00

CONCLUSION

Development Application No. 2017/1249 for expansion of the existing concrete batching plant to allow for 200,000 cubic metres (m3) or approximately 500,000 tonnes of pre-mixed concrete products per annum to be produced at 1 Baker Street, Banksmeadow has been assessed in accordance with the relevant requirements of the *Environmental Planning and Assessment Act 1979* and is recommended for **refusal** subject to the reasons listed below.

Premises: 1 Baker Street, Banksmeadow

DA No: 2017/1249

REASONS FOR REFUSAL

1. Pursuant to the provisions of Section 4.15(1)(b) and Section 4.15(1)(c) of the Environmental Planning and Assessment Act 1979, insufficient information has been provided with particular regard to traffic and air quality impacts by the applicant to allow a proper and thorough assessment of the impacts of the proposed development and the suitability of the site for the development.
2. The proposed application fails to meet Section 5 of the Environmental Planning and Assessment Act 1979, in particular, the proposed development does not achieve ecologically sustainable development.
(Environmental Planning and Assessment Act 1979 4.15(1)(e)).
3. The proposed development, pursuant to the provisions of Section 4.15(1)(a)(i) of the Environmental Planning and Assessment Act 1979, is not consistent with Three Ports SEPP 2013 in particular the Aims of the Policy in that the proposed development does not allow for the efficient development re-development and protection of land at Port Botany for port purposes.
4. Pursuant to the provisions of Section 4.15(1)(a)(i) of the Environmental Planning and Assessment Act 1979, it is considered that the proposed development does not satisfy the objectives of the IN1 - General Industrial zone as contained in SEPP (Three Ports) 2013, including: to facilitate and encourage port related industries that will contribute to the growth and diversification of trade through the port and to encourage ecologically sustainable development.
5. Pursuant to the provisions of Section 4.15(1)(a)(i) of the Environmental Planning and Assessment Act 1979, it is considered that the proposed development does not satisfy the objectives of the IN1 - General Industrial zone as contained in SEPP (Three Ports) 2013, including: to facilitate and encourage port related industries that will contribute to the growth and diversification of trade through the port and to encourage ecologically sustainable development.
6. Pursuant to the provisions of Section 4.15(1)(b) of the Environmental Planning and Assessment Act 1979 the proposed development is likely to result in the following adverse environmental impacts.
 - a. Natural Environment – The air quality impacts are not able to be quantified for small Particulate matter at peak production. Further, increase discharge of particulate matter of 2.5 where Councils position is no additional discharge to ensure that regional air quality is maintained.
 - b. Social Impacts - The human health impacts have not been quantified
 - c. Economic Impacts – to the regional road network which seek to threaten the efficiency of the Port and surrounding land uses

42/41

7. The proposed development, pursuant to the provisions of Section 4.15(1)(b) of the Environmental Planning and Assessment Act 1979, results in an undesirable and unacceptable impact on the adverse impact on the surrounding built environment and respective uses.
8. Pursuant to the provisions of Section 4.15(1)(b) of the Environmental Planning and Assessment Act 1979, the proposed development results in unsatisfactory traffic generation that will detrimentally impact the local and regional road system and the as such the efficiency of the operation of Port Botany.
9. The proposed development, pursuant to the provisions of Section 4.15(1)(b) of the Environmental Planning and Assessment Act 1979, is unsatisfactory given the inadequate proposed means of access to and from the development site and the area available for the loading and unloading of concrete given the existing operation is not able to be contained within the site.
10. Pursuant to the provisions of Section 4.15(1)(b) of the Environmental Planning and Assessment Act 1979, the proposed development is excessive in terms of intensity in regards to traffic movements and air quality impacts and would adversely impact upon the amenity of the locality.
11. The proposed development, pursuant to the provisions of Section 4.15(1)(c) of the Environmental Planning and Assessment Act 1979, is not considered suitable for the site, in terms of traffic generation, intensity of use and is likely to adversely impact on the port related activities. In particular as the applicant has declared that the proposal is not port related.
12. Having regard to the issues raised in submissions received by Council in opposition to the proposed development, pursuant to the provisions of Section 4.15(1)(d) of the Environmental Planning and Assessment Act 1979, the proposal results in unacceptable traffic, air quality, congestion, impacts to surrounding land uses some being sensitive impacts on adjoining /nearby properties.
13. Pursuant to the provisions of Section 4.15(1)(e) of the Environmental Planning and Assessment Act 1979, and in consideration of the impacts and submissions made in regards to traffic, air quality, noise, human health hazards, the proposed development is not considered to be in the public interest and is likely to set an undesirable precedent.
14. Pursuant to the provisions of Section 4.2(1) of the Environmental Planning and Assessment Act 1979, the works to which this application are related have been carried out without first obtaining a development consent for the expanded use of truck movement and number of staff at the site without first a development consent being in force.

Bayside Local Planning Panel

28/05/2019

Item No	6.3
Application Type	Development Application
Application No	DA-18/1173
Lodgement Date	18/09/2018
Property	1 Beauchamp Road, Banksmeadow
Ward	Port Botany
Owner	Pacific National NSW Pty Ltd Australian Rail Track Corporation
Applicant	Holcim (Australia) Pty Ltd
Proposal	Designated and Integrated Development for the construction of a temporary and then permanent concrete batching plant (concrete works), aggregate/materials storage and distribution facility.
No. of Submissions	Thirteen (13)
Cost of Development	\$16,000,000.00
Report by	Michael McCabe, Director City Futures

Officer Recommendation

- 1 That Development Application DA-2018/1173 for Designated and Integrated Development for the construction of a temporary and then permanent concrete batching plant (concrete works), aggregate/materials and distribution facility at 1 Beauchamp Road, Banksmeadow, be **APPROVED** subject to the conditions of consent attached to this report.
 - 2 That the submitters be advised of the Bayside Local Planning Panel's decision.
-

Location Plan



Attachments

- 1 Planning Assessment Report [↓](#)
- 2 Locality Plan [↓](#)
- 3 Stage 0 and Stage 1 Plan [↓](#)
- 4 Stage 2 and Stage 3 Plan [↓](#)
- 5 Stage 1 Elevations [↓](#)
- 6 Stage 2 Elevations [↓](#)
- 7 Environmental Impact Statement (Part 1) - 1 Beauchamp Road Banksmeadow - Holcim (Australia) Pty Ltd [↓](#)
- 8 Environmental Impact Statement (Part 2) - 1 Beauchamp Road Banksmeadow - Holcim (Australia) Pty Ltd [↓](#)

BAYSIDE COUNCIL

Planning Assessment Report

Application Details

Application Number:	DA-2018/1173
Date of Receipt:	18 September 2018
Property:	1 Beauchamp Road, Banksmeadow
Lot & DP/SP No:	Lot 20 DP 1231202 Lot 1 DP 512040 Lot 1 DP 100686J
Owner:	Pacific National NSW Pty Ltd/Australian Rail Track Corporation
Applicant:	Holcim (Australia) Pty Ltd
Proposal:	Designated and Integrated Development for the construction of a temporary and then permanent concrete batching plant (concrete works), aggregate/materials storage and distribution facility.
Value:	\$16,000,000.00.
Zoning:	IN1 – General Industrial State Environmental Planning Policy (Three Ports) 2013
Author:	Patrick Nash - Senior Development Assessment Officer
Date of Report:	9 May 2019
Present Use:	Vacant land with hardstand areas and scattered vegetation.
No. of submissions:	Thirteen (13)
Recommendation:	Approval subject to conditions

Key Issues

During the assessment of the application, the applicant was requested to resolve a series of issues identified with the proposed development. These matters included: traffic generation, heavy vehicle access (vehicles >19m) to the site and associated concerns raised by NSW Ports, changes to existing road conditions along Beauchamp Road, consistency with SEPP (Three Ports) 2013, risk, stormwater and the provision of suitable on-site car parking for employees during Stage 1 of the development.

The development application has been assessed in accordance with the relevant requirements of the *Environmental Planning and Assessment Act 1979* and is recommended for approval subject to suitable conditions of consent.

Recommendation

1. THAT Development Application DA-2018/1173 for Designated and Integrated Development for the construction of a temporary and then permanent concrete batching plant (concrete works), aggregate/materials storage and distribution facility at 1 Beauchamp Road, Banksmeadow, be **APPROVED** subject to conditions.
2. That the submitters be advised of the Panel's decision.

Site Description

The subject site is located at 1 Beauchamp Road, Banksmeadow on approximately 2.4 hectares of land. The legal description of the subject site is Lot 20 DP 1231202, Lot 1 DP 512040 and Lot 1 DP 1006865. The subject site is currently vacant land with no operational use. There is some existing vegetation dispersed throughout the site. The subject site is zoned IN1 – General Industrial in accordance with SEPP (Three Ports) 2013.

The site is mostly cleared, disturbed land with some remnants of exotic and native regrowth vegetation scattered across the site. All the vegetation within the Project Site is mapped in the *Native Vegetation of the Sydney Metropolitan Area V3 (2016)* as weeds and exotic vegetation. Vehicular access to the site is attained off an existing access road at the intersection of Beauchamp Road and Perry Street.

The subject site is bound by Beauchamp Road along the southern eastern boundary, by the Botany Industrial Park in the northeast, by the Botany Goods Rail Line in the north west and on the southwest by the Veolia Transfer Terminal. The existing companies that are part of the Botany Industrial Park include: Huntsmen Corporation Australia Pty Ltd, Ixom Pty Ltd, Orica Australia Pty Ltd and Qenos Pty Ltd.

The residential area of Hillsdale begins at Denison Street to the north-east of the subject site. There are commercial and industrial businesses in Hillsdale to the north of the Project Site between Denison Street and Rhodes Street. The residential streets have both on street and off-street parking. The closest residents in Hillsdale are approximately 200m away along Denison Street to the north of the Project Site. The residential area of Matraville is located east and south-east of the subject site approximately 350m away. There are commercial businesses fronting Beauchamp Road opposite the subject site. Matraville Public School is the nearest school, located about 720m from the site to the northeast.

The information submitted with the application states that the site has been selected for its strategic accessibility to the existing transport links and routes including rail freight line and major road networks for the region including designated heavy vehicle routes. Beauchamp Road is the nearest state road running northeast-southwest between Denison Street and Botany Road, and is a regional road between Malabar Road and Denison Street.



Figure 1: Subject site outlined in red in relation to nearby land uses identified



Figure 2: Looking east within the subject site towards Beauchamp Road

Site History

Whilst a review of Council's records has not revealed any previous development consents on the site, the applicant has provided a detailed historical analysis of the site (and surrounds) which is re-produced below for reference:

- *The first industries in the East Botany area near the turn of 19th century were mainly tanneries, fellmongers, wool scourers and a paper mill. Several major industries followed in the 1920s and 1930s, including Davis Gelatine, Kellogg's and Johnson & Johnson. Many of the chemical industries, including ICI Australia and New Zealand (ICI/ANZ, subsequently ICIA and now Orica) were established in the 1940s in what is now the BIP.*
- *The rail line, owned by the NSW State Rail Authority (in various forms), was initiated in 1922 and established by 1930. In the 1930s, surrounding land was predominantly cleared and zoned industrial with some residential areas established about 500m southeast from the Project Site.*
- *The nearby BIP saw larger manufacturing plants constructed in the 1960s and the area became a predominantly petrochemical complex including chlorine and chlorine derivative-related chemical manufacturing. Land use included container transfers between road and rail, train shunting, minor wagon maintenance and locomotive refuelling. Ownership of the Project Site (Lot 20 DP1231202) was transferred to Pacific National in 2002 via an asset sale by the NSW Government.*
- *In 2014 the vegetation lessened and several shipping containers were stored onsite, further vegetation declined in 2016 and hardstand areas are now present.*

Background

A summary of the development application history is provided below:

- 18 September 2018 – The subject DA was submitted to Council.
- 28 September 2018 to 2 November 2018 – The development application was publicly notified and advertised in accordance with the requirements of BBDCP 2013. A total of 2 submissions were received.
- October 2018 – Various referrals were sent by Council to external agencies.
- 7 November 2018 to 7 December 2018 – The development application was re-exhibited to provide additional information required under the relevant legislation. A total of 11 submissions were received.
- 9 November 2018 – The applicant provided amended plans which removed the temporary parking originally proposed on the neighbouring parcel of land (Orica site).
- 22 November 2018 – The applicant provided an updated Traffic Impact Assessment to review options for access to the site for >19m long vehicles. This was provided to RMS for their review.
- 28 November 2018 – Water NSW provided correspondence to Council confirming that no approvals or licenses are required under the Water Management Act 2000.
- 12 December 2018 – RMS provided a written response.
- 10 January 2019 – NSW EPA issued their General Terms of Approval for the proposed development.
- 11 January 2019 – The applicant provided information with respect to stormwater management, at the request of Council's Development Engineer.
- 17 January 2019 – The applicant provided a written response to the RMS.

- 6 February 2019 – The applicant provided a written response to the matters raised in the submissions received.
- 7 February 2019 – The RMS provided a written response to Council.
- 12 February 2019 – NSW EPA re-issued their General Terms of Approval, making minor changes to the conditions imposed.
- 14 February 2019 – The application was re-referred to the Department of Planning to review the additional information provided with respect to risk.
- 19 February 2019 – The applicant provided an amended plan to demonstrate how additional temporary car parking for Stage 1 is to be provided within the site
- 20 February 2019 – The RMS provided a written response indicated that they raise no objection to the proposed development, subject to various conditions.
- 8 March 2019 – At the request of Council, the applicant provided additional information to explain how the proposed development would be consistent with the requirements of the Three Ports SEPP.
- 8 March 2019 – A meeting was held with Council and the applicant to discuss the status of the DA and outstanding matters.
- March/April/May – Further discussions with the applicant (as required) to clarify aspects of the DA.

Description of Development

This development application seeks Council consent for the construction of a temporary and then permanent concrete batching plant (concrete works), aggregate/materials storage and distribution facility. The development is a staged construction and is proposed to occur in three (3) stages. The proposed works associated with each stage is summarised below:

Stage 0/1 – Mobile Batching Plant and Aggregate Storage Facility

- Construction and operation of a mobile concrete plant and aggregate storage;
- Production rate of up to 700m³/day;
- All aggregate delivery would occur by road;
- 12-15 agitators on-site;
- Provision of on-site staff car parking facilities, lunch rooms and ablutions;
- New 4m landscape strip adjacent to the front boundary along Beauchamp Road;
- Concurrent construction of the fixed plant facilities and aggregate conveyor system; and
- Approximate duration of this stage is 21 months.

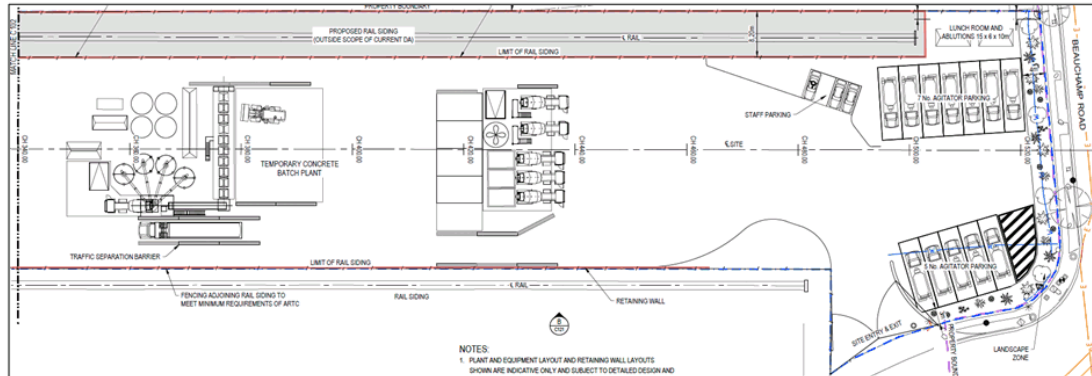


Figure 3: Stage 1 Site Plan extract – southern end of the site

Stage 2 – Fixed Aggregate Storage and Concrete Batching Facilities

- Operation of a fixed concrete batching plant and aggregate storage facilities;
- All aggregate delivery would occur by road;
- Maximum annual concrete production of 220,000m³/year;
- 25-40 agitators on-site;
- Approximately 6,000 tonnes of bulk aggregate enclosed storage;
- Dedicated staff car parking area at the front of the site;
- Retention of new 4m landscape strip (established in Stage 1) adjacent to the front boundary along Beauchamp Road;
- Various ancillary buildings (drivers crib room, office and ablutions);
- Deliveries to the site undertaken by standard truck and dog tippers, semi-tippers, B-double road tankers and semi-trailers;

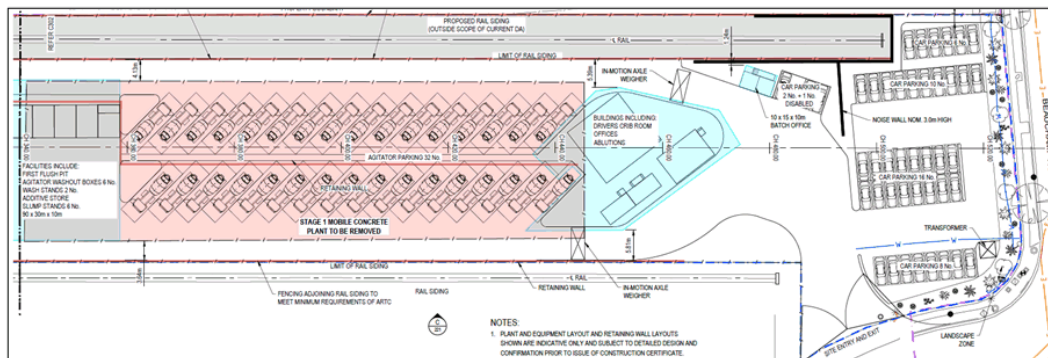


Figure 4: Stage 2 Site Plan extract – southern end of the site



The design of the development makes an allowance for the provision of a single rail siding and unloading point capable of receiving up to 36 wagons of aggregate. The current development application does not seek consent for these components. With this in mind, it noted that the proposal is capable of being fully operational without the rail siding component.

Hours of operation

The application seeks consent for the facility to operate 24 hours a day during all stages.

Site occupancy

The facility is proposed to contain up to a maximum of 45 staff members (including casual visitors/workers) from Stage 2 onwards. The applicant has provided the following table which demonstrates the proposed staffing number, their place of work on-site and likely duties.

Position	Approximate no. people/shift		Place of Work	Duties
	Day	Night		
On site	8	4	Office/Site	Plant/Production/Cleaning/Supervision
Agitator drivers	32	32	Truck driving	Delivery of concrete
Casual visitors/workers	5	-	Office/Site	Pacific National / Quality control / auditing

Figure 6: Extract from EIS – site occupancy

Traffic and Access

Access to the Project Site would be from the existing access road at the intersection of Beauchamp Road and Perry St, Banksmeadow. The access would be shared with Veolia. Beauchamp Road has a posted 60km/h speed limit, two lanes in both directions, with currently unrestricted kerbside parking north of Perry Street. Beauchamp Road is a designated heavy vehicle route and a major access route to Port Botany. There is a signalised intersection at the proposed entrance to the site.

Noise wall

A 3m high noise wall/barrier is proposed to be constructed within the site to reduce noise emissions.

Other operational details

The site would not be regularly open to the general public. Orders for concrete and aggregate are made over the phone or electronically. Visitors to the site will typically be Holcim and Pacific National staff or external visitors escorted by Holcim. Pedestrian access to the site would be through a gate exiting directly onto Beauchamp Road. All visitors to the site will report to the Batch Office.

Statutory Considerations***Environmental Planning and Assessment Act, 1979***

An assessment of the application has been undertaken pursuant to the provisions of the *Environmental Planning and Assessment Act, 1979*.

Integrated Development – Part 4, Division 4.8 – Integrated Development and Environmental Planning and Assessment Regulations 2000 – Part 6, Division 3

The relevant requirements under Division 4.8 of the EP&A Act and Part 6, Division 3 of the EP&A Regulations have been considered in the assessment of the development application. The proposed development constitutes an Integrated Development in accordance with clause 4.46(1) of the EP&A Act as the proposal requires an Environmental Protection licence(s) to authorise the carrying out of scheduled development work. The application was referred to NSW Environment Protection Authority who stated that they are able to issue an Environmental Protection Licence and issued General Terms of Approvals (GTAs) in relation to the Integrated development. This is discussed in greater detail below.

Protection of the Environment Operations Act 1997 – POEO Act

Clause 48 of the Act outlines that an Environmental Protection licence ("EPL") (separate application) is required for any scheduled activities to be undertaken at a premise at which Schedule 1 of the Act indicates that a licence is required.

Schedule 1 includes the following:

13 Concrete works

- (1) *This clause applies to concrete works, meaning the production of concrete products, but does not include the production of pre-mixed concrete (concrete batching).*
- (2) *The activity to which this clause applies is declared to be a scheduled activity if it has a capacity to produce more than 30,000 tonnes per year of concrete products.*

The proposed development would involve production of pre-mixed concrete, commonly referred to as 'concrete batching'. As such, the scheduled activity of concrete works is not applicable to the site, and the DA does not trigger an additional scheduled activity under the POEO Act.

The works of the proposed development do however meet the definition of a scheduled activity pursuant to Schedule 1, Clause 19 (Extractive Activities) of the POEO Act.

19 Extractive activities

- (1) *This clause applies to the following activities:*

Land-based extractive activity, meaning the extraction, processing or storage of extractive materials, either for sale or re-use, by means of excavation, blasting, tunnelling, quarrying or other such landbased methods.

Water-based extractive activity, meaning the extraction of extractive materials, either for sale or reuse, by means of dredging or other such water-based methods.

- (2) *In this clause, extractive materials means clay, sand, soil, stone, gravel, rock, sandstone or similar substances that are not minerals within the meaning of the Mining Act 1992.*
- (3) *Each activity referred to in Column 1 of the Table to this clause is declared to be a scheduled activity if it meets the criteria set out in Column 2 of that Table.*

Table	
Column 1	Column 2
Activity	Criteria
Land-based extractive activity	involves the extraction, processing or storage of more than 30,000 tonnes per year of extractive materials
Water-based extractive activity	involves the extraction of more than 30,000 cubic metres per year of extractive materials

The application was referred to NSW Environment Protection Authority who issued General Terms of Approval. In correspondence dated 10 January 2019, EPA stated the following:

The EPA has reviewed the information provided and has determined that it is able to issue an Environment Protection Licence (EPL) for the proposal under the Protection of the Environment Operations Act 1997 (the POEO Act), subject to a number of conditions. The applicant will need to make a separate application to the EPA to obtain this licence.

The general terms of approval (GTA) for this proposal are provided as Attachment A. If Bayside Council grants development consent for this proposal these conditions should be incorporated into the consent.

In view of the above, the relevant legislative requirements have been satisfied. Additionally, it is noted that the NSW EPA is the appropriate regulating authority for the proposed development in accordance with clause 6 – Appropriate regulatory authority of the POEO Act. A condition of consent has been included stating that the appropriate Environmental Protection License(s) (as determined by the NSW EPA) must be attained.

Environmental Planning and Assessment Act, 1979 and Environmental Planning and Assessment Regulations 2000

Section 77A of the Act defines designated development to be development that is declared designated development by an EPI or the Regulations.

Designated Development

Consideration has been given to Schedule 3 of the Environmental Planning and Assessment Regulation 2000 (Regulations), which relates to designated development. Clause 14 – Concrete works, provides the criteria for concrete works, and an assessment of the proposal against this criteria shows that the activity is 'designated development' for the following reasons:

In accordance with Clause 14 of Schedule 3, which stipulates the following:

14 Concrete works

(1) *Concrete works that produce pre-mixed concrete or concrete products and:*

(a) *that have an intended production capacity of more than 150 tonnes per day or 30,000 tonnes per year of concrete or concrete products,*

Comment:

Given the development is producing more than 30,000 tonnes of concrete per year, it satisfies the requirement for Designated Development, in accordance with Clause 4 of the EP and A Regulations.

Environmental Impact Statement

In accordance with Section 4.12(8) of the Act an environmental impact statement has been submitted. This statement is considered to be consistent with the requirements of Schedule 2 of the Regulations, which stipulates the information to be included within an environmental impact statement. The applicants EIS satisfies the SEARS issued by the Department of Planning. The SEARS for this project have been re-produced below with some commentary provided in the far right hand column.

Secretary's Environmental Assessment Requirements		Comment/response
Strategic Context	<p>A detailed justification for the proposal and suitability of the site for the development.</p> <p>A demonstration that the proposal is consistent with all relevant planning strategies, environmental planning instruments, development control plans (DCPs), or justification for any inconsistencies.</p> <p>A list of any approvals that must be obtained under any other Act or law before the development may lawfully be carried out.</p>	The submitted EIS satisfies these requirements. Site suitability has been addressed in more detail in this report under the Part 4.15(c) assessment.
Hazards and Risk	<p>A preliminary risk screening completed in accordance with <i>State Environmental Planning Policy No. 33 – Hazardous and Offensive Development and Applying SEPP 33</i> (DoP, 2011), with a clear indication of class, quantity and location of all dangerous goods and hazardous materials associated with the development. Should preliminary screening indicate that the project is "potentially hazardous" a Preliminary Hazard Analysis (PHA) must be prepared in accordance with <i>Hazardous Industry Planning Advisory Paper No. 6 - Guidelines for Hazard Analysis</i> (DoP, 2011) and <i>Multi-Level Risk Assessment</i> (DoP, 2011);</p> <p>Sufficient reporting on the consultation undertaken with Botany Industrial</p>	The application satisfies these requirements, as confirmed in an external referral response from the NSW Department of Planning. Refer to further discussion later in this report under <i>SEPP 33 – Hazardous and Offensive Development</i> .

	Park (BIP) on issues relating to hazards and risks from BIP; and Demonstration that the development complies with <i>Hazardous Industry Planning Advisory Paper No. 4, 'Risk Criteria for Land Use Safety Planning'</i> (DoP, 2011).	
Air quality	<p>A description of all potential sources of air and odour emissions.</p> <p>An air quality impact assessment in accordance with relevant Environment Protection Authority guidelines.</p> <p>A description and appraisal of air quality impact mitigation, management and monitoring measures.</p>	The submitted air quality impact assessment was reviewed by the NSW EPA who are the appropriate regulating authority and support the proposed development subject to various conditions.
Noise and vibration	<p>A description of all potential noise and vibration sources during construction and operation, including road and rail traffic noise.</p> <p>A noise and vibration assessment in accordance with the relevant Environment Protection Authority guidelines.</p> <p>A description and appraisal of noise and vibration mitigation, management and monitoring measures.</p>	A Noise and Vibration Assessment was submitted and reviewed by the NSW EPA who advised that the predicted noise levels demonstrate that construction noise from the proposal will satisfy the Interim Construction Noise Guidelines (ICHG) and that operational noise from the proposal will satisfy the requirement set-out in the Noise Policy for Industry (NPfI). However, due to potential for cumulative noise impacts on nearby sensitive receivers, EPA has recommended for noise monitoring to be undertaken during construction and for the first year of operation to validate the modelled noise impacts. Additionally, the recommended measures in the Noise and Vibration Assessment must be implemented during construction and operation.
Soil and Water	<p>A description of local soils, topography, drainage and landscapes;</p> <p>Details of water usage for the proposal including existing and proposed</p>	The EIS addresses soils, geology, erosion, groundwater, surface water, stormwater drainage, groundwater and flooding in a comprehensive manner.

	<p>water licencing requirements in accordance with the <i>Water Act 1912</i> and/or the <i>Water Management Act 2000</i>.</p> <p>An assessment of potential impacts on floodplain and stormwater management and any impact to flooding in the catchment.</p> <p>Details of sediment and erosion controls.</p> <p>A detailed site water balance.</p> <p>An assessment of potential impacts on the quality and quantity of surface and groundwater resources.</p> <p>Details of the proposed stormwater and wastewater management systems (including sewage), water monitoring program and other measures to mitigate surface and groundwater impacts.</p> <p>Characterisation of the nature and extent of any contamination on the site and surrounding area.</p> <p>A description and appraisal of impact mitigation and monitoring measures.</p>	<p>A separate Groundwater Impact Assessment was submitted with the DA and referred to Water NSW for assessment. In correspondence dated 28/11/2018, Water NSW has confirmed that no approvals or licenses are required under the Water Management Act 2000.</p> <p>The matter of land contamination is discussed in more detail in this report under SEPP 55.</p>
Traffic and Transport	<p>Detail of road transport routes and access, road traffic predictions during construction and operation, impacts to safety and function of road network and any road upgrades required for the development.</p> <p>How this is addressed is discussed within the body of the report (refer Traffic discussion).</p>	<p>A Traffic Impact Assessment was submitted with the DA. Roads and Maritime Services (RMS) and Council's Development Engineer have reviewed the proposal and raise no objection on traffic grounds, subject to various conditions which have been incorporated into the recommendation.</p> <p>The matter of traffic and transport is discussed in more detail in this report under SEPP (Infrastructure) 2007.</p>
Land resources	<p>An assessment of the compatibility of the development with other land uses in the vicinity of the development, in</p>	<p>The EIS addresses this matter in section 0, section 4.5 and section 4.3.8.</p>

	accordance with the requirements of Clause 12 of <i>State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007</i> .	
Waste management	<p>Details of waste handling including, transport, identification, receipt, stockpiling and quality control including off-site reuse and disposal.</p> <p>The measures that would be implemented to ensure that the proposed development is consistent with the aims, objectives and guidelines in the <i>NSW Waste Avoidance and Resource Recovery Strategy 2014-21</i>.</p>	Part 7.13 of the EIS addresses waste management. A detailed assessment is undertaken of measure that would be implemented to avoid, minimize, mitigate, manage and/or monitor potential impacts associated with the waste generated from the proposed development.
Biodiversity	<p>A description of any potential vegetation clearing needed to undertake the proposal and any impacts to flora and fauna.</p> <p>Details of weed management during construction and operation in accordance with existing State, regional or local weed management plans or strategies.</p> <p>A detailed description of the measures to avoid, minimise, mitigate and offset biodiversity impacts.</p>	<p>Part 7.9 of the EIS addresses biodiversity and also includes mitigation and management measures to minimize potential biodiversity impacts within the construction and operational phases of the development.</p> <p>It is noted that the subject site is highly modified and disturbed from years of historical and recent development. The existing vegetation on the site is classified as weeds and exotic vegetation. The closest area of mapped native vegetation to the subject site is Coastal Flats Swamp Mahogany Forest vegetation community which is approximately 60m to the west, across the rail corridor.</p>
Visual	An impact assessment at private receptors and public vantage points.	A Visual Impact Assessment was submitted with the DA and demonstrates that the anticipated visual impact of the development is acceptable in the industrial context of the site.
Heritage	Including Aboriginal and non-Aboriginal cultural heritage.	The submitted EIS demonstrates that it is unlikely that any Aboriginal objects remain on the site. In any case, various mitigation

		measures are recommended in Part 7.10.3 of the EIS which are supported.
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S.4.15(1) - Matters for Consideration – General

S.4.15(1)(a)(i) - Provisions of Environmental Planning Instruments

The following Environmental Planning Instruments are relevant to this application:

State Environmental Planning Policy No. 55 – Remediation of Land

The provisions of SEPP 55 have been considered in the assessment of the development application, along with the requirements of BBDCP Part 3K Contamination, relating to Contaminated Land.

Clause 7 of SEPP 55 requires the consent authority to consider whether land is contaminated prior to granting consent to carrying out of any development on that land and if the land is contaminated, it is satisfied that the land is suitable in its current state or will be suitable.

The application was supported by the following reports:

1. 'Preliminary Site Investigation and Risk Assessment – Banksmeadow Rail Terminal and Concrete Batch Plant' (Report No. DDE-269_1) completed by HIBBS and Associates dated March 2018.
2. 'Detailed Site Investigation and Risk Assessment – Banksmeadow Rail Terminal and Concrete Batch Plant' (REFERENCE NO. S10065 - R02 - DSI) completed by HIBBS and Associates dated 6 August 2018.

These reports have been assessed by Council's Environmental Scientist who makes the following comments:

The site is currently vacant and does not contain any buildings.

Groundwater is located at 2.38 - 4.88m bgl. Acid sulfate soils will not be intercepted.

The PSI and DSI concluded that the site does not require remediation prior to operation as a concrete batching and aggregate distribution facility. However groundwater has elevated concentrations of pollutants exceeding the site acceptance criteria (SAC). A construction methodology to avoid the need for dewatering has been developed by limiting excavations to less than 2m bgl and the use of driven piles.

The EIS has also advised that the proposed stormwater basin is to be designed and constructed to be sealed to avoid infiltration of stormwater to groundwater and to avoid groundwater contamination of the stormwater basin. It is proposed to limit the stormwater basin depth to 1.6m bgl. It has also advised that the development has been designed to forego the need for deep excavations (greater than 2m bgl) and avoid the requirement for groundwater dewatering. However if unforeseen dewatering is required during construction, this will be done in accordance with all relevant guidelines.

As such these have been reflected in the recommended conditions of consent.

Given the above, Council is satisfied that the applicant has provided information for it to be satisfied of the Clause 7 requirements of SEPP 55. On this basis, the site is suitable in its present state for the proposed development, subject to the recommended conditions of consent.

State Environmental Planning Policy (Infrastructure) 2007

The application was referred to the RMS in accordance with SEPP (Infrastructure) 2007. The RMS supports the proposed development subject to a number of conditions which includes (but not limited to) the following:

- No Right Turn' restrictions from Beauchamp Road shall be implemented from 0600 to 1000 and 1500 to 1900 Monday to Friday.
- In order to facilitate right turn movements outside peak periods (0600 to 1000 and 1500 to 1900 Monday to Friday) a full time 'No Stopping' zone is to be implemented along the entire frontage on the north-west side of Beauchamp Road from Perry Street to Denison Street and a full time 'No Stopping' zone is to be implemented for 100 metres on the south-east frontage of Beauchamp Road on the approach to Perry Street.
- The proponent shall submit a Heavy Vehicle Management Plan to be reviewed and approved by Council.
- A Construction Traffic Management Plan detailing construction vehicle routes, number of trucks, hours of operation, access arrangements and traffic control should be submitted to Council for approval prior to the issue of a Construction Certificate.
- All demolition and construction vehicles are to be contained wholly within the site and vehicles must enter the site before stopping. A construction zone will not be permitted on Beauchamp Road.

The proposed development will necessitate to some changes to the traffic conditions along Beauchamp Road to ensure that suitable levels of service are provided, as requested by the RMS.

The following assessment is provided by Council's Development Engineer who has assessed the proposed development on traffic grounds:

The proposed concrete batching plant will be constructed over three stages, each stage has a different traffic generation and design. The final stage will contain a rail terminal extension to reduce the amount of aggregate being transported to the site by heavy vehicles.

The expected traffic generation based on each stage is as per the table below:

Project Stage	Light Vehicles		Aggregate Tippers		Cement Tankers		Concrete Agitators		Total Vehicles
	In	Out	In	Out	In	Out	In	Out	
AM Peak									
Stage 1	4	2	0	0	1	1	10	10	28
Stage 2	2	2	5	5	2	2	20	25	63
Stage 3 (Day Only)	2	2	7	7	2	0	32	32	84
Stage 3 (All Day)	2	2	7	7	2	2	20	25	67
PM Peak									
Stage 1	0	2	6	6	0	0	6	4	24
Stage 2	2	16	8	8	1	3	10	5	53
Stage 3 (Day Only)	2	16	1	1	0	1	12	6	39
Stage 3 (All Day)	2	16	4	4	1	3	10	5	45

Source: Holcim Banksmeadow Rail Terminal & Concrete Plant Traffic movements summary report

Stage 3 traffic generation is the highest, this is because concrete production would reach its maximum because concrete agitators would be more frequent from and to the subject site. The main traffic Route is to utilise Botany Road (left and right), for all large vehicles no large vehicles are proposed to travel through Perry Street.

The RMS have provided concurrence for large trucks to turn right from Beauchamp Road excluding morning and evening peak hours. The road signage will be conditioned accordingly. Whilst the traffic report is also proposing to utilise Port Botany loop for the maximum size trucks, this will not be supported because the road is considered private and the Port Authority objected to utilising their asset.

Additionally, to improve traffic movement on Beauchamp Road the traffic report suggested removing kerbside parking on Beauchamp Road in front of the subject site this would significantly improve traffic movement at the signalised intersection. The RMS have provided concurrence to the proposed restriction in parking fronting the site.

The traffic report also discussed that the signalised intersection can be further improved if additional limited parking restriction is applied to the West Bound lane in Perry Street. This was not feasible because Perry Street is owned by Randwick Council, and Randwick Council objected to any traffic changes to Perry Street.

Staff and Agitator Truck parking is provided onsite for all stages of the development. A total of 39 standard parking spaces are provided for Stage 3, the applicable parking rate is one space per employee in accordance with part 3A of Botany Bay Development Control Plan. Also Stage 1 and 2 will also have provision for parking onsite at a similar rate.

State Environmental Planning Policy No. 33 – Hazardous and Offensive Development

The original application (including the submitted Risk Evaluation Report) was referred to the NSW Department of Planning who requested additional information on hazardous material pipelines traversing or in the vicinity of the Site. In response Holcim has undertaken additional investigations and consultation with the Botany Industrial Park and its members including the various utility owners, to obtain additional information on the pipelines and associated risks.

In preparing this information, the application has consulted with: Qenos, Freysinnet, Solvay, Caltex and Pacific National. The applicant provided an updated Risk Evaluation Report which includes specific assessment of hazards from the site including explosion, toxic exposure, heat radiation, fire and explosion, and air emissions, and outlines recommended management measures where required to manage these risks.

The additional information (and updated Risk Evaluation Report) provided by the applicant which was subsequently re-referred back to the Department of Planning who provided the following comments:

Given that the proposed development is in the vicinity of Botany Industrial Park (BIP), the Department reviewed the proposal in light of the findings and recommendations of:

- the *2001 Botany/Randwick Industrial Land Use Safety Study Overview Report*, published by the Department; and
- the *2012 Botany Industrial Park Quantitative Risk Assessment Summary Report*, prepared by Sherpa Consulting (2012 BIP QRA).

The Department also considered the 2018 BIP QRA, prepared by Sherpa Consulting and submitted by BIP in accordance with the Minister's approval of the BIP subdivision as modified (DA 30/98).

As indicated in the Department's e-mail, the proposed development is not potentially hazardous under *State Environmental Planning Policy No. 33 – Hazardous and Offensive Development*. In considering the 2018 BIP QRA, the proposed development is located outside of the 50 per million per year cumulative individual fatality risk contour from BIP, indicating that the proposed development can comply with the risk criteria for industrial uses in the vicinity of potentially hazardous facilities. Although not clearly assessed in the EIS and RTS, the Department has verified that a maximum population of 60 full-time employees within the proposed development does not exceed the local population assumptions in the 2018 BIP QRA. As such, the proposed

development can comply with the risk criteria in the Department's *Hazardous Industry Planning Advisory Paper No. 10, 'Land Use Safety Planning'*.

In reviewing the RTS, it is considered that the Applicant has sufficiently addressed the Department's e-mail and consulted with the operators of BIP and the relevant hazardous chemical pipeline operators on the proposed development. From this consultation, several hazardous chemical pipelines are identified to be located within and in the vicinity of the proposed development. Although RTS Appendix B Table 2 appears to indicate that the Applicant will not be primarily responsible for ensuring safety of pipelines outside of the development area, the Department considers that the Applicant (Holcim), rail operator (Pacific National), land owner (Australian Rail Track Corporation) and pipeline operators are holistically responsible in ensuring that the proposed development will be carried out safely in a systematic manner, given that the proposed development will be dependent on new neighbouring rail facilities which could be constructed close to these pipelines. It is understood that separate development applications will be lodged for these rail facilities.

As such, if the proposed development is approved, it is recommended that the conditions in **Attachment A** be included in the consent to ensure continual safe operation of the development and hazardous chemical pipelines within and in the vicinity of the development.

Comment: In view of the above comments, it is concluded that the proposed development is not potentially hazardous in accordance with clause 3 of SEPP 33. The conditions recommended by the NSW Department of Planning have been incorporated into the consent.

State Environmental Planning Policy – Three Ports 2013

Under SEPP 2013, Clause 6 relates to the relationship to other environmental planning instruments. Subject to section 74 (1) of the Act, in the event of an inconsistency between this Policy and another environmental planning instrument whether made before or after the commencement of this Policy, this Policy prevails to the extent of the inconsistency. Therefore, the provisions of *Botany Local Environmental Plan (LEP) 2013* do not apply to the subject site.

Principal Provisions of SEPP (Three Ports) 2013	Compliance Yes/No	Comment
Land use Zone	Yes	The site is zoned IN1 – General Industrial
Is the proposed use/works permitted with development consent?	Yes	<p>The proposed use is permissible with Council's consent under the BBLEP 2013. The use has been categorized as General Industries.</p> <p>Clause 4(3) of the SEPP – Definitions calls up the words having the same meaning as those described at the end of Standard Instrument (Local Environmental Plans) Order 2006.</p> <p>General industry means a building or place (other than a heavy industry or light industry) that is used to carry out an industrial activity.</p>

Principal Provisions of SEPP (Three Ports) 2013	Compliance Yes/No	Comment
		<p>Industrial Activity means the manufacturing, production, assembling, altering, formulating, repairing, renovating, ornamenting, finishing, cleaning, washing, dismantling, transforming, processing, recycling, adapting or servicing of, or the research and development of, any goods, substances, food, products or articles for commercial purposes, and includes any storage or transportation associated with any such activity</p> <p>Comment: The proposed use does not fall into the definition of light industry nor heavy industry. The applicant has undertaken an assessment of Hazardous and offensive industry in accord with SEPP 33 and determined that it is neither and as such does not meet the criteria for heavy industry.</p> <p>Given the nature of the concrete batching plant it is considered to be an industrial activity and as such in light of the above falls into the definition of <i>general industry</i>.</p>
Does the proposed use/works meet the objectives of the zone?	Yes – Refer to Note 1	<p>The proposed development is consistent with the objectives of the IN1 – general industry zone which are as follows:</p> <ul style="list-style-type: none"> • To provide a wide range of industrial and warehouse land uses. • To encourage employment opportunities. • To minimise any adverse effect of industry on other land uses. • To facilitate and encourage port related industries that will contribute to the growth and diversification of trade through the port. • To enable development for the purposes of business premises or office premises associated with, and ancillary to, port facilities or industries.

Principal Provisions of SEPP (Three Ports) 2013	Compliance Yes/No	Comment
		<ul style="list-style-type: none"> To encourage ecologically sustainable development. <p>Comment: The proposed development is considered to be consistent with the applicable zone objectives. Refer to additional discussion in Note 1 which provides further justification with respect to the proposal supporting port related industries.</p>
Clause 17 – Demolition requires consent	Yes	Demolition is proposed.
Clause 22 - Earthworks	Yes	<p>Clause (2) - Development consent is required for earthworks unless:</p> <ul style="list-style-type: none"> the earthworks are exempt development under this Policy or another applicable environmental planning instrument, or the earthworks are ancillary to development that is permitted without consent under this Policy or to development for which development consent has been given. <p>Comment: Development Consent is required for earthworks as the proposal does not satisfy either of the above clauses.</p> <p>Clause (3) - Before granting development consent for earthworks (or for development involving ancillary earthworks), the consent authority must consider the following matters:</p> <ul style="list-style-type: none"> the likely disruption of, or any detrimental effect on, drainage patterns and soil stability in the locality of the development, the effect of the development on the likely future use or redevelopment of the land, the quality of the fill or the soil to be excavated, or both, the effect of the development on the existing and likely amenity of adjoining properties, the source of any fill material and the destination of any excavated material,

Principal Provisions of SEPP (Three Ports) 2013	Compliance Yes/No	Comment
		<ul style="list-style-type: none"> the likelihood of disturbing relics, the proximity to, and potential for adverse impacts on, any waterway, drinking water catchment or environmentally sensitive area, any appropriate measures proposed to avoid, minimise or mitigate the impacts of the development, the potential impact on groundwater and groundwater dependent ecosystems. <p>Comment: The proposed earthworks are unlikely to alter the drainage patterns of the area and the area is not known as being unstable land. The effect of the earthworks would not preclude future redevelopment of the land for a future purpose.</p> <p>Appropriate conditions are recommended in relation to the quality of any excavated material and quality of any imported fill. The conditions would ensure that the source of any fill will be of a high quality.</p> <p>The applicant has advised that in accordance with the Heritage Act 1977 that the site does not support any items of historic heritage value and as such the likelihood of disturbing relics would be low.</p> <p>The site is located well away from any waterway and is in an area where the groundwater is contaminated as such impacts on waterways as a result of earthworks are negligible.</p>

Note 1 – Objectives of the zone

Clause 14(2) of SEPP (Three Ports) 2013 states the following:

The consent authority must have regard to the objectives for development in a zone when determining a development application in respect of land within the zone.

The applicant has provided a detailed planning analysis to demonstrate that the proposed development would facilitate and encourage Port related industries, as required by the IN1 – General Industry zone objectives. The applicant has provided the following commentary in this respect:

The proposed concrete batch plant, aggregate storage and distribution facility would be undertaken in association with a new rail siding (subject to separate development application) to be owned and operated by Pacific National, that would support the delivery of concrete aggregates to Site by train. The rail siding would connect with the Botany main line. The development is a port related industry and we offer the following justification:

- *The rail siding will also be used by Pacific National to stage Port shuttle trains and the proposed design incorporates a link back to Port Botany to increase Botany Yard capacity for Freight Rail.*
- *The rail siding would not exist without Holcim's concrete plant and aggregate depot, and likewise, the concrete plant relies on the rail siding.*
- *The site and proposed land use are located on rail and road infrastructure that services the port and will provide aggregate and concrete to support the construction of infrastructure and buildings in the port and of other port related development in the locality. The development will contribute to the growth and diversification of trade through the port;*
- *The variables of concrete mixes, its limited life in transit (in rotating "Agitator" trucks) and the engineering specifications for each construction project limit the transit time/batch to pouring time. Therefore, it is critical that concrete for use in Port development be located central to the Port of Botany Bay and eastern Sydney generally to effectively service these areas.*
- *Holcim will also continue to explore opportunities to utilise the Port and rail to transport other raw materials in the future. For example, the proposed concrete plant will be using cement substitution products for special concrete mixes, which some of them are already imported into Port Botany. Holcim has already approached the vendors to assess the viability of this option.*
- *The proposed development is a port related industry, will contribute to the development of other port related industries and to the growth and diversification of trade through the port. Hence the proposed development satisfies this objective.*

S.4.15(1)(a)(ii) - Provisions of any Draft EPI'sDraft State Environmental Planning Policy (Three Ports)

The draft Amendment to the SEPP (Three Ports) was placed on exhibition on 20 September 2018 until 1 November 2018.

The amendments include the provisions of additional categories of exempt and complying development that can occur at the three ports, additional land within the Port Kembla and Port of Newcastle lease area, rezone certain land near Hale Street and Wentworth Avenue, Botany, outline options to discourage the subdivision of industrial land at Port Botany and other housekeeping amendments and operational improvements.

Comment: The draft provisions are not specifically applicable to the proposed development and no further concerns are raised. In any case, given the draft amendment and its relative infancy in the process, the amendment is not considered imminent or certain and as such minimal weight should be given to it.

Draft SEPP 55

The new SEPP aims for the better management of remediation works by aligning the need for development consent with the scale, complexity and risks associated with the proposed works. For remediation works that can be undertaken without development consent, the mandatory use of certified contaminated land consultants and standard operational requirements, will provide greater certainty for councils, planning authorities and the community, that remediation work is properly carried out and appropriately validated. The proposed development would not be inconsistent with the draft SEPP 55.

S4.15(1)(a)(iii) - Provisions of any Development Control PlanBotany Bay Development Control Plan 2013

Botany Bay Development Control Plan 2013 (BBDCP 2013) does not apply to land subject to the SEPP (Three Ports) 2013.

A detailed assessment against Council's DCP would not ordinarily be required in this case as the DCP does not apply. However, Council has consistently used the DCP controls as a guide to development in this locality. The following matters have been considered in order to determine the merits of this application without strict application of the development controls.

Control		Requirement	Proposed	Complies
Part 3 General Provisions				
3A.2 Parking	Car	Freight Transport Facilities/Depot require 1 space per employee.	Up to 40 staff members are proposed for Stage 2 (excluding 5 casual employees). The Stage 2 plans indicate 43 car parking spaces at the front of the site. During Stage 1, the applicant has identified provision of 4 car parking spaces at the front of the site and 15 at the rear of the site which is acceptable.	Yes
3A.3.1 Car Design	Park	General: C1 All off-street parking facilities shall be designed in accordance with current Australian Standards AS2890.1 and AS2890.6 (for people with disabilities).	A Traffic and Parking Report was submitted with the application which addresses compliance with the standards relating to the car park design.	Yes
		Location: C10 Off-street parking facilities are not permitted within the front setbacks. C11 Car parks must provide a direct and safe access to a building's entry and exit (well lit and free of concealment opportunities). C12 Off-street parking facilities must not dominate the streetscape and are to be located away from the primary frontages of the site.	The location of the car parking spaces at the site are located within the front setbacks area. However, this space would be screened by a new 4m wide landscaped strip which restricts the visibility of the car parking area from the public domain.	Yes

Control	Requirement	Proposed	Complies
	<p>Access:</p> <p>C13 Pedestrian entrances and exits shall be separated from vehicular access paths.</p> <p>C14 A maximum of one vehicle access point is permitted per property. Council may consider additional vehicle access points for large scale developments.</p>	<p>The pedestrian entrance to the site would not be separate from the vehicular access. However, this is acceptable given that the number of people entering the site on foot is likely to be minimal. A maximum of one vehicle access point has been provided.</p>	Yes
	<p>At-Grade Parking:</p> <p>C25 At-grade parking shall be avoided for large scale residential and commercial development.</p>	<p>All parking is at grade with landscape screening proposed at the front of the site.</p>	Yes
	<p>Non-Residential:</p> <p>C29 Car parking areas shall be adequately finished with fully sealed surfaces, internal drainage systems, line markings, appropriate kerbing, paved aisle dividers and/or wheel stops.</p> <p>Pavement:</p> <p>C32 All off-street parking areas and internal circulation roadways shall be sealed with hard-standing all weather materials</p>	<p>All parking and manoeuvring areas will be sealed and finished in accordance with Council requirements. Relevant conditions are proposed.</p>	Yes

Control	Requirement	Proposed	Complies
	or approved alternatives to Council's satisfaction.		
	Lighting: C34 Adequate lighting shall be provided if the parking facility is expected to be used at night. Design of lighting shall be in accordance with relevant Australian Standards and be consistent with the relevant requirements to allow drivers to manoeuvre vehicles safely into and out of parking spaces.	Suitable conditions have been imposed with respect to lighting.	Yes
	Accessible parking: C35 Accessible parking spaces for people with disabilities shall be designed in accordance with AS2890.6.	An accessible car parking space has been provided during all Stages.	Yes
	Waste Collection Points: C40 The waste collection point shall be designed to: (i) Allow waste loading operations to occur on a level surface away from parking areas, turning areas, aisles,	There is sufficient space within the site for waste collection points to be established. A condition of consent has been included requiring the provision of an Operational Waste Management Plan in accordance with the stated mitigation measures within Part 7.13.3 of the EIS.	Yes

Control	Requirement	Proposed	Complies
	<p>internal roadways and ramps; and</p> <p>(ii) Provide sufficient side and vertical clearance to allow the lifting arc for automated bin lifters to remain clear of any walls or ceilings and all service ducts, pipes and the like.</p>		
3A.3.3 Traffic and Transport Plans and Reports	<p>C1 A Traffic and Parking Impact Assessment Report shall be provided for development:</p> <p>(i) Listed in Schedule 3 of State Environmental Planning Policy (Infrastructure) 2007; and</p> <p>(ii) Where, in the opinion of Council, the proposed development is likely to generate significant traffic and/or parking demand or land use.</p> <p>C2 The Traffic and Parking Impact Assessment Report shall be prepared by a qualified and experienced traffic engineer.</p>	A Traffic and Parking Report prepared accompanies the application. Refer to previous discussion in this report under SEPP (Infrastructure) 2007.	Yes

Control	Requirement	Proposed	Complies
3A.3.4 On Site Loading and Unloading	C2 - The number of service bays shall be provided in accordance with Table 2. Where calculated provision of servicing bays numbers results in a fraction, the requirements shall be rounded up to the nearest whole number.	The nature of the development inherently relates to loading and unloading. No further concerns are raised in this regard.	Yes
3C Access and Mobility	<p>Appropriate access to and within all areas normally used by the occupants, designed in accordance with the BCA and relevant Australian Standards.</p> <p>General access for all persons to appropriate sanitary facilities and other common facilities including kitchens, lunch room, shower facilities, indoor and outdoor recreational facilities.</p> <p>In a vehicle parking area containing 6-49 vehicle spaces, one accessible vehicle space, designed in accordance with relevant Australian Standards will be provided.</p>	The design of the car parking area incorporates one (1) accessible space. This space has been positioned directly adjacent to the Batch Office and across from the drivers crib room, office and ablutions. Conditions of consent have been imposed to ensure general access for all persons to these facilities can be achieved.	Yes – conditions imposed.

Control	Requirement	Proposed	Complies
3D Signage	Not applicable.	No signage is proposed as part of this application.	Not Applicable
3G Stormwater Management	Stormwater Management: Stormwater runoff generated from the development site shall be collected and discharged in accordance with Council's Part 10 – Stormwater Management Technical Guidelines.	Water reuse initiatives have been incorporated into the design of the Project. Stormwater and process water is reused in the concrete batching process wherever feasible and discharge to Council's stormwater network would only occur in extreme rainfall events where the capacity of the stormwater management system is exceeded.	Yes
3H Sustainable Design	To ensure commercial and industrial development incorporates ecologically sustainable design principles.	Clause 7(1)(f) of the EP&A Regulation requires an EIS to provide justification for a development with specific reference to the principles of ecologically sustainable development. This assessment has been undertaken by the applicant which demonstrates that regard has been provided to the following: <ul style="list-style-type: none"> - The precautionary principle - Inter-generational equity - Conservation of biological diversity and ecological integrity - Improved valuation, pricing and incentive mechanisms 	Yes
3I Crime Prevention, Safety and Security	The building is to be designed in accordance with CPTED principles.	The proposed development provides opportunities for natural surveillance to the surrounding streets. The entries to the development will be appropriately lit at night to enhance safety, visibility and legibility. Effective access control has been achieved through the provision of	Yes

Control	Requirement	Proposed	Complies
		physical barriers to attract, channel and/or restrict the movement of people within the development. The internal areas within the development such as the entrances and lobbies will be well used.	
3J Aircraft Noise & OLS	In certain circumstances and subject to Council's discretion, Council may grant consent to development where the building site has been classified as "conditional" or "unacceptable" under Table 2.1 of AS2021-2000 Pursuant to Part 3J.3 of the DCP if a building is located within a specific area identified on the OLS map or seeks to exceed the height limit specified in the map the application must be referred to Civil Aviation Safety Authority and Air services Australia for assessment.	Given the industrial nature of the proposal, no further assessment required in regards to the Australian Standard AS 2021 for aircraft noise. As the site is within the area identified on the OLS map and the building exceeds 15.24 metres, Council is required to refer the application to the Sydney Airport for assessment. Sydney Airport have provided their approval to the proposed development.	Yes
3K Contamination	Contamination of the site is to be investigated in accordance with SEPP 55 and the Managing Land Contamination: Planning Guidelines.	A full assessment of potential contamination has been undertaken – Refer to SEPP 55 discussion.	Yes

Control	Requirement	Proposed	Complies
3L Landscaping and Tree Management	A Landscape Plan is to be prepared. A deep soil zone is required for all developments within boundary setbacks, communal and private open space and green corridors.	The submitted plans indicate the provision of a new 4m wide landscaped area at the front of the site. This outcome is supported as it enables an appropriate softening of the development. A condition has been imposed requiring a detailed landscape plan to be provided before the issue of a CC.	Yes – conditions imposed.
3N Waste Minimisation and Management	Demolition, construction and ongoing waste is to be minimised. A Site Waste Minimisation Plan is to be submitted for all development applications.	A condition of consent has been included requiring the provision of an Operational Waste Management Plan in accordance with the stated mitigation measures within Part 7.13.3 of the EIS.	Yes – conditions imposed.

6.3 General Provisions			
6.3.12 Noise and Hours of Operation	To ensure appropriate noise attenuation measures are incorporated into building design and site layout.	<p>The site is located in an industrial area proposed to operate 24/7 all year round. The noise report submitted with the application is considered to have addressed the relevant criteria.</p> <p>Due to potential for cumulative noise impacts on nearby sensitive receivers, EPA has recommended for noise monitoring to be undertaken during construction and for the first year of operation to validate the modelled noise impacts. Additionally, the recommended measures in the Noise and Vibration Assessment must be implemented during construction and operation.</p>	Yes
6.3.13 Waste	Development must comply with Part 3N - Waste Management and Minimisation.	Waste management has been addressed within the EIS. A condition of consent has been included requiring the provision of an Operational Waste Management	Yes

	Sufficient space shall be provided for on-site separation and storage of recyclables and garbage.	Plan in accordance with the stated mitigation measures within Part 7.13.3 of the EIS.	
6.3.14 Environmental Protection	To ensure that development takes account of and minimises any adverse effects upon the environment. To limit the potential for noise, air (including odour), ground water, soil and surface water pollution	The matters of noise, air, ground water, soil and surface water pollution have been addressed in the EIS and other specialist reports. These matters are considered to be resolved as discussed throughout this report.	Yes
6.3.15 Risk	To ensure that any risk to human health, property or the natural environment arising from the operation of the development is minimised and addressed.	Refer to previous SEPP 33 discussion.	Yes

4.15(1)(a)(iv) - Provisions of regulations

Clause 92 of the Regulation has been considered and there are no other applicable provisions to the development. No further concerns are raised in this regard.

4.15(1)(b) - Likely Impacts of Development

The likely environmental impacts of the development on both the natural and built environments and social and economic impacts in the locality have been considered in the assessment of the application.

The applicant has demonstrated that the proposed development will not cause any unreasonable impacts with respect to: traffic and parking, noise and vibration, land contamination, groundwater, air quality, surface water and stormwater drainage, visual amenity, hazard and risk, biodiversity, heritage, waste and cumulative impacts. Construction and operation of the proposed development would create new full-time, part-time and casual jobs, which provides economic benefits for the area. The site is well positioned to contribute,

and support infrastructure and development projects. There are no negative social impacts associated with the proposal.

24 hour operation is proposed at the site. This will necessitate the provision of outdoor lighting at night time. To ensure that the impacts of any outdoor lighting (i.e. – spillage) are minimised, a condition of consent has been included stating that any lighting shall be designed so as not to cause nuisance to other residences in the area or to motorists on nearby roads, and to ensure no adverse impact on the amenity of the surrounding area by light overspill. All lighting shall comply with *AS4282-1997 Control of the obtrusive effects of outdoor lighting*.

The likely impacts of the development during the construction phase have been considered in the assessment of the application. In this regard, suitable conditions of consent have been included to minimise any construction related impacts upon the locality.

4.15(1)(c) - Suitability of the site

The site is located in the IN1 –General Industry zone within the SEPP (Three Ports) 2013. General industry is a permissible form of development in this zone. It is noted that the site is currently vacant and does not present any significant environmental constraints. The land use proposed is compatible and the site is located in an existing industrial area between Orica/Botany Industrial Park and Veolia which both currently operate 24/7.

The site is identified as being flood affected by minor overland flow. The applicant has demonstrated that the subject site is quite large and the flooding is due to lack of drainage on the site and the irregular topography of the site. The minor flooding onsite is potentially eliminated or mitigated during construction when the site is levelled and reconstructed. The depth of flooding onsite is expected to be quite minor and there are no habitable areas to be protected from floodwaters.

The site adjoins an existing rail corridor. A rail depot will enable aggregate to be delivered by rail, thus removing heavy vehicles off the road, reducing transport costs and improving security of supply. The site is well positioned for the intended land use and is suitable for the proposed development.

4.15(1)(d) - Public Submissions

In accordance with Part 2 of Botany Bay DCP 2013 – Notification and Advertising, the development application was notified to surrounding property owners for a thirty (30) day Period. Due to issues with the advertising this was notified one (1) additional time to ensure the advertisement was notified in the manner set down by the regulations. This notification ended on 7 December 2018. A total of thirteen (13) submissions were received. All matters raised have been taken into consideration in the assessment of the application. The key issues raised in the submissions have been summarised/addressed below:

Comment: Health risks associated with air quality. The proposal is not suitable in this location.

Response: An Air Quality Impact Assessment (AQIA) has been prepared that assessed and modelled the potential air quality (including particulates, dust and odour) emissions for each stage of the development. The assessment found that the proposed project would not have a

significant air or dust impact and that it complies with relevant guidelines. Dust control would be an important element of the site's Operational Environmental Management Plan and would also be regulated by the NSW EPA via the Environment Protection License that would be obtained for the premises. Cement is stored onsite in enclosed silos and transferred to agitators by a process that limits potential for cement and other dust escape.

Activities that have the potential to emit dust within the site will be managed by suppression and extraction. For example, all aggregate conveyors and transfer points will be enclosed, aggregate storage bins will be fully enclosed, and cement will be stored in fully enclosed silos equipped with dust filters.

The proposed development is compatible with the surrounding industrial land uses, is within a broader industrial precinct and is permissible within the industrial zoning of the site.

Comment: There must not be 24 hour operations.

Response: The proposed development seeks consent for 24 hours operations during all stages. In this regard, it is noted that permitted construction hours on most development consents are restricted anyway. However, the 24 hour provision would enable the facility to provide concrete services for other state significant projects which are unrestricted in their construction times (i.e – new road projects such as WestConnex). Suitable noise related conditions of consent have been imposed by the NSW EPA to ensure that the noise emissions from the facility are within the applicable guidelines.

Comment: Heavy vehicles using residential streets. Loss of parking along Beauchamp Road. Additional traffic generation.

Response: Modelling of the traffic impacts found that the intersection of Beauchamp Road and Perry Street currently operates above practical operating capacity and improvements are needed. Factors contributing to the high level of congestion include the unrestricted parking along Beauchamp Road north of Perry Street and unrestricted parking on Perry St westbound approach to Beauchamp Road. The applicant has consulted with RMS (as the 'owner' of Beauchamp Road) about the traffic assessment and RMS has indicated their support for parking changes along Beauchamp Road, which is part of the State Road network and along with Denison Street and Foreshore Drive, form vital links to Port Botany. With these parking changes, overall intersection performance would improve.

A detailed Traffic Impact Assessment has been undertaken and provided with the DA. This includes traffic counts and assessment of intersection performance (SIDRA modelling) at the key intersection of the Site with Beauchamp Road, as well as safety considerations due to the project. The assessment found that the additional of approximately 40 heavy vehicles per hour is a very small contribution to the existing traffic numbers.

There will be no change to the existing car parking conditions in Perry Street (local road). Further the proposal does not seek to use Perry Street. The applicant has indicated that trucks are capable of being tracked via GPS to ensure compliance with the designated haulage routes.

Comment: Removal of car parking spaces in Perry Street and associated impacts on residents and local businesses.

Response: The removal of car parking spaces in Perry Street is no longer sought.

Comment: NSW Ports objects to the proposed of the 'loop' through Port Botany as an option for heavy vehicles accessing the site as this route is within the NSW Ports boundary.

Response: The application no longer relies on this haulage route because RMS is supportive of modifying the existing traffic conditions to enable vehicles >19m making a right hand turn into the site off Beauchamp Road. In any case, the number of large vehicles >19m accessing the site is limited to less than one (1) per hour.

Comment: Noise and vibration.

Response: A Noise and Vibration Impact Assessment has been prepared for the proposed project that assessed the noise and vibration emissions for each stage of the project and modelled the potential impact to sensitive receivers (residences). The assessment included the effect of heavy vehicles. The impact assessment concluded the proposal would not have a significant noise or vibration impact and complies with all relevant guidelines.

Design features are built into this modern concrete plant and designed to reduce noise emissions. These include:

- Agitator load bay enclosed on 3 sides and roofed
- Washout boxes roofed and with a noise barrier on one side (closest Beauchamp Rd)
- Agitator loading, slump stands and washout boxes set well back from Beauchamp Rd (approx. 300m)
- The plant was designed to locate the noisiest components farthest away from sensitive receivers.
- A noise wall/barrier will be constructed adjacent to the exit road alignment and along the northern boundary and eastern frontage to Beauchamp Road to reduce noise from site operations.

The NSW EPA General Terms of Approval require further noise assessment and modelling during the first year of operation.

Comment: A legal agreement should be in place between Holcim and Pacific National prior to the issue of a CC to give certainty on the transition from road to rail transport during stages 2-3.

Response: The rail siding facility is the subject of a further application. Nevertheless, the applicant has responded to this concern with the following comments:

Holcim and Pacific National have entered into a term sheet (being an expression of intent document) regarding the proposed development of a terminal and adjoining rail siding at the Site for the purpose of delivering materials to Holcim's proposed concrete batching plant. The term sheet records the construction of a concrete batching plant on the Site being conditional on the development of the terminal and rail siding. When the development of a concrete batching plant at the Site proceeds (subject to development consent), Holcim and Pacific National propose to enter into negotiations for a binding agreement regarding the operation of the batch plant and the development of the terminal and rail siding. Holcim notes the need for such binding agreement to be in place prior to it commencing construction of the batching plant.

Comment: A survey for the Green and Golden Bell Frog should be prepared on the basis of Bionet Atlas results within the local area and survey having been conducted for the southlands development in 2009.

Response: The site is highly modified and disturbed. The site is unlikely to contain any threatened flora or fauna species and currently comprises scattered areas of shrubs and isolated vegetation located within an industrialised area. The connectivity of the area for fauna potentially moving to and from the site is very low due to the fencing around the site, restricting fauna. There is no aquatic habitat on the Site that would present habitat for endangered amphibians including Green and Golden Bell Frog. Lastly, Council has approved clearing of trees on the land based on an earlier application by Pacific National.

Comment: The EIS relies on ambient air quality data from monitors at Randwick, Earlwood and Rozelle, yet fine particle mass data is available from a closer monitoring station at Coward Street Mascot. The submission recommends that the Mascot site is more representative and should be used.

Response: The applicant has advised that because it is only collected on one day in three, whereas the EPA guidelines require 90% data availability for the modelling year. This data is therefore not suitable for the purpose of modelling assessment.

Comment: Flooding risks

Response: Council's Engineer is satisfied that this matter has been addressed. This is addressed in 4.15(1)(c) - Suitability of the site.

Comment: Visual impact

Response: A detailed Visual Impact Assessment was submitted with the DA. Fundamentally, the proposal to construct a concrete batching plant is generally consistent with the character of the existing industrial area. The site is zoned accordingly and such a use is anticipated. A 4m vegetative buffer is proposed along the front boundary to Beauchamp Road which will provide some landscape opportunities.

Comment: Light spill

Response: A condition requiring compliance with AS4248 1995 – Control of Obtrusive Effects has been included.

Comment: Holcim has conducted little consultation.

Response: The applicant's EIS (chapter 5) summarises the consultation undertaken prior to the submission of the application. This included consultation with industrial neighbours, Bayside and Randwick Council and the broader community. It is further noted that the application has been notified to nearby properties, inviting submissions on the proposed development. Some concern has been raised that 30 days is insufficient, however this is the required statutory period.

Comment: Potential groundwater impacts and land contamination.

Response: The submitted groundwater impact assessment demonstrates that the potential for the development to cause adverse groundwater impacts is low. The proposal does not require any dewatering activities. The site activities would be regulated by the EPA through

operation of an Environment Protection Licence (EPL). Ongoing monitoring of various environmental parameters will be a requirement under the EPL. Land contamination has been addressed in the SEPP 55 discussion in the main body of the report.

Comment: Objection to the use of the neighbouring site (Orica) for various activities (car parking spaces, removal of vegetation, road and footbridge). Owner's consent has not been provided.

Response: Updated plans have been submitted which remove all structures proposed on the adjacent Orica land. This concern is resolved.

Comment: The applicant must ensure that the owner requirements of all serviceable pipelines are met.

Response: This matter is addressed through conditions.

Comment: The Risk Assessment Evaluation Report is inadequate.

Response: This report has been updated and includes specific assessment of hazards from the Holcim site including explosion, toxic exposure, heat radiation, fire and explosion, and air emissions, and outlines recommended management measures, where required, to manage these risks.

Comment: Use of Beauchamp/Perry intersection. This should be maintained as a public asset.

Response: There is no legal instrument (e.g. – easement) relating to access through this land for the benefit of Orica.

4.15(1)(e) - Public interest

The proposed development would not conflict with the public interest, subject to ongoing compliant with the recommended conditions of consent.

Other Matters

External Referrals –

Roads and Maritime Services (RMS)

The application was referred to RMS initially advised that the proposal to remove the right turn restriction from Beauchamp Road during times outside 0600 to 1000 is not supported on network safety and efficiency grounds. The proposal relies on this right turn for vehicles >19m to access the site. During the assessment of the application, the applicant conferred with the RMS where it was agreed that:

In order to facilitate right turn movements outside peak periods (0600 to 1000 and 1500 to 1900 Monday to Friday) a full time 'No Stopping' zone is to be implemented along the entire frontage on the north-west side of Beauchamp Road from Perry Street to Denison Street and a full time 'No Stopping' zone is to be implemented for 100 metres on the south-east frontage of Beauchamp Road on the approach to Perry Street. 'No Right Turn' restrictions from Beauchamp Road shall be implemented from 0600 to 1000 and 1500 to 1900 Monday to Friday.

In correspondence dated 7 February 2019, the RMS confirmed that they have reviewed the amended development application and raise no objections, subject to Council's approval and other various requirements being included in the development consent. The requested conditions have been incorporated into the consent.

Sydney Airport Corporation Limited (SACL)

The application was referred to Sydney Airport as the building and the proposed additions are above 15.24 (50 feet). Sydney Airport gave their approval for the works to be constructed to a height of 38m above existing ground level.

NSW – Environment Protection Agency

The application was referred to the EPA given the application is for a concrete batching plant and is designated and integrated development. On 10 January 2019, the NSW EPA issued their General Terms of Approval. 12 February 2019 – NSW EPA re-issued their General Terms of Approval, making minor changes to the conditions imposed. These conditions have been included in the consent.

Water NSW

The application was referred to Water NSW who confirmed that no approvals or licences are required under the Water Management Act 2000.

Department of Planning (Risk)

The application was referred to the Department of Planning with respect to the matter of risk. Refer to SEPP 33 discussion within this report.

Australian Rail Track Corporation Ltd (ARTC)

The application was referred to the ARTC given the proximity of the development to their asset. No response was received.

Sydney Water

The application was referred to Sydney Water who raised no objections.

Ausgrid

The application was referred to Ausgrid. No response was received. As such, standard conditions have been included.

Internal Referrals

The application was referred to Council's environmental scientist, tree preservation officer, development engineer and environmental health. Conditions of consent were recommended.

Section 7.12 – Development Contributions

The city of Botany Bay Section 94A Plan is applicable to the site, as such 1 percent of the value of works is the contribution required. Accordingly, at a cost of works of \$16,000,000.00 The resultant contribution is \$160,000.00.

CONCLUSION

Development Application No. 2018/1173 for construction of a temporary and then permanent concrete batching plant (concrete works), aggregate/materials storage and distribution facility at 1 Beauchamp Road, Banksmeadow has been assessed in accordance with the relevant requirements of the *Environmental Planning and Assessment Act 1979* and is recommended for **approval** subject to the attached conditions.

Attachment**Schedule 1 – Conditions of Consent****Premises: 1 Beauchamp Road, Banksmeadow****DA No: 2018/1173****GENERAL CONDITIONS**

- 1 The development is to be carried in accordance with the plans and documentation listed below, except where amended by other conditions of this consent:

Drawing No.	Author	Dated/Received
Notes SY18118-G002 Revision A	pitt&sherry	Dated: 10 September 2018 Received: 14 February 2018
Stage 3 – Equipment Index SY18118-G003 Revision B	pitt&sherry	Dated: 1 November 2018 Received: 14 February 2018
Staging Plan Stage 0 and Stage 1 SY18118-G005 Revision B	pitt&sherry	Dated: 1 November 2018 Received: 14 February 2018
Staging Plan Stage 2 and Stage 3 SY18118-G006 Revision B	pitt&sherry	Dated: 1 November 2018 Received: 14 February 2018
Stage 0 Site Plan – Sheet 1 SY18118-C001 Revision B	pitt&sherry	Dated: 1 November 2018 Received: 14 February 2018
Stage 0 Site Plan – Sheet 2 SY18118-C002 Revision A	pitt&sherry	Dated: 10 September 2018 Received: 14 February 2018

Stage 0 Elevations SY18118-C021 Revision A	pitt&sherry	Dated: 1 November 2018 Received: 14 February 2018
Stage 1 Site Plan – Sheet 1 SY18118-C101 Revision B	pitt&sherry	Dated: 1 November 2018 Received: 14 February 2018
Stage 1 Site Plan – Sheet 2 SY18118-C102 Revision A	pitt&sherry	Dated: 10 September 2018 Received: 14 February 2018
Stage 1 B-Double Turning Paths SY18118-C111 Revision A	pitt&sherry	Dated: 10 September 2018 Received: 14 February 2018
Stage 1 Concrete Aggitator Turning Paths SY18118-C112 Revision A	pitt&sherry	Dated: 10 September 2018 Received: 14 February 2018
Stage 1 Aggregate Tipper Turning Paths SY18118-C113 Revision A	pitt&sherry	Dated: 10 September 2018 Received: 14 February 2018
Stage 1 Elevations SY18118-C121 Revision A	pitt&sherry	Dated: 10 September 2018 Received: 14 February 2018
Stage 2 Site Plan – Sheet 1 SY18118-C201 Revision B	pitt&sherry	Dated: 1 November 2018 Received: 14 February 2018
Stage 2 Site Plan – Sheet 2 SY18118-C202 Revision A	pitt&sherry	Dated: 10 September 2018 Received: 14 February 2018
Stage 2 Elevations SY18118-C221 Revision A	pitt&sherry	Dated: 10 September 2018 Received: 14 February 2018

Stage 2 B-Double Turning Paths SY18118-C212 Revision A	pitt&sherry	Dated: 10 September 2018 Received: 14 February 2018
Stage 2 Concrete Aggitator Turning Paths SY18118-C213 Revision A	pitt&sherry	Dated: 10 September 2018 Received: 14 February 2018
Stage 3 Site Plan – Sheet 1 SY18118-C301 Revision A	pitt&sherry	Dated: 10 September 2018 Received: 14 February 2018
Stage 3 Car Park Turning Paths SY18118-C315 Revision A	pitt&sherry	Dated: 10 September 2018 Received: 14 February 2018
Site Section Long Sections – Site CL SY18118-C401 Revision A	pitt&sherry	Dated: 10 September 2018 Received: 14 February 2018
Site Sections Cross Sections – Sheet 1 SY18118-C451 Revision A	pitt&sherry	Dated: 10 September 2018 Received: 14 February 2018
Site Sections Cross Sections – Sheet 2 SY18118-C452 Revision A	pitt&sherry	Dated: 10 September 2018 Received: 14 February 2018
Site Sections Cross Sections – Sheet 3 SY18118-C453 Revision A	pitt&sherry	Dated: 10 September 2018 Received: 14 February 2018
Site Sections Cross Sections – Sheet 4 SY18118-C454 Revision A	pitt&sherry	Dated: 10 September 2018 Received: 14 February 2018
Site Sections Cross Sections – Sheet 5 SY18118-C455	pitt&sherry	Dated: 10 September 2018

Revision A		Received: 14 February 2018
Site Sections Cross Sections – Sheet 6 SY18118-C456 Revision A	pitt&sherry	Dated: 10 September 2018 Received: 14 February 2018
Site Sections Cross Sections – Sheet 7 SY18118-C457 Revision A	pitt&sherry	Dated: 10 September 2018 Received: 14 February 2018
Site Sections Cross Sections – Sheet 8 SY18118-C458 Revision A	pitt&sherry	Dated: 10 September 2018 Received: 14 February 2018
Environmental Impact Statement	pitt&sherry	Dated: August 2018 Received: 18 September 2018
Stage 1 – Alternate Car Parking 9021-R-19368-AR-DG-063	Holcim	Dated: 19 February 2019 Received: 19 February 2019
Construction Methodology	Holcim	Dated: 19 June 2018 Received: 18 September 2018
Risk Assessment and Evaluation Report	Pitt&sherry	Dated: 4 December 2018 Received: 6 February 2019
Groundwater Impact Assessment	Hibbs & Associates Pty Ltd	Dated: September 2018 Received: 18 September 2018
Detailed Site Investigation	Hibbs & Associates Pty Ltd	Dated: August 2018 Received: 18 September 2018
Geotechnical and Contamination Investigation Report	GHD	Dated: July 2018 Received: 18 September 2018

Air Quality Impact Assessment	Todoroski Air Sciences	Dated: 6 September 2018 Received: 18 September 2018
Noise and Vibration Assessment	Muller Acoustic Consulting	Dated: July 2018 Received: 18 September 2018
Traffic and Transport Impact Assessment	Bitzios Consulting	Dated: 20 November 2018 Received: 22 November 2018

- 2 No construction works shall be undertaken prior to the issue to the Construction Certificate.
- 3 This Consent relates to land in Lot 20 DP 1231202, Lot 1 DP 512040, and Lot 1 DP 1006865 and, as such, building works must not encroach on to adjoining lands or the adjoining public place.
- 4 This approval does not provide development consent for the construction of the rail siding and associated aggregate unloading facility.
- 5 All building work must be carried out in accordance with the requirements of the Building Code of Australia;
- 6 All required Environmental Protection Licenses (as determined by the NSW EPA) must be attained at the appropriate times.
- 7 Stage 1 operations are restricted to a maximum concrete production rate of up to 700m³/day.
- 8 Stage 2/3 operations are restricted to a maximum annual concrete production of 220,000m³/year.
- 9 The construction and on-going operation of the premises shall adhere to the requirements of all Environmental Management Plans required by O10.1 of the NSW EPA General Terms of Approval.
- 10 The consent given does not imply that works can commence until such time that:
 - (a) Detailed plans and specifications of the building have been endorsed with a Construction Certificate by:
 - (i) The consent authority; or
 - (ii) An accredited certifier; and
 - (b) The person having the benefit of the development consent:
 - (i) Has appointed a principal certifying authority (**PCA**); and
 - (ii) Has notified the consent authority and the Council (if the Council is not the consent authority) of the appointment; and

- (iii) The person having the benefit of the development consent has given at least 2 days notice to the council of the persons intention to commence the erection of the building.

CONDITIONS IMPOSED BY AN EXTERNAL AUTHORITY

- 11 The following conditions imposed by **NSW EPA** are as follows and must be complied with:

General Terms of Approval

A1. Information supplied to the EPA

A1.1 Except as expressly provided by these general terms of approval, works and activities must be carried out in accordance with the proposal contained in:

- the development application DA2018/1173 submitted to Bayside Council on 18 September 2018;
- any environmental impact statement relating to the development, including the document prepared by pitt&sherry titled "*Concrete Plant and Rail Depot, Banksmeadow NSW, Environmental Impact Statement, August 2018*"; and
- all additional documents supplied to the EPA in relation to the development.

A2. Fit and Proper Person

A2.1 The applicant must, in the opinion of the EPA, be a fit and proper person to hold a licence under the Protection of the Environment Operations Act 1997, having regard to the matters in s.83 of that Act.

P1. Location of monitoring/discharge points and areas

P1.1 The following points in the table are identified in these general terms of approval for the purposes of the monitoring and/or the setting of limits for discharges of pollutants to water from the point.

EPA Identification Number	Type of Monitoring	Type of Discharge	Description of Location
Point 1	Water Quality Monitoring	Discharge from sediment basin	Outlet of sediment basin at north-west corner of premises

L1. Pollution of waters

L1.1 Except as may be expressly provided by a licence under the Protection of the Environment Operations Act 1997 in relation to the development, section 120 of the Protection of the Environment Operations Act 1997 must be complied with in and in connection with the carrying out of the development.

Concentration Limits

L1.2 For each monitoring/discharge point specified in the table/s below (by a point number), the concentration of a pollutant discharged at that point must not exceed the concentration limits specified for that pollutant in the table.

L1.3 Where a pH quality limit is specified in the table, the specified percentage of samples must be within the specified ranges.

L1.4 To avoid any doubt, this condition does not authorise the pollution of waters by any pollutant other than those specified in the tables/s.

Pollutant	Units of Measure	Concentration Limit
Total Suspended Solids (TSS)	Mg/L	50mg/L
pH	pH	pH between 6.5 and 8.5
Oil or Grease	Nil	No visible oil or grease

L2. Waste

L2.1 The licensee must not cause, permit or allow any waste generated outside the premises to be received at the premises for storage, treatment, processing, reprocessing or disposal or any waste generated at the premises to be disposed of at the premises, except as expressly permitted by a licence under the Protection of the Environment Operations Act 1997.

L2.2 This condition only applies to the storage, treatment, processing, reprocessing or disposal of waste at the premises if it requires an environment protection licence under the Protection of the Environment Operations Act 1997.

L3. Noise limits

Hours of Operation

L3.1 All construction work at the premises must only be conducted between:

- a) 7:00am and 6:00pm Monday to Friday;
- b) 8:00am and 1:00pm Saturday; and
- c) not be undertaken on Sunday or public holidays.

L3.2 This condition does not apply to the delivery of material outside the hours of operation permitted by condition L3.1, if that delivery is required by police or other authorities for safety reasons; and/or the operation or personnel or equipment are endangered. In such circumstances, prior notification is provided to the EPA and affected residents as soon as possible, or within a reasonable period in the case of emergency.

L3.3 The hours of operation specified in conditions L3.1 and L3.2 may be varied with written consent if the EPA is satisfied that the amenity of the residents in the locality will not be adversely affected.

L3.4 All feasible and practicable noise mitigation measures shall be implemented to minimise noise impacts from the development. If noise exceeds the project noise

trigger level, as described in the Noise Policy for Industry (EPA, 2017) the proponent shall investigate, establish the reason and implement all additional feasible and practicable measures.

Operating conditions

O1. Activities must be carried out in a competent manner

O1.1 Licensed activities must be carried out in a competent manner. This includes:

- a. the processing, handling, movement and storage of materials and substances used to carry out the activity;
- b. and the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.

O2. Maintenance of plant and equipment

O2.1 All plant and equipment installed at the premises or used in connection with the licensed activity:

- a. must be maintained in a proper and efficient condition; and
- b. must be operated in a proper and efficient manner.

O3. Dust

O3.1 Activities occurring at the premises must be carried out in a manner that will minimise emissions of dust from the premises.

O3.2 Trucks entering and leaving the premises that are carrying loads must be covered at all times, except during loading and unloading.

O3.3 An Air Quality Management Plan (AQMP) must be prepared and implemented prior to the commencement of project operations. The plan must set out the measures used to minimise air emissions from the premises and must include, as a minimum:

a. Measures to manage dust from all sources. Control measures should focus on (but not be limited to) managing dust from:

- receiving, handling, processing and reprocessing of materials,
- stockpiles; and
- hardstand areas.

- b. Key performance indicators(s);
- c. Monitoring method(s);
- d. Location, frequency and duration of monitoring;
- e. Record keeping;
- f. Response mechanisms; and
- g. Compliance reporting.

O4. Stormwater/sediment control - Construction Phase

O4.1 An Erosion and Sediment Control Plan (ESCP) must be prepared and implemented during the construction phase of the development. The plan must describe the measures that will be employed to minimise soil erosion and the discharge of sediment and other pollutants to lands and/or waters during construction activities.

The ESCP should be prepared in accordance with the requirements for such plans outlined in *Managing Urban Stormwater: Soils and Construction*.

O5. Stormwater/sediment control - Operation Phase

O5.1 A Stormwater Water Management Plan (SWMP) must be prepared and implemented prior to the commencement of project operations. The SWMP must detail an appropriate water quality monitoring and reporting regime, with reference to the Australian and New Zealand guidelines for fresh and marine water quality: Volume 1 (2000). The SWMP should include:

- details of how and when stormwater will be tested prior to discharge;
- the location of proposed sampling points, including justification for the locations that demonstrates that the samples collected will be representative of the water being discharged;
- details of proposed sampling criteria and trigger levels;
- details of actions that will be taken in the event of exceedances of identified trigger values for specified pollutants in water proposed to be discharged from the site; and
- who will be responsible for ensuring water sampling is undertaken as per the SWMP.

O6. Noise

O6.1 All work and activities must be undertaken in a manner that will minimise noise and vibration impacts at sensitive receivers.

O6.2 The proponent must ensure that all feasible and practicable noise mitigation measures are implemented in accordance with the Interim Construction Noise Guidelines (DECC, 2009). If noise exceeds the project noise trigger level the proponent must investigate, establish the reason for the exceedance and implement all additional feasible and practicable measures.

O6.3 For the purposes of determining the noise generated at the premises the modification factors in Fact Sheet C of the Noise Policy for Industry (EPA, 2017) must be applied, as appropriate, to the noise levels measured by the noise monitoring equipment.

O6.4 A Noise and Vibration Management Plan (NVMP) must be prepared and implemented prior to the commencement of project construction and operation. The NVMP should include:

- Project specific noise goals;
- A description of the measures that will be employed to minimise noise and vibration impacts to nearby sensitive receivers during operation and construction; and
- A noise monitoring plan of one (1) years duration to validate the modelled noise impacts.

07. Waste Management - Operational

07.1 The proponent must ensure that any liquid and/or non liquid waste generated and/or stored at the premises is assessed and classified in accordance with the EPA's Waste Classification Guidelines.

07.2 All activities at the premises must be carried out in a manner that will prevent waste from polluting waters.

07.3 The proponent must provide facilities to ensure the collection storage and disposal of waste generated at the premises so that it does not pollute waters.

08. Dangerous Goods/Chemical Management

08.1 The proponent must ensure that environmental risks associated with the storage, procession and handling of hazardous materials and dangerous goods are minimised. Storage and handling of any dangerous goods must be undertaken in accordance with The Storage and Handling of Dangerous Goods Code of Practice, 2005 which can be viewed online at:

http://www.workcover.nsw.gov.au/_data/assets/pdf_file/0019/17074/storage-handling-dangerous-goods-1354.pdf

08.2 The type, quantity and location of all dangerous goods, chemicals and waste needs to be easily identified by site personnel and included in subsequent management plans/documentation for the premises.

08.3 Effective controls need to be implemented and maintained in the storage, processing and handling of materials at the premises. These controls should also include operating and maintaining bunds or spill containment systems where necessary to minimise the risk of pollution from potential spills and leaks. Information on bunding and spill management can be found online at:

<http://www.epa.nsw.gov.au/mao/bundingspill.htm>

09. Pollution Incident Response Management Plan

09.1 A Pollution Incident Response Management Plan (PIRMP) needs to be developed for the premises (due to the premises requiring an EPA licence) which needs to follow requirements set out in the EPA's Environmental Guidelines: Preparation of Pollution Incident Response Management Plans which can be viewed online at:

<http://www.environment.nsw.gov.au/resources/legislation/201200227egpreppirmp.pdf>

09.2 The proponent should note and be aware of its responsibility to notify each relevant authority of any pollution incident, in accordance with Section 148 of the Protection of the Environment Operations Act 1997. This includes notifying the authorised relevant authority, which in this instance is likely to be the EPA. The PIRMP should detail incident triggers and notification protocols so that compliance with section 148 of the Protection of the Environment Operations Act 1997 is achieved.

O10. Environmental Management Plan

O10.1 An appropriately qualified person must prepare an Environmental Management Plan (EMP) for both construction and operational phases of the development. The plan should include but need not be limited to:

- Air Quality Management Plan
- Water Management Plan (inclusive of stormwater and wastewater)
- Operational Waste Management Plan
- Chemical Handling and Dangerous Goods Management Plan
- Noise and Vibration Management Plan
- Pollution Incident Response Management Plan
- Community Engagement Plan outlining the course of action to be undertaken following receipt of a complaint

The EMP must be submitted to the Director Sydney Industry PO Box 668 Parramatta NSW 2124 or metro.regulation@epa.nsw.gov.au before any construction works or operations take place.

M1 Monitoring records

M1.1 The results of any monitoring required to be conducted by the EPA's general terms of approval, or a licence under the Protection of the Environment Operations Act 1997, in relation to the development or in order to comply with the load calculation protocol, must be recorded and retained as set out in conditions M1.2 and M1.3.

M1.2 All records required to be kept by the licence must be:

- in a legible form, or in a form that can readily be reduced to a legible form;
- kept for at least 4 years after the monitoring or event to which they relate took place; and
- produced in a legible form to any authorised officer of the EPA who asks to see them.

M1.3 The following records must be kept in respect of any samples required to be collected: the date(s) on which the sample was taken;

- the time(s) at which the sample was collected;
- the point at which the sample was taken; and
- the name of the person who collected the sample.

M2. Requirement to monitor concentration of pollutants discharged

M2.1 For each monitoring/discharge point or utilisation area specified (by a point number), the licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:

Pollutant	Units of measure	Frequency	Sampling Method
Total Suspended Solids (TSS)	mg/L	24 hours prior to discharge	Grab sample
pH	pH	24 hours prior to discharge	Grab sample
Oil and Grease	Nil	24 hours prior to discharge	Grab sample

R1. Reporting Conditions

R1.1 The applicant must provide an annual return to the EPA in relation to the development as required by any licence under the Protection of the Environment Operations Act 1997 in relation to the development. In the return the applicant must report on the annual monitoring undertaken (where the activity results in pollutant discharges), provide a summary of complaints relating to the development, report on compliance with licence conditions and provide a calculation of licence fees (administrative fees and, where relevant, load based fees) that are payable. If load based fees apply to the activity the applicant will be required to submit load-based fee calculation worksheets with the return.

12 The following conditions imposed by **Sydney Water** are as follows:

- a) The approved plans must be submitted to the Sydney Water [Tap in™](#) online service to determine whether the development will affect any Sydney Water sewer or water main, stormwater drains and/or easement, and if further requirements need to be met. *The Sydney Water Tap in™ online self-service replaces our Quick Check Agents as of 30 November 2015.*

The [Tap in™](#) service provides 24/7 access to a range of services, including:

- building plan approvals
- connection and disconnection approvals
- diagrams
- trade waste approvals
- pressure information
- water meter installations
- pressure boosting and pump approvals
- changes to an existing service or asset, e.g. relocating or moving an asset.

Sydney Water's [Tap in™](#) online service is available at:

<https://www.sydneywater.com.au/SW/plumbingbuildingdeveloping/building/sydney-water-tap-in/index.htm>

- b) A Section 73 Compliance Certificate under the *Sydney Water Act 1994* must be obtained from Sydney Water. It is recommended that applicants apply early for the certificate, as there may be water and sewer pipes to be built and this can take some time. This can also impact on other services and building, driveway or landscape design. Application must be made through an authorised Water Servicing Coordinator. For help either visit www.sydneywater.com.au > Plumbing, building and developing > Developing > Land development or telephone 13 20 92.

If you require any further information, please contact the Growth Planning and Development Team at urbangrowth@sydneywater.com.au.

- c) Where proposed development works are in close proximity to a Sydney Water easement, the developer may be required to carry out additional works to facilitate their development in order to not encroach within the Sydney Water easement. Easements are not to be built over or encroached in without the consent of Sydney Water.

13 The following conditions imposed by **RMS** are as follows:

- a) A strip of land has previously been dedicated as Public Road by private subdivision (DP1231202), along the Beauchamp frontage of the subject property, as shown by yellow colour on the attached Aerial "X". All buildings and structures, together with any improvements integral to the future use of the site are to be wholly within the freehold property (unlimited in height or depth), along the Beauchamp Road boundary.
- b) 'No Right Turn' restrictions from Beauchamp Road shall be implemented from 0600 to 1000 and 1500 to 1900 Monday to Friday. Signage shall be at no cost to Roads and Maritime.
- c) In order to facilitate right turn movements outside peak periods (0600 to 1000 and 1500 to 1900 Monday to Friday) a full time 'No Stopping' zone is to be implemented along the entire frontage on the north-west side of Beauchamp Road from Perry Street to Denison Street and a full time 'No Stopping' zone is to be implemented for 100 metres on the south-east frontage of Beauchamp Road on the approach to Perry Street.

In addition, the existing bus zone on the south-east side of Beauchamp Road is to be relocated on the departure side of the intersection. The precise location of the bus zone shall be confirmed and approved by Sydney Buses and Roads and Maritime.

All signage and works shall be at no cost to Roads and Maritime.

- d) The proponent shall submit a Heavy Vehicle Management Plan to be reviewed and approved by Council.
- e) All vehicles are to enter and leave the site in a forward direction.
- f) All vehicles are to be wholly contained on site before being required to stop.
- g) The developer shall be responsible for all public utility adjustment/relocation works, necessitated by the above work and as required by the various public utility authorities and/or their agents.
- h) A Construction Traffic Management Plan detailing construction vehicle routes, number of trucks, hours of operation, access arrangements and traffic control should be submitted to Council for approval prior to the issue of a Construction Certificate.

- i) All demolition and construction vehicles are to be contained wholly within the site and vehicles must enter the site before stopping. A construction zone will not be permitted on Beauchamp Road.

14 The following conditions imposed by **SACL** are as follows:

- a) This location lies within an area defined in schedules of the Civil Aviation (Buildings Control) Regulations which limit the height of structures to 15.24 metres above existing ground height (AEGH) without prior approval of the Civil Aviation Safety Authority.
- b) The application sought approval for the PROPERTY DEVELOPMENT to a height of 38.0 metres Australian Height Datum (AHD).
- c) In my capacity as Airfield Design Manager and an authorised person of the Civil Aviation Safety Authority (CASA) under Instrument Number: CASA 229/11, in this instance, I have no objection to the erection of this development to a maximum height of 38.0 metres AHD.
- d) The approved height is inclusive of all lift over-runs, vents, chimneys, aerials, TV antennae, construction cranes etc.
- e) Should you wish to exceed this height a new application must be submitted.
- f) Should the height of any temporary structure and/or equipment be greater than 15.24 metres AEGH, a new approval must be sought in accordance with the Civil Aviation (Buildings Control) Regulations Statutory Rules 1988 No. 161.
- g) Construction cranes may be required to operate at a height significantly higher than that of the proposed development and consequently, may not be approved under the Airports (Protection of Airspace) Regulations.
- h) Sydney Airport advises that approval to operate construction equipment (ie cranes) should be obtained prior to any commitment to construct.

CONDITIONS WHICH MUST BE SATISFIED PRIOR TO THE ISSUE OF ANY CONSTRUCTION CERTIFICATE (FOR THE RELEVANT STAGE)

- 15 Prior to the issue of any Construction Certificate, detail design and construction plans in relation to stormwater management and disposal system for the development shall be submitted to the Principal Certifying Authority for approval. A copy of the detailed design plans shall be provided to Council where Council is not the Principal Certifying Authority. The Stormwater system must have provision for Onsite Detention, First Flush System and a Water Quality Improvement Device. The System must generally be prepared in accordance with The Concept Stormwater Management Plan Prepared by Pitt&Sherry Revision 03 Dated 09-01-2019.
- 16 Prior to the issue of any Construction Certificate, the approved plans must be submitted to Sydney Water Tap in™ online service to determine whether the development will affect any Sydney Water sewer or water main, stormwater drains and/or easement, and if further requirements need to be met.

Sydney Water's Tap in™ online service is available at: <https://www.sydneywater.com.au/SW/plumbing-building-developing/building/sydney-water-tap-in/index.htm>

- 17 Prior to the issue of any Construction Certificate, a Flood Risk Management Plan, prepared by a qualified practicing Civil Engineer must be provided. The flood impacts on the site shall be assessed for the 100 year ARI and Probable Maximum Flood (PMF) storm events. The Plan must make provision for the following:
 - (a) Recommendations on all precautions to minimise risk to personal safety of occupants and the risk of property damage for the total development.
 - (b) Types of materials to be used to ensure the structural integrity of the building to immersion and impact of velocity and debris.
 - (c) Flood warning signs/depth indicators for areas that may be inundated.
 - (d) A flood evacuation strategy.
 - (e) On site response plan to minimise flood damage, demonstrating that adequate storage areas are available for hazardous materials and valuable goods above the flood level.
 - (f) Specify the architectural and structural plans upon which the above recommendations have been incorporated.
- 18 Prior to the issue of any Construction Certificate, a suitably qualified engineer is to certify that the structure can withstand the forces of floodwater, scour, debris and buoyancy up to 1% AEP flood event. All internal electrical switches, power points or similar utilities liable to flood damage shall be set at a minimum of 500mm above the 1% AEP flood Event. Details and certification shall be provided to the Principal Certifier for Assessment and approval.
- 19 To ensure that environmental & health risks are minimized, prior to the issue of any Construction Certificate the applicant must submit details to Council demonstrating how the recommendations within the Detailed Site Assessment (DSI) shall be met, specifically:
 - No groundwater shall be extracted for use during construction and operational phase as the area is declared as "groundwater extraction exclusion zone". The groundwater quality assessment showed elevated concentrations of some pollutants exceeding SAC (heavy metals, CHCs and PFAS) therefore it should be handled and disposed fully if extracted for construction dewatering purposes.
 - An environmental management plan shall be prepared for the Project comprising of the following:
 - a) Unexpected Finds Protocol (UFP) to manage unexpected contamination, asbestos-containing materials and acid sulfate soils.
 - b) If required, details of planned extraction rates for construction dewatering purpose and procedures to handle and dispose of contaminated groundwater.
 - c) Whilst the risk of vapour intrusion into the proposed development is considered low, the ASC NEPM recommends soil vapour measurements for vapour intrusion when the depth to groundwater across the site is less than 2 m. Further investigation of the potential for vapour intrusion and exposure of construction and maintenance workers shall be undertaken once the details of the final landform

have been confirmed and the extent of excavation into the contaminated areas has been defined. Any management measures required shall be incorporated into a Remediation Action Plan (RAP) and any Long-term Environmental Management Plan (EMP) as required. This shall form part of the development consent.

- d) All management and mitigation measures for construction (S2-S9 and GW1-GW2) and operation (S10-S11 and GW3-GW4) of the concrete batching plant identified in the EIS dated August 2018 shall be met.
- 20 A detailed Landscape Plan shall be submitted to the satisfaction of the Certifying Authority prior to the issue of any Construction Certificate. The landscaped area at the front of the site shall be comprised of a minimum of 80% native plants. Locally indigenous species, as specified in Part 10 – Technical Guidelines for Landscaping on Development Sites, are to be incorporated where practical and suit the microclimate conditions. The landscape design shall incorporate a minimum of three (3) canopy trees, shrubs and groundcovers.
- 21 An operational waste management plan in accordance with the stated mitigation measures within Part 7.13.3 of the EIS must be submitted to the satisfaction of the Certifying Authority prior to the issue of any Construction Certificate.
- 22 Prior to the issue of any Construction Certificate a report shall be provided by a suitably qualified acoustical consultant/engineer, who is eligible for membership of the Australian Acoustic Society (AAS) and/or be a member of a firm which is a member of the AAAC, confirming the required noise control measures specified in the Development Application documentation have been incorporated into the proposed development and identified on the construction certificate plans.
- 23 The applicant must prior to the issue of any Construction Certificate, pay the following fees:
- | | | |
|-----|--------------------------------|--------------|
| (a) | Development Control: | \$3,081.00 |
| (b) | Builders Damage Deposit: | \$22,541.33 |
| (c) | Section 7.12 Contribution..... | \$160,000.00 |
- 24 Prior to the issue of any Construction Certificate, the applicant shall lodge a Builder's Damage Deposit and Performance Bond of \$22,541.33(GST Exempt) by way of cash deposit or unconditional bank guarantee to Council against possible damage to Council's asset during the course of the building works and performance bond covering all public domain works. The deposit will be refunded subject to inspection by Council 12 months after the completion of all works relating to the proposed development and Final Occupational Certificate has been issued.
- 25 The payment of the following monetary contributions in accordance with Council's Section 94A Contributions Plan 2016:
Total = \$16,000,000.00 (this is 1% of the value of works)
This results in a total contribution of \$160,000.00 to be paid to Council prior to the issue of any Construction Certificate. The Section 94 Contribution fees are subject to annual review and the current rates are applicable for the financial year in which your consent is granted. If you pay the contribution in a later financial year you will be required to pay the fee applicable at the time.

- 26 Prior to the issue of any Construction Certificate, the required Long Service Levy payable under Section 34 of the Building and Construction Industry Long Service Payments Act 1986 must be paid. The Long Service Levy is payable at 0.35% of the total cost of the development, however this is a State Government fee and can change without notice.
- 27 Prior to the issue of any Construction Certificate, at the proposed point of construction site entry, photographic survey showing the existing conditions of Council's infrastructure shall be submitted to Council and Principal Certifying Authority.
- The survey shall detail the physical conditions and identify any existing damage to the roads, kerbs, gutters, footpaths, driveways, street trees, street signs and any other Council assets fronting the property and extending to a distance of 50m from the development. Failure to do so may result in the applicant/developer being liable for any construction related damages to these assets. Any damage to Council's infrastructure during the course of this development shall be restored at the applicant's cost.
- 28 Prior to the issue of any Construction Certificate, the applicant shall contact "Dial Before You Dig on 1100" to obtain a Service Diagram for, and adjacent to, the property. The sequence number obtained from "Dial Before You Dig" shall be forwarded to Principal Certifying Authority. Any damage to utilities/services during the course of this development will be repaired at the applicant's expense.
- 29 Prior to the issue of any Construction Certificate, design certification, prepared by a suitably qualified engineer shall be submitted to Principal Certifying Authority certifying the parking arrangements, swept paths and vehicle access shown on the construction plans have been designed in accordance with AS 2890.1, AS 2890.2 and Austroads.
- 30 The developer is required to make a formal submission to Ausgrid by means of a duly completed Preliminary Enquiry and/ or Connection Application form, to allow Ausgrid to assess any impacts on its infrastructure and determine the electrical supply requirements for the development (eg. whether a substation is required on site).
- 31 To ensure that utility authorities and Council are advised of any effects to their infrastructure by the development, the applicant shall:
- (a) Carry out a survey of all utility and Council services within the site including relevant information from utility authorities and excavation if necessary to determine the position and level of services;
 - (b) Negotiate with the utility authorities (eg AusGrid, Sydney Water, Telecommunications Carriers and Council in connection with:
 - (i) The additional load on the system; and
 - (ii) The relocation and/or adjustment of the services affected by the construction.
- Any costs in the relocation, adjustment or support of services as requested by the service authorities, beneficiaries and Council are to be the responsibility of the developer.
- 32 Prior to issue of the Construction Certificate, a Dilapidation Report of the immediate adjoining properties and public infrastructure (including Council and public utility infrastructure) shall be prepared by a Practising Structural / Geotechnical Engineer and submitted to the Certifying Authority (and Council where it is not the PCA). The report shall include records and photographs of the adjoining properties that will be impacted by the development:

- a) Prior to commencement of any works on-site, a dilapidation report of the immediate adjoining properties and public infrastructure (including Council and public utility infrastructure) shall be prepared by a qualified person and submitted to Council. The report shall include records and photographs of the all properties immediately adjoining the site;
 - b) In relation to Council's infrastructure, the report shall include at the proposed point of construction site entry, photographic survey showing the existing conditions of Council's infrastructure. The survey shall detail the physical conditions and identify any existing damage to the roads, kerbs, gutters, footpaths, driveways, street trees, street signs and any other Council assets fronting the property and extending to a distance of 50m from the development.
 - c) Prior to commencement of the surveys, the applicant/ owner shall advise (in writing) all property owners of buildings to be surveyed of what the survey will entail and of the process for making any future claim regarding property damage. A copy of this communication shall be submitted to Council.
 - d) The applicant shall bear the cost of all restoration works to buildings/ structures and public infrastructure that has been damaged during the course the demolition, site clearing and site remediation works. Any damage to buildings/structures, infrastructures, roads, lawns, trees, gardens and the like shall be fully rectified by the applicant/developer, at the applicant/developer's expense.
 - e) A copy of the dilapidation report together with the accompanying photographs shall be given to all immediately adjoining properties owners and public utility authorities, including Council;
 - f) A second dilapidation report, including a photographic survey shall then be submitted no later than one month after the completion of all works identifying all damage that has occurred as a result of the construction and the rectification works required. A copy of the second dilapidation report together with the accompanying photographs shall be given to Council, public utilities authorities and all adjoining properties owners.
- (Note:** Prior to commencement of the surveys, the applicant/ owner of the development shall advise (in writing) all property owners of buildings to be surveyed of what the survey will entail and of the process for making a claim regarding property damage. A copy of this information shall be submitted to Council.)

- 33 A Construction Management Program (including a Traffic Management Plan) shall be submitted to, and approved by the Certifying Authority prior to the issue of any Construction Certificate. A copy shall be forwarded to Council where it is not the PCA. The program shall detail:
- (a) The proposed method of access to and egress from the site for construction vehicles;
 - (b) The proposed phases of construction works on the site and the expected duration of each construction phase;
 - (c) The proposed order in which works on the site will be undertaken, and the method statements on how various stages of construction will be undertaken;
 - (d) The proposed manner in which adjoining property owners will be kept advised of the timeframes for completion of each phase of development/construction process;
 - (e) The proposed method of loading and unloading excavation and construction machinery, excavation and building materials, formwork and the erection of any part of the structure within the site. Wherever possible mobile cranes should be located wholly within the site;

- (f) The proposed areas within the site to be used for the storage of excavated materials, construction materials and waste containers during the construction period;
- (g) The proposed method/device to remove loose material from all vehicles and/or machinery before entering the road reserve, any run-off from the washing down of vehicles shall be directed to the sediment control system within the site;
- (h) The proposed method of support to any excavation adjacent to adjoining properties, or the road reserve. The proposed method of support is to be designed and certified by an Accredited Certifier (Structural Engineering), or equivalent;
- (i) Proposed protection for Council and adjoining properties, and
- (j) The location and operation of any on site crane. Please note that a crane may require prior approval from Sydney Airports Corporation';
- (k) The location of any Construction Zone (if required) approved by Council's Traffic Committee, including a copy of that approval.

CONDITIONS WHICH MUST BE SATISFIED PRIOR TO THE COMMENCEMENT OF ANY WORKS

- 34 The Applicant must prepare and submit for the approval of Council a Construction Safety Study consistent with the Department of Planning's *Hazardous Industry Planning Advisory Paper No.7, 'Construction Safety'*. Construction must not commence until approval has been given by Council.

The study must:

- (i) be prepared in consultation with all affected owners or operators listed in the *Response to Submissions* (RTS) Appendix B Table 2 to sufficiently address construction risks within or in the vicinity of the development for works close to hazardous chemical pipelines; and
- (ii) include an implementation program ensuring that all actions, recommendations or control measures from the study and RTS Appendix B will be implemented in a timely manner.

- 35 For any water from site dewatering to be permitted to go to the stormwater, the water must meet ANZECC 2000 Water Quality Guidelines for Fresh and Marine Water for the 95% protection trigger values for marine water. The results of all testing must be completed by a NATA accredited laboratory.

All laboratory results must be accompanied by a report prepared by a suitably qualified person indicating the water meets these guidelines and is acceptable to be released into council's stormwater system. If it is not acceptable, details of treatment measures to ensure that the water is suitable for discharge to council's stormwater shall be provided in this report.

Reports shall be provided to council prior to discharge of any groundwater to the stormwater system.

- 36 This Consent shall not preclude the applicant from giving notice to other statutory authorities, such as Sydney Water Corporation, WorkCover, etc.

- 37 Prior to commencement of any works, application(s) shall be made to Council's Customer Services Counter and obtained the following approvals and permits on Council's property/road reserve under the *Roads Act 1993* and *Local Government Act 1993* **as appropriate**:
(It should be noted that any works shown within Council's road reserve or other Council Lands on the development approval plans are indicative only and no approval for these works is given until this condition is satisfied.)
- (a) Permit to erect hoarding on or over a public place, including Council's property/road reserve;
 - (b) Permit to construct works, place and/or store building materials on footpaths, nature strips;
 - (c) Permit to install temporary ground anchors in public land;
 - (d) Permit to discharge ground water to Council's stormwater drainage system;
 - (e) Permit for roads and footways occupancy (long term/ short term);
 - (f) Permit to construct vehicular crossings, footpaths, kerbs and gutters over road reserve;
 - (g) Permit to open road reserve area, including roads, footpaths, nature strip, vehicular crossing or for any purpose whatsoever, such as relocation / re-adjustments of utility services;
 - (h) Permit to place skip/waste bins on the footpath and/or nature strip, and
 - (i) Permit to use any part of Council's road reserve or other Council lands.
- 38 A Soil and Water Management Plan (SWMP) shall be prepared in accordance with the Landcom Managing Urban Stormwater – Soils and Construction 4th Edition (2004). All management measures recommended and contained within the Soil and Water Management Plan (SWMP) shall be implemented in accordance with the Landcom Managing Urban Stormwater – Soils and Construction 4th Edition (2004). This plan shall be implemented prior to commencement of any site works or activities. All controls in the plan shall be maintained at all times during construction. A copy of the SWMP shall be kept on-site at all times and made available to Council Officers on request.
- 39 Erosion and sediment control devices shall be installed and functioning prior to the commencement of any demolition, excavation or construction works upon the site in order to prevent sediment and silt from site works (including demolition and/or excavation) being conveyed by stormwater into public stormwater drainage system, natural watercourses, bushland and neighbouring properties. In this regard, all stormwater discharge from the site shall meet the legislative requirements and guidelines including the Protection of the Environment Operations Act 1997.
These devices shall be maintained in a serviceable condition AT ALL TIMES throughout the entire demolition, excavation and construction phases of the development and for a minimum one (1) month period after the completion of the development, where necessary.

DURING WORKS

- 40
- (a) The applicant shall conduct all construction and related deliveries wholly on site. If any use of Council's road reserve is required then separate applications are to be made at Council's Customer Services Department;

- (b) Construction operations such as brick cutting, washing tools or brushes and mixing mortar shall not be carried out on public roadways or footways or in any other locations which could lead to the discharge of materials into the stormwater drainage system or onto Council's lands;
 - (c) Hosing down or hosing/washing out of any truck (concrete truck), plant (eg concrete pumps) or equipment (eg wheelbarrows) on Council's road reserve or other property is strictly prohibited. Fines and cleaning costs will apply to any breach of this condition;
 - (d) Pavement surfaces adjacent to the ingress and egress points are to be swept and kept clear of earth, mud and other materials at all times and in particular at the end of each working day or as directed by Council's Engineer;
 - (e) Shaker pads are to be installed at the entry/exit points to the site to prevent soil material leaving the site on the wheels of vehicles and other plant and equipment.
 - (f) Council nature strip shall be maintained in its current state at all times during construction works.
- 41 Prior to the commencement of works, separate permits are required to be obtained and approved by Council for all works including but not limited to road opening, road and footpath closure, stand and operate a registered vehicle or plant, occupy road with unregistered item, work zone, hoarding, shoring support (anchoring), tower crane operation, public land access, temporary dewatering, and any excavation and works proposed to be undertaken on public land.
- 42 During Demolition, Excavation and Construction, care must be taken to protect Council's infrastructure, including street signs, footpath, kerb, gutter and drainage pits etc. Protecting measures shall be maintained in a state of good and safe condition throughout the course of construction. The area fronting the site and in the vicinity of the development shall also be made safe for pedestrian and vehicular traffic at all times. Any damage to Council's infrastructure (including damage caused by, but not limited to, delivery vehicles, waste collection, contractors, sub-contractors, concrete delivery vehicles) shall be fully repaired in accordance with Council's specification and AUS-SPEC at no cost to Council.
- 43 Results of the monitoring (if required) of any field parameters such as soil, groundwater, surface water, dust or noise measurements shall be made available to Council Officers on request throughout the construction works.
- 44 Any new information that comes to light during demolition or construction which has the potential to alter previous conclusions about site contamination and remediation must be notified to Council and the accredited certifier immediately.
- 45 Any remediation work must be carried out in accordance with:
- NSW Office of Environment and Heritage (OEH) 'Contaminated Sites – Guidelines for Consultants Reporting on Contaminated Sites';
 - NSW Environment Protection Authority (NSW EPA) guidelines under the Contaminated Land Management Act 1997; and
 - State Environmental Planning Policy 55 (SEPP55) – Remediation of Land.

- 46 To ensure that relevant engineering and water quality provisions are met during the period of dewatering for construction, prior to any water from site dewatering to be permitted to go to council's stormwater system a permit to discharge to the stormwater shall be obtained from Council. Dewatering shall not commence until this is issued by Council.
- 47 All materials excavated from the site (fill or natural) shall be classified in accordance with the NSW Environment Protection Authority (EPA) Waste Classification Guidelines (2014) prior to being disposed of to a NSW approved landfill or to a recipient site.
- 48 To prevent contaminated soil being used onsite and to ensure that it is suitable for the proposed land use, all imported fill shall be appropriately certified material and shall be validated in accordance with the:
- Office of Environment and Heritage (OEH) approved guidelines; and
 - Protection of the Environment Operations Act 1997; and
 - Protection of the Environment Operations (Waste) Regulation 2014.
- All imported fill shall be accompanied by documentation from the supplier which certifies that the material has been analysed and is suitable for the proposed land use.
- 49 During construction, care must be taken to protect Council's infrastructure, including street signs, footpath, kerb, gutter and drainage pits etc. Protecting measures shall be maintained in a state of good and safe condition throughout the course of construction. The area fronting the site and in the vicinity of the development shall also be made safe for pedestrian and vehicular traffic at all times. Any damage to Council's infrastructure (including damage caused by, but not limited to, delivery vehicles, waste collection, contractors, sub-contractors, concrete delivery vehicles shall be fully repaired in accordance with Council's specification and AUS-SPEC at no cost to Council.
- 50 During construction, the applicant shall ensure that all works and measures have been implemented in accordance with approved Erosion and Sediment Control Plan, Traffic Management Plan and Construction Management Plan at all times.
- 51 The following shall be complied with:
- (a) A sign must be erected in a prominent position on any work site on which work involved in the erection or demolition of a building is being carried out:
 - (i) Stating the unauthorized entry to the work site is prohibited;
 - (ii) Showing that unauthorized entry to the work site is prohibited;
 - (iii) The Development Approval number; and
 - (iv) The name of the Principal Certifying Authority including an after hours contact telephone number;
 - (b) Any such sign is to be removed when the work has been completed.
- 52 Toilet facilities are to be provided at or in the vicinity of the work site on which work involves:
- (a) Erection of the building being carried out, at the rate of one toilet for every 20 persons or part of 20 persons employed at the site;
 - (b) Each toilet provided:
 - (i) must be standard flushing toilet; and,
 - (ii) must be connected:

- (1) to a public sewer; or
 - (2) if connection to a public sewer is not practicable to an accredited sewerage management facility approved by the Council; or,
 - (3) if connection to a public sewer or an accredited sewerage management facility is not practicable to some other sewerage management facility approved by the Council.
 - (c) The provisions of toilet facilities in accordance with this clause must be completed before any other work is commenced.
- 53 If an excavation associated with the proposal extends below the level of the base of the footings of a building on an adjoining allotment of land or the common boundary fence the person causing the excavation to be made:
- (a) Must preserve and protect the building/ fence from damage; and
 - (b) If necessary, underpin and support such building in an approved manner;
 - (c) Must at least be 7 days before excavating below the level of the base of the footings of a building on an adjoining allotment of land, give notice of the intention to do so to the owner of the adjoining allotment of land and, furnish particulars of the excavation to the owner of the building being erected or demolished;
 - (d) Any retained existing structures and or services on this and adjoining properties are not endangered during any demolition excavation or construction work associated with the above project. The applicant is to provide details of any shoring, piling, or underpinning prior to the commencement of any work. The construction shall not undermine, endanger or destabilise any adjacent structures.
 - (e) If the soil conditions required it:
 - (i) Retaining walls associated with the erection of a building or other approved methods of preventing movement or other approved methods of preventing movement of the soil must be provided, and
 - (ii) Adequate provision must be made for drainage.
- 54 The following shall be complied with during construction:
- (a) Construction Noise
 - (i) Noise from construction activities associated with the development shall comply with the NSW Environment Protection Authority's Interim Construction Noise Guideline and the Protection of the Environment Operations Act 1997. At residential boundaries the "Noise affected RBL + 10 dB" limit shall apply – not the highly affected 75 dB(A) limit.
 - (b) Time Restrictions
 - (i) Monday to Friday 07:00am to 06:00pm
 - (ii) Saturday 08:00am to 01:00pm
 - (iii) No Construction to take place on Sundays or Public Holidays.
 - (c) Silencing
 - All possible steps should be taken to silence construction site equipment.
- 55 All possible and practicable steps shall be taken to prevent nuisance to the inhabitants of the surrounding neighbourhood from wind-blown dust, debris, noise and the like.
- 56 Throughout the construction period, Council's warning sign for soil and water management shall be displayed on the most prominent point of the building site, visible to both the street and site workers. A copy of the sign is available from Council's Customer Service Counter.

- 57 The land to which this consent relates must be fenced and enclosed to protect the entry or access to the land and demolition site by unlawful persons.
 - (a) The fencing must be in place before the demolition commences, and
 - (b) Must remain in place during the construction of the development.
- 58 Any material containing asbestos found on site during the demolition process shall be removed and disposed of in accordance with:
 - (a) SafeWork NSW requirements. An appropriately licensed asbestos removalist must complete all asbestos works if they consist of the removal of more than 10m² of bonded asbestos and/or any friable asbestos;
 - (b) Protection of the Environment Operations Act 1997;
 - (c) Protection of the Environment Operations (Waste) Regulation 2014;
 - (d) NSW Environment Protection Authority Waste Classification Guidelines 2014.
- 59 The principal contractor or owner builder must install and maintain water pollution, erosion and sedimentation controls in accordance with:
 - (a) The Soil and Water Management Plan;
 - (b) "Managing Urban Stormwater - Soils and Construction" (2004) Landcom ('The Blue Book'); and
 - (c) Protection of the Environment Operations Act 1997.
- 60 Hazardous and/or intractable wastes arising from the demolition or construction processes shall be removed and disposed of in accordance with the requirements of the relevant statutory authorities, together with the relevant regulations, including:
 - (a) The Work Health and Safety Act 2011 (NSW);
 - (b) The Work Health and Safety Regulation 2011;
 - (c) WorkCover Construction Work Code of Practice July 2014.
- 61 At all times during works:
 - (a) The works shall not give rise to air impurities in contravention of the Protection of the Environment Operations Act 1997 and shall be controlled in accordance with the requirements of this Act;
 - (b) Liquid and solid wastes generated on the site shall be collected, transported and disposed of in accordance with the Protection of the Environment Operation Act 1997. Records shall be kept of all liquid and solid waste disposals from the site, and be made available to Council Officers on request;
 - (c) The works shall be conducted in a manner which does not pollute water as defined by the Protection of the Environment Operations Act. Treated overflow or other discharge shall not cause pollution of the council's stormwater system in accordance with the Protection of the Environment Operations Act 1997. Management of the site shall be undertaken in accordance with measure outlined in the Operational Environmental Management Plan (OEMP);
 - (d) The operations of the premises shall be conducted in such a manner as not to interfere with or materially affect the amenity of the neighbourhood by reason of noise, vibration, odour, fumes, vapour, steam, soot, ash, dust, particulate matter, waste water, waste products or other impurities which are a nuisance or injurious to health.
 - (e) Waste gases released from the premises shall not cause a public nuisance nor be hazardous or harmful to human health or the environment.
- 62 The operation and maintenance of the first flush system shall be undertaken in accordance with the NSW EPA current version of the "Stormwater First Flush Pollution"

guidelines on their website at <http://www.epa.nsw.gov.au/mao/stormwater.htm>. The first-flush stormwater detention basin and its ancillaries shall be inspected after every rainfall event to check for any blockage in the drainage outlet. Such blockages, if any, shall be cleared immediately. "Rainfall event" is any rain that produces or causes run-off. This area is to be appropriately fenced to ensure safety.

- 63 During construction, the applicant shall ensure that all works and measures have been implemented in accordance with approved Traffic Management Plan and Construction Management Plan at all times.

CONDITIONS WHICH MUST BE SATISFIED PRIOR TO THE ISSUE OF AN OCCUPATION CERTIFICATE

- 64 Prior to the issue of an Occupation Certificate, An appropriate instrument in accordance with Council Specification must be registered on the title of the property, concerning the presence and ongoing operation of the On-Site Detention System and stormwater quality improvement device/s. A Works-as-Executed plan must be submitted Council at the completion of the works, the plan must clearly illustrate dimensions and details of the site drainage and the On-Site Detention System and stormwater quality improvement device/s. The plan shall be prepared by a registered surveyor or an engineer. A construction compliance certification must be provided to verify, that the constructed stormwater system and associate works have been carried out in accordance with the approved plan(s), relevant codes and standards.
- 65 Prior to the issue of an Occupation Certificate, signs shall be displayed adjacent to onsite above ground storage systems shall be marked by the permanent fixing of a marker plate of minimum size 200 mm by 150 mm to the nearest permanent surface. The plate shall be non-corrosive metal or 4 mm thick laminated plastic that contains the following wording:
- "This is an onsite stormwater detention system that will pond water during heavy storms."
- 66 Prior to the issue of any Occupation Certificate, all parking and traffic signs and associated arrangement shall be implemented on Beauchamp Road to the satisfaction of the RMS.
- 67 An Air Quality Management Plan must be prepared in accordance with *Part 9 – Dust Mitigation and Management* within Air Quality Impact Assessment, dated 7 September 2019 and prepared by Todoroski Air Sciences. The operational dust mitigation options detailed in Table 9-1 must be implemented.
- 68 Prior to use and occupation of the building an Occupation Certificate must be obtained under Section 109C(1)(c) and 109M of the Environmental Planning and Assessment Act 1979.
- 69 The Applicant must develop and implement a comprehensive Emergency Plan and detailed emergency procedures for the development. The plan must include detailed procedures for the safety of all people outside and within the development who may be at risk. The plan must into account the potential impacts from Botany Industrial Park (BIP) or hazardous chemical pipelines and must be developed in consultation with BIP and hazardous chemical pipeline operators. The plan must be prepared in accordance

with the Department of Planning's *Hazardous Industry Planning Advisory Paper No. 1 'Emergency Planning'*.

The Emergency Plan shall be submitted to the satisfaction of the Certifying Authority prior to the issue of an Occupation Certificate. A copy shall be forwarded to Council where it is not the PCA.

- 70 Prior to the issue of an Occupation Certificate, the applicant/developer shall fully rectify buildings/ structures and public infrastructure that been damaged during the course of the demolition and construction, at the applicant/developer's expense, to the written satisfaction of Council.
- 71 Prior to the issue of an Occupation Certificate a final fire safety certificate must be prepared and issued.
- 72 Any damage not shown in the photographic survey submitted to Council before site works have commenced will be assumed to have been caused by the site works (unless evidence is provided to prove otherwise). All damage as a result of site works shall be rectified at the applicant's expense to Council's satisfaction, prior to the release of the damage deposit.
- 73 Prior to the issue of an Occupation Certificate, all acoustic mitigation measures as recommended in the approved acoustic reports and the referred to in the approved noise management plan are to be installed. Certification is to be provided to the written satisfaction of the Certifying Authority from a suitably qualified acoustical consultant/engineer who is eligible for membership of the Australian Acoustic Society (AAS) and/or be a member of a firm which is a member of the AAAC, that the mitigation measures have been installed and are compliant. Certification is also to be provided to Council where it is not the PCA.
- 74 Prior to the issue of an Occupation Certificate, truck access, off-street parking area, truck loading/unloading area and truck queuing and waiting area shall be provided and clearly designated, sign posted and line marked. Signage and line marking shall comply with the current version of Australian Standards.

Documentation shall be submitted to the Principal Certifying Authority certifying compliance with AS2890.1 and AS2890.2 requirements.
- 75 Prior to the issue of an Occupation Certificate, all off-street car parking bays shown on the plans approved pursuant to this consent shall be provided. All car parking bays shall be maintained for the life of the development.
- 76 Prior to issue of an Occupation Certificate, all civil works required in public domain area (including kerb and guttering, footpath paving, stormwater construction, landscaping, line marking and signage) shall be completed to Council's satisfaction. The following documentation shall be submitted to the PCA attesting this condition has been appropriately satisfied.
 - (a) Written confirmation / completion certificate obtained from Council's engineer to show the completion of civil works in the public domain area.
 - (b) Inspection reports (formwork and final) obtained from Council's engineer to ensure inspection have been carried out to the civil works in the public domain area.

- (c) all services (Utility, Council, etc) within the road reserve (including the footpath) shall be relocated/adjusted to match the proposed/existing levels as required by the development.
- 77 Prior to the issue of an Occupation Certificate, documentation from a practising civil engineer shall be submitted to the Principal Certifying Authority certifying that the stormwater drainage system has been constructed generally in accordance with the approved stormwater management construction plan(s) and all relevant standards.
- 78 Prior to the issue of an Occupation Certificate, a Certificate of Survey from a Registered Surveyor shall be submitted to the Principal Certifying Authority showing all the building structures are wholly located within the property boundary.
- 79 A Section 73 Compliance Certificate under the Sydney Water Act 1994 must be obtained prior to the issue of an Occupation Certificate.
- 80 Landscaping shall be installed in accordance with the approved landscape plan.
- 81 At the completion of landscaping on the site, the Applicant is required to obtain a Certificate of Compliance from the Landscape Consultant to certify that the landscaping has been installed in accordance with the approved landscape plan. The Certificate is to be submitted to the satisfaction of the Certifying Authority prior to the issue of an Occupation Certificate.

CONDITIONS WHICH MUST BE SATISFIED DURING THE ONGOING USE OF THE DEVELOPMENT

- 82 The on-going operation of the premises shall adhere to the requirements of all Environmental Management Plans required by O10.1 of the NSW EPA General Terms of Approval.
- 83 The stormwater drainage system (including all pits, pipes, absorption, detention structures, treatment devices, detention systems and rainwater tanks) shall be regularly cleaned, maintained and repaired in accordance with the maintenance schedule submitted to Council to ensure the efficient operation of the system from time to time and at all times. The system shall be inspected on a monthly basis to determine whether there is any blockage, silt, debris, sludge and the like in the system. In the event of potential blockage this material shall be removed. All solid and liquid waste that is collected during maintenance shall be disposed of in a manner that complies with the appropriate Environmental Guidelines.
- 84 The off-street parking bays as shown on the approved plans shall be made available at all times.
- 85 The development is approved to operate 24 hours per day during all stages.
- 86 The maximum number of staff employed on-site for Stage 2 onwards shall not exceed 32 agitator drivers, 8 office/site staff and 5 casual staff. Any additional staff employed on-site shall be subject to Council's written consent.

- 87 The operations of the site must at all times fully comply with the requirements of all management plans/mitigation measures required by this consent.
- 88 The Applicant must ensure that the quantities of dangerous goods stored within the development or transported to and from the development remain below the screening threshold quantities listed in the Department of Planning's *Applying SEPP 33* guideline (January 2011) at all times.
- 89 The Application must store and handle all chemicals, fuels and oils used on-site in accordance with:
- (a) The requirements of all relevant Australian Standards; and
 - (b) The NSW EPA's *Storing and Handling of Liquids: Environmental Protection – Participant's Handbook* if the chemicals are liquids.

In the event of an inconsistency between the requirements of (a) and (b) above, the most stringent requirement shall prevail to the extent of the inconsistency.

- 90 The operation of the site and movements of vehicles shall comply with the approved Traffic Management Plan at all times.
- (a) No heavy vehicles shall utilise Perry Street to travel from or to the subject site. Any vehicles larger than a standard B99 vehicle is considered a heavy vehicle.
 - (b) The movement of all commercial heavy vehicles shall be restricted to the designated heavy vehicle routes. The use of Perry Street is not permitted. The use of inbound Route 2 as identified in Figure 3.1 of the Traffic Impact Assessment report is not permitted as it involves use of roads located within NSW Ports property.
 - (c) No commercial vehicles shall be allowed to queue, wait and stop within 250m of the vehicle access points of the site. All trucks must enter the site and queue on site. There is to be no parking of commercial heavy vehicles on the public road.
 - (d) All vehicles shall enter and exit the site in a forward direction;
 - (e) All manoeuvring movements of vehicles shall be carried out wholly within the site and vehicle manoeuvring area shall be kept clear at all times;
 - (f) All vehicles shall be parked in the marked parking bays and all parking bays on-site shall be set aside for parking purpose only and shall not be used for storage of goods or machinery;
 - (g) Any gate at the vehicular entrance of the site shall be left open during the operation hours;
 - (h) All loading and unloading of vehicles in relation to the use of the premises shall only be carried out in the dedicated loading area. No deliveries to the premises/site shall be made direct from a public places, public streets or any road related areas (eg. footpath, nature strip, road shoulder, road reserve, public carpark, service station etc);
 - (i) Under no circumstance shall vehicles queue on public places, public streets or any road related area (eg. footpath, nature strip, road shoulder, road reserve etc) prior to entering the site;
 - (j) The occupier shall ensure that any person employed on the premises shall park their vehicles, if any, in the employee parking area provided. No employee shall be permitted to park on a common driveway, public streets or any road related areas (eg. footpath, nature strip, road shoulder, road reserve, public carpark etc).

- 91 No signs or advertising which require consent shall be installed or displayed at the property without a development application being lodged with Council and consent thereto being given by Council.
- 92
- (a) The use of the premises shall not give rise to air impurities in contravention of the *Protection of the Environment Operations Act 1997* and shall be controlled in accordance with the requirements of this Act.
 - (a) Liquid and solid wastes generated on the site shall be collected, transported and disposed of in accordance with the *Protection of the Environment Operation Act 1997*. Records shall be kept of all liquid and solid waste from the site, and be made available to Council Officers on request.
 - (b) The operation of the premises shall be conducted in a manner which does not pollute water as defined by the Protection of the Environment Operations Act. Treated overflow or other discharge shall not cause pollution of the council's stormwater system in accordance with the Protection of the Environment Operations Act 1997. Management of the site shall be undertaken in accordance with measure outlined in the Operational Environmental Management Plans.
 - (c) The operations of the premises shall be conducted in such a manner as not to interfere with or materially affect the amenity of the neighbourhood by reason of noise, vibration, odour, fumes, vapour, steam, soot, ash, dust, particulate matter, waste water, waste products or other impurities which are a nuisance or injurious to health.
- 93 Sufficient supplies of appropriate absorbent materials shall be kept on site to recover any liquid spillage. Liquid spills shall be cleaned up using dry methods, by placing absorbent material on the spill, and sweeping or shovelling the material into a secure bin. Absorbent materials used to clean up spills shall be disposed of to an appropriately licensed waste facility.
- 94 The use of the premises shall not give rise to any of the following:
- (i) Offensive noise as defined in the Protection of the Environment Operations Act 1997 and the Protection of the Environment Operations Act (Noise Control Regulation) 2000.
 - (ii) The operation of all equipment, vehicle movements and unloading/loading operations occurring on the site shall not give rise to an equivalent continuous (LAeq) sound pressure level at any point on any residential property greater than 5dB(A) above the existing background LA90 level (in the absence of the noise under consideration).
 - (iii) The operation of all equipment, vehicle movements and unloading/loading operations occurring on the site when assessed on any residential property shall not give rise to a sound pressure level that exceeds LAeq 50dB(A) day time, LAeq 50 dB(A) in the evening, and LAeq 40dB(A) night time.
 - (iv) The operation of all equipment, vehicle movements and unloading/loading operations occurring on the site when assessed on any neighbouring commercial/industrial premises shall not give rise to a sound pressure level that exceeds LAeq 65dB(A) day time/night time. For assessment purposes, the above LAeq sound levels shall be assessed over a period of 10-15 minutes and adjusted in accordance

with EPA guidelines for tonality, frequency weighting, impulsive characteristics, fluctuations and temporal content where necessary.

- 95 The landscaped areas on the property shall be maintained in accordance with any approved landscape plan and the conditions of development approval at all times. The landscaped areas shall be maintained in a clean and tidy state and with a dense, even coverage of plants to Council's satisfaction at all times.
- 96 Any lighting on the site shall be designed so as not to cause nuisance to other residences in the area or to motorists on nearby roads, and to ensure no adverse impact on the amenity of the surrounding area by light overspill. All lighting shall comply with *AS4282-1997 Control of the obtrusive effects of outdoor lighting*.
- 97 All available staff parking shall remain onsite and be utilised by working staff associated with the subject site.
- 98 The owner requirements of all serviceable pipelines in the vicinity of the site shall be met.

HOLCIM
CONCRETE PLANT AND RAIL DEPOT
1 BEAUCHAMP ROAD, BANKSMEADOW



DRAWING SCHEDULE	
DRG No.	TITLE
GENERAL	
SY18118-G001	LOCALITY PLAN AND DRAWING SCHEDULE
SY18118-G002	NOTES
SY18118-G003	STAGE 3 - EQUIPMENT INDEX
SY18118-G004	SURVEY PLAN
SY18118-G005	STAGING PLAN STAGE 0 AND STAGE 1
SY18118-G006	STAGING PLAN STAGE 2 AND STAGE 3
SY18118-G007	LANDAIR SURVEYS SURVEY DETAIL
SY18118-G008	NEIGHBOURING INFRASTRUCTURE
CIVIL	
SY18118-C001	STAGE 0 SITE PLAN - SHEET 1
SY18118-C002	STAGE 0 SITE PLAN - SHEET 2
SY18118-C021	STAGE 0 ELEVATIONS
SY18118-C101	STAGE 1 SITE PLAN - SHEET 1
SY18118-C102	STAGE 1 SITE PLAN - SHEET 2
SY18118-C111	STAGE 1 B-DOUBLE TURNING PATHS
SY18118-C112	STAGE 1 CONCRETE AGGREGATOR TURNING PATHS
SY18118-C113	STAGE 1 AGGREGATE TIPPER TURNING PATHS
SY18118-C121	STAGE 1 ELEVATIONS
SY18118-C201	STAGE 2 SITE PLAN - SHEET 1
SY18118-C202	STAGE 2 SITE PLAN - SHEET 2
SY18118-C221	STAGE 2 ELEVATIONS

DRAWING SCHEDULE	
DRG No.	TITLE
SY18118-C301	STAGE 3 SITE PLAN - SHEET 1
SY18118-C315	STAGE 3 CAR PARK TURNING PATHS
EARTHWORKS	
SY18118-C401	SITE SECTIONS LONG SECTIONS - SITE CL
SY18118-C451	SITE SECTIONS CROSS SECTIONS - SHEET 1
SY18118-C452	SITE SECTIONS CROSS SECTIONS - SHEET 2
SY18118-C453	SITE SECTIONS CROSS SECTIONS - SHEET 3
SY18118-C454	SITE SECTIONS CROSS SECTIONS - SHEET 4
SY18118-C455	SITE SECTIONS CROSS SECTIONS - SHEET 5
SY18118-C456	SITE SECTIONS CROSS SECTIONS - SHEET 6
SY18118-C457	SITE SECTIONS CROSS SECTIONS - SHEET 7
SY18118-C458	SITE SECTIONS CROSS SECTIONS - SHEET 8

REFERENCE FILES ATTACHED: SY18118 - Randwick Cadastre; SY18118 - Bayside Cadastre

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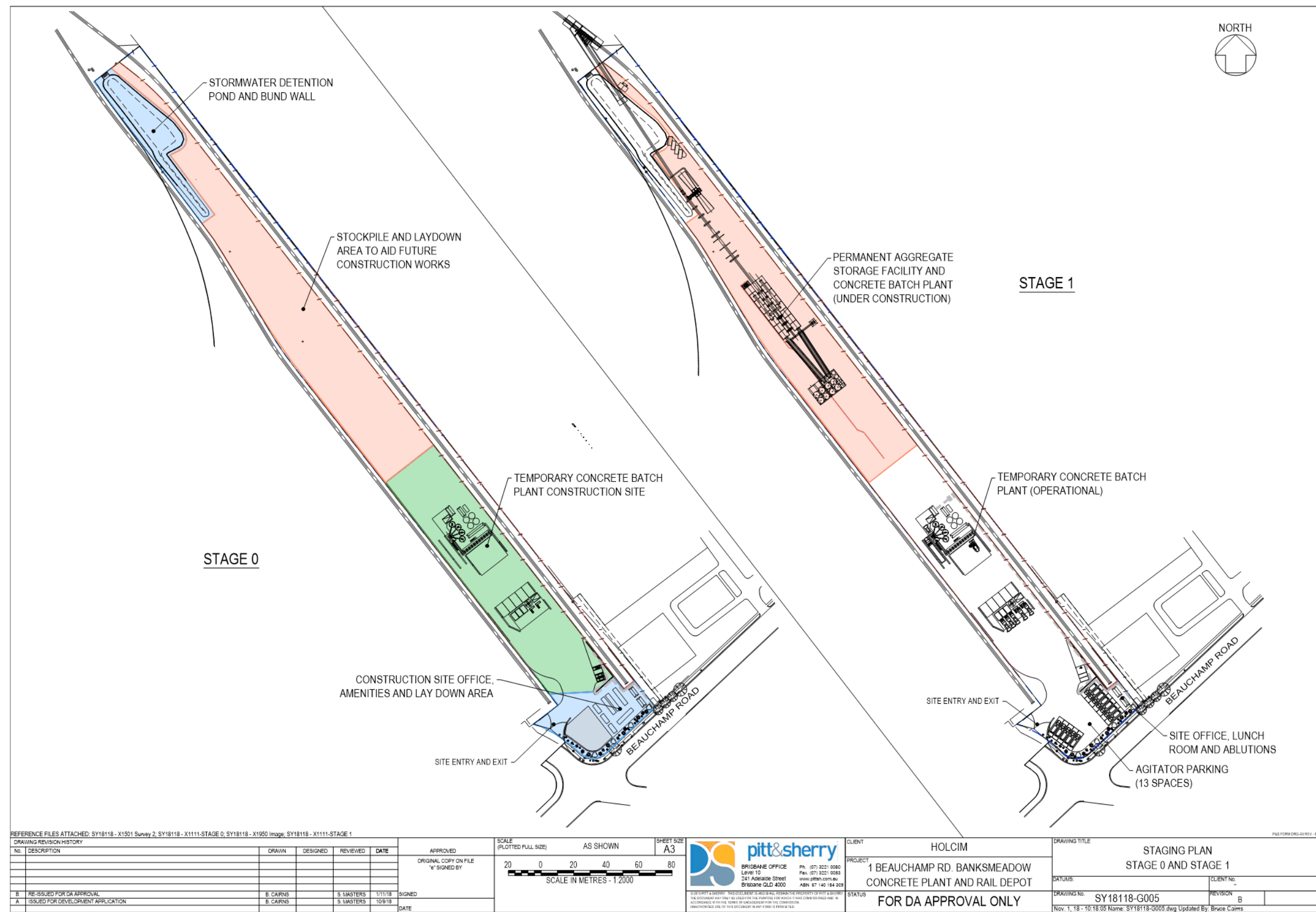


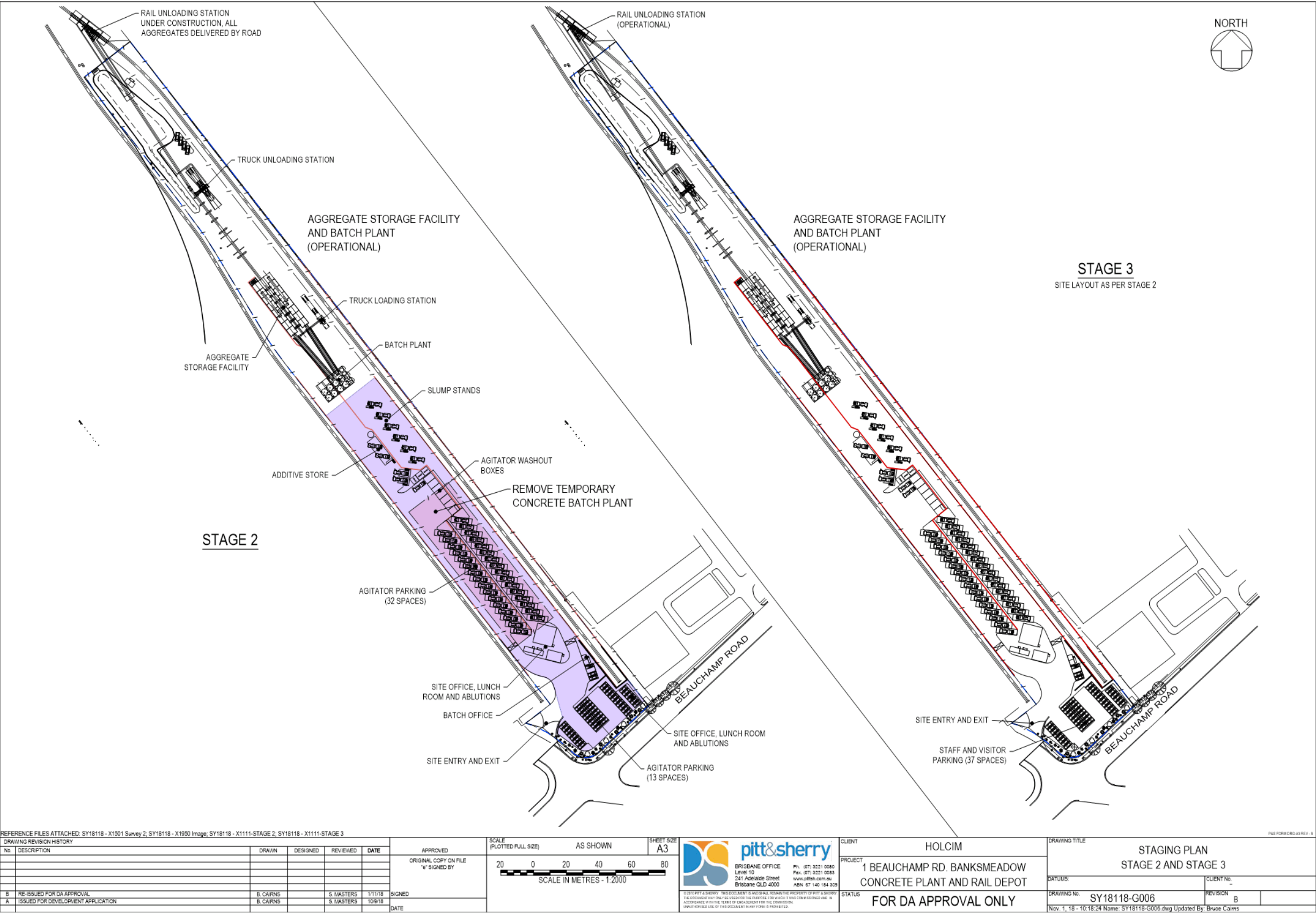
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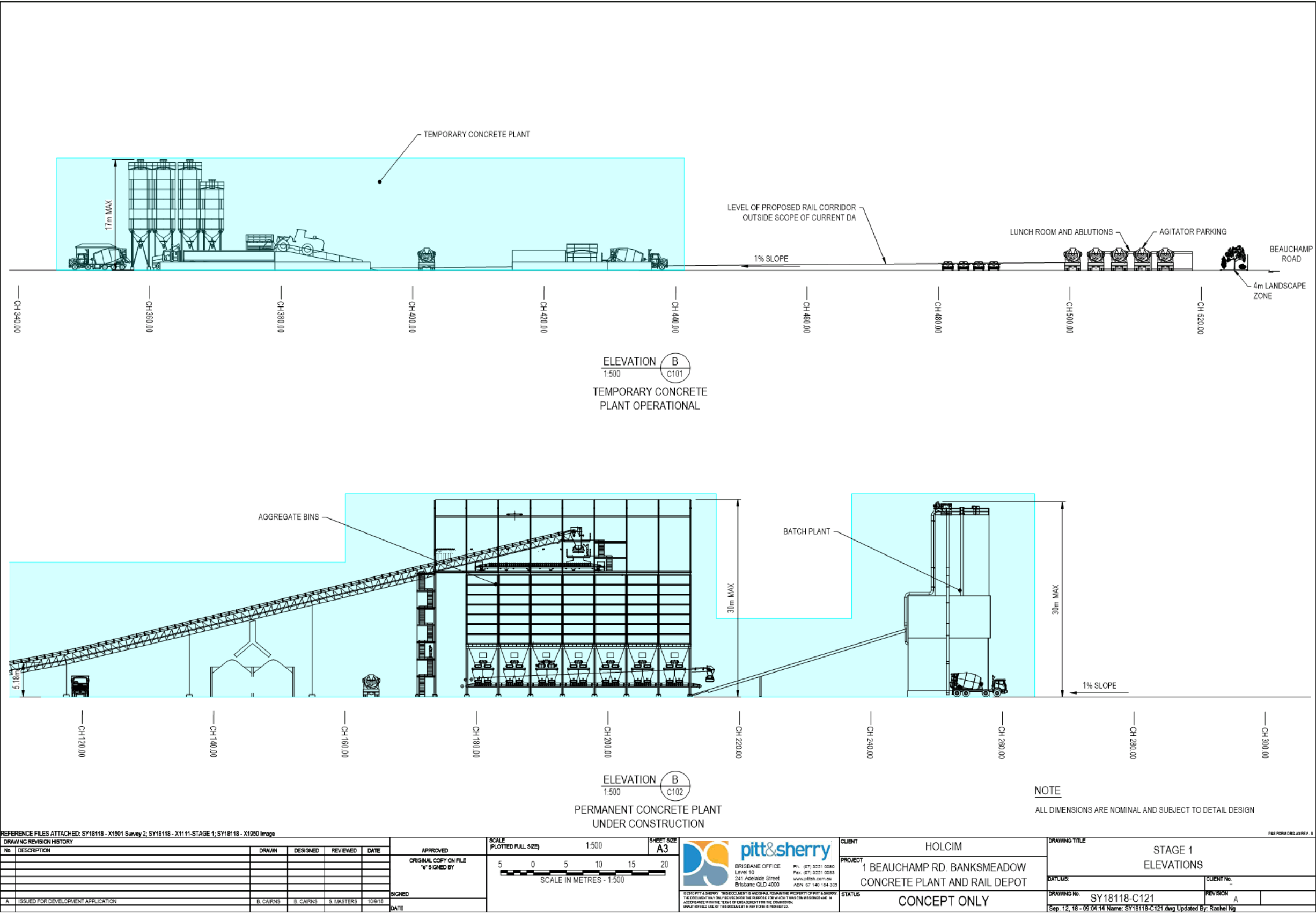
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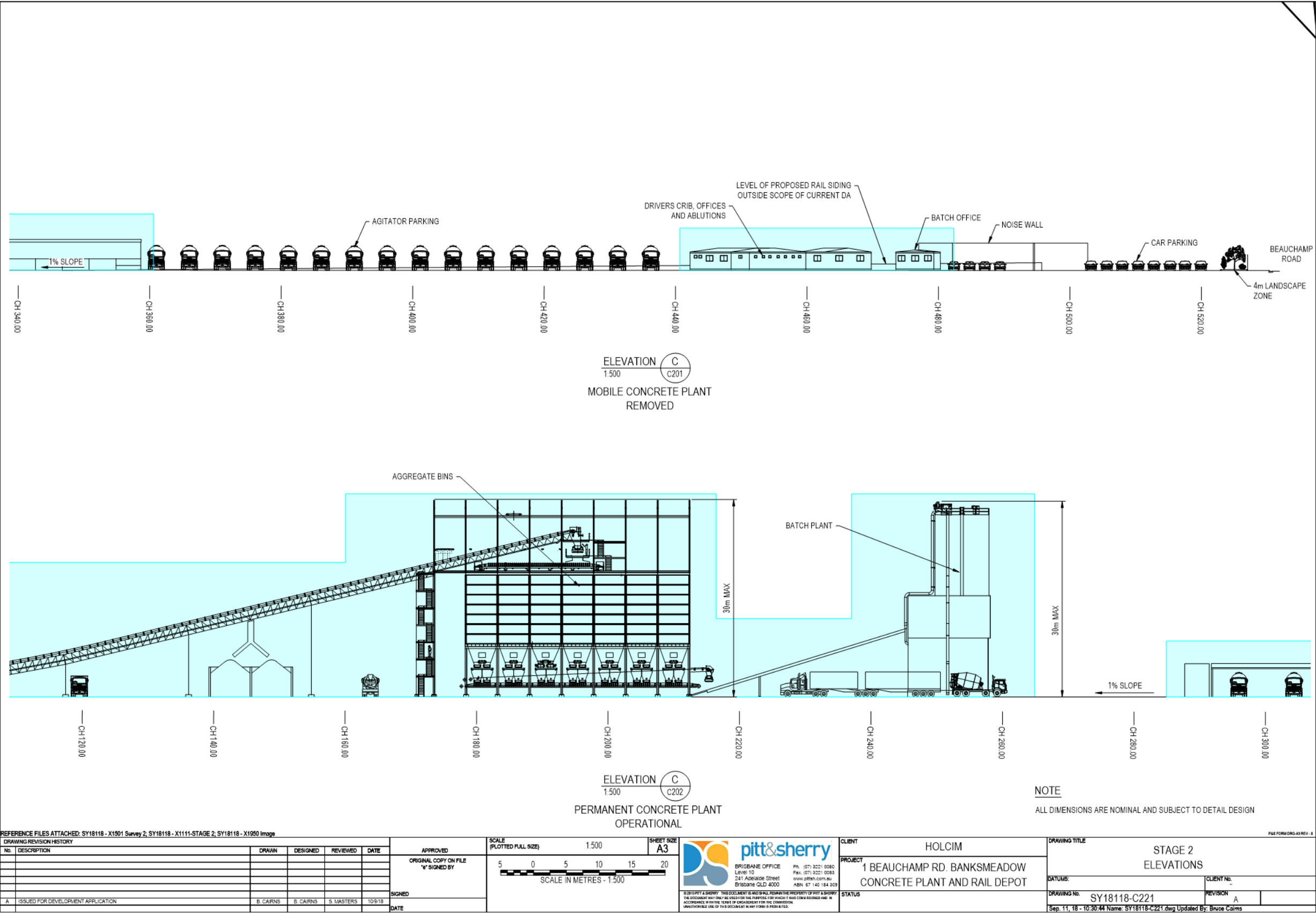
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PROJECT	1 BEAUCHAMP RD. BANKSMEADOW CONCRETE PLANT AND RAIL DEPOT
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Concrete Plant and Rail Depot Banksmeadow, NSW Environmental Impact Statement

transport | community | mining | industrial | food & beverage | energy



Prepared for:

Holcim (Australia) Pty Ltd

Client representative:

Cyril Giraud

Date:

August 2018
Rev 0

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Table of Contents

Glossary and Abbreviations	i
Statement of Authorship	iii
Executive Summary	4
1. Introduction	9
1.1 Proponent identification	11
1.2 Project Overview	12
1.3 Project Site and Land Ownership	12
1.4 Site History	15
1.5 Approval pathway	17
1.6 Permissibility	17
1.7 Secretary's Environmental Assessment Requirements (SEARs)	19
1.8 Business Case	24
1.9 Options Analysis	24
2. Site Analysis	27
2.1 Regional Context	27
2.2 Site Zoning	28
2.3 Surrounding land use	31
2.4 Historical land use	32
2.5 Site suitability	32
3. Project Description	38
3.1 Overview	38
3.2 Development Application Drawings	42
3.3 Stage 0/1 – Mobile Batching Plant and Aggregate Storage Facility	42
3.4 Stage 2 – Fixed Aggregate Storage and Concrete Batching Facilities	50
3.5 Stage 3 – Fixed Facilities and Rail Depot Operational	51
3.6 Rail Operations and Rail Siding	57
3.7 Rail operations and safety within the Holcim facilities	58
3.8 Aggregate Unloading	59
3.9 Concrete Batching	60
3.10 Aggregate Storage and Load Out	62
3.11 Site Occupancy	62
3.12 Ancillary Facilities	63
3.13 Utility Requirements	63
3.14 Energy Efficiency and Sustainable Design Elements	66
3.15 Construction Methodology	67
3.16 Amenities and Social Considerations	71
4. Statutory and Strategic Context	72
4.1 Commonwealth legislation	72
4.2 NSW Legislation	74
4.3 State Environmental Planning Policies	84
4.4 Other NSW Guidelines and Policies	89
4.5 Local Environment Plans	91
4.6 Summary of Licences and Approvals Required	101
5. Consultation	102
5.1 Overview	102
5.2 Identified Stakeholders	102
5.3 Government Agency Consultation	103
5.4 Pacific National	108
5.5 Australian Rail Track Corporation	108
5.6 Bayside Council	109

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5.7	Randwick City Council	112
5.8	Neighbouring Industrial Landowners and Occupiers.....	114
5.9	Community Engagement	115
5.10	Summary of Key Actions and Outcomes from Community Consultation.....	119
6.	Environmental Risk Analysis.....	120
6.1	Objective	120
6.2	Methodology.....	120
6.3	Summary of environmental risk analysis outcomes	126
7.	Environmental Impact Assessment	127
7.1	Traffic and Transport	128
7.2	Noise and Vibration	147
7.3	Air Quality	166
7.4	Soils, Geology and Contamination	177
7.5	Groundwater	187
7.6	Surface water and stormwater drainage	198
7.7	Visual Amenity	207
7.8	Hazards and Risk	222
7.9	Biodiversity	233
7.10	Indigenous Heritage	242
7.11	Historic Heritage	244
7.12	Socio-economic, Land Use and Property	247
7.13	Waste	250
7.14	Cumulative Impacts	257
8.	Management and Mitigation Measures	261
8.1	Introduction	261
8.2	Consolidated Summary of Management and Mitigation Measures.....	261
9.	Conclusion	269
9.1	Benefits of the proposal.....	269
9.2	Ecologically sustainable development	269
10.	References.....	271

List of figures

Figure 1-1	Project Site locality	10
Figure 1-2	Lot and DPs of the Project Site	14
Figure 1-3	Surrounding land uses	16
Figure 2-1	Land Zoning Map (Source: SEPP (Three Ports) 2013).....	29
Figure 2-2	Land Zoning Map (Source: Botany Bay LEP 2013).....	30
Figure 2-3	Local topography map	34
Figure 2-4:	Looking east toward Beauchamp Road from within the Project Site	35
Figure 2-5	Looking west from within the Project Site	36
Figure 3-1	Project staging layout – Stage 1	40
Figure 3-2	Project Staging Layout – Stages 2 and 3.....	41
Figure 3-3	Stage 0 Concept Layout – Sheet 1 (Subject to Detailed Design)	44
Figure 3-4	Stage 0 Concept Layout – Sheet 2 (Subject to Detailed Design)	45
Figure 3-5	Stage 0/1 Elevations (Subject to Detailed Design)	46
Figure 3-6	Stage 1 Concept Layout – Sheet 1 (Subject to Detailed Design)	47
Figure 3-7	Stage 1 Concept Layout – Sheet 2 (Subject to Detailed Design)	48
Figure 3-8	Stage 1/2 Elevations (Subject to Detailed Design)	49
Figure 3-9	Stage 2/3 Concept Layout – Sheet 1 (Subject to Detailed Design)	52
Figure 3-10	Stage 2 Concept Layout – Sheet 2 (Subject to Detailed Design)	53
Figure 3-11	Stage 2/3 Elevations (Subject to Detailed Design)	54
Figure 3-12	Stage 2 Concept Layout – Sheet 2 (Subject to Detailed Design)	55
Figure 3-13	Stage 3 General Layout (Concept).....	56
Figure 3-14	Sydney Freight Network	57

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Figure 3-15 Bulk quarry hopper wagon.....	59
Figure 3-16 Rail siding with hopper wagons and aggregate unloading facility at Holcim's Rooty Hill.....	59
Figure 3-17 Rail siding concept (Holcim Drawing No 17744-001).....	61
Figure 3-18 Indicative buildings.....	63
Figure 3-19 Potable water use.....	64
Figure 3-20 Washout management.....	65
Figure 4-1 Botany groundwater management zones (source: DPI NSW)	79
Figure 5-1 Flyer distribution locations.....	116
Figure 7-1 Project access and roads	130
Figure 7-2 Access road to Project entrance.....	131
Figure 7-3 Site issues map	133
Figure 7-4 Beauchamp Road/Perry Street Intersection AM Peak Turn Volumes.....	134
Figure 7-5 Beauchamp Road/Perry Street Intersection PM Peak Turn Volumes.....	134
Figure 7-6 Inbound Truck Haulage Routes	137
Figure 7-7 Outbound Truck Haulage Routes	138
Figure 7-8 Proposed upgrades.....	143
Figure 7-9 Sensitive receivers and noise logging locations	152
Figure 7-10 Indicative noise wall location	155
Figure 7-11 Sensitive receptors	168
Figure 7-12 NSW EPA monitoring sites.....	170
Figure 7-13 Satellite imagery showing smoke plume from bushfires on 21 October 2013	172
Figure 7-14 Conceptual schematic of Botany Basin sediments (Hartley 2004).....	179
Figure 7-15 Geotechnical Investigation Borehole Locations	180
Figure 7-16 DSI Bore Hole sampling locations (Hibbs & Associates, 2018)	182
Figure 7-17 DSI Test Pit and Stockpile sampling locations (Hibbs & Associates, 2018)	183
Figure 7-18 Groundwater restriction areas (Source: DPI Water)	188
Figure 7-19 Groundwater well locations (source: Hibbs 2018c)	190
Figure 7-20 Shallow groundwater table elevations and flow lines (source: Orica 2017 report/website; Golder Associates).....	193
Figure 7-21 Nearby waterways (Springvale Drain)	199
Figure 7-22 Overall site drainage.....	201
Figure 7-23 First flush concept only (CCAA 2013)	202
Figure 7-24 Washout management.....	205
Figure 7-25 Visual context of the Project Site	208
Figure 7-26 Character of the Botany Industrial Park - north and north-west of Project (image: BIP newsletter)	209
Figure 7-27 Qenos flare stacks (image: BIP newsletter).....	209
Figure 7-28 Visual points assessed	214
Figure 7-29 Viewpoint 1 – Existing views from Perry Street/Beauchamp Road intersection (Envisage Consulting Pty Ltd, 2018).....	215
Figure 7-30 Viewpoint 2 – Existing views from Orica entrance driveway (opposite Beauchamp Road residences) (Envisage Consulting Pty Ltd, 2018)	215
Figure 7-31 Viewpoint 4 – Views from Denison Street residences (Envisage Consulting Pty Ltd, 2018).....	216
Figure 7-32 Viewpoint 5 - Views from Brighton Street residences (Envisage Consulting Pty Ltd, 2018).....	216
Figure 7-33 Indicative scale of tallest Project structures (approximate)	219
Figure 7-34 Exotic groundcovers over spoil stockpiles.....	233
Figure 7-35 Exotic groundcovers over disturbed site.....	234
Figure 7-36 Shrub and small tree growth over disturbed site	234
Figure 7-37 Casuarina regrowth at the boundary with Orica.....	235
Figure 7-38 1943 Aerial Photograph of the Project Site (Source SIX Maps, NSW Government Spatial Services)	237
Figure 7-39 Mapped vegetation communities from Native Vegetation of the Sydney Metropolitan Area V3 (2016).....	238
Figure 7-40 Local heritage listed items under the SEPP (Three Ports) 2013.....	245

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Figure 7-41 Wash water management	255
---	-----

List of tables

Table 1-1 Project stages	12
Table 1-2 Banksmeadow Concrete Batching Plant & Distribution Centre	13
Table 1-3 Secretary's Environmental Assessment Requirements for this EIS	19
Table 1-4 Environmental Planning and Assessment Regulations, EIS form requirements	22
Table 1-5 Options summary	24
Table 3-1 Project stages and timing	39
Table 3-2 Stage 1 Production Requirements	42
Table 3-3 Stage 2 Production Requirements	50
Table 3-4 Site Occupancy	62
Table 3-5 Potable water usage at peak production rate	64
Table 3-6 Summary of underground services	65
Table 3-7 Construction staging	67
Table 4-1 Matters of National Environmental Significance	72
Table 4-2 Scheduled Activity Criteria Triggers (source: POEO Act Schedule 1, Clause 19)	76
Table 4-3 Definitions under Roads Act 1993	80
Table 4-4 SEPP (Three Ports) matters for consideration for ancillary earthworks	85
Table 4-5 Compliance with applicable Botany Bay DCP No.33 Industrial Development sections	94
Table 4-6 Required licences and approvals	101
Table 5-1 Summary of agency consultation through the development phase	104
Table 5-2 Key matters raised by Bayside Council in their 16 May 2018 letter	110
Table 5-3 Randwick Council Summary of Consultation	113
Table 5-4 Engagement outcomes of consultation with neighbouring landowners and occupiers	114
Table 5-5 Summary of community engagement performed to date	116
Table 6-1 Risk Analysis Consequence Definitions	120
Table 6-2 Risk Analysis Likelihood Definitions	121
Table 6-3 Risk matrix	121
Table 6-4 Risk assessment – Banksmeadow Rail Terminal and Concrete Plant, site clearance and preparatory works	122
Table 7-1 Project In/Out Traffic Generation	135
Table 7-2 Development In/Out Trip Distribution	135
Table 7-3 Construction Traffic In/Out Traffic Generation - Stage 1	139
Table 7-4 Level of Service Criteria for Signalised Intersections (based on Roads and Maritime Services)	139
Table 7-5 Existing Beauchamp Road/Perry Street Intersection SIDRA Results Summary	140
Table 7-6 Upgraded Beauchamp Road/Perry Street Intersection SIDRA Results Summary	144
Table 7-7 Traffic Mitigation Measures	145
Table 7-8 Construction Periods	148
Table 7-9 Potentially affected sensitive receivers	149
Table 7-10 Unattended Noise Monitoring Results	150
Table 7-11 Operator Attended Noise Monitoring Results	150
Table 7-12 Construction Noise Management Levels	151
Table 7-13 Project Noise Trigger Levels	153
Table 7-14 Maximum noise level screening criteria	154
Table 7-15 Predicted Noise Levels - Construction	155
Table 7-16 Predicted Operational Noise Levels – Stage 1	157
Table 7-17 Predicted Operational Noise Levels – Stage 2	158
Table 7-18 Predicted Operational Noise Levels – Stage 3	159
Table 7-19 Predicted Operational Maximum Noise Levels	161
Table 7-20 Predicted Road Traffic Noise Levels	162
Table 7-21 Working Distances for Vibration Intensive Plant	163
Table 7-22 Noise and Vibration Mitigation Table	164
Table 7-23 NSW EPA air quality impact assessment criteria	166

pitt&sherry ref: SY18040_HOLCIM_BANKSMEADOW_EIS_REVd_clean.docx



Table 7-24 Summary of PM10 levels from NSW OEH monitoring ($\mu\text{g}/\text{m}^3$)	170
Table 7-25 Summary of PM2.5 levels from NSW OEH monitoring ($\mu\text{g}/\text{m}^3$)	171
Table 7-26 Estimated annual TSP emissions rate for the Project	173
Table 7-27 Particulate dispersion modelling results for Stage 1 – Incremental impact	174
Table 7-28 Particulate dispersion modelling results for Stage 2 – Incremental impact	174
Table 7-29 Particulate dispersion modelling results for Stage 1 – Cumulative impact	175
Table 7-30 Particulate dispersion modelling results for Stage 2 – Cumulative impact	175
Table 7-31 Air Quality Mitigation Measures	176
Table 7-32 Soils and Geology Mitigation Measures	185
Table 7-33 Groundwater well summary	194
Table 7-34 Potential groundwater disposal options	195
Table 7-35 Detention basin characteristics	202
Table 7-36 Model inputs	204
Table 7-37 MUSIC model results	204
Table 7-38 Surface water and stormwater mitigation measures	206
Table 7-39 Sensitivity Ranking Criteria	210
Table 7-40 Magnitude of Change Ranking Criteria	210
Table 7-41 Landscape character and visual impact grading matrix	211
Table 7-42 Viewpoints assessed	211
Table 7-43 Visual impact to viewpoints during construction	217
Table 7-44 Visual impact to viewpoints during operation	219
Table 7-45 Visual Amenity Mitigation Measures	220
Table 7-46 Chemicals managed onsite	223
Table 7-47 Significant risks	225
Table 7-48 Hazard and risk mitigation measures	232
Table 7-49 EPBC Protected Matters Search Tool Results	239
Table 7-50 Biodiversity mitigation measures	240
Table 7-51 Mitigation Measures	242
Table 7-52 Historical heritage items near the Project Site	244
Table 7-53 Historical Heritage Mitigation Measures	246
Table 7-54 Socioeconomic, Land Use and Property Mitigation Measures	249
Table 7-55 Potential Waste Generated on-site during construction	251
Table 7-56 Potential waste generated on-site during operation	253
Table 7-57 Waste Mitigation Measures	255
Table 7-58 Potential Cumulative Impacts	257
Table 7-59 Cumulative Impacts Mitigation Measures	259

Appendices

Appendix A: SEARS
Appendix B: Bayside Council Letter
Appendix C: Concept design
Appendix D: Project Survey
Appendix E: Community Engagement Flyers
Appendix F: Stakeholder Documentation
Appendix G: Traffic Impact Assessment
Appendix H: Noise and Vibration Assessment
Appendix I: Air Quality Report
Appendix J: Geotechnical Report
Appendix K: Preliminary Site Investigation and Risk Assessment
Appendix L: Detailed Site Investigation
Appendix M: Groundwater Impact Assessment
Appendix N: Concept Stormwater Plan
Appendix O: Water Reuse and Recycling Plan

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Appendix P: Visual Impact Assessment
Appendix Q: Risk Assessment Evaluation Report
Appendix R: Desktop Database Searches
Appendix S: Outline Construction Methodology

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Reviewed by:  Date: 13 September 2018
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Authorised by:  Date: 13 September 2018
Adam Bishop

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Glossary and Abbreviations

Term/Acronym	Definition
ABS	Australian Bureau of Statistics
ACM	Asbestos Containing Material
AHD	Australian Height Datum
AHIMS	Aboriginal Heritage Information Management System
AQMP	Air Quality Management Plan
ASS	Acid Sulphate Soils
BC Act	<i>Biodiversity Conservation Act 2016</i>
Bgl	Below ground level
BIP	Botany Industrial Park
BoM	Bureau of Meteorology
CEMP	Construction Environmental Management Plan
CHCs	Chlorinated Hydrocarbons
CIV	Capital Investment Value
CLM	Contaminated Land Management Act 1997
CMA	Catchment Management Authority
CNVG	Construction Noise and Vibration Guideline
DA	Development Application
DCP	Development Control Plan
DECC	Department of Environment and Climate Change
DEC	Department of Environment and Conservation
DoEE	Department of Environment and Energy
DP	Deposit plan
DPI	Department of Primary Industries
DP&E	Department of Planning and Environment
EEC	Endangered Ecological Community
EIA	Environmental impact assessment
EIS	Environmental impact statement
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i> . Provides the legislative framework for land use planning and development assessment in NSW
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Commonwealth). Provides for the protection of the environment, especially matters of national environmental significance, and provides a national assessment and approvals process.
EPA	Environment Protection Authority
EPL	Environment Protection Licence
EPI	Environmental Planning Instrument
ERP	Emergency Response Plan
ERSED	Erosion and Sediment
ESD	Ecologically sustainable development. Development which uses, conserves and enhances the resources of the community so that ecological processes on which life depends, are maintained and the total quality of life, now and in the future, can be increased
Heritage Act	<i>Heritage Act 1977</i>
ICNG	Interim Construction Noise Guideline
INP	Industrial Noise Policy
IN1	General Industrial zone
ISEPP	State Environmental Planning Policy (Infrastructure) 2007
LALC	Local Aboriginal Land Council

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i



Term/Acronym	Definition
LEP	Local Environmental Plan. A type of planning instrument made under Part 3 of the EP&A Act.
LGA	Local Government Area
LOS	Line of Sight
MNES	Matters of national environmental significance under the Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i> .
NCG	Noise Criteria Guideline
NLOS	No Line of Sight
Noxious Weeds Act	<i>Noxious Weeds Act 1993</i>
NPW Act	<i>National Parks and Wildlife Act 1974</i>
NVMP	Noise and Vibration Management Plan
OEH	Office of Environment and Heritage (formerly DECCW)
OEMP	Operational Environmental Management Plan
OOHW	Out of Hours Work
PASS	Potential Acid Sulphate Soils
POEO Act	<i>Protection of the Environment Operations Act 1997</i>
RAE	Risk Assessment Evaluation
RAVs	Restricted access vehicle
RBL	Rating Background Level
Roads and Maritime	NSW Roads and Maritime Services
RNP	Road Noise Policy
RTA	Roads and Traffic Authority
SEARs	Secretary's Environmental Assessment Requirements
SEPP	State Environmental Planning Policy. A type of planning instrument made under Part 3 of the EP&A Act.
SEPP 33	State Environmental Planning Policy No. 33 – Hazardous and Offensive Developments
SEPP 55	State Environmental Planning Policy No. 55 – Remediation of Land
SHR	State Heritage Register
SSI	State Significant Infrastructure
SSIA	State Significant Infrastructure Application
SWMP	Soil and Water Management Plan
TMP	Traffic Management Plan
TRA	Traffic Risk Assessment
UPS	underground petroleum systems
UST	underground storage tanks
VIA	Visual Impact Assessment
WARR Act	<i>Waste Avoidance and Resource Recovery Act 2001</i>
WM Act	Water Management Act
WMP	Waste Management Plan
WHS	Work Health and Safety



Statement of Authorship


Submission of Environmental Impact Statement (EIS)

EIS prepared by:

Name:	Erik Larson
Qualifications:	Senior Environmental Consultant
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Development Application:

Proponent Name:	Holcim (Australia) Pty Ltd
Proponent Address:	Level 8, Tower B – 799 Pacific Highway Chatswood, NSW 2067
Land to be Developed:	Lot 20 in DP 1231202 Lot 1 DP 512040 Lot 1 DP 1006865 1 Beauchamp Road, Banksmeadow Bayside Local Government Area
Development Description:	Banksmeadow Concrete Plant and Rail Depot

<u>Declaration:</u>	I declare that:
	<ul style="list-style-type: none"> The statement has been prepared in accordance with Schedule 2 of the <i>Environmental Planning and Assessment Regulation 2000</i>.
	<ul style="list-style-type: none"> The statement contains all available information that is relevant to the environmental assessment of the development, activity or infrastructure to which the statement relates.
	<ul style="list-style-type: none"> That the information contained in this statement is neither false nor misleading.
Name:	pitt&sherry Pty Ltd
Signature:	
	Erik Larson
Date:	13 September 2018



Executive Summary

Holcim (Australia) Pty Ltd (**Holcim**) is seeking planning approval to construct and operate the proposed Banksmeadow Concrete Plant and Rail Depot (the Project) at 1 Beauchamp Road, Banksmeadow (the Project Site).

Holcim is a company that has been delivering construction materials in Australia since 1901. Originally serving the industry under the well-known Readymix and Humes brands (and more recently as Rinker and CEMEX), Holcim is a leading supplier of building materials including aggregate and sand, concrete, concrete pipe and concrete products.

Holcim operates across the Australian mainland supplying materials from a network of 65 sand and aggregate quarries, 250 concrete plants, 900 mixer trucks and 12 precast concrete factories. In NSW and the ACT Holcim's 12 quarry operations and 54 concrete plants provide consistent, quality products for a diverse range of government and private customers and their associated infrastructure and construction related applications.

This Environmental Impact Statement (EIS) has been prepared by pitt&sherry on behalf of Holcim to support an application for planning approval. This EIS has been prepared in accordance with the Secretary's Environmental Requirements (SEARs), SEARs number 1213, issued on 23 March 2018 by the NSW Department of Planning and Environment (refer to **Appendix A**).

Planning approval is sought for the Project under Part 4, Division 4.12 (8) of the NSW *Environment and Planning and Assessment Act 1979*, for 'designated development' as defined in Schedule 3 of the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation). Schedule 3 of the EP&A Regulation sets out development types that classify as Designated Development and outlines provisions for any EIS that is required to accompany an application for Designated Development. The Proposed development meets the description of Designated Development by virtue of Clause 14 (Concrete Works) and Clause 19 (Extractive Industries) which are explained in more detail in Section 1.5. The Project also requires licencing under the *Protection of Environmental Operations Act 1997* (POEO Act) making it 'integrated development' as well.

The relevant consent authority is Bayside Council; however, as Designated Development the Project would be referred to the Bayside Planning Panel for determination.

This Environmental Impact Statement (EIS) considers the environmental, social and economic impacts of the Project. Chapters 1, 2, 3 and 4 of this EIS define the justification of the Project. Chapters 5, 6, and 7 of this EIS assess the impacts of the Project and identify measures that would be implemented to avoid and minimise impacts. A summary of mitigation measures and concluding statements regarding the benefits of the Project are provided in Chapters 8 and 9. The Appendices comprise the concept design and a range of technical studies prepared for the Environmental Impact Statement.

What is proposed?

Holcim proposes to construct and operate a temporary and permanent concrete batch plant and aggregate storage and distribution facility on Lot 20 DP1231202. The plant would produce up to 220,000 cubic metres (m³) of concrete per annum. In association with the concrete plant Holcim would use a yet to be constructed rail depot to receive deliveries of approximately 500,000 tonnes of aggregate annually for concrete production or distribution to Sydney markets.

The Project proposes the use of 2.3 hectares (ha) on part of Lot 20 DP1231202 to be leased from Pacific National. Pacific National have provided landowner consent for the lodgement of this development



application. Construction of the rail siding and aggregate unloading facility would be undertaken by others and does not form part of this Development Application. Operation and maintenance of the rail siding is expected to be provided by Pacific National.

Development consent is also sought for construction of conveyor systems between the rail depot and the aggregate storage facilities. Conveyors would be constructed on land owned by Railcorp and leased to the Australian Rail Track Corporation (ARTC), identified as Lot 1 DP 512040 and Lot 1 DP 1006865. Holcim has obtained landowner consent from ARTC for lodgement of this development application, as well as general support from ARTC for the Project.

Development consent is sought for the following key elements of the Project:

- Staged construction and operation of a temporary and permanent concrete batching plant and associated facilities including aggregate, sand and cement storage, additive and admixture storage, conveyors, bins, silos and auxiliary equipment;
- Use of the rail depot for unloading and receiving aggregate materials;
- Construction and operation of an aggregate storage and distribution facility to receive aggregates by road and rail and dispatch aggregates by road;
- Earthworks including importing clean fill as necessary to establish design levels;
- Retaining walls and fencing;
- Parking of agitators and trucks;
- Stormwater management and treatment facilities;
- Agitator wash-out, slump stands, water storage, water reuse and recycling facilities;
- Offices, operator facilities, control rooms, amenities, crib rooms, ablutions, storage areas and ancillary facilities to support the operations;
- Parking of staff and visitor vehicles;
- Power supply (transformer) and utilities and services connections; and
- Noise wall (approximately 3-4m high, subject to detailed design); and
- Associated ancillary activities.

The following is not part of the Project and is not included in this development application, but is of relevance to the Project:

- Construction of the rail siding and aggregate unloading facility. This is to be undertaken by others in accordance with any required consent or approval; and
- Vegetation clearing over the Project Site. Bayside Council approved the vegetation clearing works on 15 June 2018 in accordance with an application by Pacific National.

The Project Site is ideally located between Beauchamp Road to the east, Botany Industrial Park to the north and the existing Veolia waste transfer facility to the south. The existing rail corridor sits to the west. Access to the Project Site would be from the extension of Perry Street across Beauchamp Road.

In order to bring capability/capacity online as soon as possible, Holcim proposes to stage construction such that in Stage 1 a small mobile concrete plant is mobilised (minimal mobilisation costs) whilst the more extensive Stage 2 plant and rail unloading facilities are constructed. Upon completion and commissioning of the rail siding and aggregate unloading facility, Holcim would commence using the rail siding for import of aggregates to supply the fixed concrete batching facilities and aggregate distribution facility in Stage 3.



The Project would be well-positioned inside the State Environmental Planning Policy (Three Ports) general industrial zone within the Bayside Local Government Area (LGA) approximately 10 kilometres south of the Sydney central business district (CBD).

What are the objectives?

The key objectives of the Project are to:

- Establish a concrete plant and aggregate distribution facility in an appropriate location near major markets;
- Provide essential construction materials and concrete to service the Sydney CBD and environs markets;
- Reduce logistics costs by supplying aggregates to Holcim's concrete plant and aggregate depot directly by rail; and
- Minimise impacts on the natural and built environment and community.

Other benefits would accrue by transporting aggregate to the Project Site by rail, including:

- Minimise conflict between city traffic and aggregate deliveries along the Hume Highway and M5;
- Reduce travel times and congestion on the Hume Highway and M5;
- Improve road safety;
- Reduce Sydney's traffic congestion;
- Provide value for money.

To support the Project objectives, the concept design and EIS have been developed by undertaking the following:

- Carrying out appropriate community and stakeholder consultation;
- Planning temporary arrangements which minimise disruption to local and through traffic and maintains access to adjacent properties during construction and operation of the concrete batching plant;
- Designing the Project to consider the environmental constraints and avoid or minimise impacts to the environment and community;
- Satisfying the technical requirements for the design of the Project;
- Optimising the concept design to ensure the Project can be constructed and maintained both practically, safely and efficiently;
- Applying appropriate urban design, landscape and visual principles in the concept design of the project elements; and
- Designing all connections, modifications and improvements necessary to link the Project to the existing road and rail networks.

The overall Project goal is to achieve the best possible result for each of the above, both in isolation and when considered together.

Why is it needed?

The Sydney region market demand for concrete aggregate has grown exponentially in recent years. A review undertaken by Holcim determined that Holcim requires additional plant to service the Sydney markets demand for concrete aggregates and concrete.



The road network associated with the existing transportation of concrete aggregates into the Sydney City currently experiences high levels of traffic congestion and delays at key intersections. Holcim currently transports aggregates from the Lynwood Quarry at Marulan in the Southern Tablelands of NSW into the City of Sydney. The quarry is located in the Goulburn Mulwaree LGA, approximately 160km south west of Sydney and 27km north east of Goulburn. The Project would allow receipt of aggregate material from available sources including the Lynwood Quarry.

The Project location, with access to the Sydney Freight Network, would minimise conflict between city/commuter vehicles, local traffic by transporting aggregates by rail.

Delivery of concrete and aggregates to the fast-growing Sydney CBD, eastern, inner-western and northern suburbs is essential to the socio-economics and development of the Sydney region. Additionally, concrete typically has a limited life (about 1 hour) and therefore concrete plants must be located close to market. The Project Site is well-positioned to contribute and support infrastructure and development projects such as Westconnex, the Sydney Light Rail and the Sydney Metro and others. The location of the Project would greatly reduce logistics-based cost components and has the potential to positively influence the financial and delivery outcomes of these important public and private works.

How would the Project satisfy this need?

- 500,000 tonnes of aggregate would be transported to the Project Site via rail and removed from the road network. The Project would result in the removal of approximately 30,000 to 40,000 truck movements, reducing congestion and pollution and improving NSW road safety;
- The Project Site is zoned appropriately as IN1 General Industrial, wherein a rail freight depot and concrete plant are permitted with consent;
- The Project Site is compatibly located within an existing industrial area between Orica/Botany Industrial Park and Veolia which both currently operate 24/7;
- The Project would provide an additional reliable and nearby supply of concrete and aggregates (that meets Roads and Maritime Services specification - 30 mins from vehicle loading to concrete placing) to major projects such as Westconnex, Sydney Light Rail, Sydney Metro and associated private residential, commercial and industrial developments; and
- Upon completion, the Project would provide an additional 45 - 60 jobs and numerous support roles for associated contractors.

Environmental Constraints and Opportunities

This EIS describes the environmental risks related to the Project and provides a comprehensive assessment of these risks. The potential environmental impacts have been identified through assessment of the Project scope, review of the SEARs issued by DP&E, and consultation with relevant stakeholders and the community.

Specialist studies were undertaken to address key identified environmental risks including traffic and access, air quality, noise and vibration, risks and hazards, contamination, groundwater, stormwater management, and visual amenity. The specialist reports are provided in the Appendices.

All potential environmental impacts have been assessed in detail in the EIS. Overall the environmental risks presented by the Project are not significant. Several features contribute to the suitability of the Project Site including:

- Owned by Pacific National and located near the rail corridor;
- Is suitably zoned industrial land and the existing surrounding environment includes commercial/industrial premises;
- Is central to the greater Sydney infrastructure markets;



The environmental impact assessment that was undertaken concludes that whilst the Project would have some impacts on air quality, noise, public amenity and traffic these impacts are manageable and can be reduced to an acceptable level with the implementation of the mitigation and management measures identified in Chapter 8. The Project can be constructed and operated without limiting existing or future land uses or current land uses surrounding the Project Site.



1. Introduction

This Environmental Impact Statement (EIS) has been prepared by **pitt&sherry** on behalf of Holcim (Australia) Pty Ltd (**Holcim**) to obtain relevant approvals to commence construction and operation of the Banksmeadow Concrete Plant and Rail Depot (the Project).

The Project proposal meets the definition of Designated Development under Schedule 3, Part 1, Clause 14 (Concrete Works) of the Environmental Planning and Assessment Regulation 2000 (EP&A Regulation 2000) as the project has an intended capacity of more than 30,000 tonnes per year of concrete or concrete products prompting the need for an Environmental Impact Statement. The Project also classifies as Designated Development under Clause 14 (Extractive Industries) as it has the capacity to store more than 30,000 tonnes of extractive materials per year.

The construction of the new facility will be staged as follows:

- Stage 1: Establish and operate a small mobile concrete batching plant whilst the main concrete plant is constructed;
- Stage 2: Operate the main, permanent concrete plant whilst Pacific National constructs the rail siding and aggregate unloading facility and rail depot; and
- Stage 3: Operate the main concrete batching plant and newly constructed rail depot.

This EIS has been prepared pursuant to the Secretary's Environmental Assessment Requirements (SEARs) for the Project proposal issued by the Department of Planning and Environment (DP&E) on 23 March 2018. A copy of the SEARs is included in **Appendix A**.

The Project Site is located at 1 Beauchamp Road, Banksmeadow within the Bayside Council Local Government Area (LGA) and zoned as "IN1 – General Industrial" under the State Environmental Planning Policy (Three Ports) 2013. Surrounding land uses include a combination of light industrial, heavy industrial, retail, commercial and residential. Botany Industrial Park is directly north of the Project Site. Further to the north and east beyond the immediate commercial and industrial areas are the residential neighbourhoods of Matraville and Hillsdale. Sydney airport sits to the north-west and Port Botany to the south (Figure 1-1).

The key benefit of the Project is the provision of a new Banksmeadow rail depot and concrete batching plant to meet increased market demand associated with continual infrastructure development growth within Sydney. The proposed Project would enable Holcim to: make concrete at the Project Site; distribute the products to Sydney construction sites; and receive, store and distribute construction materials to meet customer requirements in the Sydney region.

The Project would also provide socio-economic benefits as the new facility is likely to have between 45 and 60 full time equivalent employees and generate many more jobs over the construction stage.

This EIS describes the key environmental risks related to the Project and provides a comprehensive assessment of these risks. The key potential environmental impacts have been identified through assessment of the Project scope, specialist investigations, review of the SEARs issued by DP&E, and consultation with relevant stakeholders including the local community.



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Section 6 of this EIS contains an environmental risk assessment which identifies the key environmental risks of the Project, these being:

- Traffic and transport;
- Noise and vibration;
- Air quality;
- Soils and geology;
- Groundwater;
- Surface water;
- Visual amenity;
- Hazards and risk;
- Waste;
- Biodiversity;
- Indigenous heritage;
- Historic heritage;
- Socio-economic, land use and property; and
- Cumulative impacts.

A number of potential environmental impacts from the Project have been avoided or reduced through design development and options assessment. These changes include:

- Minimising noise impacts through implementation of noise barriers;
- Commitment to use of a GPS tracking system in trucks for vehicle tracking to ensure compliance with approved vehicle haulage routes;
- Avoiding groundwater impacts through minimising excavation and use of driven piles;
- Minimising the impact of traffic on the community through coordination with RMS to implement findings from the traffic study; and
- Reducing amenity impacts by the use of subdued colours and setback of the main plant area.

The EIS identifies appropriate mitigation measures to control the potential environmental impacts of the Project during detailed design, construction and operation of the Project. As part of the environmental impact assessment, specialist technical consultants have been engaged and consulted to identify risks and recommend mitigation measures that, when implemented, would minimise environmental impacts of the Project. These mitigation measures are summarised in Section 8 of this report.

This EIS concludes that whilst the Project would have some impacts on: traffic; noise and vibration; air quality; soils and geology; groundwater; surface water; and hazards and risk, these impacts are not significant and therefore could be reduced to an acceptable level with the implementation of the mitigation measures identified in Section 8 or will be appropriately managed through the Project design.

On the whole, the Project would provide benefits to the region and on balance the Project is considered justified.

1.1 Proponent identification

Holcim (Australia) Pty Ltd (Holcim) is a global company operating in Australia. Holcim, on a global scale employs 83,000 people, with production sites in over 70 countries. Holcim is more globally spread than any



other building materials group, allowing them to create a strong foothold in each individual market. The company aims to keep a balanced portfolio, and their business strategy is based on continuous growth in both developed economies and emerging, high-growth markets.

Holcim has been delivering construction materials in Australia since 1901. Originally serving the industry under the well-known Readymix and Humes brands, Holcim is a leading supplier of building materials including aggregate and sand, concrete, concrete pipe and concrete products.

Holcim operates across the Australian mainland supplying materials from a network of 65 sand and aggregate quarries, 250 concrete plants, 900 mixer trucks and 12 precast concrete factories. In NSW and the ACT Holcim's 12 quarry operations and 54 concrete plants provide consistent, quality products for a diverse range of Government and private customers and their associated infrastructure and construction related applications.

1.2 Project Overview

Holcim proposes to construct and operate a concrete batching plant with associated office and vehicle parking. Additionally, the Project would operate a new rail depot to allow delivery of aggregates and other material to the Project Site for use in concrete production or for material deliveries to construction sites and other concrete plants.

The Project Site is compatibly sited in-between the newly constructed Veolia waste transfer terminal, which freights general solid waste by rail to Woodlawn near Goulburn, and the large industrial operations at Botany Industrial Park (Figure 1-3).

The Project is proposed to commence in 2019, and to be constructed and operated in the stages outlined in Table 1-1.

Table 1-1 Project stages

	Stage 1	Stage 2	Stage 3
Operational plant and equipment	Mobile concrete batching plant and aggregate storage	Fixed concrete batching plant and aggregate storage facilities	Fixed concrete batching plant and aggregate storage facilities and rail depot
Concurrent construction stages	Mobile and fixed concrete batching and aggregate storage facilities, including truck unloading conveyor systems. Commencement of construction of rail siding and rail wagon unloading facility,	Construction of rail siding and aggregate unloading facility (separate approval and construction by Pacific National)	Operation only
Approximate duration	21 months	6 months	Post completion of rail siding and fixed plant

1.3 Project Site and Land Ownership

The Project Site is located at 1 Beauchamp Road, Banksmeadow on approximately 2.4 hectares of land, of which approximately 2.3ha is owned by Pacific National and 0.1ha is owned by Railcorp and leased/operated by ARTC.



The Project would be located primarily on Lot 20 DP1231202, currently owned by Pacific National. A portion of this lot would be leased by Holcim under a long-term lease agreement for Holcim's intended uses as described in this EIS. Pacific National have provided landowner consent for the lodgement of this development application.

A small portion of the Project would be located on Lot 1 DP512040 and Lot 1 DP1006865, both owned by Railcorp and operated by ARTC, for the operation of an aggregate unloading facility and construction and operation of an associated conveyor system. Holcim has obtained landowner consent from ARTC for lodgement of this development application.

The relevant parts of the ARTC/Railcorp lots may be subject to a separate lease for establishment of the aggregate unloading facility.

A breakdown of the land ownership is shown in Table 1-2 and illustrated in Figure 1-2.

Table 1-2 Banksmeadow Concrete Batching Plant & Distribution Centre

Lot / DP	Owner	Existing Use	Proposed Use
Lot 20 DP 1231202	Pacific National Pty Ltd	<p>The land to be leased by Holcim and subject of this DA is Vacant Land</p> <p>The land is highly disturbed and there is no current operational use for the land. There are some non-native trees, shrubs and exotic weeds within the Project Site.</p> <p>The southern half of this lot is currently occupied by Veolia under a separate agreement with Pacific National.</p>	Holcim proposes to lease the land from Pacific National Pty Ltd to operate a concrete batching plant and aggregate distribution centre.
Lot 1 DP 512040	Railcorp / ARTC	Partial Rail Corridor and Rail. Land is highly disturbed.	Holcim proposes to use a small portion of ARTC land to access rail tracks, construct conveyor systems operate the aggregate unloading facility.
Lot 1 DP 1006865	Railcorp / ARTC	Rail / Rail Corridor. Land is highly disturbed.	Holcim proposes to use a small portion of ARTC land to access rail tracks, construct conveyor systems operate the aggregate unloading facility.



Figure 1-2 Lot and DPs of the Project Site

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14



1.4 Site History

The Project Site has experienced many uses over the last 100 years including manufacturing, metal fabrication, the storage of skip bins, semi-trailers and shipping containers. Previously, Asciano used the existing rail siding built in the 1950s (which connects to the Botany Goods Line) to store railway cars and handle freight containers.

Varied land uses surrounding the Project Site and west of the Botany Goods Line are predominantly for manufacture of chemicals, surfactants and plastics, steel fabrications and freight warehousing.

Land use on the Project Site included container transfers between road and rail, train shunting, minor wagon maintenance and locomotive refuelling. Ownership of the Project Site (Lot 20 DP1231202) was transferred to Pacific National in 2002 via an asset sale by the NSW Government.



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1.5 Approval pathway

The Project requires assessment under Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). The Project meets the definition of “designated development” and triggers the need for an Environmental Impact Statement under Schedule 3 (Clause 14) of the Environmental Planning and Assessment Regulation 2000, as follows:

14 Concrete works

- (1) *Concrete works that produce pre-mixed concrete or concrete products and:*
 - (a) *that have an intended production capacity of more than 150 tonnes per day or 30,000 tonnes per year of concrete or concrete products, or*
 - (b) *that are located:*
 - (i) *within 100 metres of a natural waterbody or wetland, or*
 - (ii) *within 250 metres of a residential zone or dwelling not associated with the development.*
- (2) *This clause does not apply to concrete works located on or adjacent to a construction site exclusively providing material to the development carried out on that site:*
 - (a) *for a period of less than 12 months, or*
 - (b) *for which the environmental impacts were previously assessed in an environmental impact statement prepared for that development.*

The Project would have a concrete production capacity of more than 150 tonnes per day or 30,000 tonnes per year and therefore is considered “designated development”. The Project is entirely within the Bayside LGA. By virtue of the Project being a designated development, it will be determined by an Independent Hearing and Assessment Panel, in this case the Bayside Planning Panel. The Local Planning Panels (LPP) direction issued by the Minister on 23 February 2018 identifies development applications that are to be determined by a LPP and this includes Designated Developments.

The Project Site adjoins Randwick LGA. Whilst a small part of the access road to the Project proposed entry gate is within Randwick LGA, no development would occur on land within Randwick LGA. After discussions with Randwick Council it was determined that Randwick Council does not have any statutory approvals function. However, Randwick Council has provided a letter outlining suggested requirements for the EIS (**Appendix F**) and has been consulted through Project design development regarding traffic and other matters.

The Project does not meet the conditions in Schedule 1 of the SEPP (State and Regional Development) to prompt the requirement to lodge this Project application as a State Significant Development.

The project is an integrated development under Part 4.8 of the EP&A Act and requires an Environment Protection Licence (EPL) under the *Protection of the Environment Operations Act 1997* (POEO Act). Concrete batching plants are not a ‘scheduled activity’ and do not require a POEO Act Licence under Clause 13(1) of Schedule 1. However, under Clause 19 of Schedule 1 of the POEO Act, the premises is required to operate under an EPL as the proposal includes the storage and distribution of over 30,000 tonnes of aggregate annually. The Environmental Protection Authority regulates EPLs under the POEO Act 1997.

Bayside Council will be the consent authority for the premises under the EP&A Act, and the consent will provide the environmental criteria for the Project.

1.6 Permissibility

The Project is located on land zoned “IN1-General Industry” under the SEPP (Three Ports) 2013. General Industry is permissible with consent within the zone.

IN1 General Industry Zone Objectives:

- To provide a wide range of industrial and warehouse land uses.



- To encourage employment opportunities.
- To minimise any adverse effect of industry on other land uses.
- To facilitate and encourage port related industries that will contribute to the growth and diversification of trade through the port.
- To enable development for the purposes of business premises or office premises associated with, and ancillary to, port facilities or industries.
- To encourage ecologically sustainable development.

The Project is considered a type of general industry.

Rezoning of the area is not required. The activities of the Project do not trigger any prohibited activities under the SEPP (Three Ports) 2013 and will provide a positive effect and support the surrounding commercial and industrial businesses in the local area.

The proposed development is not considered to be a form of 'heavy industry'. "Heavy Industry" is defined as:

"heavy industry means a building or place used to carry out an industrial activity that requires separation from other development because of the nature of the processes involved, or the materials used, stored or produced, and includes:

- (a) hazardous industry, or*
- (b) offensive industry.*

It may also involve the use of a hazardous storage establishment or offensive storage establishment."

Under SEPP 33, an 'offensive industry' is defined as follows:

"a development for the purposes of an industry which, when the development is in operation and when all measures proposed to reduce or minimise its impact on the locality have been employed (including, for example, measures to isolate the development from existing or likely future development on other land in the locality), would emit a polluting discharge (including, for example, noise) in a manner which would have a significant adverse impact in the locality or on the existing or likely future development on other land in the locality."

Under SEPP 33, a 'hazardous industry' is defined as follows:

"a development for the purposes of an industry which, when the development is in operation and when all measures proposed to reduce or minimise its impact on the locality have been employed (including, for example, measures to isolate the development from existing or likely future development on other land in the locality), would pose a significant risk in relation to the locality:

- (a) to human health, life or property, or*
- (b) to the biophysical environment."*

The development application is supported by a Risk Assessment Evaluation (RAE) that includes a SEPP 33 Preliminary Hazard Analysis (PHA). The RAE concludes the development is not hazardous or offensive development and, therefore, meets the definition of General Industry and not Heavy Industry. Details of the risk assessment process are provided in **Appendix Q** and summarised in Section 7.8 of this EIS. Review of the concept designs and plans (**Appendix C**) prepared in support of the development application conclude that the Proposal does not constitute high risk activities after risk controls are in place.

Safeguards have been developed and are provided in this EIS (Section 8) to ensure any potential emissions from the Proposal would be controlled to acceptable levels.



1.7 Secretary's Environmental Assessment Requirements (SEARs)

The Secretary's Environmental Assessment Requirements (SEARs) for this EIS were received on 23 March 2018 and are summarised in Table 1-3. The SEARs and agency responses are contained in **Appendix A** of this EIS.

The SEARs identify the following key issues to be addressed in the development application:

- Statutory and Strategic Context
- Policies, Guidelines and Planning agreements
- Hazards and risk
- Air quality
- Noise and Vibration
- Soil
- Water (surface water and groundwater)
- Sediment, Erosion and Dust Control
- Traffic, transport and accessibility
- Land resources
- Waste management
- Biodiversity
- Visual
- Heritage
- Ecologically sustainable development
- Contamination
- Contributions
- Construction Hours.

The SEARs also specify that Holcim must consult with the relevant local, State or Commonwealth Government authorities, service providers, community groups, special interest groups including Local Aboriginal Land Councils, and affected landowners. Consultation undertaken by Holcim in support of this EIS is detailed in Section 5.

Table 1-3 Secretary's Environmental Assessment Requirements for this EIS

Requirements	Section addressed
General Requirements, including: The Environmental Impact Statement (EIS) must meet the minimum form and content requirements in clauses 6 and 7 of Schedule 2 of the Environmental Planning and Assessment Regulation 2000.	This EIS
Key issues, including: The EIS must include an assessment of all potential impacts of the proposed development on the existing environment (including cumulative impacts if necessary) and develop appropriate measures to avoid, minimise, mitigate and/or manage these potential impacts. As part of the EIS assessment, the following matters must also be addressed:	Section 7 Section 8
Strategic context, including: <ul style="list-style-type: none"> • a detailed justification for the proposal and suitability of the site for the development; • a demonstration that the proposal is consistent with all relevant planning • strategies, environmental planning instruments, development control plans (DCPs), or justification for any inconsistencies; and • a list of any approvals that must be obtained under any other 	Section 1.8, 1.9 and Section 2.5 Sections 4.1 and 4.2 Sections 4.3, 4.4 and 4.5 Section 4.6 and Table 4-6



Requirements	Section addressed
Act or law before the development may lawfully be carried out.	
Hazards and risk, including: <ul style="list-style-type: none"> a preliminary risk screening completed in accordance with State Environmental Planning Policy No. 33 – Hazardous and Offensive Development and Applying SEPP 33 (DoP, 2011), with a clear indication of class, quantity and location of all dangerous goods and hazardous materials associated with the development. Should preliminary screening indicate that the project is "potentially hazardous" a Preliminary Hazard Analysis (PHA) must be prepared in accordance with Hazardous Industry Planning Advisory Paper No. 6 – Guidelines for Hazard Analysis (DoP, 2011) and Multi-Level Risk Assessment (DoP, 2011); sufficient reporting on the consultation undertaken with Botany Industrial Park (BIP) on issues relating to hazards and risks from BIP; and demonstration that the development complies with Hazardous Industry Planning Advisory Paper No. 4, 'Risk Criteria for Land Use Safety Planning' (DoP, 2011). 	<p>Section 7.8 and Appendix Q</p> <p>Section 5</p> <p>Section 7.8 and Appendix Q</p>
Air quality, including: <ul style="list-style-type: none"> a description of all potential sources of air and odour emissions; an air quality impact assessment in accordance with relevant Environment Protection Authority guidelines; and a description and appraisal of air quality impact mitigation, management and monitoring measures. 	Section 7.3 and Appendix I
Noise and vibration, including: <ul style="list-style-type: none"> a description of all potential noise and vibration sources during construction and operation, including road and rail traffic noise; a noise and vibration assessment in accordance with the relevant Environment Protection Authority guidelines; and a description and appraisal of noise and vibration mitigation, management and monitoring measures. 	Section 7.2 and Appendix H
Soil and water, including: <ul style="list-style-type: none"> a description of local soils, topography, drainage and landscapes; details of water usage for the proposal including existing and proposed water licencing requirements in accordance with the Water Act 1912 and/or the Water Management Act 2000; an assessment of potential impacts on floodplain and stormwater management and any impact to flooding in the catchment; details of sediment and erosion controls; a detailed site water balance; an assessment of potential impacts on the quality and quantity of surface and groundwater resources; details of the proposed stormwater and wastewater management systems (including sewage), water monitoring program and other measures to mitigate surface and groundwater impacts; characterisation of the nature and extent of any contamination on the site and surrounding area; and a description and appraisal of impact mitigation and monitoring 	<p>Sections 7.4, 7.5 and 7.6</p> <p>Section 7.6</p> <p>Sections 7.4 Section 7.6</p> <p>Sections 7.4, 7.5 and 7.6 and Appendices M and N</p> <p>Sections 7.4, 7.5 and 7.6</p> <p>Sections 7.4</p> <p>Sections 7.4, 7.5 and 7.6 Section 8</p>



Requirements	Section addressed
measures.	
Traffic and transport, including: <ul style="list-style-type: none"> a traffic impact assessment in accordance with Roads and Maritime Services guidelines; details of road transport routes and access to the site; road traffic predictions for the development during construction and operation; an assessment of impacts to the safety and function of the road network and the details of any road upgrades required for the development; details of the design of the rail siding and connection(s) to the rail network; details of train operating plans, including likely rail routes and origins, train size and configuration, service frequency, expected ramp up periods and peak demand; and demonstrated engagement with and confirmation from all relevant rail network owners regarding train path availability over the life of the development. 	Section 7.1 and Appendix G Section 3.6 Section 7.1 and Appendix G Section 3.6 Section 3.6 Section 3.6 Section 5.4 and 5.5 Section 3.6
Land resources, including: <ul style="list-style-type: none"> an assessment of the compatibility of the development with other land uses in the vicinity of the development, in accordance with the requirements of Clause 12 of State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007. 	Section 0 and Section 4.5 Section 4.3.8
Waste management, including: <ul style="list-style-type: none"> details of waste handling including, transport, identification, receipt, stockpiling and quality control including off-site reuse and disposal; and the measures that would be implemented to ensure that the proposed development is consistent with the aims, objectives and guidelines in the NSW Waste Avoidance and Resource Recovery Strategy 2014-21. 	Section 7.13
Biodiversity, including: <ul style="list-style-type: none"> a description of any potential vegetation clearing needed to undertake the proposal and any impacts to flora and fauna; and details of weed management during construction and operation in accordance with existing State, regional or local weed management plans or strategies; and a detailed description of the measures to avoid, minimise, mitigate and offset biodiversity impacts. 	Section 7.9
Visual, including: <ul style="list-style-type: none"> an impact assessment at private receptors and public vantage points. 	Section 7.7 and Appendix P
Heritage, including: <ul style="list-style-type: none"> Aboriginal and non-Aboriginal cultural heritage. 	Sections 7.10 and 7.11
Environmental Planning Instruments and other policies, including: <ul style="list-style-type: none"> State Environmental Planning Policy (Infrastructure) 2007; State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007; State Environmental Planning Policy (Vegetation in Non-Rural 	Section 4.3.3 Section 4.3.8 Section 4.3.4



Requirements	Section addressed
<ul style="list-style-type: none"> Areas) 2017; State Environmental Planning Policy No 19–Bushland in Urban Areas; State Environmental Planning Policy No 33–Hazardous and Offensive Development; State Environmental Planning Policy No 55–Remediation of Land; State Environmental Planning Policy (Three Ports) 2013; and relevant development control plans and section 94 plans. 	<p>Section 4.3.9</p> <p>Section 4.3.5</p> <p>Section 4.3.6 Section 4.3.1</p> <p>Section 4.5 and Section 4.5.5</p>
<p>During the preparation of the EIS, you must consult the relevant local, State and Commonwealth government authorities, service providers and community groups, and address any issues they may raise in the EIS. In particular, you should consult with the:</p> <ul style="list-style-type: none"> Environment Protection Authority; Office of Environment and Heritage; Department of Primary Industries; Roads and Maritime Services; WaterNSW; Port Authority of NSW; Australian Rail Track Corporation; Transport for NSW; Bayside Council; Botany Industrial Park; and the surrounding landowners and occupiers that are likely to be impacted by the proposal. <p>Details of the consultation carried out and issues raised must be included in the EIS</p>	Section 5
<p>Further consultation after 2 years. If you do not lodge an application under section 4.12(8) of the Environmental Planning and Assessment Act 1979 within 2 years of the issue date of these SEARs, you must consult with the Secretary in relation to any further requirements for lodgement.</p>	Noted

This EIS has also been prepared to meet the requirements of the *Environmental Planning and Assessment Act 1979* and the *Environmental Planning and Assessment Regulations 2000*. Table 1-4 identifies where these requirements have been addressed in the EIS.

Table 1-4 Environmental Planning and Assessment Regulations, EIS form requirements

Requirement	Addressed
6 Form of environmental impact statement	
An environmental impact statement must contain the following information:	
(a) the name, address and professional qualifications of the person by whom the statement is prepared,	Statement of Validity
(b) the name and address of the responsible person,	Statement of Validity
(c) the address of the land:	Statement of Validity
(i) in respect of which the development application is to	Statement of Validity



Requirement	Addressed
be made, or	
(ii) on which the activity or infrastructure to which the statement relates is to be carried out,	Statement of Validity
(d) a description of the development, activity or infrastructure to which the statement relates,	Statement of Validity
(e) an assessment by the person by whom the statement is prepared of the environmental impact of the development, activity or infrastructure to which the statement relates, dealing with the matters referred to in this Schedule,	Statement of Validity
(f) a declaration by the person by whom the statement is prepared to the effect that:	
(i) the statement has been prepared in accordance with this Schedule, and	Statement of Validity
(ii) the statement contains all available information that is relevant to the environmental assessment of the development, activity or infrastructure to which the statement relates, and	Statement of Validity
(iii) that the information contained in the statement is neither false nor misleading	Statement of Validity
7 Content of environmental impact statement	
(1) An environmental impact statement must also include each of the following:	
(a) a summary of the environmental impact statement,	Executive Summary
(b) a statement of the objectives of the development, activity or infrastructure,	Executive Summary
(c) an analysis of any feasible alternatives to the carrying out of the development, activity or infrastructure, having regard to its objectives, including the consequences of not carrying out the development, activity or infrastructure,	Section 1.9
(d) an analysis of the development, activity or infrastructure, including:	
(i) a full description of the development, activity or infrastructure, and	Section 3
(ii) a general description of the environment likely to be affected by the development, activity or infrastructure, together with a detailed description of those aspects of the environment that are likely to be significantly affected, and	Section 2.5 and Section 7
(iii) the likely impact on the environment of the development, activity or infrastructure, and	Section 7
(iv) a full description of the measures proposed to mitigate any adverse effects of the development, activity or infrastructure on the environment, and	Section 8
(v) a list of any approvals that must be obtained under any other Act or law before the development, activity or infrastructure may lawfully be carried out,	Section 4.6
(e) a compilation (in a single section of the environmental impact statement) of the measures referred to in item (d) (iv),	Section 8
(f) the reasons justifying the carrying out of the	Section 9



Requirement	Addressed
development, activity or infrastructure in the manner proposed, having regard to biophysical, economic and social considerations, including the principles of ecologically sustainable development set out in subclause (4).	

1.8 Business Case

Sydney is Holcim's largest market in Australia and in recent years Holcim has made significant investments in this market including Lynwood Quarry (\$254m), and a cement grinding plant (Cement Australia – 50% owned by Holcim) at Port Kembla.

Concrete demand in Sydney has doubled since 2010 to greater than 6,000,000m³ in 2017, and is forecast to remain at elevated levels for the foreseeable future. The Greater Sydney Commission has outlined plans for future development, and therefore future concrete demand is expected to be focused in specific growth corridors including:

- The Western Sydney Priority Growth Zone which includes a new airport and residential / employment growth areas; and
- Sydney CBD and South East Sydney where there are high levels of urban infill driving the development of public transport infrastructure which in turn further drives urban infill.

Analysis suggests that based on Holcim's historical market share an increase in capacity of 220,000m³/year is required to meet this growth.

There is a significant shortage of capacity in the Sydney CBD and South East Sydney areas which is prompting all industry participants to add capacity. Holcim currently supplies the markets from plants at Artarmon and Alexandria, with both these plants currently operating at maximum capacity.

1.9 Options Analysis

Holcim selected the Banksmeadow location Project Site after a site selection assessment was conducted based on information provided by the business plan. The business plan specifies market requirements that need to be met in order to justify the capital investment, which guided the site selection process. Two locations were considered based on information provided in the business plan including 1) upgrade of Holcim's Alexandria Concrete Plant, or 2) a new plant located in the Banksmeadow locality. The main alternatives considered are listed as follows and an analysis of the options provided in Table 1-5. In addition, a "Do Nothing" option was considered as part of the analysis.

- 1) Upgrade Holcim's Alexandria Concrete Plant by approximately 500 m³/day;
- 2) New site and concrete plant in Banksmeadow/Botany/Matraville area with a capacity of 2,500 m³/day with no rail access;
- 3) Lease land from Pacific National at Banksmeadow Project Site to facilitate rail access; and
- 4) Do Nothing

Table 1-5 Options summary

Option	Potential Concrete Capacity (m ³ /day)	Costs	Option Analysis
Upgrade Holcim's Alexandria	~500 (additional)	High	<ul style="list-style-type: none"> • Capacity increase objective not met; • High transport cost of raw materials not

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24



Option	Potential Concrete Capacity (m ³ /day)	Costs	Option Analysis
Concrete Plant			<ul style="list-style-type: none"> addressed; Limited space on site results in very expensive solution (for example multi-storey buildings); and Residential encroachment results in very expensive solution (for example noise reduction measures).
New site and concrete plant in Banksmeadow / Botany / Matraville area	2500	High	<ul style="list-style-type: none"> High transport cost of raw materials not addressed; and No suitable sites with long term lease or purchase identified.
Lease land from Pacific National at Banksmeadow	2500	Lower	<ul style="list-style-type: none"> Integrate land lease with rail logistics contract; Site identified at Banksmeadow off Beauchamp Road with access to rail; Adequate space for the construction of a new concrete plant with a capacity for the production of 2,500m³/day; Compatible with neighbouring heavy industry; and Direct access to heavy traffic road infrastructure (e.g. B-double route).
Do Nothing	NA	NA	<ul style="list-style-type: none"> Continue to supply aggregate via roadways to Sydney projects No additional supply to Sydney from Holcim to assist meeting demand

Through the business case, Holcim has agreed upon the location and the capacity of the Project to accommodate the growth of the development opportunities for their existing and new customers in the Sydney region. The “Do Nothing” option was not considered as it did not address Holcim’s business plan requirements or provide for meeting increased demand for concrete and aggregate in Sydney.

Through a business case assessment of the options listed above, Holcim found that the option of leasing land from Pacific National at Banksmeadow was the most viable.

1.9.1 Supply Alternatives

A typical day’s production from a concrete plant supplying the Sydney CBD and South East Sydney with 1,000m³ of concrete weighing 2,300 tonnes would be delivered to the job site in 140 agitator truck loads and require 58 truck deliveries of raw materials (cement and aggregate). This production can double during peak periods of infrastructure construction. Holcim, as with all companies supplying concrete into the Sydney market, sources its aggregates from South West of Sydney. Holcim’s Lynnwood Quarry at Murulan uses rail to transport aggregate to a rail distribution centre at Rooty Hill and from there the aggregate is currently dispatched in trucks across Sydney.

The opening of a new Holcim rail depot to service the Sydney CBD and South East Sydney markets would provide the following benefits:

- Overall, significantly reduce heavy vehicle road traffic;
- Improve road safety;

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25



- reduce transport costs; and
- provide security of supply.

The proposed operation of the new rail depot at Banksmeadow would supply aggregates to the proposed new concrete batching plant on the Project Site and distribute aggregates via road to Holcim's Alexandria Concrete Plant.

1.9.2 Preferred Site

The Project Site is the only option that meets all of the objectives within the business plan. The main business plan objectives are to provide:

- Additional capacity (2,500m³/day) for the production and supply of concrete into the CBD and South East Sydney market; and
- A rail depot to allow concrete plants in the CBD and South East Sydney market to be supplied with aggregates by rail thus reducing transport costs and improving security of supply.

The option to lease land from Pacific National on the Banksmeadow Project Site was selected as the most valid option for the Project.



2. Site Analysis

2.1 Regional Context

The Project Site is located 1 Beauchamp Road in the suburb of Banksmeadow NSW, at the intersection of Beauchamp Road and Perry Street. The Project Site is about 10 kilometres (km) south of the Sydney Central Business District (CBD) and sits within a general industrial area under the SEPP (Three Ports). This industrial area covers major industries within the Sydney region, including manufacturing, processing and other associated general industries within the Banksmeadow/Port Botany area. The Project Site is on land earmarked for long-term industrial use.

Land immediately surrounding the Project Site is either heavy industry, general industry or commercial, with the nearest residential areas located approximately 200m to the north and east of the Project Site. Local topography of the area is relatively flat and the nearest watercourse to the Project Site is Bunnerong Creek which occurs about 900m to the south. However, the nearest stormwater drains near the rail corridor that intercept runoff from the Project Site flow into Port Botany and Yarra Bay via the Springvale Drain. Vegetation in the local region is heavily disturbed and mostly exotic from previous clearing and development for industrial land uses.

The Project Site has been selected for its strategic accessibility to the existing transport links and routes including rail freight line and major road networks for the region including designated heavy vehicle routes. Beauchamp Road is the nearest state road running northeast-southwest between Denison Street and Botany Road, and is a regional road between Malabar Road and Denison Street. Access to the Project Site would be via Beauchamp Road and the extension of Perry Street across Beauchamp Road.

The Australian Bureau of Statistics (ABS) 2016 census recorded a statistical population of 164,880 within the Bayside Council Local Government Area (LGA) (previously known as Botany Bay LGA). Bayside LGA has a projected population growth of 22.64% between 2018-36. (ABS, 2016). Redevelopment of former industrial sites around Mascot Station and Wolli Creek, and the locality to the airport, CBD and major education precincts have encouraged land development in the vicinity over time.

The recent merger of Botany Bay and Rockdale Councils created Bayside Council in 2016. While the Project resides within the Bayside LGA, the site is subject to the provisions of State Environmental Planning Policy (Three Ports). The site is also subject to the provisions of the Botany Bay Development Control Plan No. 33 – Industrial Development 2003 and the Botany Bay LEP 2013.

The Botany Industrial Park (BIP), on land previously owned and operated by Orica, was subdivided in 1998 and four companies now operate in the BIP, including:

- Huntsman Corporation Australia Pty Ltd
- Ixom Pty Ltd
- Orica Australia Pty Ltd
- Qenos Pty Ltd

The Bayside LGA, previously Botany Bay LGA, has long been dominated by industrial development associated with Port Botany and Sydney Airport. Over half of the LGA is zoned for industrial and commercial land uses, much of which plays an important role in supporting Port Botany and Sydney Airport. Some previously zoned industrial areas were converted to residential use in the past decade. However, during the same period industrial uses have intensified around Port Botany and Sydney Airport, particularly transport and logistics related use (NSW Department of Planning, 2007). Figure 1-3 shows the surrounding land uses in context of the Project Site. Historical industrial land use in the immediate area would present many challenges to the Project Site land becoming re-zoned away from existing industrial



use due to historic and existing contamination of the soil and groundwater. The proposed development is therefore consistent with historical land use whilst moving the land use towards more benign uses.

The Eastern City District Plan provides a 20-year plan to manage growth and achieve a 40-year vision, while enhancing Greater Sydney's liveability, productivity and sustainability into the future. It is a guide for implementing *A Metropolis of Three Cities - the Greater Sydney Region Plan* at a district level and is a bridge between regional and local planning. There are ten directions for Greater Sydney:

- Infrastructure
- People
- Housing
- 'Great Places'
- Jobs and Skills
- Connections
- Landscape
- Efficiency
- Resilience and
- Collaboration

The Project focuses on the number 1 direction for the Greater Sydney, namely Infrastructure, which is described in the *Greater Sydney Region Plan* as follows:

"Providing adequate infrastructure to support population growth is essential to creating strong communities. Therefore, the Commission is developing a series of mechanisms to better align growth with infrastructure. One mechanism is the Growth Infrastructure Compact which will assess the nature, level and timing of infrastructure required for an area in light of its forecast housing and employment growth, including analysis of growth scenarios. This approach will demonstrate the correlation between growth and infrastructure, such as public transport, schools and open space, and allow for the timely integration and more effective expenditure on infrastructure by location." (Directions for a Greater Sydney 2017-2056, Greater Sydney Commission)."

The Project would contribute to infrastructure, development, creation of jobs and skills growth of the region, and therefore also supports the planning direction of the Greater Sydney area.

2.2 Site Zoning

The State Environmental Planning Policy (Three Ports) 2013 applies to the Project Site, which is zoned "IN1 General Industry". A concrete batching plant, rail depot and aggregate distribution centre are considered general industries and thus would be permitted with consent in this zone (see Section 1.6 Permissibility).

An extract of both the SEPP (Three Ports) and the Bayside Council LEP land use zoning maps applying to the site and surrounding land is provided in Figure 2-1 and Figure 2-2. There is no zoning identified under the Botany Bay LEP as the Project area is within the SEPP (Three Ports).

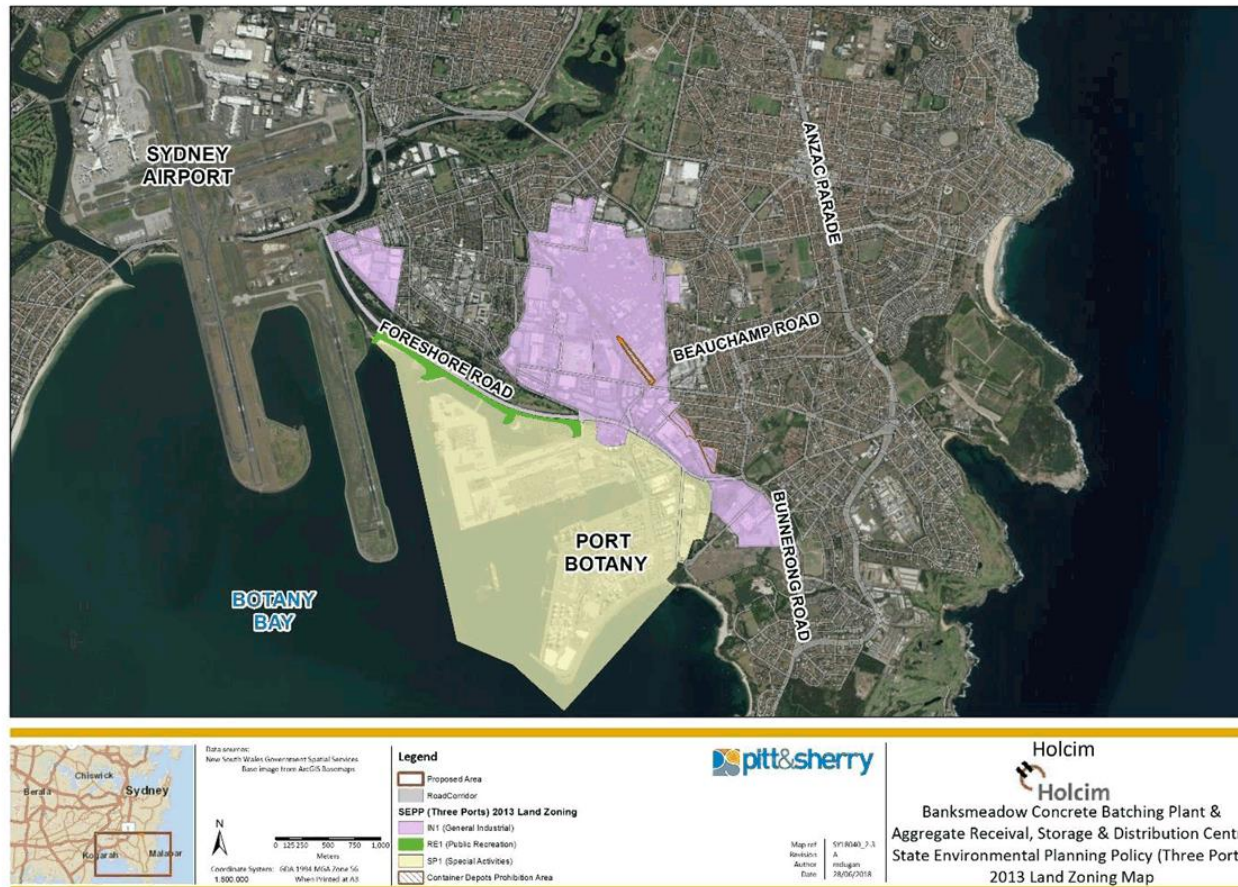


Figure 2-1 Land Zoning Map (Source: SEPP (Three Ports) 2013)

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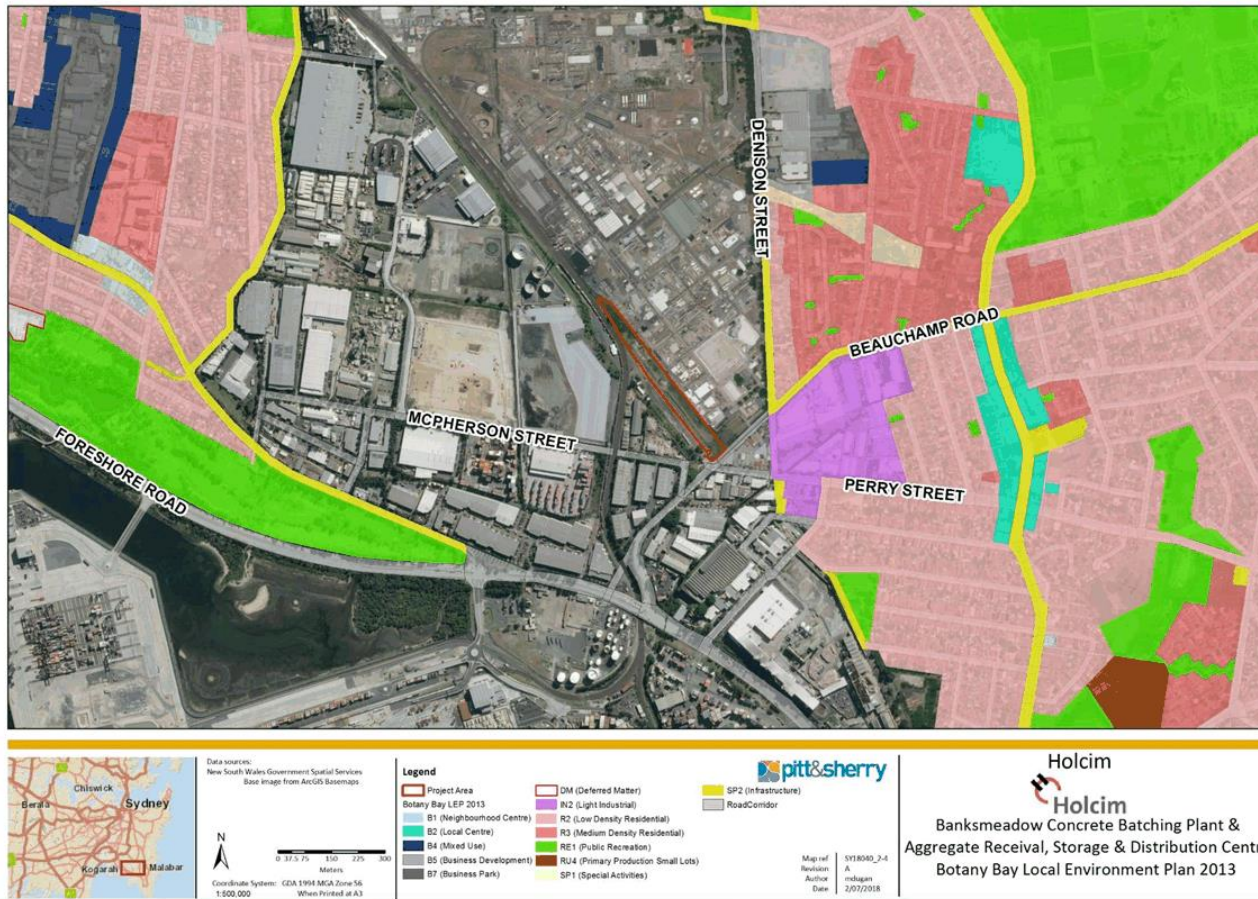


Figure 2-2 Land Zoning Map (Source: Botany Bay LEP 2013)

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30



2.3 Surrounding land use

The Project Site is bound by Beauchamp Road along the southern eastern boundary, by the Botany Industrial Park in the northeast, by the Botany Goods Rail Line in the north west and on the southwest by the Veolia Transfer Terminal. Surrounding land uses are shown in Figure 1-1 and Figure 1-3.

Botany Industrial Park

The Botany Industrial Park (BIP) is located immediately north of the Project Site. The BIP was established as a requirement by the NSW Department of Urban Affairs and Planning to ensure safety, health and environmental standards are maintained. The companies that are part of the BIP include:

- Huntsman Corporation Australia Pty Ltd
- Ixom Pty Ltd
- Orica Australia Pty Ltd
- Qenos Pty Ltd

The listed companies above perform the following industrial related activities:

- *Orica Australia Pty Ltd (as of 2018)* operates the Groundwater Treatment Plant and manages site legacy issues, including the HCB Waste Repackaging Plant.
- *Huntsman Corporation Australia Pty Ltd* operates the Surfactants Plant.
- *Qenos Pty Ltd* operates the Site Utilities, Olefines, Alkathene and Alkatuff Plants. Formerly operated as a joint venture plastics manufacturing company between Exxon-Mobil and Orica, Qenos is now a wholly-owned subsidiary of ChemChina Bluestar and is entirely independent of Orica.

In addition to these three operating companies Qenos, Huntsman and Orica, the BIP also co-ordinates activities with other companies that lease land on site from Orica. These include:

- Ixom which operates the former Orica Chlor-Alkali Plant at the southern end of the site near Beauchamp Road;
- Air Liquide in Baker Street at the northern end of the site;
- KBR (engineering) which occupies offices on the corner of Denison Street and Beauchamp Road; and
- Broadspectrum ("BRS") (maintenance, projects and turnarounds) which is located at the north end of the site, off Corish Circle.

Sydney Airport

The Project Site is near to Sydney international and domestic airport. In 2017, Sydney airport was used by 43.3 million passengers (Sydney Airport Corporation Limited, 2017).

Matraville

The residential area of Matraville is located east and south-east of the Project Site approximately 350m away. There are commercial businesses lining Beauchamp Road opposite the Project to the east including distribution services and construction businesses. On and off-street parking service these businesses along Beauchamp Road. There are also several residences along Beauchamp Road located between commercial premises and between 75-100m from the Project.

Matraville Public School is the nearest school, located about 720m from the Project Site to the northeast. The school is not located on aggregate or cement delivery routes proposed for the Project.

**Hillsdale**

The residential area of Hillsdale begins at Denison Street to the north-east of the Project Site. There are commercial and industrial businesses in Hillsdale to the north of the Project Site between Denison Street and Rhodes Street. The residential streets have both on street and off-street parking. The closest residents in Hillsdale are approximately 200m away along Denison Street to the north of the Project Site.

Parks and Reserves

Purcell Park is located about 445m to the south-east of the Project Site on Australia Avenue in Matraville. The park is 1.27 hectares and provides a shared walking and cycling path, shade trees and seating.

2.4 Historical land use

Hibbs & Associates prepared a Preliminary Site Investigation (PSI) (**Appendix K**) documenting the history of the Project Site and adjacent properties within a 500m radius. The assessment includes analysis of aerial photographs and is summarised below.

The first industries in the East Botany area near the turn of 19th century were mainly tanneries, fellmongers, wool scourers and a paper mill. Several major industries followed in the 1920s and 1930s, including Davis Gelatine, Kellogg's and Johnson & Johnson. Many of the chemical industries, including ICI Australia and New Zealand (ICIANZ, subsequently ICIA and now Orica) were established in the 1940s in what is now the BIP.

The rail line, owned by the NSW State Rail Authority (in various forms), was initiated in 1922 and established by 1930. In the 1930s, surrounding land was predominantly cleared and zoned industrial with some residential areas established about 500m southeast from the Project Site.

The nearby BIP saw larger manufacturing plants constructed in the 1960s and the area became a predominantly petrochemical complex including chlorine and chlorine derivative-related chemical manufacturing.

Land use included container transfers between road and rail, train shunting, minor wagon maintenance and locomotive refuelling. Ownership of the Project Site (Lot 20 DP1231202) was transferred to Pacific National in 2002 via an asset sale by the NSW Government.

In 2014 the vegetation lessened and several shipping containers were stored onsite, further vegetation declined in 2016 and hardstand areas are now present.

2.5 Site suitability

The Project is located on land zoned "IN1-General Industry" under the SEPP (Three Ports) 2013. The Project is permissible with consent in within the zone (see Section 1.6 Permissibility). Rezoning of the area is not required. The activities of the Project do not trigger any prohibited activities under the SEPP (Three Ports) 2013 and will provide a positive effect and support the surrounding commercial businesses in the local area.

2.5.1 Topography

The surrounding topography is relatively flat with the land heavily disturbed and industrialised. The Project Site elevation ranges from approximately 6m in the west to about 10m at the eastern end. The highest elevation within a 500m radius of the site is approximately 20m in the Matraville residential area to the east.

The regional topography of Banksmeadow area slopes gently down toward the southwest and Botany Bay. While the Project Site is relatively flat, the Orica site is built up to between 10m and 14m elevation at the boundary. Thus there would be some grading and retaining walls necessary to establish flat areas of



hardstands to enable construction and accommodate travel ways and plant and equipment. Pacific National would undertake the planning and construction of any retaining walls needed for rail siding works under a separate approval. Refer to the topography map in Figure 2-3.

The topography of the Project Site is relatively flat and generally slopes towards the north-west toward ARTC land, the rail corridor and a canal that drains into Botany Bay known as Springvale Drain.



Figure 2-3 Local topography map

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34



2.5.2 Drainage and flooding

The Botany Bay LEP 2013 does not identify the Project Site as flood prone land. The catchment for the Proposal site is constrained by Orica to the north, the rail corridor to the west, Beauchamp Road to the east, and Veolia to the south. Very little flow from external catchments currently drains through the Project Site.

The Botany Industrial Park to the north diverts stormwater into a stormwater capture system that flows to Beauchamp Road and the council drainage system. The rail corridor to the west drains surface flows via cess drains to the existing drainage channels (Springvale Drain) located west of the Project Site that discharge directly into Botany Bay.

Stormwater drainage from the Project Site is therefore largely independent of external flows. The Project proposes to manage surface stormwater flows via a drainage capture and treatment system designed in accordance with Bayside Council DCP and other relevant requirements.

2.5.3 Vegetation and Biodiversity

The Proposed site is mostly cleared, disturbed land with some remnants of exotic and native regrowth vegetation scattered across the site. All the vegetation within the Project Site is mapped in the *Native Vegetation of the Sydney Metropolitan Area V3 (2016)* as weeds and exotic vegetation. The vegetation is dominated by weeds, exotic species and degraded urban vegetation resulting from historical and existing development of the land. Bayside Council has approved clearing of the land based on an earlier application by Pacific National.

Figure 2-4 and Figure 2-5 provide photographs of the site displaying mainly scattered exotic and some native vegetation, mostly along the northern edge of the site at the boundary with Orica. The majority of the site is cleared with minimal groundcover of exotic grasses.



Figure 2-4: Looking east toward Beauchamp Road from within the Project Site

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35



Figure 2-5 Looking west from within the Project Site

2.5.4 Bushfire

The location of the Project Site is within a heavily disturbed general industry zoned area. It is very unlikely for a bushfire to occur due to the nature of the Project Site and the surrounding area. The Project Site would be cleared of vegetation by Pacific National prior to commencement of the Project.

2.5.5 Traffic and Access

Access to the Project Site would be from the existing access road at the intersection of Beauchamp Road and Perry St, Banksmeadow, where a secure access gate is proposed per Figure 7-1 in Section 7.1. The access would be shared with Veolia.

Beauchamp Road has a posted 60km/h speed limit, two lanes in both directions, with currently unrestricted kerbside parking north of Perry Street. Beauchamp Road is a designated heavy vehicle route and a major access route to Port Botany. There is a signalised intersection at the proposed entrance to the Project Site.

Bus route 309 between Port Botany Depot and Central Railway Square is the only bus service operating along Beauchamp Road, running every 10-15 minutes during peak periods and every 20 minutes during off-peak periods.

Traffic surveys undertaken at the Beauchamp Road/Perry Street intersection identified the critical peak hours were 8:00am to 9:00am for the AM peak and 4:30pm to 5:30pm for the PM peak. The intersection at Beauchamp Road and Perry Street is currently operating above practical capacity due to the following reasons:

- Beauchamp Road northbound traffic queues from Denison Street back into the Beauchamp Road/Perry Street intersection due to unrestricted kerbside parking;



- Vehicles turning from Beauchamp Road into Perry Street are delayed by vehicles using driveways to access fronting businesses. This causes vehicles to queue back into the Beauchamp Road/Perry Street intersection, increasing safety risks to drivers and pedestrians;
- Considerable conflict was observed between through vehicles on Perry Street and driveway vehicles, increasing delays on the Perry Street east approach to the Beauchamp Road/Perry Street intersection. Also, the Perry Street queues block the driveways, meaning vehicles from Beauchamp Road must wait for traffic to move during the Perry Street green phase and causes queues to back into the intersection; and
- Unrestricted kerbside parking on the Perry Street east approach to the Beauchamp Road/Perry Street intersection causes frequent long queues and delays.

A detailed assessment of potential traffic and access impacts from the Project was undertaken (**Appendix G**). A summary with proposed mitigation measures is included in Section 8.



3. Project Description

3.1 Overview

Holcim proposes to construct and operate a new concrete batch plant and operate a new rail depot in Banksmeadow, NSW. The land would be leased from Pacific National. Entry to the Project Site would be from the extension of Perry Street across Beauchamp Road sharing the existing access road with Veolia.

Key elements of the Project including the following:

- Staged construction and operation of a temporary and permanent concrete batching plant and associated facilities including aggregate, sand and cement storage, additive and admixture storage, conveyors, bins, silos and auxiliary equipment;
- Operation of the rail depot for unloading and receiving aggregate materials;
- Construction and operation of an aggregate storage and distribution facility to receive aggregates by road and rail and dispatch aggregates by road;
- Earthworks including importing clean fill as necessary to establish design levels;
- Retaining walls and fencing;
- Parking of agitators and trucks;
- Stormwater management and treatment facilities;
- Agitator wash-out, slump stands, water storage, water reuse and recycling facilities;
- Offices, operator facilities, control rooms, amenities, crib rooms, ablutions, storage areas and ancillary facilities to support the operations;
- Parking of staff and visitor vehicles;
- Power supply (transformer) and utilities and services connections; and
- Noise wall; and
- Associated ancillary activities.

The Project would receive up to 500,000 tonnes of aggregate via road and rail. The concrete batching plant would be dry mix, or equivalent technology, and have a production rate of about 220,000 m³/year. In addition to concrete, the Project would distribute the balance of imported aggregate to the wider Sydney markets. It is proposed to operate the site 24 hours, seven days a week.

A single rail siding and unloading point capable of receiving up to 36 wagons would be assessed and constructed separately by Pacific National. The rail siding and aggregate load out point are key components supporting the Project, though not part of this development application. Pacific National and ARTC have provided letters of support for the Project and information is detailed in Section 5 (Consultation) and in Section 1.3 (Project Site and Land Ownership).

To assist in developing the site and immediately bring concrete capacity to the Sydney market, the Project would be constructed and operated in three stages:

- Stage 0/1 – Establish and operate a mobile concrete plant. Construct the fixed plant facilities and aggregate conveyor system. Pacific National may start construction of rail siding and aggregate unloading facility. [A nominal Stage 0 is also described in the DA Drawings, representing construction of the temporary plant];

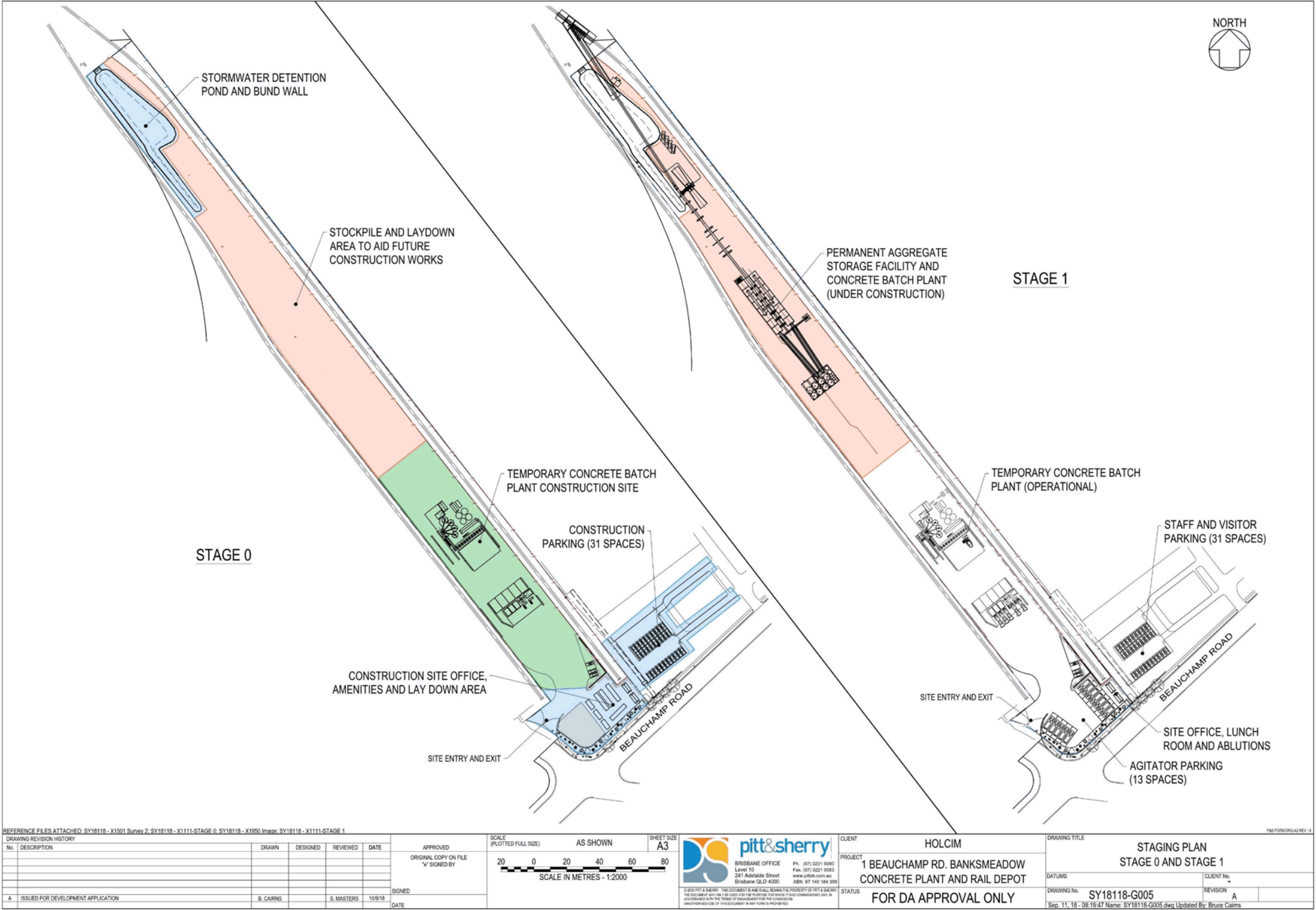


- Stage 2 – Operate the fixed plant whilst Pacific National complete construction of the rail siding and aggregate unloading facility; and
- Stage 3 – Full operation of fixed concrete batch plant, aggregate distribution facility and rail depot.

Staging of Project construction and operation is explained further in Table 3-1 and illustrated in Figure 3-1 and Figure 3-2.

Table 3-1 Project stages and timing

Project Elements	Stage 0/1	Stage 2	Stage 3
Operational plant and equipment	Mobile concrete batching plant and aggregate storage	Fixed concrete batching plant and aggregate storage facilities	Fixed concrete batching plant, aggregate storage and distribution facilities and rail depot
Concurrent construction stages	Fixed concrete batching and aggregate storage facilities, including truck unloading conveyor systems. Commencement of construction of rail siding and rail wagon unloading facility,	Construction of rail siding and aggregate unloading facility (separate approval and construction by Pacific National)	Operation only
Aggregate delivery	Road only	Road only	Rail predominantly and road
Load out / export of aggregates	No	No	Yes
Approximate duration	21 months	6 months	Post completion of rail siding and fixed plant



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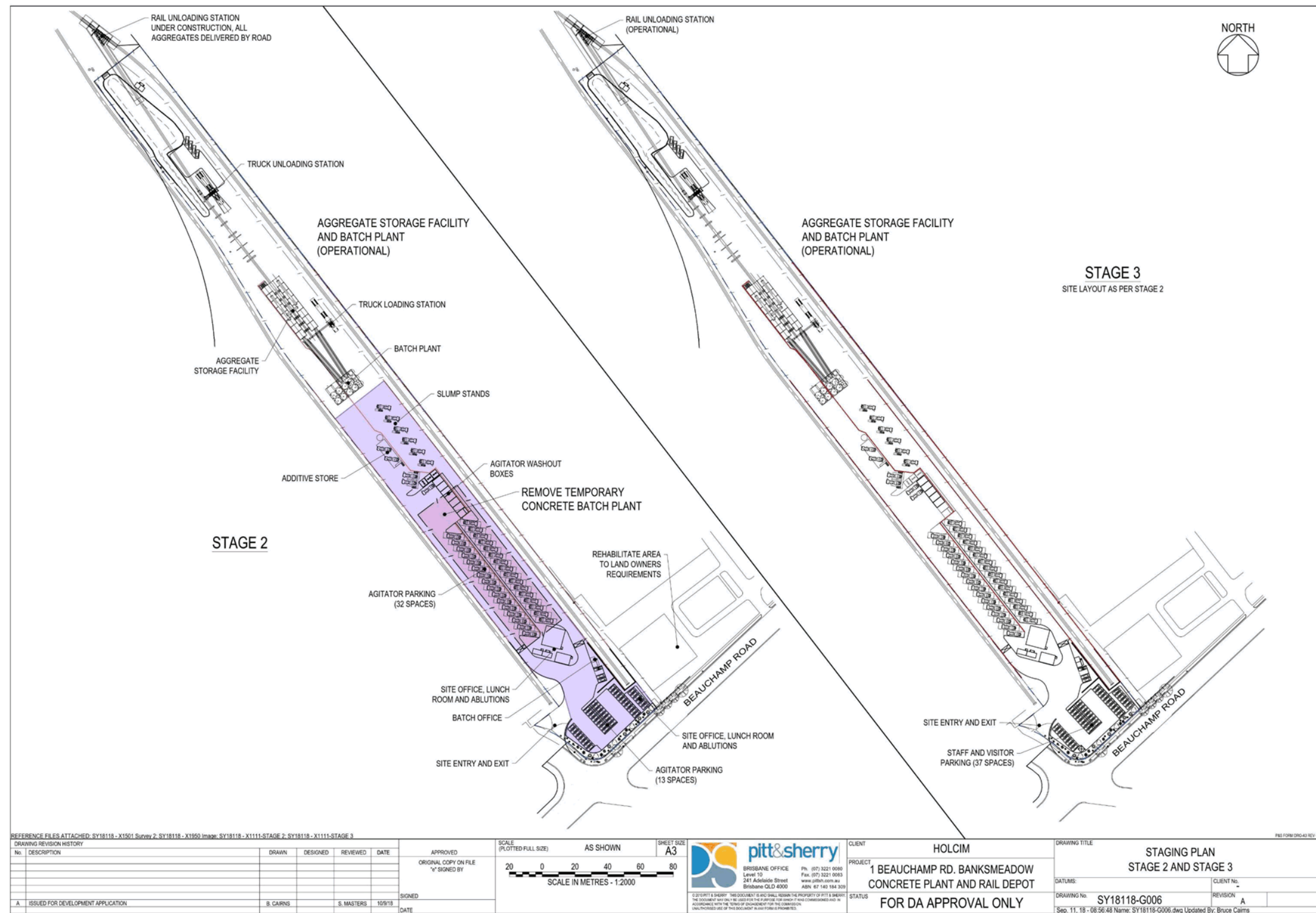


Figure 3-2 Project Staging Layout – Stages 2 and 3



3.2 Development Application Drawings

A set of Development Application Drawings is provided in **Appendix C**. The drawings include a Site plan, survey, staging plans, indicative layout of plant and equipment, elevations, long and cross-sections. These drawings have been prepared to a level of detail sufficient to permit assessment of the development against relevant planning controls and environmental objectives. The plans provide the detail necessary to inform the various specialist environmental investigations and assessments undertaken for the application, including traffic and access assessment, noise assessment, air quality assessment, soil and groundwater investigations, and visual impact assessment.

The drawings show the layout of plant, equipment, earthworks and structures which is indicative only and subject to future detailed design. It is anticipated that the detailed design process would include refinement and optimisation of the layout, and is likely to include minor repositioning of infrastructure within the Project Site. To enable this level of flexibility in design, the development plans show the likely maximum footprints and heights of infrastructure within zones dedicated to core purposes such as the concrete batching plant, aggregate depot, agitator parking areas, staff car parks, and ancillary buildings. The final positioning and design of all infrastructure would be confirmed with detailed design and prior to issue of construction certificate.

3.3 Stage 0/1 – Mobile Batching Plant and Aggregate Storage Facility

To establish immediate production while the Stage 2 fixed unloading and plant facilities are constructed, a mobile concrete plant would be constructed and operated. A nominal Stage 0 is also described in the DA Drawings, representing construction of the temporary plant. The mobile facility would provide the capabilities listed in Table 3-2 and the following objectives would be met:

- Minimal mobilisation and capital cost;
- Short construction period and immediate commencement;
- Locate so that the construction of the fixed plant facilities can progress unhindered;
- Potentially overlapping of Stage 1 operation during testing of Stage 2 plant; and
- Have an operational life of approximately 18 months (during construction of Stage 2).

The mobile concrete batching plant would be located on the eastern-most third of the project site on Pacific National land (Lot 20 DP 1231202). The general layouts of Stage 0/1 are described in Figure 3-3 through Figure 3-8.

Table 3-2 Stage 1 Production Requirements

Requirement	Capability
Potential Production Rate (Peak Capacity)	100 m ³ /h is typical during high demand periods. This is typically short-term for several hours during a day.
Working day	24 hours
Mixing technology	Dry mix, or equivalent technology
Aggregate storage	Five (5) in-line overhead bins and ground storage bins
Cementitious material storage	Four (4) silos -
Water storage	Potable – 100mm NB mains water available on boundary.



Requirement	Capability
Admixtures	Yes
Additives	Bag handling to conveyor for addition to agitator hopper.
Agitators	Approximately 12 - 15
Wash facilities	Washout facilities commensurate with the number of agitators
Recycling water	Contaminated water to be stored and reused in concrete batching process
Stormwater capture and treatment facilities	Yes, including first flush and stormwater system

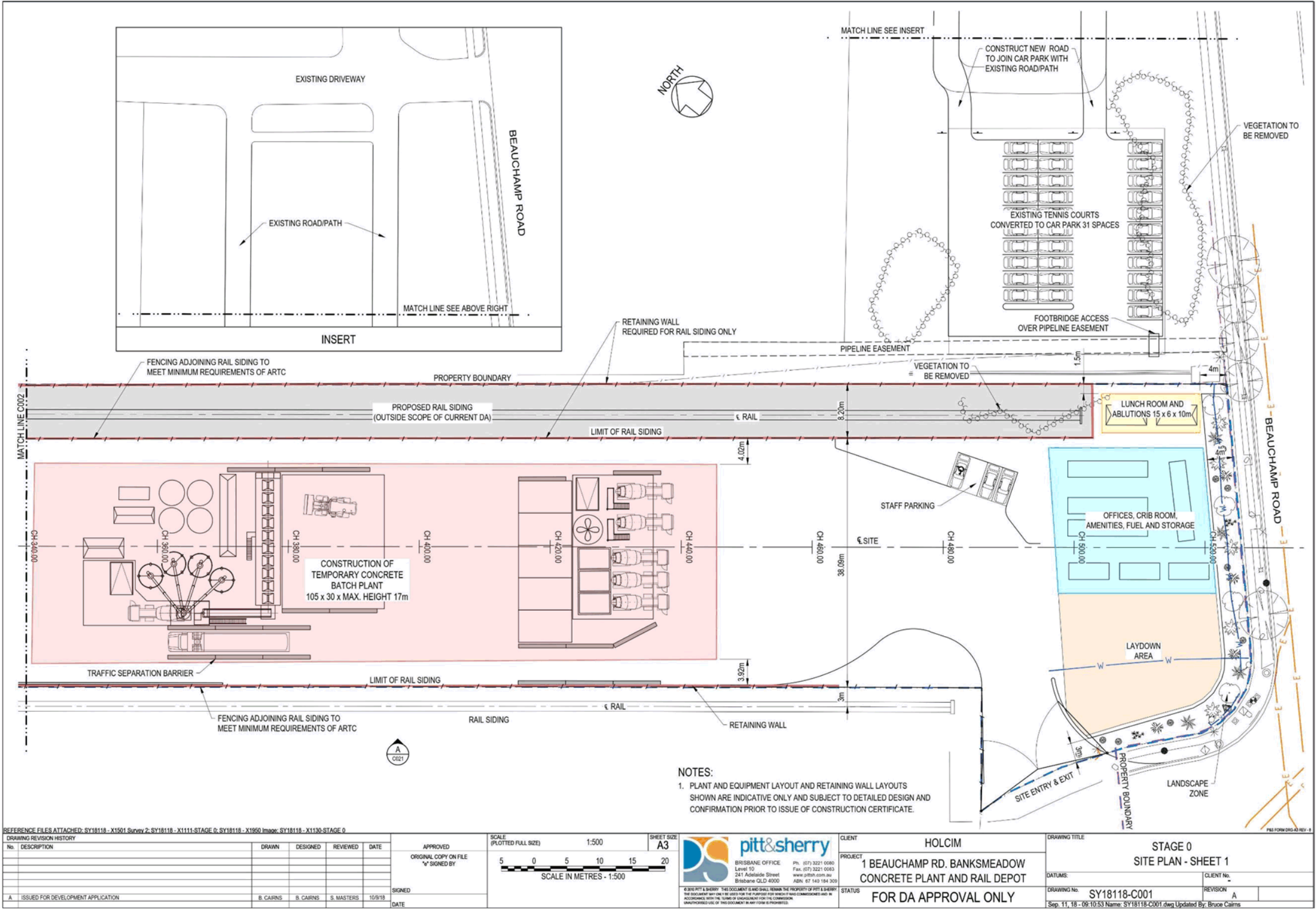
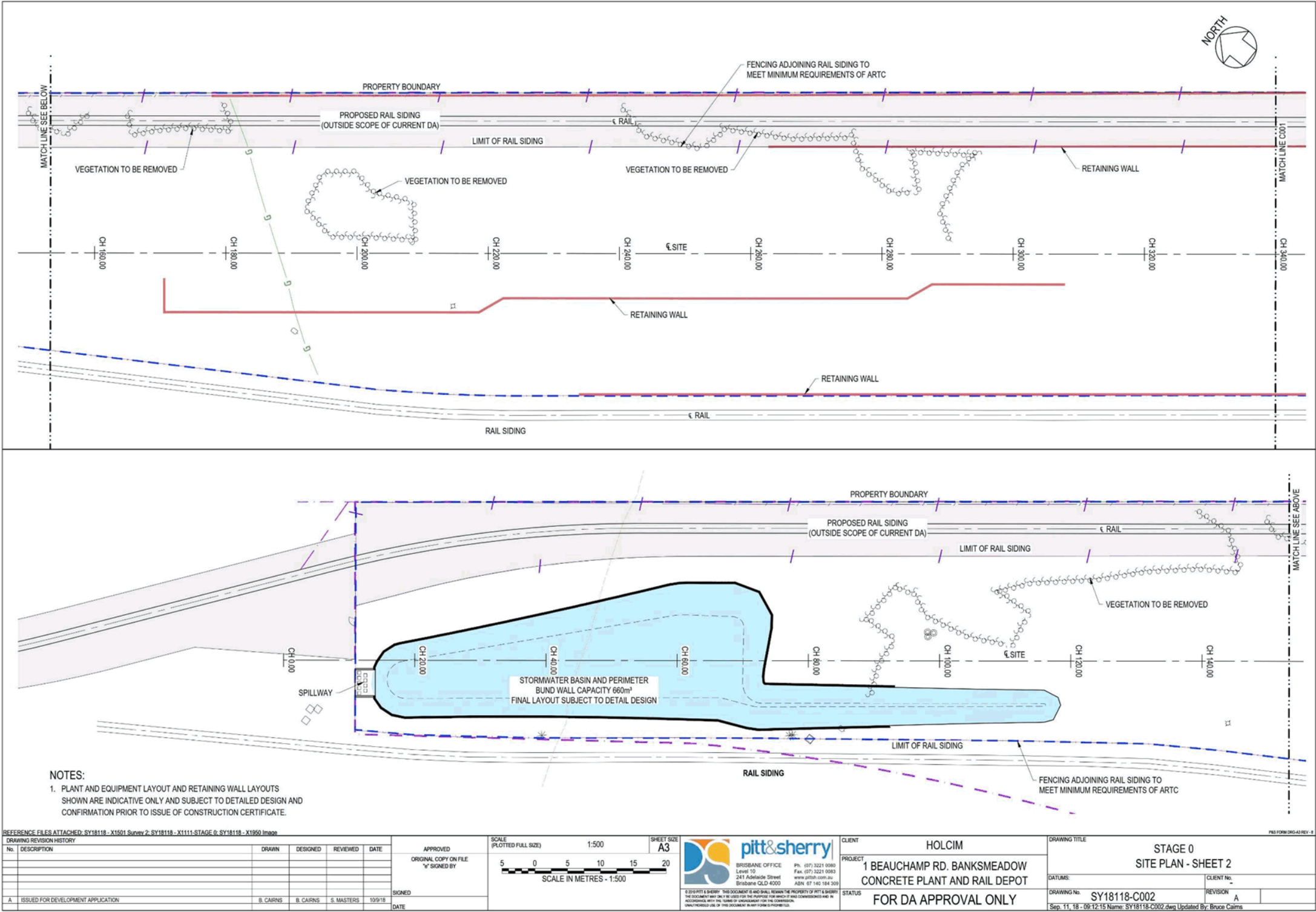


Figure 3-3 Stage 0 Concept Layout – Sheet 1 (Subject to Detailed Design)



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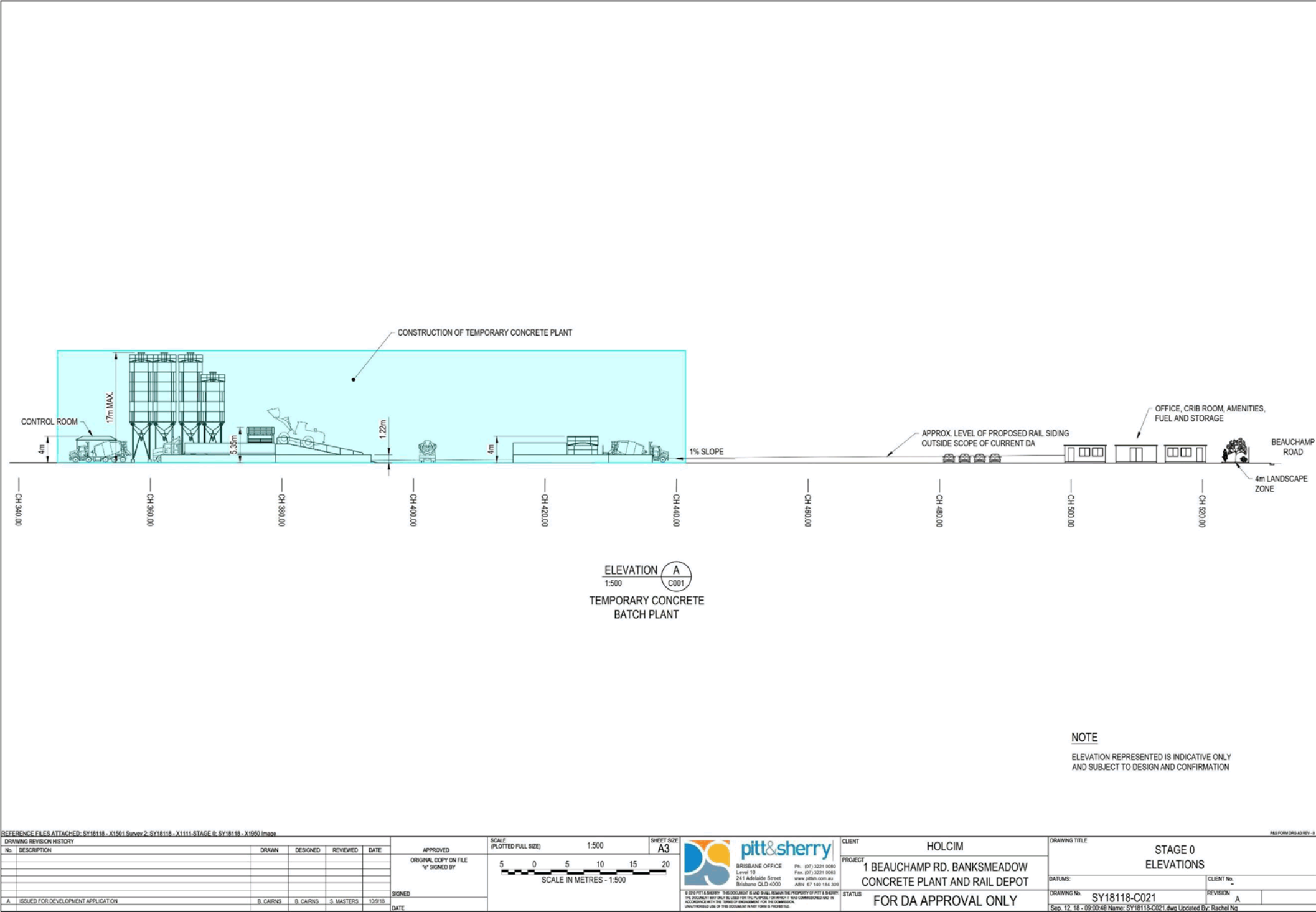
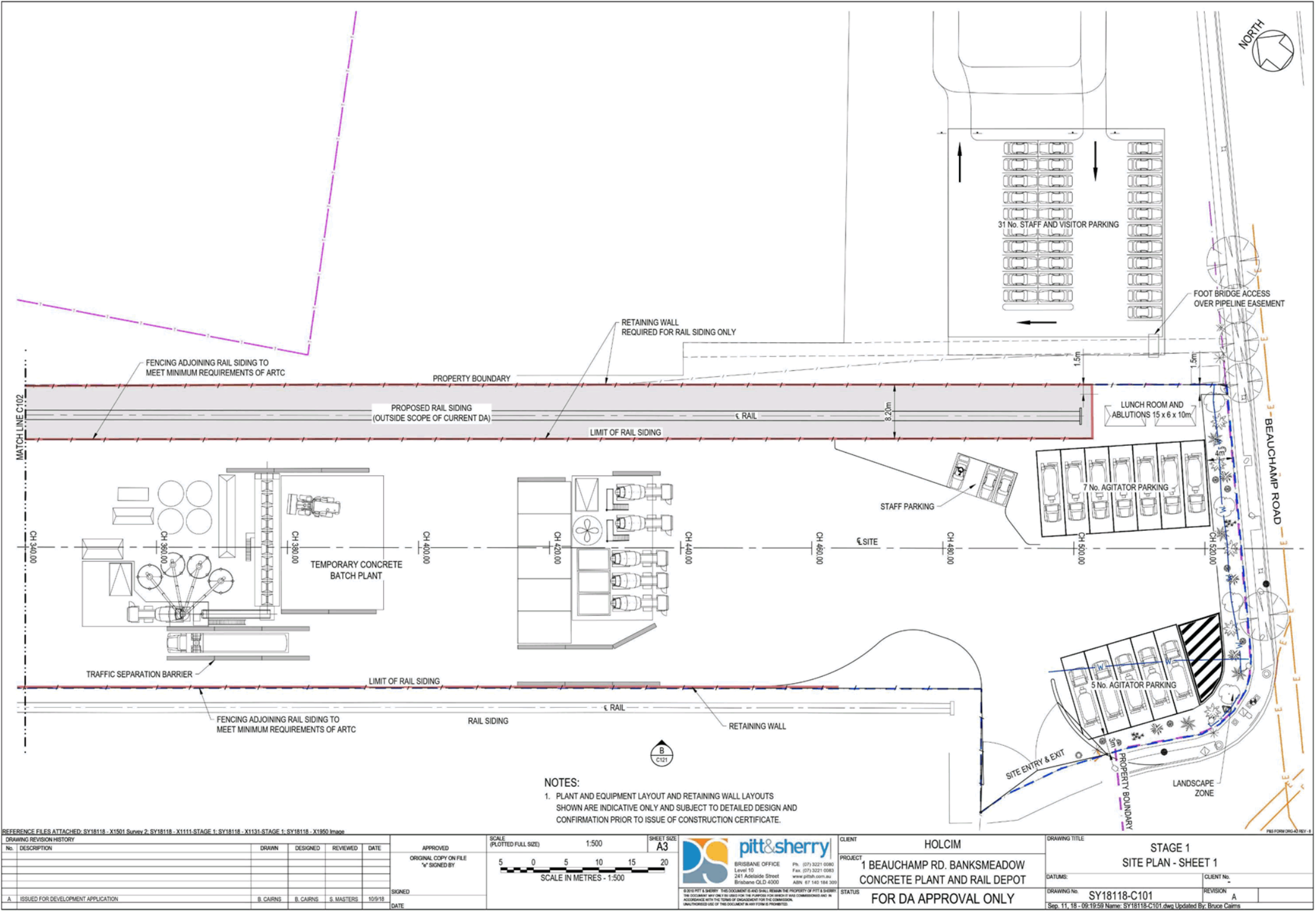
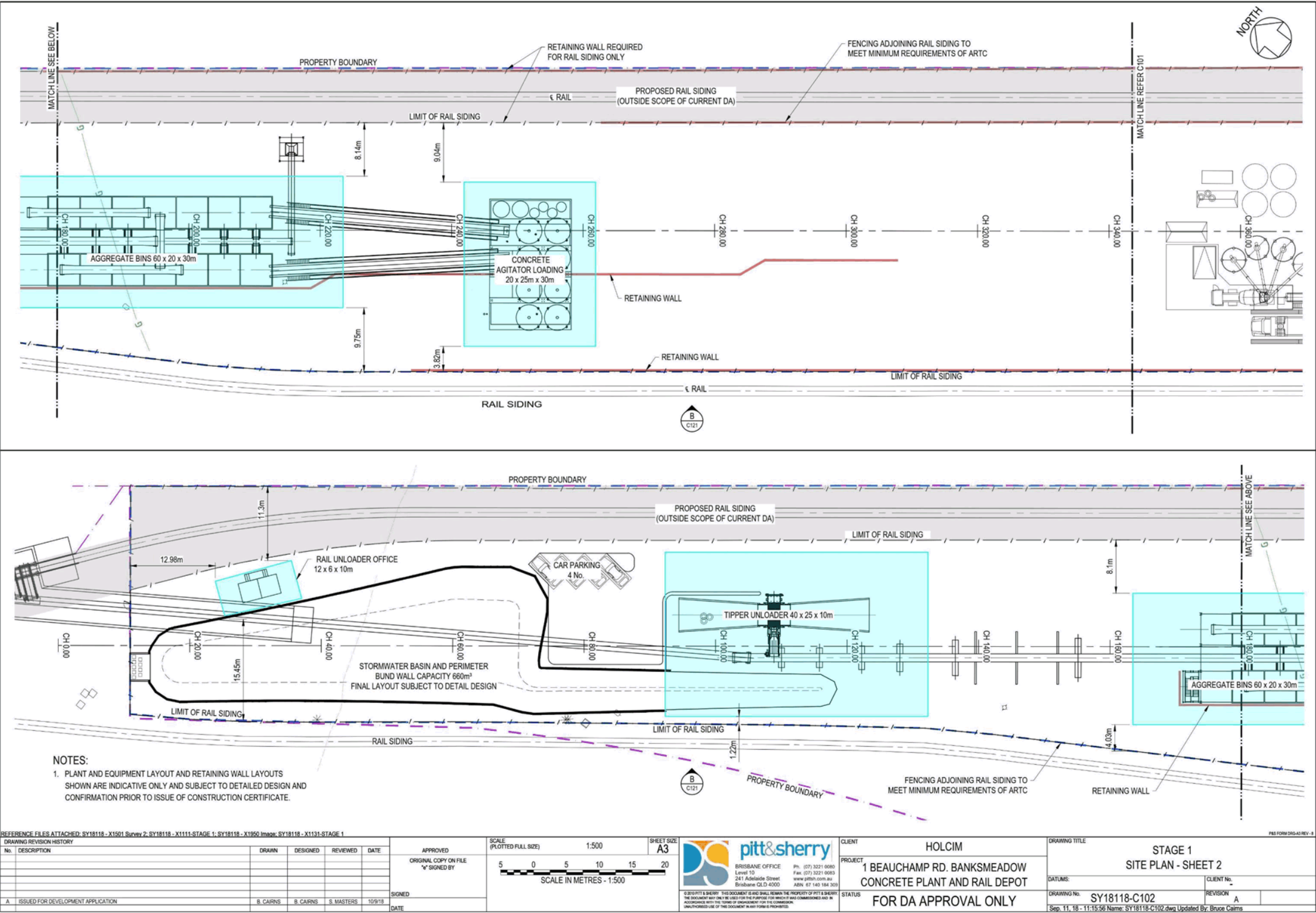
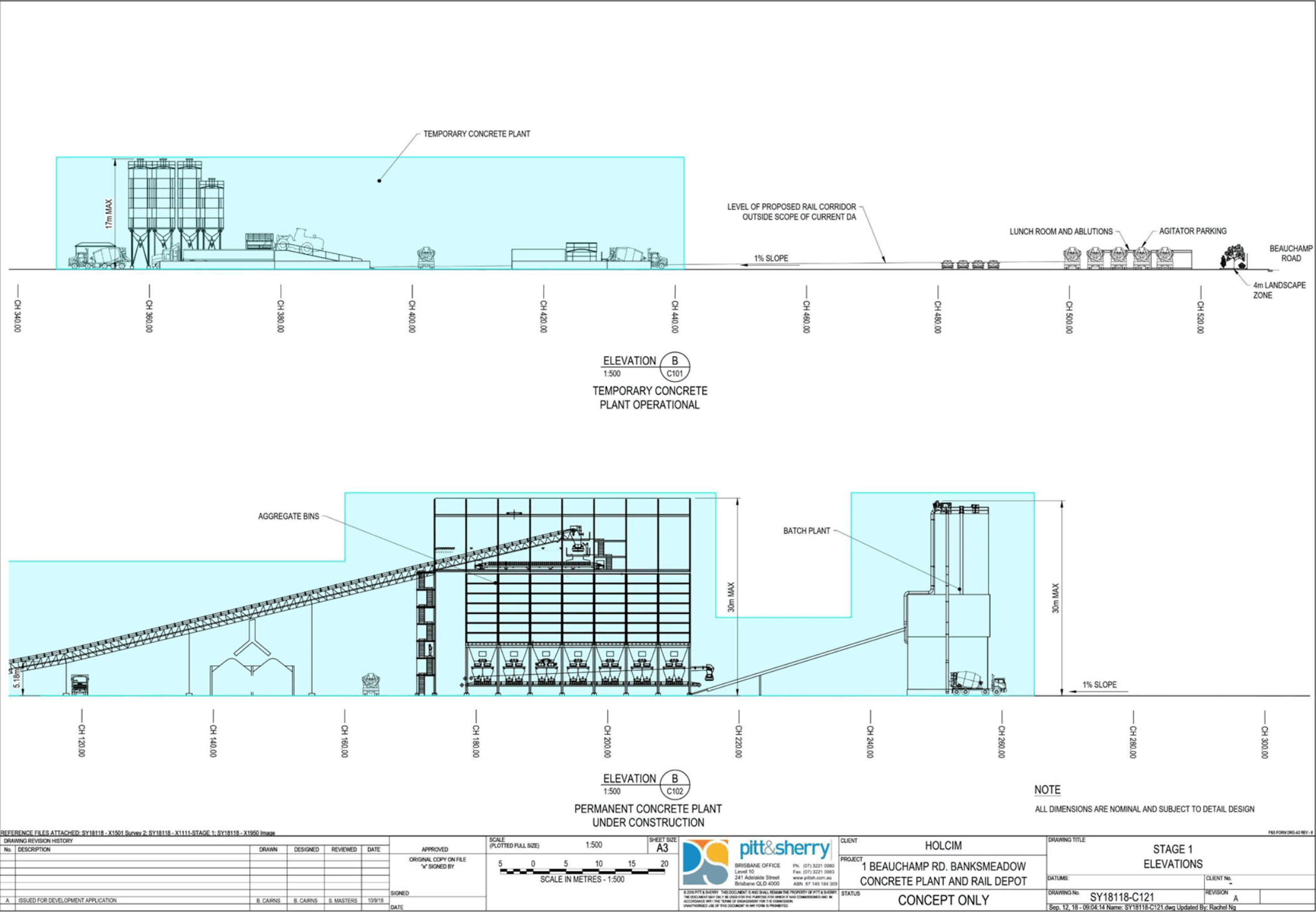


Figure 3-5 Stage 0/1 Elevations (Subject to Detailed Design)









3.4 Stage 2 – Fixed Aggregate Storage and Concrete Batching Facilities

Stage 2 commences once the fixed plant and aggregate storage facilities have been constructed and are commissioned into operations. Stage 2 materials would be provided solely via roadway while the rail siding and aggregate unloading facility are being constructed by Pacific National. The mobile plant constructed in Stage 1 would be decommissioned. The capabilities of Stage 2 are summarised in Table 3-3. The general layout of Stage 2 is the same as Stage 3, however, construction of the rail siding is not yet complete (see Figure 3-9 through Figure 3-13).

Table 3-3 Stage 2 Production Requirements

Requirement	Capability
Maximum Annual Production	220,000 m ³ /year.
Potential Production Rate (Peak Capacity)	300 m ³ /h is typical during high demand periods. This is typically short-term for several hours during a day.
Working day	24h
Mixing technology	Dry mix, or equivalent technology
Slumping	Typical 8 slump stands
Agitators	Typical 25 - 40
Agitator wash stands	Yes
Agitator loading bays	Typical two (2) load bays.
Wash facilities	Washout facilities commensurate with the number of agitators
Recycling water	Contaminated water to be stored and reused in concrete batching process
Stormwater capture and treatment facilities	Yes, including first flush and stormwater system
AGGREGATES	
Bulk storage	Approximately 6,000 tonnes of enclosed storage.
Deliveries	Standard truck and dog tippers, and semi-tippers during Phase 2.
CEMENTITIOUS MATERIALS	
Storage	8 vertical silos x 100m ³ (minimum) All silos shall be provided with: <ul style="list-style-type: none"> ○ Overfill protection (automatic shut-off); and ○ Reverse-pulse vent filters
Deliveries	B-double road tankers. Semi-trailers.



Requirement	Capability
WATER	
Storage	Potable: 200kL Recycled: 200kL
Delivery	Mains supply into holding tanks.
MODIFIERS	
Admixtures/admixtures	Yes
Delivery	Flat bed trucks for bags. Bulk tankers for admixtures.
SERVICES	
Power	Mains power including padmount transformer (minimum 1,000kVA)
Potable water	Mains supply
Sewerage	Mains connection
ACCOMMODATION/AMENITIES	
Fuel (diesel)	No onsite storage would be provided (refuelling undertaken by contractors)
Fire protection	In accordance with the National Construction Code.

3.5 Stage 3 – Fixed Facilities and Rail Depot Operational

Stage 3 commences once the rail siding and aggregate unloading facility have been constructed and commissioned and are available for use by Holcim. Stage 3 includes the rail depot ability to accept aggregate deliveries by rail. The capabilities of Stage 3 are the same as in Stage 2 except aggregate would be primarily delivered via the rail depot. Figure 3-13 shows the final configuration of the Project at Stage 3 of the project, with the fixed concrete batching plant and rail siding in full operation. illustrates elevations of Stage 2 and Stage 3 plant.

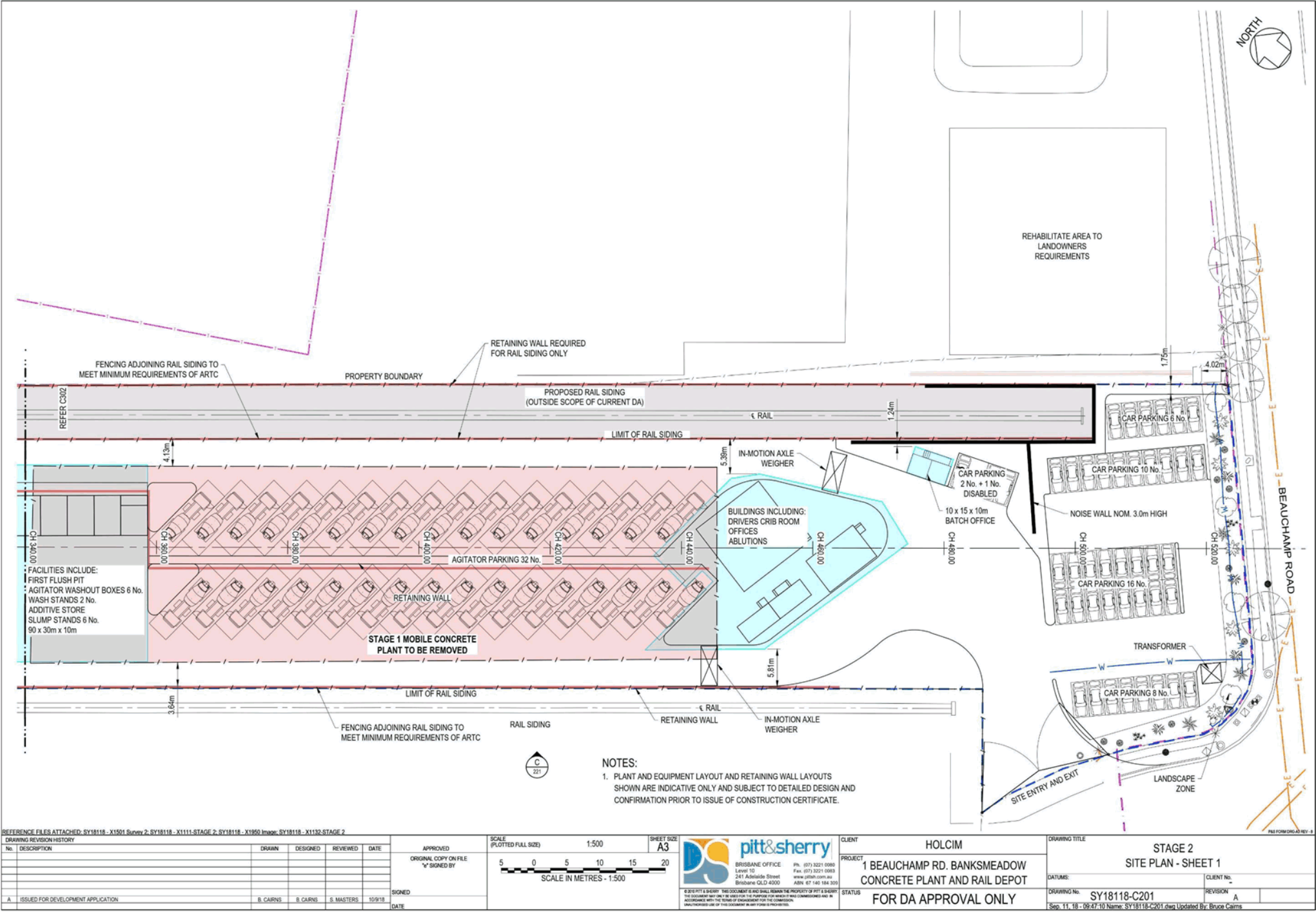
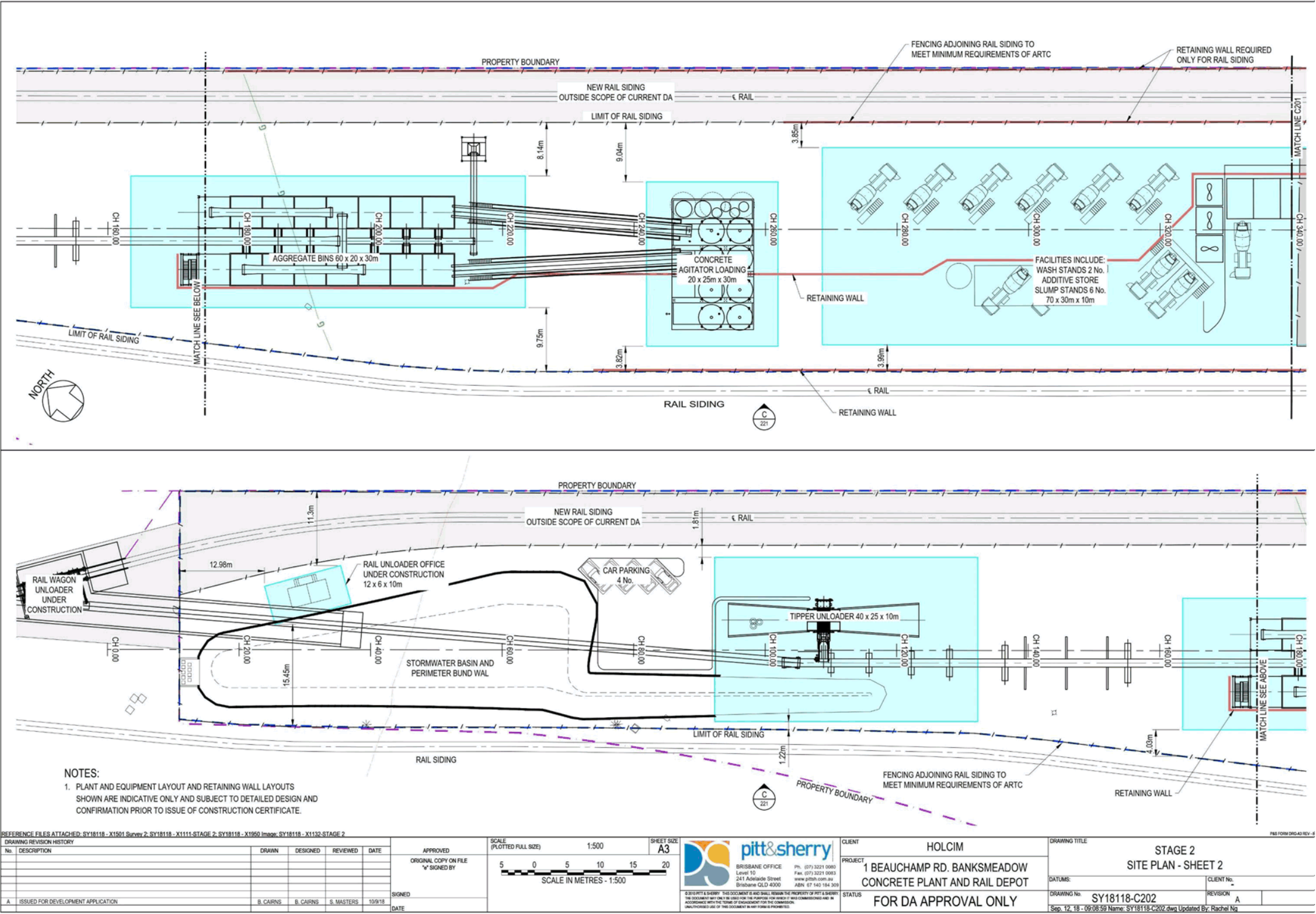
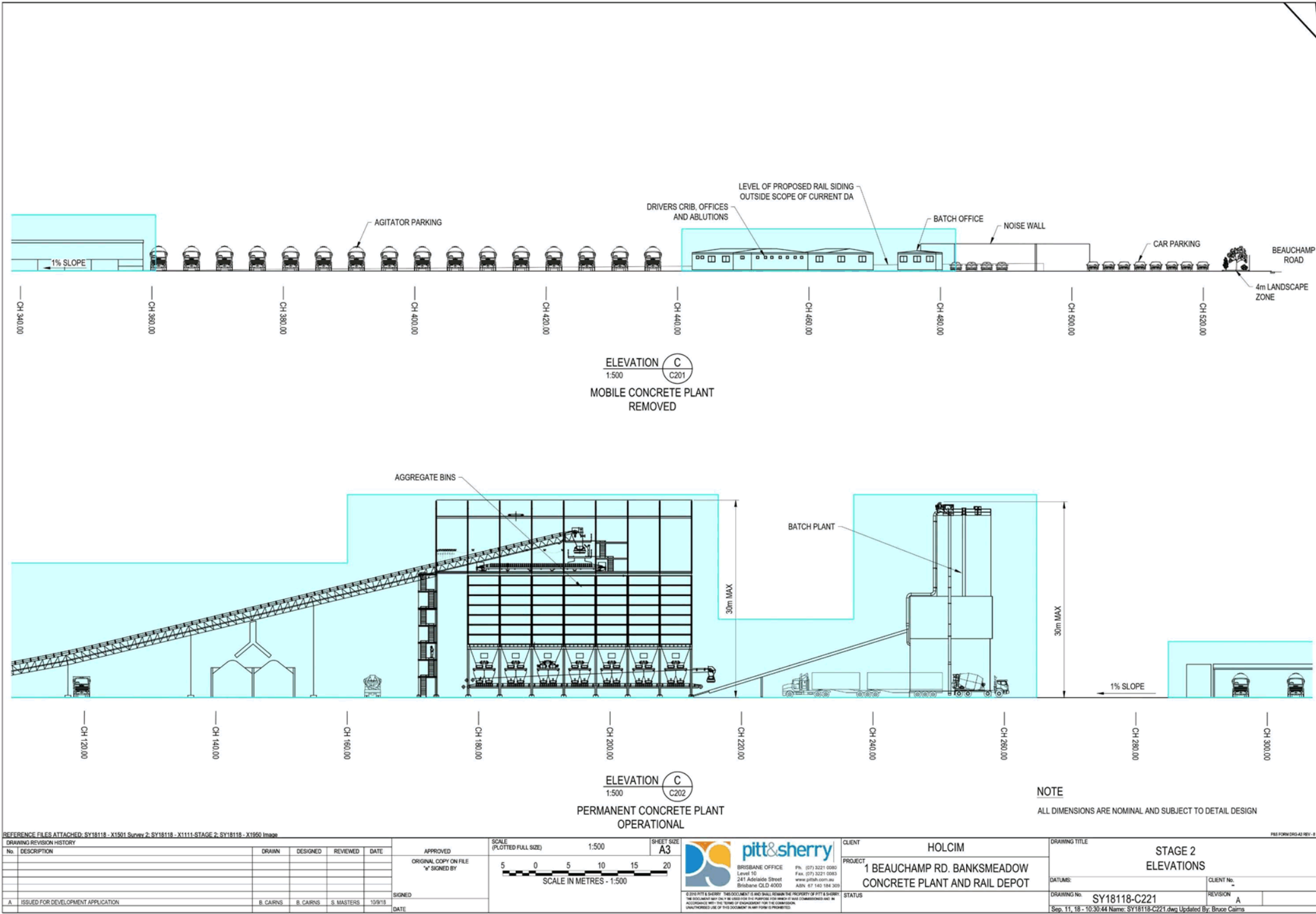


Figure 3-9 Stage 2/3 Concept Layout – Sheet 1 (Subject to Detailed Design)





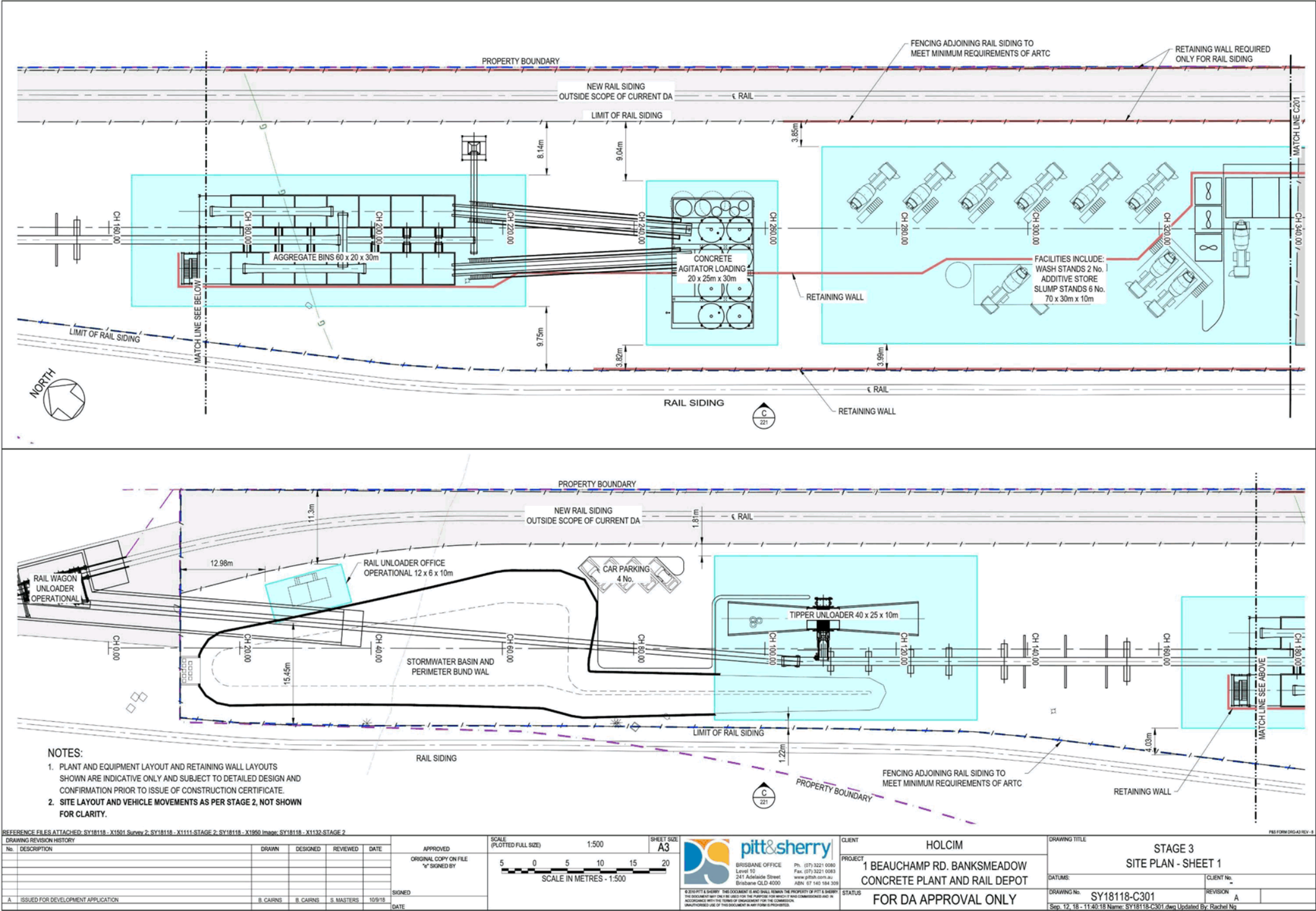


Figure 3-12 Stage 2 Concept Layout – Sheet 2 (Subject to Detailed Design)

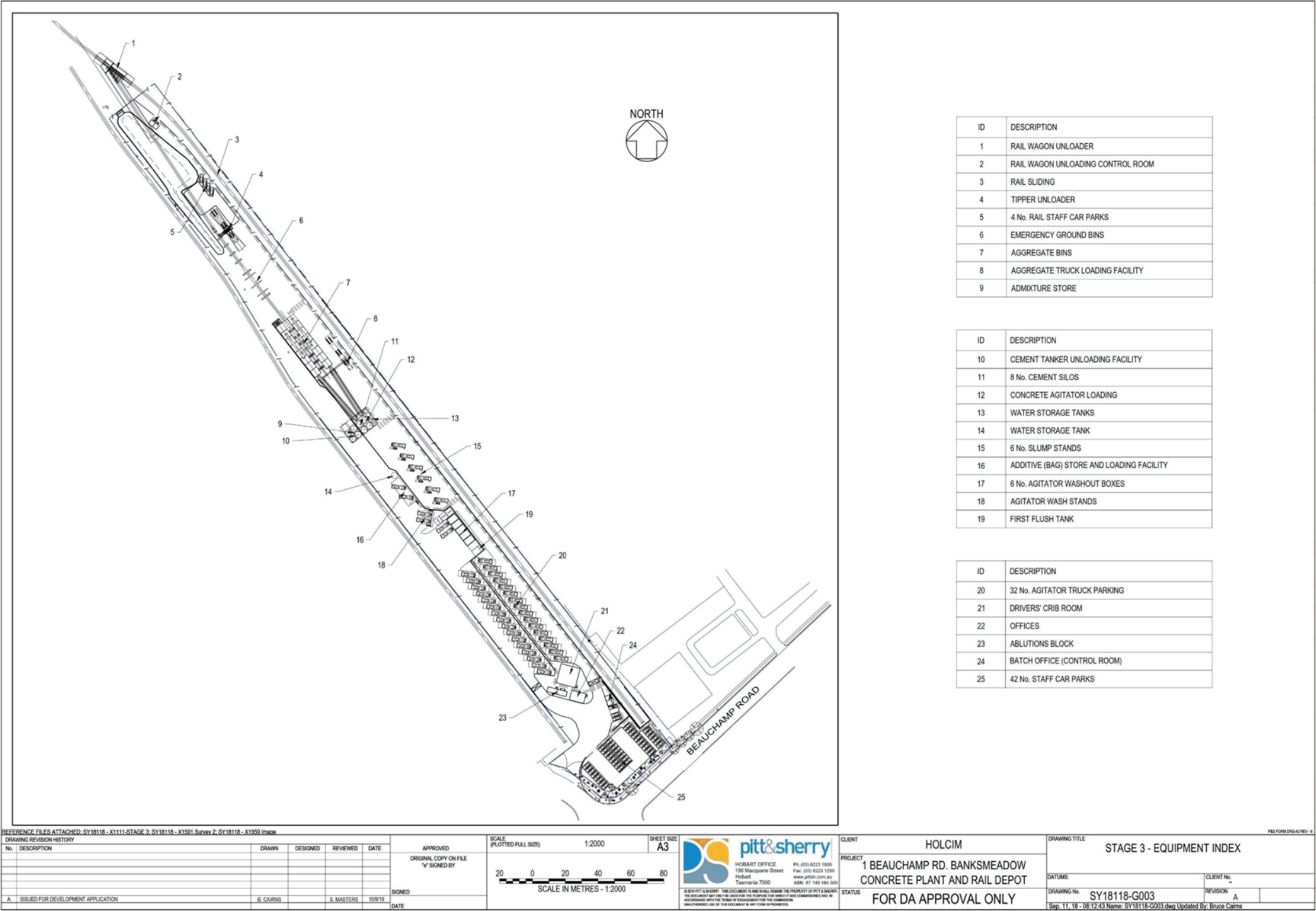


Figure 3-13 Stage 3 General Layout (Concept)



3.6 Rail Operations and Rail Siding

Construction of the rail siding and aggregate unloading facility would be undertaken by others in accordance with any required consent or approval. These works are not part of this development application.

Holcim and Pacific National would enter an agreement whereby Pacific National provides the rail haulage operations associated with delivery of aggregates to the Holcim site. The proposed rail siding would connect with the rail freight network which is managed and operated by ARTC. Letters from the ARTC and Pacific National supporting the Project are attached in **Appendix F**.

Pacific National currently operates a dedicated train hauling aggregate from the Holcim Lynwood quarry at Marulan to Holcim's rail distribution centre at Rooty Hill. Each train consists of 36 hopper wagons with a diesel locomotive at either end. Pacific National would employ a similar train configuration to deliver aggregates from Holcim quarries to the new rail depot at Banksmeadow.

As the train and rail siding owner, Pacific National would be responsible for train scheduling and train routing. The train route (Figure 3-14) is expected to take the Southern Sydney Freight Line to Chullora, and the Metro Freight Network and Botany Rail Line to the proposed new rail depot at Banksmeadow.

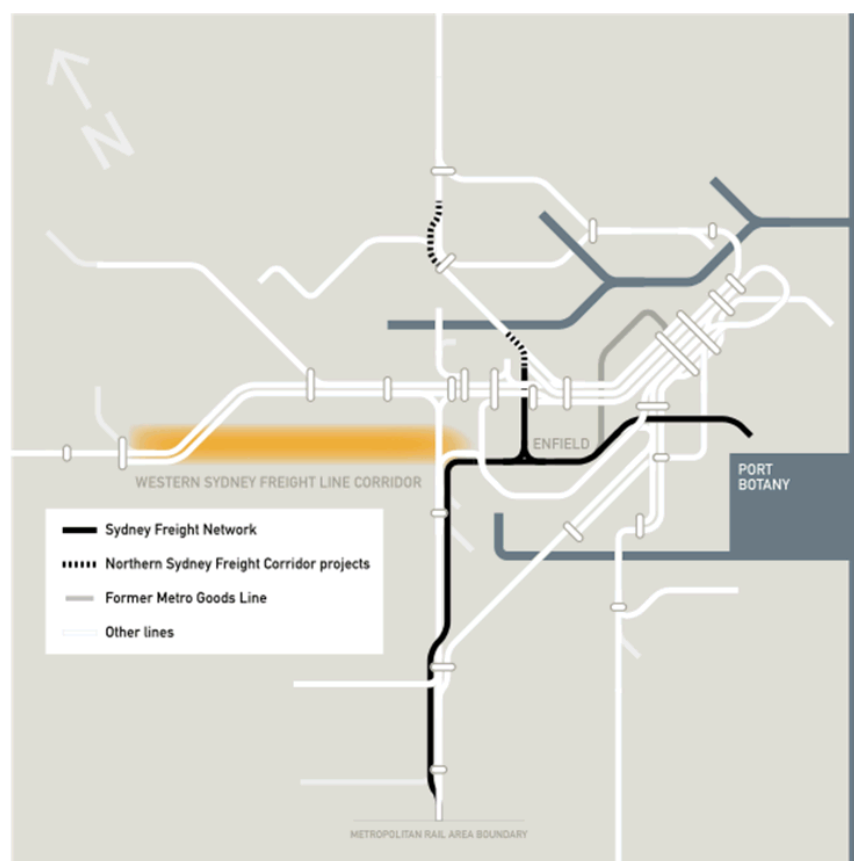


Figure 3-14 Sydney Freight Network



In 2018 the NSW government announced the upcoming duplication of the rail line between Port Botany and Mascot. The upgrade would assist the movement of train traffic between Holcim quarries and the proposed new rail depot at Banksmeadow.

Up to one train per working day would deliver the required quantity of aggregates to the Project.

Ramp Up Period and Peak Demand

It is estimated that the Stage 3 operations will take between 18 months to 2 years to reach 50% of the Project concrete production, and then increase at an annual rate of approximately 3% thereafter.

Rail Spur Configuration

The existing configuration on Lot 20 DP1231202 is a single rail spur that leaves the ARTC rail sidings at Port Botany and divides into three sidings to service the Veolia depot to the south of the Project Site. This arrangement is considered adequate for Veolia's current level of demand on the rail network. However, ARTC and Pacific National plan to modify the rail spur location to accommodate future increases in rail traffic servicing the Veolia depot and the new rail depot at the Project Site.

The rail spur upgrade from the ARTC rail line would likely extend from near Stephen Road overbridge and feed the Pacific National sidings for Veolia and Holcim. The existing connection between the ARTC sidings at Port Botany and the Veolia sidings would be removed. The spur upgrade would ensure that the trains servicing the Pacific National sidings at Lot 20 DP1231202 do not interfere with ARTC operations of the Port Botany rail sidings.

Proposed Rail Siding for the Project

The current proposal for the new rail siding would be capable of receiving two different train configurations (rakes) into the Project Site:

- Rake #1: 36 wagons each 76.7t payload = 2,761t and 530m overall length
- Rake #2: 27 wagons each 75.8t payload = 2,047t and 500m overall length

The rail siding arrangement would connect to the existing rail line in one location with one line diverging into the Project Site and one line diverging toward the Veolia site. The rail siding would have rail heights and grades similar to the existing ARTC corridor main line rail but increase in elevation up to and extending over Pacific National land to enable the wagon aggregate load-out point. General layout of the proposed rail siding is shown in Figure 3-17.

Each train would have two locomotives, one at either end of the rake. The wagon unloading point would be about 500m from the end of the siding to allow the rake to be unloaded without being split. The rail siding would diverge from the Port Botany goods yard and serve both this development and the current rail sidings serving Veolia.

3.7 Rail operations and safety within the Holcim facilities

Holcim is familiar with rail operations and safety as they currently operate rail wagon loading and unloading facilities at their Lynwood Quarry and the Rooty Hill Rail Depot, respectively. The rail siding will be fenced off from the Holcim site with access by authorised persons only.

All rail maintenance activities are the responsibility of Pacific National. Maintenance of the aggregate unloading facility is the responsibility of Holcim and would be carried out only by appropriately authorised personnel. Any isolation of the rail siding for track maintenance or aggregate unloading facility maintenance would be carried out by Pacific National.



3.8 Aggregate Unloading

Rail

The train would travel to the end of the siding first, then each wagon would stop to unload as the train moved out of the siding. At the aggregate unloading station the train stops, the wagon doors open and aggregates drop into a hopper set between the rails. Once a wagon is empty the wagon doors close and the train moves forward to allow the next wagon to unload. The process repeats until the train is empty. A 2-hour window is typically needed to unload all wagons on the rake.

Figure 3-15 shows a typical bulk quarry hopper wagon for transporting and unloading aggregates via rail. Figure 3-16 shows what the Project's aggregate unloading facility would look like based on a similar configuration at the Holcim Rooty Hill facility.

Lighting would be provided to enable wagon unloading at any time. Aggregate would be transported via a covered conveyor to the enclosed bulk storage bins.



Figure 3-15 Bulk quarry hopper wagon



Figure 3-16 Rail siding with hopper wagons and aggregate unloading facility at Holcim's Rooty Hill

Road

A single truck unloading point would be established. The truck unloading point would accept:

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- Truck and dog combinations and B-double configurations; and
- All aggregates (coarse and fine).

3.9 Concrete Batching

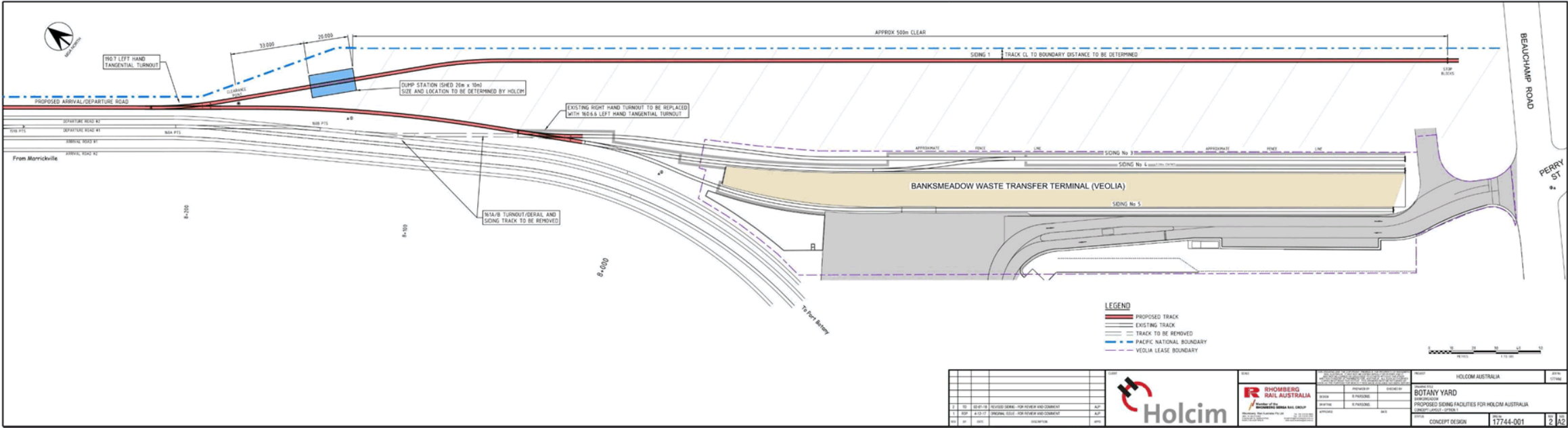
Concrete is comprised of 3 main ingredients: aggregate (stone in varying sizes), cements and water. Other materials (such as steel fibres, coloured oxides and accelerators) are added to modify the chemistry of the concrete. Concrete has a limited delivery window (generally 90 minutes) from when the ingredients are mixed to when the concrete begins to set and its properties compromised. Mixing of concrete on the job site is rarely practicable or economic for the volumes used, even in the small pours used for a house slab.

Aggregates come in a range of sizes from fine sand to coarse stone (typically 20mm in size) and properties (strength *etc.*). These aggregates need to be blended to achieve the properties required for the concrete. Typically aggregates are delivered by tipper truck from the quarry to the concrete plant. At Banksmeadow the majority of the aggregates will be delivered by rail from Holcim's quarry near Marulan south of Sydney or from other future sources as available. At Banksmeadow the aggregates will be unloaded from the rail wagons and the tipper trucks into hoppers from which they are transported by covered conveyor into large enclosed bins.

Cementitious materials include general Portland cement, fly ash (a by-product from the combustion of coal in power stations) and blast furnace slag (a by-product from the production of iron). These materials bind (or "glue") the aggregates together. Cementitious materials are delivered from the cement works by road tanker and are stored in sealed silos.

Water is required to activate the cementitious materials. The Banksmeadow plant is designed to minimise the volume of town water used by: a) collecting rain water from pavements and roofs, and b) recycling water used for washing down equipment. Water from all sources (whether recycled or storm water) is stored in large tanks to minimise the impact on the surrounding infrastructure.

Concrete is produced by separately weighing the aggregates, cementitious materials and water and then transferring into the concrete mixer which is mounted on a truck: commonly referred to as an agitator truck. It is in the agitator truck that all the ingredients are thoroughly mixed: this is termed by the industry as the dry-mix process as the ingredients are added in their dry state to the mixer. The load is then checked for quality and the agitator truck washed before leaving the site. The agitator truck may be washout out when it returns to the site to remove any residual concrete.





3.10 Aggregate Storage and Load Out

Aggregates would be delivered into storage bins that are fed to the concrete plant. Based on a typical concrete mix design, daily aggregate consumption by the concrete plant would be about 3,300 tonnes of rail delivered aggregate and about 1,300 tonnes of road delivered.

If daily consumption of rail delivered aggregate exceeds that proposed to be delivered by rail, then aggregate would be imported either by road (via truck) or additional train runs. Stage 2 of the development is expected to produce concrete at a peak of 2,500m³/day equivalent to consuming approximately one train load.

The Project would load out aggregates and fine sand into truck and dog combinations and semi-tippers. The Project would distribute the balance of imported aggregate after concrete batching to the wider Sydney markets.

Aggregate and fine sand would be dispatched to internal (*i.e.* Holcim) and external customers.

3.11 Site Occupancy

Table 3-4 lists the predicted occupancy of the Project Site once the rail siding is in operation (Stage 3).

Agitator drivers would typically arrive at the Project Site for pre-start meetings and truck checks and then leave over the following hour. An agitator returns from a concrete delivery job site on average every 1 to 2 to collect their next load.

Production is estimated to be generally uniform throughout the day with production dropping off from 2:00pm onwards. A meeting room would accommodate agitator drivers for pre-starts and function as a lunch room. Facilities (ablutions, parking etc.) would be determined from the National Construction Code based on the final determined occupancy. It is uncommon for drivers to need to shower at the end of their shift.

Table 3-4 Site Occupancy

Position	Approximate no. people/shift		Place of Work	Duties
	Day	Night		
On site	8	4	Office/Site	Plant/Production/Cleaning/Supervision
Agitator drivers	32	32	Truck driving	Delivery of concrete
Casual visitors/workers	5	-	Office/Site	Pacific National / Quality control / auditing

The Site would not be regularly open to the general public. Orders for concrete and aggregate are made over the phone or electronically. Visitors to the site will typically be Holcim and Pacific National staff or external visitors escorted by Holcim. Pacific National or third party contracted staff. Pedestrian access to the site would be through a gate exiting directly onto Beauchamp Road. All visitors to the Site will report to the Batch Office.



3.12 Ancillary Facilities

Office spaces

Several buildings will be established on the site including a batch office, drivers' crib room (including kitchenette), office rooms (typically 3x3m per person); and an ablutions block (male, female facilities and disabled). All would be established in accordance with the National Construction Code (formerly known as the Building Code of Australia). These small buildings would be located towards the front of the Project Site near the parking area. An indicative layout is provided in **Appendix C**. A proposed colour scheme and roof profile is provided in Figure 3-18.



COLOUR SCHEME



ROOF PROFILE

Figure 3-18 Indicative buildings

Parking

Parking for staff and visitors will be at the front of the site and separated from the main plant activities. Thirty-nine (39) spaces would be available for Holcim staff and one (1) space for Pacific National. Visitor parking spaces would be as determined based on National Construction Code. Approximately thirty-two (32) agitator trucks parking places would be located on site. These trucks will be accessed from the lunch room without crossing any roads. No agitator maintenance would occur on site.

3.13 Utility Requirements

Power

Based on preliminary designs, the pad-mount transformer and main switchboard / meter will be located adjacent to the main gate to the Project Site. Medium voltage (11kV) power will be supplied by Ausgrid.

Water

The existing Sydney Water potable water main is near the Project Site frontage along Beauchamp Road. Potable quality water would be required for:

- Process water used in the manufacture of concrete
- Washing of agitator trucks
- Amenities.



Potable water will be supplemented by stormwater captured on site for use as process water and for dust suppression. Potable water requirements are summarised in Table 3-5 (per A. Rex, Holcim correspondence).

Table 3-5 Potable water usage at peak production rate

Estimated water usage	
Process Water	
Process water	180 L/m ³
Production (peak)	2,500 m ³ /day
Water usage (concrete)	450 kL/day
Amenity Water	
No. people on site	40
Consumption	150L/person/day
Water usage (amenities)	6 kL/day
Agitator Truck Chute Wash	
Production (peak)	2,500 m ³ /day
Average load size	6 m ³
No. loads	417 loads/day
Chute wash (slump stand)	40 L/load
Water usage (chute wash)	17 kL/day

Potable water will be stored on site to provide a buffer between the process demand and the potable (town) supply (Figure 3-6).

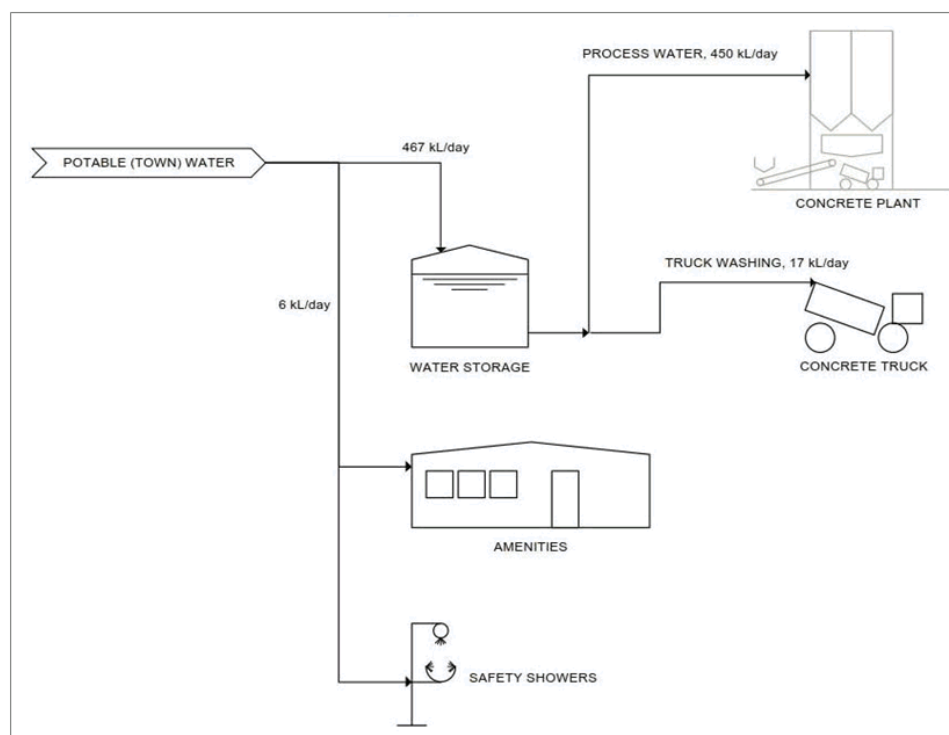


Figure 3-19 Potable water use



Concrete (agitator) trucks are washed out several times during a day to remove any buildup of concrete within the barrel. This water is captured and recycled for washing out of agitator trucks and for process water. Wherever possible this supplemental water will be used for process water, yard cleaning and dust suppression. Figure 3-20 illustrates washout management activities that promote on-site recycling of water.

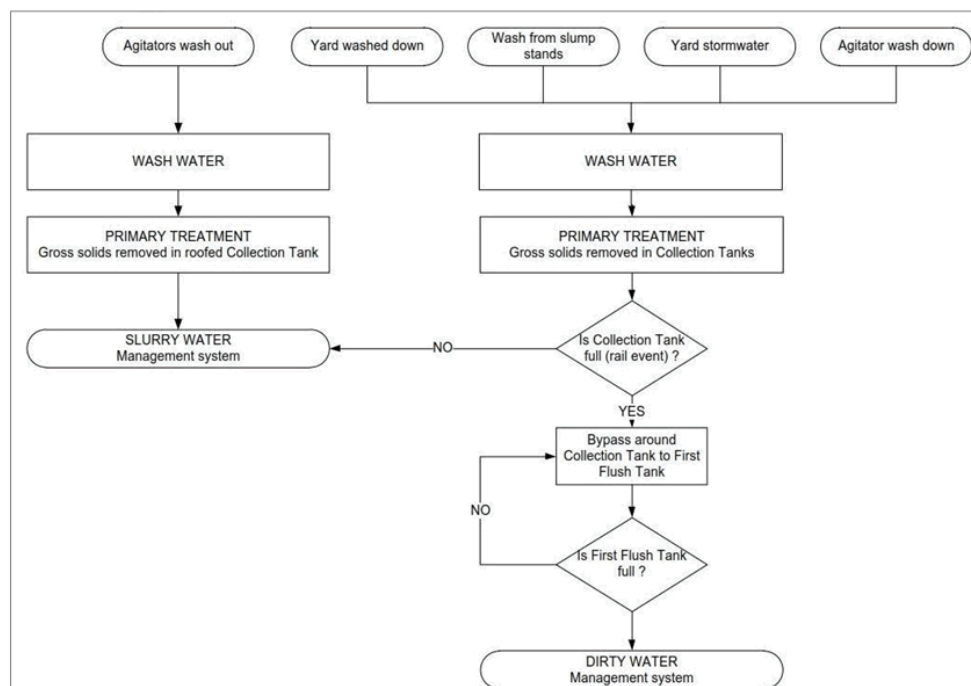


Figure 3-20 Washout management

Sewage

A trade waste licence is not required. A single sewage connection will be made meeting the National Construction Code requirements. It is proposed that the site will use a pumped system to allow “shallow” piping. The existing Sydney Water sewer main runs along the Project Site frontage along Beauchamp Road.

Rubbish

Roofed/lidded rubbish bins will be located around the site for bulk waste collection by a private contractor. This waste will be putrescible waste, packing material from operations and waste collected from maintenance activities.

Underground services

A Dial-Before-You-Dig investigation was undertaken for the Project and shows services running along the front boundary. These services are summarised in Table 3-6.

Table 3-6 Summary of underground services

Company	Service	Location
APA Group	Gas transmission	No services



Company	Service	Location
AusGrid	Power	Along Beauchamp Road fence line
Caltex	Diesel pipeline	Decommissioned pipelines Along Beauchamp Road fence line
Jemena	Gas transmission	Along Beauchamp Road fence line
Optus	Telecommunications	No services
Qenos / Orica	Caustic soda	Running mid-way across site. Along boundary (though not shown on drawings – above ground piping).
Sydney Water	Potable (town) water Sewer (wastewater)	Along Beauchamp Road fence line
Telstra	Telecommunications	No services

Two existing services that travel across the site require protection. These include the Qenos/Orica pipeline running mid-way across the site; and the Caltex (decommissioned) diesel pipeline along the front boundary. These services will be managed (protected) as follows:

Orica/Qenos Caustic Soda Pipeline

- Foundations for structures will not intrude into the exclusion zone around the pipeline. Strengthened pavement will be constructed to allow bridging of roadways across the pipeline.

Caltex diesel pipeline

- Surveys show that this pipeline will run under the proposed landscaping. New services (for example sewer, power and telecommunications) will cross the pipeline in designed culverts.

No services will need to be relocated.

3.14 Energy Efficiency and Sustainable Design Elements

Electric power

Most of the electric power would be consumed by electric motors, in particular the conveyor drives. Power factor correction will be applied to improve the efficient use of the power supplied. Power factor correction brings the power factor of an AC power circuit closer to 1 by supplying or absorbing reactive power, adding capacitors or inductors that act to cancel the inductive or capacitive effects of the load, respectively.

Large motors will use soft starters to limit the inrush current and thus improve the stability of the power supply and reduce the transient voltage drops that may affect other loads.

Heating/cooling of habitable buildings

Energy efficient building design elements would include:

- Windows will be double glazed;
- Insulated walls and roof;
- Light coloured roof;



- Reverse cycle split system air conditioners; and
- Instant hot water heaters for showers.

Sustainable building materials

All timber used in buildings will be required to be certified to AS 4707 "Chain of custody for forest products" and AS 4708 "Sustainable Forest Management - Economic, social, environmental and cultural criteria and requirements".

Water

Large volumes of water are required for the production of concrete (~200L/m³). Water efficient measures would be incorporated in the design including:

- Storm water will be harvested and stored to minimise use of town water.
- All water used for washing equipment will be recycled into the process.
- Impact on infrastructure will be reduced by storing town water and then using for process water thus reducing spikes in water demand from process equipment.

3.15 Construction Methodology

An outline Construction Methodology statement has been prepared and is provided in **Appendix S**. This statement describes the intended staging of works, key activities, facilities and management plan requirements. Additional information is provided below.

Staging

Construction will occur in several stages as summarised in Table 3-7. This schedule assumes that the construction of the rail siding, which involves activities by both Pacific National and ARTC, would exceed the time taken to construct the fixed concrete plant and aggregate storage bins and reflects the complexity of any work associated with the rail (civil works, permanent way, signalling etc.).

The mobile/temporary plant (constructed in Stage 1) would be constructed towards the front of the site in a location which will be occupied by the final car and truck parking areas. Figure 3-1 illustrates Project staging. This will allow the construction activities associated with the fixed batching facilities and conveyors to be carried out minimal impact on production from the mobile/temporary concrete plant.

Table 3-7 Construction staging

	Stage 1	Stage 2	Stage 3
Construction time	21 months	6 months	NA
Construction activities	Mobile/temporary concrete batching plant and associated aggregate storage. Bulk earthworks across the site. Commencement of construction of rail siding and rail wagon unloading facility. Fixed concrete batching and aggregate storage facilities, including truck unloading conveyor systems. Continued construction of rail siding and rail wagon unloading facility.	Completion of rail siding and aggregate unloading facility (by Pacific National)	NA
Operational plant and equipment	Mobile/temporary concrete batching plant and associated aggregate storage.	Fixed concrete batching plant and aggregate storage facilities	Fixed concrete batching plant and aggregate storage



	Stage 1	Stage 2	Stage 3
			facilities and rail depot

Site Establishment

Site establishment activities are anticipated to include:

- Installation of site boundary fencing and access gates;
- Establishment of site construction compound including site sheds, equipment and stockpiling areas, and temporary car parking facilities for workers;
- Installation of temporary services for the construction works including water supply connection, sewer connection and electrical supply connection;
- Installation of erosion and sediment controls around the area of the works to prevent sediment discharge into the surrounding waterways; and
- Installation of shaker grid and wash down facilities at the exit from the site to minimise the transfer of materials from the site onto the surrounding public roads.

Management and Environmental Controls

Potentially contaminated groundwater will be managed by:

- Restricting excavation so the groundwater is not encountered;
- Building up the site;
- Use of raft slabs; and
- Use of driven piles where required.

Potentially contaminated soil will be managed by:

- Use of driven piles;
- Quarantining all potential contaminated soil from excavations in a documented, contained area;
- Managing any contaminated soil from the site in accordance with the appropriate guidelines; and
- Ensuring all earth moving equipment is cleaned before leaving site with washout contained to a documented area.

A Construction Safety Management Plan (CSMP) and Construction Environmental Management Plan (CEMP) will be developed which includes guidance and training on:

- Management of unexpected contaminants (Unexpected Finds Protocol);
- Occupational hygiene;
- Stormwater management;
- Management of dust, noise and vibration;
- Waste management (putrescible and construction);
- Traffic management (on site and parking); and
- Interaction with rail construction and operation activities.

Earthworks and Stabilisation

A detailed plan of management for the bulk earthworks and site stabilisation activities will be prepared by the chosen construction contractor. This is likely to include:



- Establish methodology for staging of the cutting and filling of materials to achieve bulk earthworks levels whilst minimising material to be taken from or imported to Site;
- Initiate bulk excavation works in areas of cut, transferring spoil to areas of fill;
- In areas of fill, establish required compaction until earthworks level is achieved, testing compaction as specified;
- If imported fill is required obtain engineers approval for source material, track all imported material brought into site in accordance with the specification;
- Grade finished earthworks surface to minimise stormwater ponding;
- Excavate, test and remove any excess material from the site as required and dispose to a licensed waste facility;
- Maintain shaker grid and wash down facility to minimise the transfer of materials from the site onto the surrounding public roads;
- Ensure any dirt/mud that is tracked onto public roads is swept up;
- Stabilise the site progressively following bulk earthworks including provision of topsoil and revegetation where appropriate;
- If stockpiles are required as part of the works, stabilise stockpiles and employ appropriate erosion and sediment controls to minimise erosion and sedimentation risks; and
- Wet exposed earth for dust suppression for the duration of the works.

Plant required to undertake these works may include:

- Delivery vehicles such as flatbed truck and vans;
- Fork lift to unload deliveries;
- 20t – 35t Excavators for excavation of cut materials;
- 10m³ Tipping Trucks to move material around site or remove material from site;
- Wheeled loader to move material around site;
- 20t - 27t Single Drum Rollers to compact fill material and finished earthworks surface;
- Articulated Grader to grade fill layers and final earthworks surface;
- Piling rig; and
- 1,200L water truck to suppress dust on exposed earth.

Vegetation Removal

An application submitted by Pacific National to Bayside Council for the removal of vegetation across the Project Site was approved by Bayside Council on 15 June 2018. All vegetation will be removed in accordance with this approval so that the site is prepared for excavation and grading work to be undertaken as part of the Project.

Traffic, Access and Parking

Holcim is negotiating with Orica to lease land for parking of construction worker vehicles during Stages 1 and 2. The proposed lease land is north of the Project Site adjacent Orica's existing access point on Beauchamp Road (see Figure 7-1 in Section 7.1). To prevent workers having to walk along Beauchamp Road, a direct access to the construction site would be provided via a temporary constructed crossing over the existing pipelines running along the Orica boundary.

Construction areas would be divided into areas to service:



- Mobile/temporary concrete batch plant;
- (Fixed) concrete batch plant;
- Aggregate storage and handling;
- Civil works; and
- Rail.

This reflects the major construction packages. Each compound will have its own amenities (offices, lunch rooms, ablutions). With the exception of rail construction activities, all other construction activities will enter and leave the Site from the extension to Perry Street on the West side of Beauchamp Road.

As part of its Construction Environmental Management Plan (CEMP), the contractor appointed to undertake the Stage 1 would prepare and submit a Traffic Management Plan (TMP) for approval by Holcim prior to commencement of works. This would include consultation with Bayside City Council and Roads and Maritime as appropriate.

Construction vehicle site access will be via the front entry and exit gate.

Construction Hours

It is anticipated that construction activities would be undertaken primarily during standard construction hours in accordance with the Interim Construction Noise Guideline [ICNG] (DECC, 2009). These standard construction hours are:

- Monday – Friday – 7:00am to 6:00pm;
- Saturdays – 8:00am to 1:00pm; and
- Sundays and Public Holidays – No Work.

The high ambient temperatures experienced at certain times of the year may require some concrete pours to be carried out at night when it is cooler. It is expected that there could be some days over the construction period when night pours, large equipment deliveries or other works would be required.

Any required out of hours' work would be undertaken in line with an approved out of hours work procedure that will form part of the CEMP.

Construction of Rail Siding and Aggregate Unloading Facility

The approval (if required), design and construction of the rail siding and aggregate unloading facility would be undertaken by others. Pacific National would own and operate the rail infrastructure. Bulk earthworks (including the track foundation) for the rail siding would be carried out during Stage 1 as part of the general site earthworks. Construction of the rail siding and aggregate unloading facility would be carried out during Stages 1 and 2 whilst the Holcim construction activities are being progressed. It is anticipated that materials (sleepers, rail, structural fill etc.) for the construction of the rail infrastructure would be delivered by road through the Holcim site. Site development activities would be managed to ensure appropriate access for rail construction including temporary storage of materials within Holcim's development site is maintained.

Pacific National would coordinate all activities associated with the rail siding, including connection to the ARTC infrastructure and any signalling requirements.

The activities associated with the construction of the wagon unloader would also be constructed and managed by Pacific National and occur before the rail siding is constructed. Design would meet all ARTC requirements.



It is likely that the Orica boundary would need to be supported with a retaining wall for part of its length. The construction of this retaining wall and associated drainage is anticipated to be the responsibility of Pacific National. Rail siding activities will be separated by fencing from the rest of the Site.

3.16 Amenities and Social Considerations

The Site is located within an existing industrial area. The buildings and facilities bordering the Project Site include Banksmeadow Waste Transfer Terminal (Veolia) directly south, Botany Industrial Park to the north and north west, Beauchamp Road from the south east and vacant land from the west of the Project Site.

The nearest residential precincts occur at Denison Street (200m to the north-east), McCauley Street (300m to the south east), and Stephen Road/Brighton Street (over a kilometre to the north-west). However, during 150 community letter box drops on 18 May 2018, two buildings discovered had a shared use of commercial and residential with the address 105 and 111 Beauchamp Road. These two properties, along with several residences in Perry St (14, 18, 20, 22) are the nearest residential neighbours and are located approximately 75-100m from the Project Site.

The following characteristics of the Project further illustrate its compatibility with the surrounding land uses and visual aspects of the proposed elements of the Project.

- The Site is long and narrow and small in scale compared to adjoining industrial lots;
- The Site is lower in elevation compared to the nearest viewpoints and adjoining industrial land, and has limited visual exposure;
- Residential receptors are unable to view the existing Site;
- An acoustic barrier (noise wall) is proposed behind the carpark on Beauchamp Road which would limit views of train movements along the rail siding, and operations within the Site particularly for Beauchamp Road users travelling south. The wall is likely to be between 3-4m high, subject to detailed design;
- The proposed Project is similar in character to the existing surrounding industrial infrastructure;
- Proposed Site infrastructure would be set-back from Beauchamp Road with only a light vehicle carpark and single-storey ancillary buildings close to Beauchamp Road;
- External walls and roofing materials of proposed buildings are constructed of non-reflective material, pre-coloured metal sheeting;
- Ancillary buildings would be clad in muted, natural tones, colours that do not have a high contrast, to reduce visual dominance;
- Intense lighting is not proposed to prevent obtrusive light being a nuisance to residents;
- Vertical structures are proposed; however, they would have limited exposure due to elevation and intervening existing industrial buildings. Note that the Qenos plant (north of the Site) includes two distinctive, red and white striped, flare stacks over 70m used to manage the safe disposal of excess gases. They are located 300m north-west of the Project Site.
- Existing vegetation along Beauchamp Road screens views into the Site for road users travelling south (and would be retained); and

The construction parking area would be screened behind existing vegetation and away from residential views.



4. Statutory and Strategic Context

This chapter outlines the statutory framework that applies to the Project and summarises NSW and Commonwealth environmental planning legislation relevant to the Project and this EIS.

4.1 Commonwealth legislation

4.1.1 Environmental Protection and Biodiversity Conservation Act 1999

The Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) is the primary piece of environmental legislation at the federal level. The EPBC Act relevantly provides a legal framework to assess proposed actions that will have, or are likely to have, a significant impact on matters of national environmental significance (NES), Commonwealth land or are proposed to be undertaken by the Commonwealth or a Commonwealth Agency.

The EPBC Act requires that actions which will have, or are likely to have, a significant impact on such matters require the approval from the environment minister for the Department of the Environment and Energy. A search of the EPBC Protected Matters Search tool was undertaken on 21 February 2018 for the site and a 10 km buffer. The results of the search are summarised in Table 4-1.

Table 4-1 Matters of National Environmental Significance

Matter of National Environmental Significance	Assessment
Wetlands of International Importance (Ramsar)	<p>There are no Wetlands of International Importance located within 500m of the Project Site. However, the Towra Point Nature Reserve Ramsar wetland is within a 10km buffer of the Project Site.</p> <p>Towra Point Nature Reserve: Towra Point Nature Reserve is located approximately 7km south of the Project Site. Due to the location of the reserve, impacts are not expected from the construction or operation of the Project.</p>
World Heritage Properties	<p>There are no World Heritage Properties located within 500m of the Project Site. However, world heritage properties that are listed below are located within 10km of the Project Site:</p> <ul style="list-style-type: none"> • Australian Convict Sites (Hyde Park Barracks Buffer Zone); • Sydney Opera House- Buffer zone; and • Australian Convict Sites (Hyde Park Barracks). <p>While there are 3 listed world heritage properties within 10km of the Project there are no listed sites within 500m of the Project footprint. Therefore, the Project would not impact these world heritage properties.</p>
National Heritage Places	<p>No National Heritage Places are located within 500m of the Project Site. However, there are a list of Indigenous and Historic heritage properties located within 10km of the Project. These include:</p> <p>Indigenous heritage:</p> <ul style="list-style-type: none"> • Cyprus Hellene Club - Australian Hall (8km from the Project). <p>Historic:</p> <ul style="list-style-type: none"> • Bondi Beach (8km from the Project);



Matter of National Environmental Significance	Assessment
	<ul style="list-style-type: none"> Hyde Park Barracks (8km from the Project); Kamay Botany Bay: botanical collection sites (5km from the Project); Kurnell Peninsula Headland (5km from the Project); and Bondi Surf Pavilion (9km from the Project).
Commonwealth Marine Areas	No Commonwealth Marine Areas are located within the vicinity of the Project Site.
Listed Ecological Communities Listed Threatened Species Listed Migratory Species	<p>Banksmeadow is predominately an industrial area with very little undisturbed land remaining. Surrounding the Project Site are largely industrial and commercial facilities including the Botany Industry Park. Immediately to the west of the Project is a railway corridor that includes mostly exotic and some native vegetation.</p> <p>There are no recorded threatened or migratory flora or fauna recorded on the Project Site or using it as habitat. The heavily developed nature of the Project Site and the surrounding area reduces the likelihood for listed threatened or migratory species to occur on the site.</p> <p>It is predicted there would be no impacts on EPBC listed species due to the Project. A biodiversity assessment and potential impacts are discussed in Section 7.8.</p>
Commonwealth Land	<p>No Commonwealth Land is located within 500m of the Project Site. However, there are Commonwealth Lands located within 10km of the Project. These include:</p> <p>Natural</p> <ul style="list-style-type: none"> Malabar Headland. <p>Historic</p> <ul style="list-style-type: none"> Bondi Beach Post Office; Botany Post Office; Building VB1 and Parade Ground; Building VB2 Guard House; Buildings MQVB16 and VB56; Buildings VB13, 15, 16 & 17; Buildings VB41, 45 & 53; Buildings VB60 and VB62; Buildings VB69, 75 & 76 including Garden; Buildings VB83, 84, 85, 87 & 89; Buildings VB90, 91, 91A & 92; Cape Baily Lighthouse; Marrickville Post Office; Paddington Post Office;



Matter of National Environmental Significance	Assessment
	<ul style="list-style-type: none"> • Reserve Bank NSW; • School of Musketry and Officers Mess, Randwick Army Barracks; • Sydney Airport Air Traffic Control Tower; • Victoria Barracks Perimeter Wall and Gates; • Victoria Barracks Precinct; and • Victoria Barracks Squash Courts.

Impacts on matters of NES are not predicted as part of the Project and therefore a referral has not been made to the Commonwealth Department of the Environment and Energy for the Project.

4.2 NSW Legislation

The following sections provide a summary of NSW environmental and planning legislation that has been considered in the development of the Project.

4.2.1 Environmental Planning and Assessment Act 1979

The *Environmental Planning and Assessment Act 1979* (EP&A Act) and the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation) provide the framework for the assessment of the environmental impacts of proposed developments in NSW.

Development consent for the Project is required under Part 4 of the EP&A Act. Clause 4.10 of the EP&A Act states that designated development is development that is declared to be designated development by an environmental planning instrument (EPI) or the regulations. The Project is classified as Designated Development in accordance with Schedule 3 of the EP&A Regulation (see Section 4.2.2 below).

Under Clause 4.12(8) of the EP&A Act, a development application for designated development is to be accompanied by an environmental impact statement prepared by or on behalf of the applicant in the form prescribed by the regulations.

The Project is also considered Integrated Development in accordance with Section 4.46 of the EP&A Act as the Project will require an Environment Protection Licence under the Protection of the Environment Operations Act 1997 (POEO Act) which states:

(1) Integrated development is development (not being State significant development or complying development) that, in order for it to be carried out, requires development consent and one or more of the following approvals:

- *Environment protection licence to authorise carrying out of scheduled development work at any premises.*

Part 4 of the EP&A Act establishes the classifications of development as permissible without consent, permissible with consent or prohibited. The EP&A Act also sets forth the requirements for assessment of development that is permissible with consent. The Banksmeadow project is defined as permissible with consent.



EP&A Act Section 4.15 – Matters for Consideration

In determining a development application, a consent authority is to take into consideration the following matters as are relevant to the development, which are the subject of the development application.

(a) The provisions of:

(i) Any environmental planning instrument

Part 1 Clause 5 of the SEPP (Three Ports) lists the land areas to which the Policy applies. Under SEPP (Three Ports) the Project Site is zoned IN1 – General Industrial. General Industry is permissible within this zone with consent.

(ii) Any draft environmental planning instruments that have been placed on public exhibition.

None relevant at this stage.

(iii) Any Development Control Plans

Botany Bay Development Control Plan (DCP) 2013, City of Botany Bay Development Control Plan No. 33 – Industrial Development (2013), and Botany Bay Development Control Plan No. 30 – Botany / Randwick Land Use Safety Study apply to the Site. The objectives and development controls as they relate to this development have been addressed in this EIS.

(iv) Any matters prescribed by the regulations.

The Project meets the definition of designated development under the EP&A Regulation.

(b) The likely impact of the development including environmental impacts in both the natural and built environment and social and economic impacts in the locality.

These are considered in Section 7 of this EIS.

(c) The suitability of the site for the development.

The Project Site is considered suitable for the development as it meets the SEPP (Three Ports) Land Zoning requirements and the Project is reflective of the existing surrounding industrial development and will be built to meet the relevant design and environmental controls as set out in the relevant DCPs.

(d) Any submissions made in accordance with the Act or the Regulations.

No submissions have been made at this stage.

(e) The public interest

The Project will meet the public interest as is reasonable and consistent with the Project Site zoning and character of the industrial area and would not create any significant adverse impacts on the environment or on neighbouring properties.

The permissibility of the Project is determined by the environmental planning instruments (EPIs) applicable to the Site. Part 3 of the EP&A Act provides for the foundation of EPIs, which can take the form of local environmental plans (LEPs) and State Environmental Planning Policies (SEPPs), described in further detail below.

4.2.2 Environmental Planning and Assessment Regulation (2000)

The Project is classified as designated development in accordance with Schedule 3 of the EP&A Regulation and therefore, under Clause 4.12(8) of the EP&A Act, a development application is to be accompanied by an environmental impact statement prepared by or on behalf of the applicant in the form prescribed by the regulation.

The Project can be classified as designated development in accordance with Schedule 3, Clause 14 (Concrete works) of the EP&A Regulation. Concrete works are defined under this clause as:

(1) Concrete works that produce pre-mixed concrete or concrete products and:

(a) that have an intended production capacity of more than 150 tonnes per day or 30,000 tonnes per year of concrete or concrete products



The Project can also be classified as Designated Development in accordance with Schedule 3, Clause 19 (Extractive industries). Extractive industries are defined under this clause as:

- (1) *Extractive industries (being industries that obtain extractive materials by methods including excavating, dredging, tunnelling or quarrying or that store, stockpile or process extractive materials by methods including washing, crushing, sawing or separating):*
- (a) *that obtain or process for sale, or reuse, more than 30,000 cubic metres of extractive material per year*

4.2.3 Protection of the Environment Operations Act 1997

The *Protection of the Environment Operations Act 1997* (POEO Act) is administered by the Environmental Protection Authority (EPA) and includes provisions relating to the protection of the environment. One of the objectives of the Act is to protect, restore and enhance the quality of the environment in NSW, having regard to the need to maintain ecologically sustainable development.

Schedule 1 of the POEO Act defines “Scheduled activities” for which an environmental protection licence (EPL) is required. Under Clause 13(1) of the POEO Act, concrete batching plants are not a “scheduled activity”. The works of the Project, however, meet the definition of a scheduled activity pursuant to Schedule 1, Clause 19 (Extractive Activities) of the POEO Act:

- (1) *This clause applies to the following activities:*

land-based extractive activity, meaning the extraction, processing or storage of extractive materials, either for sale or re-use, by means of excavation, blasting, tunnelling, quarrying or other such land-based methods.

water-based extractive activity, meaning the extraction of extractive materials, either for sale or re-use, by means of dredging or other such water-based methods.

- (2) *In this clause, extractive materials means clay, sand, soil, stone, gravel, rock, sandstone or similar substances that are not minerals within the meaning of the Mining Act 1992.*

- (3) *Each activity referred to in Column 1 of the Table to this clause is declared to be a scheduled activity if it meets the criteria set out in Column 2 of that Table.*

Table 4-2 Scheduled Activity Criteria Triggers (source: POEO Act Schedule 1, Clause 19)

Activity	Criteria
<i>land-based extractive activity</i>	<i>involves the extraction, processing or storage of more than 30,000 tonnes per year of extractive materials</i>
<i>water-based extractive activity</i>	<i>involves the extraction of more than 30,000 cubic metres per year of extractive materials</i>

The Project would therefore meet the definition of a scheduled activities and an EPL would be required during the relevant stage of works.

In addition to the above, the EPA would be the Appropriate Regulatory Authority (ARA) under the POEO Act for the Project given that the proposed production capacity of the concrete batching plant exceeds 30,000 tonnes per annum [Clause 92(b) of the Protection of the Environment Operations (General) Regulation 2009].

The POEO Act addresses a range of pollution offences and penalties that are applicable to all activities undertaken on a site. Specific pollution offences are created for actions associated with:

- Water pollution;
- Air pollution;



- Noise pollution;
- Land pollution; and
- Littering and waste.

A Construction Environmental Management Plan (CEMP) and an Operational Environmental Management Plan (OEMP) would be the two principal documents for the construction and operational compliance with the POEO Act and the EPL. In addition, a Pollution Incident Response Management Plan (PIRMP) would be prepared for construction and operation of the Project in relation to the requirements of Part 5.7A: *Duty to notify pollution incidents* of the POEO Act and the *Protection of the Environment Operations (General) Regulation 2009*.

4.2.4 Protection of the Environment Operations (Clean Air) Regulation 2010

The *Protection of the Environment Operations (Clean Air) Regulation 2002* authorise emission concentration limits which apply to industries. Under the regulation, the Project falls into 'Group 6 emission concentration limits', which are the most stringent limits under the regulation which applies to 'an activity carried out, or plant operated, on scheduled premises'. Group 6 relates to an activity that 'commenced on, or to operate, on or after 1 September 2005.'

Section 7.3 discusses the air quality impacts associated with the proposal and demonstrates how the Project will comply to the limits set out in the regulation.

4.2.5 Protection of the Environment Operations (Waste) Regulation 2014

The *Protection of the Environment Operations (Waste) Regulation 2014* requires tracking of certain waste within NSW and between participating states. Each party must be authorised to store, transport, or receive the specific type of waste.

Schedule 1 of the Regulation identifies waste to which waste tracking requirements under Part 4 apply. The Regulation additionally has specific reporting and record-keeping requirements. Under the POEO Act it is an offence to wilfully or negligently dispose of waste in a manner that harms or is likely to harm the environment.

Holcim and the Project contractors would manage any waste generated from the preparation and construction of the site including demolition of the existing infrastructure on the Project Site and construction of the new facilities and buildings, in accordance with the requirements of the POEO Act.

The Project will generate the most of amount of waste during the demolition and construction phases of the Project.

4.2.6 Waste Avoidance and Resource Recovery Act 2001

The importance of responsible resource management, including maximisation of the utility of resources and associated minimisation of disposal to landfill, is highlighted in the *Waste and Resource Recovery (WARR) Act 2001*. The WARR Act is the principal piece of legislation governing waste and resource management in NSW and objectives of the Act include:

- Encouraging the most efficient use of resources;
- Reducing environmental harm;
- Ensuring that resources are managed against the waste hierarchy of avoidance, resource recovery, and then disposal;
- Diversion of waste from landfill;
- Ensuring industry takes part in reducing and dealing with waste; and



- Achieving integrated, state-wide waste and resource management planning and service delivery.

The NSW WARR Strategy 2007 is the principal tool used by the NSW government to implement the objectives of the WARR Act and is described in detail in Section 7.13 along with *NSW Waste Avoidance and Resource Strategy 2014- 21*.

4.2.7 Contaminated Land Management Act 1997

The objectives of the Contaminated Land Management Act 1997 (CLM Act) are to enforce a process for investigating and remediating land, where applicable, that the EPA considers to be significantly contaminated to require regulation. Under Clause 5 of the CLM Act, contamination is described as:

- (1) **Contamination** of land, for the purposes of this Act, means the presence in, on or under the land of a substance at a concentration above the concentration at which the substance is normally present in, on or under (respectively) land in the same locality, being a presence that presents a risk of harm to human health or any other aspect of the environment.*

Surrounding the Project Site there are 11 sites registered by the NSW EPA and listed under Section 58 of the CLM Act including those previously regulated under the Environmentally Hazardous Chemicals Act, 1985. The Project Site is notified as a contaminated site under the CLM Act with the contamination activity type unclassified in the EPA records.

The Project Site is located within a declared area of significant contamination known as the 'Botany Orica' site, and is within Zone 1 of the Botany Groundwater Management Zones (Figure 4-1) which is part of the declared as a "groundwater extraction exclusion zone".

Historically, some of the Botany Orica stored materials leaked into the ground and groundwater with chlorinated hydrocarbons (CHCs) first detected in 1993. The contaminant chemicals are no longer manufactured or used at the Orica site, however, the legacy continues to affect groundwater quality beneath the Botany Industrial Park (BIP). The Botany Groundwater Clean-up Project is designed to contain the contaminated groundwater and to prevent further migration of contamination to other parts of the Botany Sands Aquifer and Botany Bay by pumping the contaminated groundwater down-gradient of the BIP to a Groundwater Treatment Plant (GTP).

A preliminary site investigation (PSI) and a detailed site investigation (DSI) were undertaken in accordance with the EPA contaminated land assessment guidelines. The assessment concluded that the Project Site would not require remediation prior to operation as a concrete batching and aggregate distribution facility. However, groundwater showed elevated concentrations of pollutants exceeding Site Acceptance Criteria (SAC) (heavy metals, CHCs and PFAS). The Project has developed a construction methodology to avoid the need for groundwater dewatering during construction, through limiting excavations above 2m below ground level (bgl) and the use of driven piles. The Project does not propose any groundwater use for operational purposes. If groundwater is unexpectedly encountered during construction, it would be handled, tested, classified and managed lawfully and no groundwater would be extracted for use during operation.

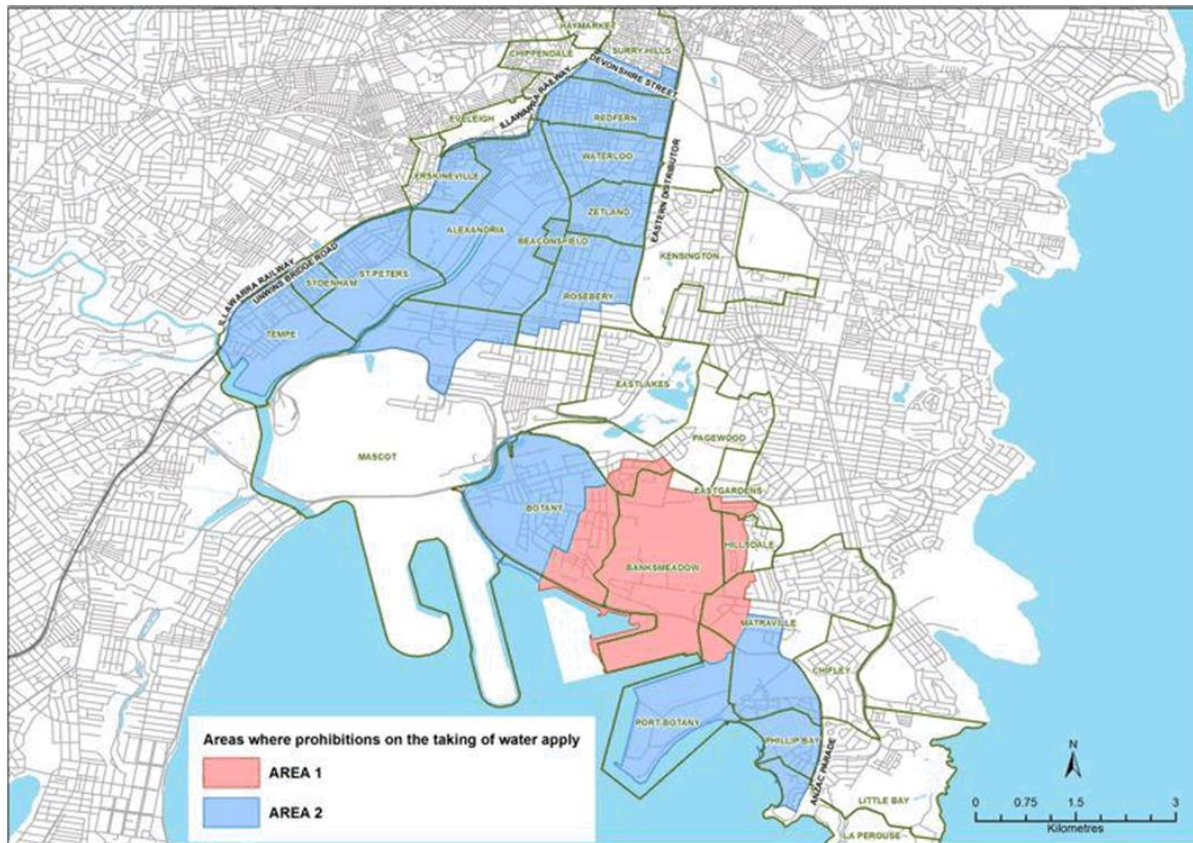


Figure 4-1 Botany groundwater management zones (source: DPI NSW)



4.2.8 Roads Act 1993

The objects of the *Roads Act 1993* are:

- to set out the rights of members of the public to pass along public roads, and
- to set out the rights of persons who own land adjoining a public road to have access to the public road, and
- to establish the procedures for the opening and closing of a public road, and
- to provide for the classification of roads, and
- to provide for the declaration of RMS and other public authorities as roads authorities for both classified and unclassified roads, and
- to confer certain functions (in particular, the function of carrying out road work) on RMS and on other roads authorities, and
- to provide for the distribution of the functions conferred by this Act between RMS and other roads authorities, and
- to regulate the carrying out of various activities on public roads.

The Roads Act provides the following definitions applicable to the operation of the Act:

Table 4-3 Definitions under Roads Act 1993

Defined Term	Definition	Applicable Roads	Roads authority
Classified Road	(a) a main road, (b) a highway, (c) a freeway, (d) a controlled access road, (e) a secondary road, (f) a tourist road, (g) a tollway, (g1) a transitway, (h) a State work.	Foreshore Road (main road) Botany Road (main road) Beauchamp Road (main road)	Roads and Maritime Services
Public Road	(a) any road that is opened or dedicated as a public road, whether under this or any other Act or law, and (b) any road that is declared to be a public road for the purposes of this Act.	Perry Street	Randwick City Council
		McPherson Street	Botany Bay Council
Road	(a) the airspace above the surface of the road, and (b) the soil beneath the surface of the road, and (c) any bridge, tunnel, causeway, road-ferry, ford or other work or structure forming part of the road.	Definition applicable to all roads.	

Section 138 of the Roads Act requires a consent to be obtained from a roads authority before any works and structures affecting a public road can be undertaken or a connection to a classified road can proceed. These works and structures comprise:



- *erect a structure or carry out a work in, on or over a public road, or*
- *dig up or disturb the surface of a public road, or*
- *remove or interfere with a structure, work or tree on a public road, or*
- *pump water into a public road from any land adjoining the road, or*
- *connect a road (whether public or private) to a classified road,*

Under section 138 of the Roads Act 1993, Holcim would not be required to enter into a Works Authorisation Deed (WAD) with Roads and Maritime Services as there are no construction works or additional signalling proposed on Beauchamp Road. No additional works are proposed on the access road (extension of Perry Street to the west of Beauchamp Road). All works would be managed, designed and constructed within the Project Site. Therefore no WAD would be required for the Project.

Consultation has been undertaken with Bayside Council, Randwick City Council and Roads and Maritime regarding proposed traffic and haulage routes proposed by the Project. These are summarised in Section 5 (Consultation). A discussion of the traffic impacts associated with the Project and mitigation measures proposed to ameliorate those impacts are presented in Section 7.1.

4.2.9 Road Transport Act 2013

The *Road Transport Act 2013* provides guidelines to impose vehicle mass limits to restrict or prohibit certain vehicles using roads. This Act enables councils and Roads and Maritime to restrict vehicles with a load mass exceeding a specified maximum mass from using certain roads. Under the Act, an individual who breaches the load limit restrictions enacted under section 28 of the Road Transport Act 2013 is guilty of an offence.

Aggregate tippers and other trucks accessing the Project Site would use only those roads approved for use based on the appropriate size and length. Further detail of transport routes is provided in Section 7.

4.2.10 Water Management Act 2000

The *Water Management Act 2000* (WMA) aims to provide for the sustainable and integrated management of the water sources for the State for the benefit of present and future generations. The WMA provides for the preparation of water management plans that outline guidelines for activities and management of water of the State. The Project Site is located within the area which is covered under the urban area by the *2017 Metropolitan Water Plan* (Metropolitan Water, 2017), the key aims of which are to provide:

- a water supply that is secure and affordable
- a water supply system that is resilient to stresses and shocks
- more liveable and resilient urban communities
- rivers downstream from dams that are healthy.

The Project has been intended to have minimal impact on the quality and quantity of water that would be discharged from the Site, and to further minimise the demand for potable water through the capture and reuse of rain water on the site.

Under the WMA approval is required to undertake:

- Controlled activities, including dredging and reclamation works and any works that affect the quantity or flow of water in a water source.
- Aquifer interference activities, including any activity involving the penetration of an aquifer, interference with water in an aquifer and obstruction of water within an aquifer.



The Project will not trigger the need for a controlled activities approval as it will not involve any works in or near a watercourse.

The WMA also aims to provide for the protection and sharing of groundwater through the development and implementation of water sharing plans. The Project Site is subject to the *Water Sharing Plan for the Greater Metropolitan Region Groundwater Sources 2011*. The Project Site lies within the extent of the Botany Sands Groundwater Source, which is highly vulnerable to contamination due to the permeability of the sands and the generally shallow water table. The Project is located in the restricted areas of Botany Sands (Figure 4-1). Further details on proposed water management at the site are provided in Section 7.6.

All extraction of groundwater by residents for domestic purposes is prohibited in Area 1 and Area 2, shown on the map above. The restrictions apply to a whole land parcel, even if only part of the property is within the restricted area. The Project would not be using the groundwater for domestic purposes; therefore, the restriction does not apply. Any water required for domestic purposes, such as office and amenities, will use another source of water.

Under section 91F of the WMA, authorisation through an aquifer interference approval is required prior to carrying out an aquifer interference activity.

During construction and operation of the Project, excavations for the infrastructure foundations are unlikely to intercept the aquifer and therefore an aquifer interference approval is not likely required under the WMA. The Project does intend to take groundwater during any stage of operation except for potential dewatering that may be required during construction.

It is an offence to take water from a water source by means other than by a water supply work without a water licence. It during the course of the Project dewatering is unexpectedly required, a temporary dewatering licence would be sought from the DPI Water for an incidental aquifer interference activity. An aquifer interference approval and a water access licence may at that time be required to be obtained.

4.2.11 Water Act 1912

In those water sources (rivers, lakes and groundwater aquifers) in NSW where water sharing plans have not commenced, the Water Act 1912 still governs the issue of new water licences and the trade of water licences and allocations. Even though a water sharing plan may be in place, some of licencing provisions remain in force where the water source is not covered by a water sharing plan, such as water taken from the deeper rock strata.

As the proposal, does not intend to extract surface water or groundwater from the fractured rock aquifer the proposal does not require licensing or approvals under the *Water Act 1912*.

4.2.12 Fisheries Management Act 1994

The Fisheries Management act aims to conserve, develop and share the fishery resources of the State for the benefit of present and future generations. The Act aims to ensure that any potential impacts on threatened species and aquatic habitats are rightfully addressed during the planning and assessment procedures.

Schedules 4, 4A and 5 of the Fisheries Management Act 1994, list threatened species, populations and ecological communities as well as key threatening processes that are classified as 'endangered', 'critically endangered' or 'vulnerable'.

The Project Site does not contain any watercourses or waterbodies. However, wastewater would be discharged into the stormwater drains that flow from the manmade drainage system in Botany Bay and into nearby Penhryn Estuary. Stormwater from upstream urban and industrial areas, including the Project Site and groundwater from the Botany Aquifer enters the Estuary, primarily via Springvale and Floodvale



Drains. (Sydney Ports Corporation, 2007). Penrhyn Estuary in its current form provides a significant habitat for migratory shorebirds listed under international treaties or as threatened species under both Commonwealth and NSW legislation. Penrhyn Estuary is the only viable shorebird habitat remaining on the northern side of Botany Bay (URS, 2003).

The Project design has incorporated measures to minimise changes to the quantity and quality of stormwater leaving the site. Details on the proposed stormwater management at the site and impact on watercourses are discussed in Section 7.6.

4.2.13 National Parks and Wildlife Act 1974

The National Parks and Wildlife Act 1974 (NPW Act) provides the basis for the legal protection and management of Aboriginal sites within NSW. Sections 84 and 90 of the NPW Act provide statutory protection for any physical/ material evidence of Aboriginal occupation of NSW and places of cultural significance to the Aboriginal community. The key principles of the Act in relation to Aboriginal heritage are the prevention of unnecessary or unwarranted destruction of Aboriginal objects, and the active protection and conservation of objects which are of high cultural significance. A general license may be issued by the Secretary of the Office of Environment and Heritage (OEH) to harm any protected fauna (other than a threatened species, population or ecological community) in the course of carrying out specified development or specified activities.

No harm is expected to be done to any protected fauna and native flora species identified on the site are not classified as protected under the NPW Act; hence a licence under the NPW Act is not required for the Project. Details of the flora and fauna of the Project Site are provided in Section 7.4.

The NP&W Act also aims to provide for the conservation of objects, places or features of cultural value within the landscape, including items and places of significance to Aboriginal people and places of historic and social significance to the people of NSW. The NP&W Act provides the public the Aboriginal Heritage Information Management System (AHIMS). The AHIMS contains information regarding Aboriginal items and other objects, places and items of significance to Aboriginal people. A search was conducted on the 21 February 2018 of the AHIMS and found no sites or objects of Aboriginal significance within a proximity of 200m of the site. The Site has been highly disturbed, and it is unlikely that any items of Aboriginal significance would be uncovered during construction or operation of the Project. In the event where they are discovered, mitigation measures that would be implemented have been outlined within Section 7.10.

4.2.14 Biodiversity Conservation Act 2016

The Biodiversity Conservation Act 2016 (BC Act) aims to maintain a healthy, productive and resilient environment for the greatest well-being of the community, now and into the future, consistent with the principles of ecologically sustainable development. The BC Act replaces the *Threatened Species Conservation Act 1995* (TSC Act) as the key piece of legislation that identifies and protects threatened species, populations and ecological communities in NSW.

Detailed field ecological investigations were not undertaken or required for this assessment as the site is within an industrial park, is completely disturbed and contains no significant native vegetation or fauna habitat. The vegetation is dominated by weeds, exotic species and degraded urban vegetation resulting from historical and existing development of the land. Further details on biodiversity can be found in Section 7.9.

Bayside Council has approved clearing of the land based on an earlier application by Pacific National.

4.2.15 Heritage Act 1977

The Heritage Act 1977 (Heritage Act) provides for the conservation of items of environmental heritage in NSW. The Act defines heritage as items or places that are of state and/ or local heritage significance and



include: places, buildings, works, relics, moveable objects and precincts. The Heritage Act establishes a register including an inventory and list of protected heritage items.

Under Section 170 of the Heritage Act government departments are required to establish and keep a register of heritage places under their control entitled the *'Heritage and Conservation Register'*.

There are no heritage listed buildings or items on the site. No other buildings exist on the site. Therefore, there are no listed heritage items under the *Heritage Act 1977* that exist on the site or might be affected by site works. Any potential impacts of heritage significance associated with the Project have been outlined in Section 7.11.

4.2.16 Rural Fires Act 1997

The Project is not located in a bushfire prone land area; as a result, a bushfire assessment is not required in this EIS.

4.2.17 Crown Lands Act 1989

The Crown Lands Act 1989 provides for the administration and management of Crown Land in the eastern and central divisions of NSW. Crown land may not be occupied, used, sold, leased, dedicated, reserved or otherwise dealt with unless authorised by this Act or the Crown Land (Continued Tenures) Act 1989. The Project Site is not located on or nearby crown land, therefore the Crown Lands Act does not apply.

4.3 State Environmental Planning Policies

4.3.1 State Environmental Planning Policy (Three Ports) 2013

SEPP (Three Ports) 2013 aims to provide a consistent planning regime for the development and the delivery of infrastructure on land in Port Botany, Port Kembla and the Port of Newcastle.

Part 1 Clause 5 of the SEPP (Three Ports) lists the land areas to which the Policy applies. Under SEPP (Three Ports) the Project Site is zoned IN1 – General Industrial (Figure 2-1). General Industry is permissible within this zone with consent. When considering whether to grant approval to the Project, the relevant consent authority must have regard to the objectives of the IN1 – General Industrial zone, which are as follows:

- To provide a wide range of industrial and warehouse land uses.
- To encourage employment opportunities.
- To minimise any adverse effect of industry on other land uses.
- To facilitate and encourage port related industries that will contribute to the growth and diversification of trade through the port.
- To enable development for the purposes of business premises or office premises associated with, and ancillary to, port facilities or industries.
- To encourage ecologically sustainable development.

SEPP (Three Ports), is applicable to the Project Site and in the immediate adjacent areas, overrides the local Environmental Planning Instruments that would otherwise be applicable. The Botany Bay LEP is not strictly applicable to development of the Project, yet consideration has been given to the aims and objectives of the Botany Bay LEP to ensure the Project is consistent with the future planning of the area.

The Project is an appropriate fit with the objectives of the zone as it would provide an industrial use of the land, provide temporary and long-term employment opportunities, provide infrastructure that is supportive to other industrial land uses within the area and is consistent with the principles of ecologically sustainable development (ESD).



Clause 22 of the SEPP (Three Ports) prescribes certain matters that the consent authority must consider when assessing a proposal within the Three Ports area that requires earthworks. These matters and the section where they are addressed within this EIS are described in Table 4-4.

Table 4-4 SEPP (Three Ports) matters for consideration for ancillary earthworks

Matter of Consideration	Summary of assessment outcome	Section addressed
<i>Part 2 Clause 22 (3)</i>		
(a) the likely disruption of, or any detrimental effect on, drainage patterns and soil stability in the locality of the development,	The Project has been designed to largely maintain draining patterns from the Project Site. As a result, of the Project, an increase in water runoff will occur and would be mitigated though capturing stormwater onsite for the reuse within the Project Site.	Section 7.6.
(b) the effect of the development on the likely future use or redevelopment of the land,	The Project works would improve drainage conditions on the Project Site, as a result this would be beneficial for the future use of the land.	Section 7.6.
(c) the quality of the fill or the soil to be excavated, or both,	The imported fill would meet engineering design standards and be free of contamination. If unexpected contaminated material is to be found residing onsite, and material is above industrial land-use criteria, the contaminated material would be remediated or removed from Site and disposed of at a licenced disposal facility.	Section 3.15.
(d) the effect of the development on the existing and likely amenity of adjoining properties,	The Project is considered general industrial development and fits in with existing surrounding land uses. The development proposes to include structures sympathetic to the local environment to minimise impacts on the amenity of adjoining properties.	Section 7.5.
(e) the source of any fill material and the destination of any excavated material,	On-site excavated material would remain on-site where possible. If material excavated from the site requires disposal, the material would be tested and disposed of in accordance with relevant legislation and approvals. Any fill imported to the site would be clean in accordance with the Protection of the Environment Operations (Waste) Regulation 2014 and any required Council approvals and meet geotechnical requirements for their proposed use.	Section 3 and Section 7.13.
(f) the likelihood of disturbing relics,	The Project Site is currently heavily disturbed and within an industrial zone. The likelihood of the Project disturbing	Section 7.10 and Section 7.11.



Matter of Consideration	Summary of assessment outcome	Section addressed
	relics is low.	
(g) the proximity to, and potential for adverse impacts on, any waterway, drinking water catchment or environmentally sensitive area,	The Project Site would include a stormwater drainage capture and treatment system designed per relevant council requirements. There is a low likelihood of the Project negatively impacting on waterways, drinking water catchments or environmentally sensitive areas.	Section 7.6.
(h) any appropriate measures proposed to avoid, minimise or mitigate the impacts of the development,	A mitigation measures summary for the Project is presented in Section 8. Mitigation measures to control potential impacts would be included in the Contractor Site Management Plan, Construction Environmental Management Plan (CEMP) and Operational Environmental Management Plan (OEMP) developed for the Site, and include Erosion and Sediment Control Plans (ESCPs).	Section 8
(i) the potential impact on groundwater and groundwater dependent ecosystems	Potential impacts to groundwater would be temporary and only during the construction phase of the Project. Mitigation measures would be in place to control potential impacts. The Project would not cause a change to groundwater flows or dependent biological environments.	Section 7.5.
<i>Part 5 Clause 29</i>		
The objective of this clause is to preserve the amenity of the area, including biodiversity values, through the preservation of trees and other vegetation.	The Project Site is highly disturbed with a scattering of small native and exotic trees throughout the site. Pacific National has applied separately to Bayside Council for the removal of trees from the Project Site.	Section 7.9.
<i>Part 5 Clause 31</i>		
The consent authority must, before granting consent under this clause in respect of a heritage item, consider the effect of the proposed development on the heritage.	Heritage items listed under the SEPP (Three Ports) include the Main Administration building and a mature fig tree adjacent to the building on Lot 11. DP 1039919, on the corner of Denison and Beauchamp Streets. The Project Site would not impact on the two (2) local heritage listed items under SEPP (Three Ports).	Sections 7.10 and 7.11

4.3.2 State Environmental Planning Policy (State and Regional Development) 2011

This SEPP is the prevailing environmental planning instrument (EPI) applying to the Project.

The aims of the State Environmental Planning Policy (State and Regional Development) are:



- To identify development that is State Significant Development. To identify development that is State Significant Infrastructure and critical State Significant Infrastructure.
- To confer functions on joint regional planning panels to determine development applications.

The Project does not meet the requirements of and is not considered State Significant Infrastructure.

Under SEPP (State and Regional Development) the Project is considered to be regionally significant development under Schedule 7 (Clause 7 Particular designated development).

A regional development needs to be notified and assessed by a council and then determined by the relevant Planning Panel – either a Sydney Planning panel for applications within the Greater Sydney Region or the relevant Joint Regional Planning Panel outside of Sydney.

4.3.3 State Environmental Planning Policy (Infrastructure) 2011

State Environmental Planning Policy (Infrastructure) 2007 (ISEPP) aims to enable the efficient delivery of infrastructure across NSW, provide a consistent planning regime for infrastructure, providing greater flexibility in the location of infrastructure and service facilities and identifying the environmental assessment category into which different types of infrastructure and services development fall.

Section 86 of Division 15 Subdivision 1 (Railways and rail infrastructure facilities) requires that a consent authority must consult with the relevant rail authority when development penetrates the ground to a depth of at least 2m bgl within 25m of a rail corridor. Holcim has been in close consultation with ARTC regarding the Project (see Section 5).

4.3.4 State Environmental Planning Policy (Vegetation in Non-Rural areas) 2017

Clearing of vegetation on the Project Site would be required prior to construction of the Project. Bayside Council has approved clearing of the land based on an earlier application by Pacific National. Clearing works would be undertaken in accordance with this existing approval

4.3.5 State Environmental Planning Policy 33 Hazardous and Offensive Development

State Environmental Planning Policy 33 – Hazardous and Offensive Development (SEPP 33) presents a systematic approach to planning and assessing proposals for potentially hazardous and offensive development for the purpose of industry or storage. Through the policy, the permissibility of a proposal to which the policy applies is linked to its safety and pollution control performance.

The Project would involve handling, storing or processing a range of materials, which, in the absence of controls, may create a risk to the outside population, environment or property. Some of the Project's activities would be defined by SEPP 33 as a 'potentially hazardous industry' or 'potentially offensive industry'. SEPP 33 applies to any industrial development proposals which fall within these definitions.

Under Clause 3, a development is deemed part of a potentially hazardous industry if it satisfies the definition of a *potentially hazardous industry* as provided in SEPP 33.

The Department of Urban Affairs and Planning (DUAP) (1997) guideline "*Applying SEPP 33*" provides a risk screening procedure to facilitate determination of whether a proposed development is applicable under the SEPP. If, under this screening test SEPP 33 is triggered, Clause 12 of SEPP 33 requires that any proposal to carry out a potentially hazardous development must be supported by a Preliminary Hazard Analysis (PHA).



As the Project falls within the definition of a “potentially hazardous industry”, a screening assessment has been undertaken, which is outlined in Section 7.8. The assessment found the Project would not trigger the need for a PHA as it would operate below the screening levels set out in the guidelines.

4.3.6 State Environmental Planning Policy 55 Remediation of Land

The SEPP 55 objective is to provide for a coordinated state-wide planning approach for the remediation of contaminated land. SEPP 55 aims to promote the remediation of contaminated land with the objective of reducing the risk of harm to human health or other aspects of the environment.

Clause 7 of SEPP 55 requires the approval authority to have regard to certain matters before granting approval, including whether the subject land of the Project is contaminated, is suitable for the purpose for which the development is proposed to be carried out, and whether remediation is required.

SEPP 55 also places obligations to carry out any remediation work in accordance with relevant guidelines, developed under the *Contaminated Lands Management Act 1995* and to notify the certain matters in relation to any remediation work to council.

Preliminary and detailed site contamination investigations were undertaken for the Project Site. No health investigation level (HIL D) exceedances were reported in the soils, suggesting that the soils within the site are not likely to present a health risk to workers on the project or future users of the site. As such, it is considered that no remedial action plan would be required to proceed with the Project.

Contamination is addressed in Section 7.4 of this EIS.

4.3.7 State Environmental Planning Policy No 64 – Advertising and Signage

The SEPP 64 objective is to regulate signage (including advertising) to ensure that it is compatible with the visual character of an area. SEPP 64 is applicable to all signage, except for signage that is classified as ‘exempt development’ under an EPI.

This Policy aims to ensure that signage (including advertising) is compatible with the desired amenity and visual character of an area, provides effective communication in suitable locations, and is of high quality design and finish.

Under Clause 30 and Clause 31, Schedule 1 of the SEPP (Three Ports) signage (other than advertising structures) is classified as ‘exempt development’ when it complies with AS 1319—1994, *Safety signs for the occupational environment* and AS 4282—1997, *Control of the obtrusive effects of outdoor lighting*.

Signage would be installed at the Project Site for the purposes of identifying the Project, providing occupational health and safety information and directing visitors and vehicles around the Site. All Project signage would be developed in accordance with AS 1319-1994 and AS 4282-1997.

Project associated signage would include signage on the Project building front at Beauchamp Road, including the Holcim logo, identifying the batch building and associated traffic and pedestrian signs on Beauchamp Road to instruct vehicles and visitors safely to the Site. Signage, that is freestanding at the site, would not extend beyond the skyline when viewed at ground level. SEPP 64 is not applicable to the signage proposed for the Project.

4.3.8 State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007

The aims of this Policy, under clause 2, are in recognition of the importance to New South Wales of mining, petroleum production and extractive industries:



- (a) to provide for the proper management and development of mineral, petroleum and extractive material resources for the purpose of promoting the social and economic welfare of the State, and*
- (b) to facilitate the orderly and economic use and development of land containing mineral, petroleum and extractive material resources, and*
- (b1) to promote the development of significant mineral resources, and*
- (c) to establish appropriate planning controls to encourage ecologically sustainable development through the environmental assessment, and sustainable management, of development of mineral, petroleum and extractive material resources, and*
- (d) to establish a gateway assessment process for certain mining and petroleum (oil and gas) development:*
 - (i) to recognise the importance of agricultural resources, and*
 - (ii) to ensure protection of strategic agricultural land and water resources, and*
 - (iii) to ensure a balanced use of land by potentially competing industries, and*
 - (iv) to provide for the sustainable growth of mining, petroleum and agricultural industries.*

Under Clause 7(3) of this Policy, the proposed storage of extractive materials for the purposes of industry is permissible with development consent.

Under Clause 12 of this Policy, the proposed storage of extractive materials is considered compatible with existing and future surrounding land uses and approved land uses in the vicinity of the Project, as discussed in Section 0 and Section 4.5 of this EIS.

This EIS assesses potential natural resource and environmental management impacts associated with the Project (Clause 14 of this Policy), and includes mitigation measures to ensure impacts are minimised.

4.3.9 State Environmental Planning Policy No 19-Bushland in Urban Areas

State Environmental Planning Policy – Bushland in Urban Areas (SEPP 19) aims to protect and preserve bushland within certain urban areas, as part of the state's natural heritage or for recreational, educational and scientific purposes. SEPP 19 is designed to protect bushland in public open space zones and reservations and to ensure that bush preservation is given a high priority when local environmental plans for urban development are prepared.

Schedule 1 of the SEPP lists areas/part areas to which the Policy applies. Bayside LGA is not listed within Schedule 1.

Clearing of vegetation on the Project Site would be required prior to construction of the Project. Bayside Council has approved clearing of the land based on an earlier application by Pacific National. Clearing works would be undertaken in accordance with this existing approval

4.4 Other NSW Guidelines and Policies

4.4.1 NSW aquifer interference policy

The NSW Aquifer Interference Policy was finalised in September 2012 and clarifies the water licensing and approval requirements for aquifer interference activities in NSW.

The Policy outlines the water licensing requirements under the Water Management Act, 2000 (WMA). A water licence is required whether water is taken for consumptive use or whether it is taken incidentally by the aquifer interference activity (such as groundwater filling a void), even where that water is not being used consumptively as part of the activity's operation. Under the WMA, a water licence gives its holder a share of the total entitlement available for extraction from the groundwater source. The water access



licence (WAL) must hold sufficient share component and water allocation to account for the take of water from the relevant water source at all times.

The NSW Aquifer Interference Policy requires that potential impacts on groundwater sources, including their users and Groundwater Dependent Ecosystems (GDEs), be assessed against minimal impact considerations, outlined in Table 1 of the Policy. If the predicted impacts are less than the Level 1 minimal impact considerations, then these impacts will be considered as acceptable.

The potential Project's impact on groundwater resources are assessed in Section 7.5.

4.4.2 NSW State Rivers and Estuary Policy (1993)

It is the policy of the NSW Government to encourage the sustainable management of the natural resources of the State's rivers, estuaries and wetlands and on the adjacent riverine plains.

Adoption of the State Rivers and Estuaries Policy means that the sustainability of the river and estuarine resources and their biophysical functions will be given explicit consideration in resource management decision making.

The Project is not within the immediate vicinity of water including rivers and estuaries, and with implementation of stormwater management mitigation measures (Section 7.6) the construction and operation of the Project is not expected to cause an impact on these water bodies.

4.4.3 NSW Wetlands Policy (2010)

The NSW Wetlands Policy aims to promote the sustainable conservation, management and use of the state's wetlands. The nearest wetland is the Towra Point Nature Wetland which is approximately 4km south of the Project Site. There would be no Project works in the immediate vicinity of the Towra Point Nature Wetland, therefore this policy does not apply to the EIS. With implementation of stormwater management mitigation measures (Section 7.6) the construction and operation of the Project is not expected to cause an impact on wetlands.

4.4.4 NSW State Groundwater Quality Protection Policy (1998)

The aim of the NSW State Groundwater Quality Protection Policy is to promote the management of groundwater resources in New South Wales is to manage the State's groundwater resources so that they can sustain environmental, social and economic uses for the people of NSW. It is the policy of the NSW Government to encourage the ecologically sustainable management of the State's groundwater resources.

This Groundwater Quality Protection Policy is specifically designed to protect valuable groundwater resources against pollution. Adoption of this Policy means that the sustainability of groundwater resources and their ecosystem support functions will be given explicit consideration in resource management decision making.

The surrounding and historic nearby land uses have caused the contamination of the groundwater underlying the Project Site. The Project aims to avoid interference into groundwater through use of driven piles, minimising depth of excavation and sealed stormwater facilities. It is considered unlikely that the Project would contaminate or impact on groundwater. Potential impacts during construction and additional mitigation measures are discussed in Section 7.5.

4.4.5 NSW State Groundwater Dependent Ecosystems Policy (2002)

The NSW State Groundwater Dependent Ecosystems Policy provides guidance on the protection and management of GDEs.



The existing groundwater below the Project Site is contaminated from the previous Orica activities. Orica established the ongoing Botany Groundwater Cleanup Project to manage the groundwater contamination. Construction of the Project is not expected to contribute to the existing groundwater contamination. This is further detailed in Section 7.5.

4.4.6 NSW Water Extraction Monitoring Policy (2007)

The aim of the NSW Water Extraction Monitoring Policy is to provide a framework to accurately monitor water extraction from NSW rivers and groundwater sources, which is essential for the fair and equitable sharing of the State's water.

The groundwater within the Project Site is within a groundwater extraction exclusion zone due to the historic contamination of groundwater in the area. Groundwater would not be extracted for use during construction or operation of the Project. If groundwater is required to be temporarily dewatered during construction of the Project, appropriate management of extraction, testing and disposal of groundwater would be undertaken as discussed in Section 7.5 and in accordance with relevant regulations.

4.5 Local Environment Plans

4.5.1 Botany Bay Local Environmental Plan (2013)

The Project Site is located in the SEPP (Three Ports) zone and is also located within the Bayside Local Government Area (LGA). Therefore an assessment of the Project against the aims of the Botany Bay Local Environmental Plan (LEP) 2013 has also been undertaken.

The Botany Bay LEP 2013 aims are:

- (a) to recognise the importance of Botany Bay as a gateway to Sydney, given its proximity to Sydney (Kingsford Smith) Airport and Port Botany,*
- (b) to encourage sustainable economic growth and development,*
- (c) to provide direction concerning growth and change in Botany Bay,*
- (d) to identify and conserve those items and localities that contribute to the local built form and the environmental and cultural heritage of Botany Bay,*
- (e) to protect and enhance the natural and cultural landscapes in Botany Bay,*
- (f) to create a highly liveable urban place through the promotion of design excellence in all elements of the built environment and public domain,*
- (g) to protect residential amenity.*

The Project is compatible with the objectives of the Botany Bay LEP, specifically the aim to stimulate sustainable economic growth and development within the area. The Project Site is in an existing industrial zone under the SEPP (Three Ports), identified as an industrial precinct, and is consistent with present, future and surrounding land uses. Furthermore, the Project would provide a much-needed concrete and aggregate transport service, facilitating sustainable economic growth for the greater Sydney region.

In summary, the Project is consistent with the aims of the Botany Bay LEP 2013 as:

- The Project would involve the transport of concrete and aggregate into the Sydney area by rail, supporting the stimulation of growth of infrastructure and development projects in the Sydney region;
- The Project would be constructed on land zoned IN1 – General Industrial under the SEPP (Three Ports). The Project characteristics would be consistent to the present and future plans for the Bayside LGA; and
- The existing Project Site is highly disturbed and with the implementation of mitigation measures outlined in this EIS, the Proposed development would not impose an ongoing environmental or social impact to the surrounding area.



4.5.2 Botany Bay Development Control Plan 2013

Although the Project is located in the SEPP (Three Ports) area, provisions of the Botany Bay Development Control Plan (DCP) will also apply.

The Project has considered the following general provisions:

- Parking and access;
- Heritage;
- Access & mobility;
- Signage;
- Stormwater management;
- Sustainable design;
- Crime prevention, safety and security;
- Contamination;
- Landscaping and tree management;
- Natural resources; and
- Waste minimisation & management.

The general provisions of the Botany Bay DCP have been considered in the development of the Project concept design. This EIS provides an assessment of environmental and other aspects addressing the general provisions. During detailed design of the Project each provision of the Botany Bay Development would be assessed in detail to ensure compliance.

A detailed assessment of the Botany Bay Development Control Plan No. 33 – Industrial Development is provided in Section 4.5.3.

4.5.3 Botany Bay Development Control Plan No.33 Industrial Development

Although the Project is located in the SEPP (Three Ports) area, provisions of the Botany Bay Development Control Plan (DCP) No. 33 Industrial Development also applies.

The Project is consistent with the following objectives in the Botany Bay DCP No. 33 Industrial Development, in relation to the Botany Banksmeadow Industrial Precinct:

- O1 To implement the objectives of the Botany Local Environmental Plan 1995.*
- O2 To provide a document for the assessment of development applications for commercial and industrial developments.*
- O3 To allow Council to guide the nature, scale and quality of development in the industrial areas.*
- O4 To improve the environmental and aesthetic amenity of industrial areas for those who visit and/or work in the areas.*
- O5 To encourage the development of cleaner, well-landscaped industrial zoned areas with well maintained industrial/commercial buildings and sites.*
- O6 To minimise the impact of industrial development on residential areas.*
- O7 To ensure that development incorporates safe, effective and convenient provision for servicing, parking, pedestrian and vehicular access and movements.*
- O8 To encourage energy efficiency and energy conservation in all forms of development.*
- O9 To ensure that the effects of development upon drainage, water quality and stormwater management are considered.*
- O10 To provide guidelines on the rehabilitation and control of use of known or possible contaminated sites.*



O11 To promote the adoption of waste minimisation and recycling principles and practices in the planning and development of the local government area.

O12 To encourage ecologically sustainable development.

The provisions of the Botany Bay DCP No. 33 Industrial Development have been considered in the development of the Project design and are summarised in Table 4-5.

The DCP Industrial Development responds to a number of issues that have arisen related to industrial development within the City of Botany Bay, and in particular the Botany Banksmeadow Industrial Precinct, in relation to the following issues:

- The interface between industrial and residential land uses;
- The impact of the operations of industrial development – including noise, traffic, odour and pollution on residential development;
- The design of new industrial development;
- The operations of older industrial development;
- The appearance of older industrial development;
- Building height and form; and
- Traffic and parking associated with industrial and related development as well as the type of delivery vehicles and routes of delivery vehicles.



Table 4-5 Compliance with applicable Botany Bay DCP No.33 Industrial Development sections

Relevant Sections	Environmental Aspects (DCP Controls)	Compliance Statement
2.1 Design Quality Principles	P1. The contribution of Industrial/Commercial land use activity at the Local, Regional and State levels	The Project contributes to activities that support construction and growth at the local and regional level.
	P5. The need for a compatible and workable relationship between industrial and non-industrial uses.	The Project is compatible with surrounding land uses.
2.7 Precinct Controls for the Banksmeadow Industrial Precinct	C1. Council will require industrial uses with access from Rhodes Street or Smith Street to have low vehicular generation characteristics and exclude the use of container handling or semi-trailers.	NA
	C2. The transport of hazardous substances should be directed away from residential areas and a Traffic Route Study showing the proposed traffic route of such transport, should accompany the development application.	A Traffic Impact and Assessment report has been prepared for the Project (Appendix G). Traffic to and from the site will be primarily via Foreshore Drive.
	C3. Council will require development that has a frontage to the Sydenham-Botany Goods Railway Line to provide/investigate rail access into the site for the transport of goods by rail.	Stage 3 of the Project would rely on delivery of aggregates to the Project Site via a new rail siding connected to the Sydenham Botany Goods Railway Line.
	C6. Development is not to adversely impact on the surrounding established residential areas through noise, traffic, pollution and risk	This EIS assesses potential impacts of noise, traffic, pollution, risk and other aspects due to the Project. With the implementation of the mitigation measures outlined in Section 8, the Project would not adversely impact upon surrounding residential areas.
	C7. Redevelopment of property must take into account any road widening affectation.	No road widening is proposed.
	C8. A survey is to be lodged with Council as part of the information required for the submission of a Development Application identifying any pipelines, easements etc affecting the development site. If the pipeline enters Council land an appropriate deed of agreement is to be executed.	A survey has been included in Appendix D showing existing and proposed utilities and easements that are part of the Project. Council land is not affected by the Project.
	(4) A Risk Assessment Evaluation to accompany all applications for sites: (a) within the study area of the Botany/Randwick Industrial Area Land Use Safety Study – 2001; and/or	A Risk Assessment Evaluation (RAE) has been prepared for the Project and is included in this EIS in Appendix Q . The RAE concluded that the activities proposed for the premises do not constitute an escalation of existing

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94



Relevant Sections	Environmental Aspects (DCP Controls)	Compliance Statement
	(b) affected by the recommendations of the Port Botany Land Use Safety Study Overview Report - 1996.	hazards, and the risk posed by neighbouring uses in the exposure of hazards to the site is acceptable as defined by the DUAP Risk Assessment Guidelines including Hazardous Industry Advisory Paper No. 6: Guidelines for Hazard Analysis the 'Hazardous Industry Planning Advisory Paper No. 4: Risk Criteria for Land Use Safety Planning'.
<i>3.0 General Design Elements</i>		
A1 Energy Efficiency	C1 Compliance with the Council's Energy Efficiency Development Control Plan and Landscape Development Control Plan.	To be addressed as part of detailed design and Construction Certificate Application, if required
A2 Stormwater disposal and drainage design	C1. Any stormwater drainage system submitted shall be in accordance with Guidelines for the Design of Stormwater Drainage System within the Bayside City Council.	A concept stormwater drainage plan for the Project is included in Appendix N . All stormwater discharge would conform with Bayside Council's DCP and relevant Botany Bay stormwater requirements.
A3 Site Contamination	C1 Site contamination assessment and site remediation is undertaken in accordance with Council's Development Control Plan No. 34 - Contaminated Land.	Preliminary site investigation and detailed site investigation reports were prepared for the Project (Appendix K and Appendix L).
A4 Acid Sulfate Soils	C1 An acid sulfate soils management plan is required to be submitted, detailing the means which will be employed to minimise the impacts on the development and wider environment from the soil where acid sulfate soils are found to exist.	Preliminary site investigation and detailed site investigation reports were prepared for the Project (Appendix K and Appendix L) including sampling for acid sulfate soils. An acid sulfate soils management plan would be prepared, if required, as part of the CEMP.
B-Building form and character		
B1 Land Title	C1 Where development or use of a number of existing lots is proposed, the lots shall be consolidated into one parcel, and the plan of consolidation lodged with the Land Titles Office prior to release of the Construction Certificate. Written notification as to the registration of the Consolidation Plan at the Land Titles Office is to be received by Council prior to the occupation of the premises or use of the site.	Consolidation of lots is not proposed.
	C2 No part of any site is to be separately leased from the	Veolia leases and operates part of Lot 20 DP1231202 from



Relevant Sections	Environmental Aspects (DCP Controls)	Compliance Statement
	remainder of the property for the purpose of a separate occupation or operation from an approved use except where the prior Development Consent of Council has been sought and received to any such lease, occupation or operation.	Pacific National. The Project seeks approval to use part of this lot for the proposed use as set forth in this EIS under a lease agreement with Pacific National.
B2 FSR	<p>C1 The Floor Space Ratio (FSR) of any development is to comply with the provisions of Clause 12 of the Botany Local Environmental Plan 1995 as amended.</p> <p>The FSR control is considered to be a “development standard”. Council cannot consider a variation to a development standard unless an applicant has provided written justification in respect of State Environmental Planning Policy No. 1 (SEPP No. 1).</p>	According to Bayside Council’s letter (Appendix B), a GFA Validation by a surveyor is not required; however, the submitted drawings (Appendix C) are of sufficient detail to identify the actual gross floor area proposed.
B4 Site Layout	C1 A site analysis plan is to be lodged with the Development Application in accordance with the Council’s Development Application Guide.	A site analysis plan has been prepared and is provided in Section 2.5.
B5 Building height and overshadowing	C1. Council shall, where overshadowing of adjacent residential property, the public domain occurs, or private open space occurs, require an applicant to provide shadow diagrams prepared by a suitably qualified person.	The letter from Bayside Council (Appendix B) confirms that shadow diagrams are not required for the DA.
	C3. Compliance with the Civil Aviation Safety Authority (CASA) requirements.	The critical component of the prescribed airspace over Botany is the Inner Horizontal Surface (51.0 metres AHD) of the Obstacle Limitation Surfaces (OLS) for Sydney (Kingsford Smith) Airport. The Project would not encroach over 51m AHD (Appendix C).
	C4. Where the heights of a proposed development are higher than surrounding development, a submission is to be lodged with the DA giving reasons for supporting the height discrepancy. Unless proper planning reasons are presented, heights over above that approved in the locality will not be supported by Council.	The Project would not be higher than the surrounding industrial development (Appendix P). Taller permanent structures would be set back towards the rear of the property thereby making them less visually prominent.
	C.5 All rooftop or exposed structures including lift motor rooms, plant rooms, etc., together with air conditioning,	The Project is not adjacent to a residential premises and would be properly integrated into the surrounding



Relevant Sections	Environmental Aspects (DCP Controls)	Compliance Statement
	ventilation and exhaust systems, are to be suitably screened and integrated with the building in order to ensure a properly integrated overall appearance. If your site adjoins a residential premises the facilities are to be located away from the residential boundary.	industrial environment.
B6 Building design and appearance		
	C1. All Development Applications involving external building works are to be accompanied by a Schedule of Finishes and a detailed Colour Scheme for the building facades.	A colour scheme is provided in Appendix C .
	C2. The maximum reflectivity of any glazing is not to exceed 20% to avoid nuisance in the form of glare to occupants of nearby buildings, pedestrians and motorists.	The structures and buildings associated with the Project will have minimal glazing and be constructed with materials that minimise glare.
	C3. External finishes are to be robust and graffiti resistant. An anti-graffiti coating may be required where buildings abut a public place. The business operator may be required to enter into a graffiti agreement with Council.	The entire Project Site will be fenced and secured and include 24 hour operations, thus reducing the potential for graffiti.
	C4. All rooftop or exposed structures including lift motor rooms, plant rooms, etc., together with air conditioning, ventilation and exhaust systems, are to be suitably screened and integrated with the building in order to ensure a properly integrated overall appearance.	The Project would be properly integrated into the surrounding existing industrial environment.
B7 Setbacks	C1. Front setbacks are to be in accordance with the following: i) front to a designated road: landscape setback 4 m; building setback 9 m; and ii) side adjoining a non-residential use: landscape setback 2 m; building setback 2 m (includes landscape setback)	The Project would include the required setbacks.
B9 Parking and vehicular access	All servicing, loading/unloading and parking are provided on site for new development, and external impacts (such as traffic and car parking impact on the road networks) are minimised. (DCP Controls C1-C10)	A Traffic Impact Assessment is provided in Appendix G and summarised in Section 7.1. Concept design drawings are provided in Appendix C and Appendix D . No public parking is proposed. Light vehicle parking for site staff would be a small area to accommodate approximately



Relevant Sections	Environmental Aspects (DCP Controls)	Compliance Statement
		<p>39 parks for Holcim staff and 1 for PN. Visitor parking would be 3 spaces. Car parks would be separated from loading/unloading and operational areas.</p> <p>Access to the Project Site will be primarily via Foreshore Drive from the south.</p> <p>Bayside and Randwick Councils and Roads and Maritime Services have been consulted regarding traffic (Section 5).</p>
B10 Signs	Ensure adequate identification of all industrial premises whilst preventing the proliferation of advertising signs or structures.	No advertising signage is proposed. Signage for internal traffic movements, safety and health would be provided.
B11 Site Facilities	Site facilities (generally including mailboxes, waste storage and garbage collection areas, general storage areas, gatehouses, substations, staff recreational facilities, telecommunications, fire hydrants/booster valves, and water storage/recycling tanks) need to be appropriately designed and well-integrated within the development, as the facilities need to be accessible to occupiers of the development. Consideration needs to be given to the impact of these facilities on the overall appearance and amenity of the development and the local streetscape.	The design and placement of site facilities have been considered in terms of impacts and overall appearance. See Section 7.7 (Visual Amenities).
B12 Building Construction	Ensure that all buildings are constructed to adequate standards to maintain structural stability and safety. And ensure that construction works on site produce no detrimental effects beyond the site boundaries.	A noise and vibration assessment has been prepared for the Project (Appendix H). All buildings would be constructed in accordance with the Development Consent approval and Construction Certificate. Dust will be managed as required by the Construction Environmental Management Plan and Operations Environmental Management Plan.
B13 Demolition	Ensure that buildings are demolished to adequate standards. And ensure that industrial processes and buildings are recorded prior to demolition.	No demolition is required or proposed.
C. Environmental		



Relevant Sections	Environmental Aspects (DCP Controls)	Compliance Statement
Amenity		
C1 Landscape	Ensure the environmental amenity of industrial areas is maintained and improved. (DCP Controls C1-C14)	The Project will meet DCP landscaping requirements during detailed design.
C2 Landscaping in car parks	Ensure open car parks at ground level minimises large expanses of pavements and minimises and reduces the potential impacts of heat and glare. (DCP Controls C1-C5)	The Project will meet DCP landscaping requirements during detailed design.
C3 Fences	Fences and walls are to be well designed, compatible with others in the street and constructed of materials that are compatible with buildings on the site and fences on adjoining properties. (DCP Controls C1-C7)	A proposed noise wall would be required as noise mitigation toward the north-east side of the Project Site. Landscaping and setbacks will aim to soften visual impacts and will meet DCP during detailed design.
C4 Residential/Non-Residential Interface	Consideration needs to be given to the interface along side and rear boundaries in terms of privacy and amenity, especially where outdoor living spaces (balconies) are located along side and rear balconies. (DCP Controls C1-C7)	The Project does not impact upon privacy or visual amenity. A Visual Impact Analysis has been prepared for the Project (Appendix P)
C5 Noise and Hours of Operation	Ensure any noise generated from the operation of the development is minimised and maintained at acceptable levels. And ensure that hours of operation are appropriate for the site and the neighbourhood. (DCP Controls C1-C6)	A noise and vibration impact assessment has been prepared for the Project (Appendix H). Noise and vibration from construction and operation of the Project is within acceptable levels based on the relevant noise guidelines.
C6 Waste	Waste issues are to be considered in the development proposal to assist in the on-going minimisation of waste through recycling and reuse of materials. Council encourages waste minimisation (source separation, re-use and recycling) and requires the efficient storage and collection of waste and quality designed of facilities. (DCP Control C1)	The Project aims to maximise resource re-use (e.g. water recycling and re-use for products) and encourage re-use and recycling. Section 7.13 in this EIS provides further details regarding waste reduction and reuse.
C7 Environmental Protection	Ensure that development takes account of and minimises any adverse effects upon the environment. And limit the potential for noise, air (including odour), ground water, soil and surface	This EIS includes an assessment of potential environmental impacts in Section 7.



Relevant Sections	Environmental Aspects (DCP Controls)	Compliance Statement
	water pollution. (DCP Controls C1-C10)	
C8 Risk	Ensure that any risk to human health, property or the natural environment arising from the operation of the development is minimised and addressed. (DCP Control C1)	A risk and hazard assessment has been undertaken for the Project (Section 7.8) and mitigation measures would be implemented to ensure the minimisation of risk. A Risk Assessment Evaluation has been prepared (Appendix Q).



4.5.4 Botany Bay Development Control Plan No. 30 – Botany / Randwick Land Use Safety Study

A Risk Analysis and Evaluation (RAE) report was prepared by pitt&sherry (**Appendix Q**) and is summarised in Section 7.8. The RAE was undertaken following the guidelines of AS/NZS ISO 31000:2009 Risk Management Principles and Guidelines and the NSW Department of Planning Hazardous Industry Advisory Papers HIPAP Nos. 4, 6 and 10.

A multi-party workshop was held by Holcim to consider various aspects related to the development and operation of the Project. The RAE also includes a Traffic Risk Assessment (TRA) to analyse the risks related to traffic generation, its impacts on local traffic and impacts on operations from existing traffic on local roads as identified in the TIA, and the potential for dangerous goods movements along Denison Street/Beauchamp Road.

Due to the location of the proposed facility, a draft Emergency Response Plan (ERP) was also prepared and is included in the RAE taking into account potential incidents that could occur at the BIP.

All chemicals would be stored in appropriate store rooms, fully contained and banded. Holcim maintains a hazardous chemical register identified as 9021-R-SF-RG-007, which is prepared in alignment with SEPP33. Upon review of the registers, the RAE assessed that the hazardous materials stored on site would not exceed the SEPP 33 thresholds. Therefore, the Project is not considered hazardous as per SEPP 33 HIPAP No 6 and does not constitute a hazardous industry or a potentially hazardous industry. Chemicals managed on site are indicated in Table 7-46 and in **Appendix Q**.

4.5.5 Bayside Council Development Contributions Plan 2016

The Project does not meet the types of developments and areas outlined in Table 1.1 of the Bayside Council Development Contributions Plan 2016 (Amendment 1) to which the Section 94 plan applies.

4.6 Summary of Licences and Approvals Required

The licences and approvals in Table 4-6 would be required for the Project.

Table 4-6 Required licences and approvals

Licence or Approval	Authority
Development Consent	Bayside (Council) Planning Panel
Environment Protection Licence	NSW Environment Protection Authority



5. Consultation

5.1 Overview

A Community and Stakeholder Engagement Plan (CSEP) was prepared in April 2018 in accordance with The *Community and Stakeholder Engagement Draft Environmental Assessment Guidance Series June 2017* (Draft Guidelines) prepared by DP&E. The CSEP documents the objectives of engagement, and identifies relevant stakeholders and potential impacts associated with the development. The CSEP also includes an implementation plan which is updated as required through the duration of community and stakeholder engagement and guides stakeholder engagement.

The objectives of the CSEP included:

- Develop a process for listening to the community and stakeholders regarding concerns over the development;
- Provide information of the proposed development including the rationale;
- Identify stakeholders and engaging with them;
- Provide the community and other stakeholders with the opportunity to inform design, where required;
- Seek feedback and comments on the proposed development; and
- Identify engagement requirements through the EIS, Submission, Determination and post approvals stage of the proposed development.

This chapter summarises the engagement undertaken with stakeholders and the community to date, and planned future engagement. In response to the feedback from engagement Holcim has implemented several actions and made updates to elements of the concept design (refer to Section 5.10).

5.2 Identified Stakeholders

The following stakeholders were identified:

- Banksmeadow community
- Pacific National (landowner)
- Australian Rail Track Corporation (adjoining landowner)
- Bayside Council
- Randwick Council
- Government Agencies including:
 - Environment Protection Authority
 - Office of Environment and Heritage
 - Department of Primary Industries
 - Roads and Maritime Services
 - Water NSW
 - Port Authority of NSW
 - Transport for NSW
- Neighbouring commercial/industrial landowners and occupiers
 - Veolia Waste transfer terminal



- Bingo Recycling Centre
- Botany Industrial Park (Orica, Qenos, Huntsman, Ibom)
- Goodman Botany Bay Industrial Estate

5.3 Government Agency Consultation

In February 2018, the DP&E sought input into the SEARs from various government agencies. The full SEARs (**Appendix A**) provides key environmental aspects government agencies have requested that the EIS address. Further consultation with relevant government agencies was undertaken to obtain additional guidance and to clarify those items identified in the SEARs. A summary of the Agency consultation undertaken and the outcomes from engagement, is provided in Table 5-1.



Table 5-1 Summary of agency consultation through the development phase

Stakeholder	Date	Details of Engagement	Key Aspects	Outcomes
Department of Planning and Environment (DP&E)	23/03/2018	Letter (SEARs)	SEARs detailed the following matters for the EIS to address: <ul style="list-style-type: none"> • Strategic context • Consultation • Hazards and risk • Air Quality • Noise & Vibration • Soil & Water • Traffic & transport • Land resources • Waste management • Biodiversity • Visual • Heritage 	This EIS addresses the SEARs.
Environment Protection Authority (EPA)	23/03/2018	Letter (SEARs)	Environmental Protection Licence (EPL) requirements: Clause 19 of Schedule 1 of the POEO Act The EIS must address: <ul style="list-style-type: none"> • Air quality management • Soil & water management including sediment controls • Noise management • Waste Management • Waste management • Incident risks & contingency practices • Community Liaison 	This EIS. Community flyers distributed (Appendix E). Establish a 24-hour complaints hotline. Proponent to submit an application for an EPL.
	20/07/2018	Phone call	Phone call and messages left. Seeking to clarify EPA expectations and understand any	No response to messages. No further communications from EPA have been received.



Stakeholder	Date	Details of Engagement	Key Aspects	Outcomes
			additional matters for assessment	
Office of Environment and Heritage (OEH)	28/02/2018	Letter (SEARs)	Application to be assessed as a local Designated Development, does not necessitate the need for OEH involvement.	No further communication required.
Department of Primary Industries (DPI)	March 2018	Letter (SEARs)	The EIS must address: <ul style="list-style-type: none"> Annual volumes of surface water and groundwater assessed (including technical modelling details) Assessment of volumetric water licensing requirements Identification of adequate and secure water supply for the life of the project Detailed consolidated site water balance Proposed surface and groundwater monitoring activities & methodologies Assessment on impact to groundwater if excavation is required 	This EIS.
	20/07/2018	Phone call	Request contact person.	Referred to the general email for water referrals (water.referrals@dpi.nsw.gov.au).
	20/07/2018	Email	Query on licensing information.	DPI provided general licensing requirements for potential dewatering.
Roads and Maritime Services (RMS)	7/03/2018	Letter (SEARs)	The EIS must address: <ul style="list-style-type: none"> Traffic Impact Assessment Details of current daily and peak hour vehicle, public transport, pedestrian and bicycle movements Type and impact of heavy vehicles likely to be used 	This EIS.



Stakeholder	Date	Details of Engagement	Key Aspects	Outcomes
			<ul style="list-style-type: none"> Propose routes and assessment of impact Performance of key intersections, and upgrades if required Access and parking arrangements (including emergency vehicle access) Preparation of a draft Construction Traffic Management Plan 	
	17/05/2018	Phone call	Query for contact details and to request a meeting.	Established initial contact and engagement.
	23/05/2018 /	Email Correspondence to RMS / Email response from RMS	Query to describe traffic study results and to request a meeting. RMS provided initial feedback on query.	RMS provided feedback acknowledging the traffic issues on Beauchamp Road and Perry Street. RMS has communicated their support of the installation of full time No Stopping zones along both sides of the Beauchamp Road between Botany Road and Perry Street, and of an extension of the full time No Stopping zones on Perry Street. RMS acknowledged that growth in commercial and residential components in the broader area are likely to increase traffic flows along all major road corridors, however, no works by RMS were planned in the immediate area. Copy of correspondence provided in Appendix F
	29/05/2018	RMS Meeting (Robert Rutledge, James Suprain)	Pre-DA Meeting between Holcim and RMS	<p>Holcim presented an overview of the proposed development. Traffic consultants Bitzios presented an overview of the Traffic Impact Assessment methodology, findings and recommendations.</p> <p>General discussion included review of transport routes, local traffic issues and predicted increase in traffic due new development, and RMS process for</p>



Stakeholder	Date	Details of Engagement	Key Aspects	Outcomes
				<p>managing and reviewing operation of State Roads.</p> <p>RMS advised they are aware of congestion on Beauchamp Rd with on-street parking causing issues. RMS support a review and change in parking arrangements: suggest No Stopping be implemented on west side, No Stopping or peak period No Parking on east side. Perry St is Council's responsibility though RMS would support review of Perry St parking also.</p> <p>Traffic signal cycle times might be worth reviewing once development in operation</p>
Water NSW	23/05/2018	Letter (SEARs)	The EIS must address: Identification, assessment and management of potential impacts on surface water and groundwater resources	Checklist provided by Water NSW via email outlining the requirements if a temporary groundwater (dewatering) approval is required.
	20/07/2018	Phone & email	Query regarding licensing for potential dewatering.	It was noted that the Project aims to avoid groundwater interference; however, if groundwater dewatering is required during construction, then temporary dewatering approval would be required.
Port Authority of NSW	20/07/2018	Phone & email	Confirmed project is within the SEPP (Three Ports).	Port Authority email stating they have no specific requirements for consideration in the EIS.
Transport for NSW	20/07/2018	Phone and email	Aimed to introduce the Project and request feedback.	No response provided.



5.4 Pacific National

Pacific National owns the land on which the development is proposed and a key stakeholder. Holcim and **pitt&sherry** have held meetings with Pacific National to discuss details of land agreements, planning and construction of the Project. Consultation is ongoing and will continue to occur during the development application process and subsequent detailed design.

Holcim has met numerous times with Pacific National to discuss and agree commercial arrangements relating to land access and future tenancy, as well as details around construction of the rail spur and provision of future rail services to the site. Pacific National has provided their full support for the project subject to commercial terms, and gives landowner consent to lodge this development application. A copy of the landowner consent is provided in **Appendix F**.

One meeting was held at Pacific National's office in North Sydney and there have been several phone meetings and email correspondence, as summarised below:

28 June 2018

In person meeting between representatives from Pacific National, Holcim and **pitt&sherry** to discuss Project development, land use agreement, rail siding design, stormwater, traffic and vegetation removal. The following topics were also discussed in detail:

- It was agreed that clearing of vegetation on the Project Site would be required prior to construction of the Project. Pacific National advised that they hold an existing approval with Bayside Council for vegetation clearing. Clearing works would be undertaken in accordance with this existing approval.
- Discussed review of the draft Heads of Terms agreement;
- 1.5km of new rail track required from turnout of ARTC main track. Constraints include possible relocation of utility services; narrow corridor for construction; ARTC conditions regarding turnout location;
- Design of retaining wall along Orica boundary;
- Rail infrastructure design, approval (if required) and construction responsibility. Pacific National to commission feasibility design;
- Detailed survey of entire site required including extension in to ARTC corridor;
- Pacific National require consultation with Veolia to ensure compatibility with Veolia operations, with regards traffic and transport, train operations and other matters;
- Understand incline limits for locomotives and unloading process;
- Veolia track realignment;
- Determine effect on southern site boundary;
- Rail infrastructure approval process;
- Stormwater drainage; and
- EIS review and submission process. Need for landowner consent to lodge the EIS.

5.5 Australian Rail Track Corporation

Holcim have held several meetings with ARTC to discuss the Project and its interactions with ARTC particularly around rail operations and connections associated with the proposed new rail spur. Consultation included a meeting held at the ARTC office in Sydney on 18 July 2018, attended by Holcim, **pitt&sherry** and ARTC representatives. The following topics were discussed:



- Holcim provided an update on the Project status and design. Explained the staging of development and proposed design/location of rail spur, and approvals process for rail activities (rail siding, aggregate unloading facility) which would be assessed under a separate development application;
- ARTC indicated they are supportive of the Project in principle;
- A lot of the discussion focused on the rail spur, design, construction and operation details. ARTC explained their requirements around the connection point with main line and some significant constraints to development of the spur that would need to be addressed, including signalling, environmental constraints (groundwater, contamination), space limitations, existing services (including Orica pipelines), and general buildability. Signalling and rail spur design are key issues that require further development;
- Approvals process for the rail infrastructure. Pacific National would be the proponent for the rail siding and aggregate unloading facility;
- Stormwater drainage was discussed. Main stormwater drain in this area is the Springvale Drain. Stormwater drainage not a major problem at present. Very sandy soils so water seems to drain away well; and
- Holcim discussed proposed discharge of stormwater to ARTC rail corridor under similar conditions to present, ie employ detention basin and limit discharges to pre-development levels. ARTC provided in principle agreement, but noted this arrangement would need to be addressed and modified for development of the rail spur as it will occupy space currently used for drainage.

5.6 Bayside Council

Holcim and **pitt&sherry** have had one face to face meeting and numerous follow up phone calls and emails with Bayside Council to discuss the Project and DA requirements. Consultation included one meeting held at the Bayside Council office and several phone meetings to discuss, summarised as follows.

21 March 2018

In person meeting with Christopher Mackey, Development Team Leader, to introduce the Project and discuss DA requirements. Attending were Chris Mackey and Alexandra Hafner, Senior Development Assessment Planner (Bayside Council), Rachel Heath (Holcim) and Adam Bishop (pitt&sherry). The following topics were discussed:

- Holcim provided an outline of the project details and objectives
- Council outlined some key considerations for the EIS and local issues of relevance. These included:
 - Risk assessment / compatibility with adjoining Botany Industrial Park;
 - Transport risk assessment;
 - Local planning controls and Three Ports SEPP; and
 - The project would be referred to Bayside Planning Panel for determination.

Council provided a letter dated 16 May 2018 which outlines further information and requirements for the DA/EIS. A copy of this letter is provided in **Appendix B**.

1 May 2018

Phone conference with Christopher Mackey, Development Team Leader, to discuss the DA application checklist and submittal requirements

2 July 2018

Phone conference with Chris Thompson, Drainage Engineer, to discuss stormwater design requirements and flooding.



A Flood Advice Letter was subsequently requested and received on 1 July 2018. This indicates that parts of the site are affected by Flood Fringe: Low Hazard. 1% AEP flood levels across the site are provided.

30 August 2018

Holcim attended a pre-lodgement meeting with Bayside Council. Holcim provided an overview of the development and the environmental assessment undertaken. Copies of the DA plans were presented for review. Council did not provide any additional matters for consideration in the EIS.

Table 5-2 summarises the key concerns raised by Bayside Council from their request to comment, and subsequent consultation.

Table 5-2 Key matters raised by Bayside Council in their 16 May 2018 letter

Summary of key issue	Outcome of Engagement
Owners consent clarified at lodgement by detailed survey plan.	Pacific National have provided consent to construct and operate the Project (Appendix F). Survey plans are provided in Appendix C .
The proposal will need to comply with all relevant controls and provisions contained in relevant planning legislation.	Section 4 of the EIS addresses the relevant planning controls.
State Environmental Planning Policy (Three Ports) 2013 Zoning – must demonstrate that this development complies with 'General Industrial'.	A concrete batching plant, rail depot and aggregate distribution are considered general industries and thus are permitted with consent in this zone.
State Environmental Planning Policy No. 33 Hazardous and Offensive Development – must demonstrate that the development is not an offensive industry.	A Risk Assessment Evaluation has been completed (Appendix Q) and determined that the hazardous materials stored on site do not exceed the SEPP 33 thresholds and therefore the Project is not considered hazardous as per SEPP 33.
Traffic. Key intersections of proposed traffic route, to be modelled as Dangerous Goods Route. All routes for proposed truck use to be outlined including movements, frequency and impact. Address cumulative impacts of the proposal on the area.	A Traffic Impact and Assessment (TIA) report has been prepared for the Project (Appendix G). Traffic to and from the site will be primarily via Foreshore Drive and Beauchamp Road / Denison St. Roads and Maritime has been consulted throughout the development of the TIA.



Summary of key issue	Outcome of Engagement
Visual Impact Analysis required, noting no signage on top of or fixed to structures will be supported by council.	A Visual Impact Assessment (VIA) report has been prepared for the Project (Appendix P).
Waste management including wet weather protocol.	Waste management is addressed in Section 7.13. A detailed Operational Waste Management Plan would be prepared for the Project.
Retention of significant healthy trees. If proposed vegetation removal an Arborist Report will be required.	Pacific National have obtained approval from Bayside Council to remove vegetation within the Project Site, see Appendix F . This application assumes vegetation clearing would be undertaken prior to development by others.
Landscaping	Pacific National have obtained an approval from Bayside Council to remove vegetation within the Project Site, see Appendix F .
Must address land contamination issues through submission of a Phase 1 Preliminary and Stage 2 Detailed Site Assessment in accordance with the NSW EPA Guidelines.	A preliminary investigation and detailed site investigation were undertaken by Hibbs & Associates as part of the Project and is provided in Appendix K and Appendix L .
Flooding & Stormwater Management – consideration of flood storage requirements.	A flood advice letter (Appendix F) was obtained from council and a concept stormwater management strategy has been developed for the Project (Appendix N).
Water management – seek relevant approvals from Office of Water, and perform Geotechnical Report. Clarify details around excavations.	The Project is considered integrated development and consultation has been undertaken with Water NSW. A geotechnical report has been prepared (Appendix J). The proposed stormwater and wash water systems would incorporate a capture and reuse component to maximise water re-use opportunities into the process. A groundwater assessment has been undertaken (Appendix M).
An Acoustic report and Vibration report required to be submitted with the DA.	A Noise and Vibration Impact Assessment (NVIA) has been prepared for the Project (Appendix H). A summary is provided in Section 7.2 of this EIS.
An Air Quality Assessment and Management Plan is required – inclusive of Ongoing Dust Mitigation/Management Report. Actual testing required.	An Air Quality Impact Assessment (AQIA) has been prepared for the Project (Appendix I) that includes construction and operation mitigation management measures. A summary is provided in Section 7.3 of this EIS.
Risk Assessment	An RAE that includes an ERP and TRA has been included with this

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Summary of key issue	Outcome of Engagement
Evaluation (RAE) including an Emergency Response Plan (ERP) and a Transport Risk Assessment Report (TRA) and required to accompany the DA.	EIS in Appendix Q . A summary is provided in Section 7.8 of this EIS.

5.7 Randwick City Council

Due to the Project Site's proximity to the Bayside Council / Randwick City Council's LGA boundary, Holcim was recommended by Bayside Council to consult with Randwick City Council and consider any requirements they may have for the DA. Consultation with Randwick Council included several phone conversations and emails to discuss the Project, summarised as follows:

10 April 2018

Emailed Ray Brownlee, General Manager to provide notification and information to Randwick Council of the Project and request feedback.

22 May 2018

Phone call to David Ongkili, Coordinator Strategic Planning, to explain the Project and request feedback from Randwick Council.

19 June 2018

Email and letter received from Randwick Council regarding the Project (**Appendix F**). Other emails in June to/from Randwick Council included requests to discuss traffic with Council traffic engineers and to request attendance at Council's traffic committee meeting on 14 August 2018.

4 July 2018

Phone call with Despina Kalavas, Acting Integrated Transport Coordinator, to discuss proposed traffic changes including parking loss on Perry Street and general traffic issues in the area. Agreed that the matter would be reviewed at the next Traffic Committee meeting.

27 July 2018

Email to Despina Kalavas to request inclusion at the next traffic committee meeting on 14th August 2018.

2 August 2018

Phone call and subsequent email with Jai Sue, PA to the Manager Integrated Transport. Details of the project discussed. Copy of Traffic Impact Assessment emailed to Council. Council advised that the matter would be addressed at the September traffic committee meeting.

24 August 2018

Email from Darren Price, Coordinator Integrated transport, advising Council does not support the removal of parking along Beauchamp Road or Perry Street. Council notes the RMS traffic signals engineer comments regarding improvements to the functionality of the intersection by removing parking, however, the loss of amenity also needs to be considered. Holcim to continue discussions with Randwick Council to seek agreement for parking changes in Randwick LGA for improved traffic flow.

Table 5-3 outlines the key matters for consideration contained in Randwick City Council's letter of 19 June 2018 in response to the Project.



Table 5-3 Randwick Council Summary of Consultation

Summary of key issue	Outcome of Engagement
TIA to be prepared - specifically assessment of constraints, traffic generation, Levels of Service, safety and cumulative impacts of existing development in the wider Banksmeadow and Botany Industrial Park area.	A Traffic Impact and Assessment report has been prepared for the Project (Appendix G). Traffic to and from the site will be primarily via Foreshore Drive. Council raised the concern that traffic is a key issue in the area and will need to be addressed appropriately. It was noted that mitigation measures proposed in the TIA could improve traffic flows through the area, as outlined in Section 7.1 of this EIS.
Council does not support any use of Perry Street by vehicles associated with the proposed concrete plant nor any changes to existing local street configuration and capacity to accommodate vehicle movements to and from the proposed development	Holcim has given commitment that Perry Street would not be used by Holcim heavy vehicles. Haul routes would follow primarily Foreshore Drive, Beauchamp Road and Denison Street which are all State Roads and designated heavy vehicle routes. Holcim would employ GPS vehicle tracking software (known as "geofencing") to ensure compliance with approved vehicle haulage routes.
Noise nuisance complaints by residents located in Matraville. Concerns of cumulative operational noise impacts.	A NVIA has been prepared for the Project (Appendix H). A summary is provided in Section 7.2 of this EIS.
Odour and pollution: no emissions or discharges from the premises which would give rise to public nuisance	An Air Quality Impact Assessment (AQIA) has been prepared for the Project (Appendix I) that includes construction and operation mitigation management measures. A summary is provided in Section 7.3 of this EIS.
Must address impact to acid sulphate soils located on the site	The geotechnical report (Appendix J) and the DSI (Appendix L) concluded it would be unlikely for acid sulfate soils to be present or disturbed during earthworks.
Suitably appointed Site Auditor be engaged to assess suitability of the site for its intended development and use	The DSI (Appendix L) did not recommend a Remedial Action Plan (RAP) for the Project site, therefore a Site Audit report is not considered necessary. The Project Site is considered suitable for the intended purpose. While there are risks of encountering contamination, these would be managed during construction and operation using the mitigation measures listed in Section 7.4 of this EIS.
Address SEPP No 33 and SEPP (Three Ports) 2013.	An RAE that includes an ERP and TRA has been included with this EIS in Appendix Q . A summary is provided in Section 7.8 of this EIS. The SEPP (Three Ports) is addressed in Section 4.3.1 of this EIS.
Potential construction impacts.	A CEMP will be developed for the Project which will incorporate the mitigation measures set forth in this EIS to be implemented during construction and operation.
Location of a small portion of Lot 20 DP1231202 within Randwick City Council LGA.	There is no proposed development on the small portion of Lot 20 DP1231202. It is noted that Randwick Council does not anticipate a request for a DA to be lodged with Randwick City



Summary of key issue	Outcome of Engagement
	as part of the proposed development at this stage.

5.8 Neighbouring Industrial Landowners and Occupiers

Table 5-4 outlines the engagement outcomes with neighbouring landowners and occupiers in accordance with the SEARs requirements.

Table 5-4 Engagement outcomes of consultation with neighbouring landowners and occupiers

Stakeholder	Date	Details of Engagement	Key Aspects
Veolia	6 April 2018	Meeting between Holcim property manager and Veolia	Copy of EIS to be provide to Veolia prior to lodgement (RB to provide), email response regarding train unloading and timings. Traffic Management Plan between Holcim and Veolia to be prepared post consent.
	31/05/2018	Email	A copy of Flyer 1 was provided to Veolia.
	6 July 2018	Meeting between Holcim Project Manager, pitt&sherry and Veolia personnel,	Holcim provided an update on the project Veolia provided an outline of their traffic numbers and movement patterns. Busiest periods is 3am – 12pm. Typically 27 trucks per hour. Veolia recommend engagement with local community including Matraville Precinct Committee Veolia provided details of their stormwater detention basin and discharge infrastructure. Veolia explained some of the historical contamination issues.
Orica	6 July 2018	Holcim and Pitt&sherry meeting with Orica	Orica provided some historical background to the site, contamination and ongoing remediation management. Orica explained land use across the broader Botany Industrial park and key stakeholders – provided contact details for BIP tenants. Orica explained possible future redevelopment plans and recent subdivision.
Botany Industrial Park	10 August 2018	Phone call	pitt&sherry contacted Richard Benson and provided a general overview of the Project. Richard provided an overview of the BIP major hazard facility and advised consultation should occur with Ixom who operate the Chloralkali facility. Richard explained the community's concerns regarding dangerous



Stakeholder	Date	Details of Engagement	Key Aspects
			goods transport particularly on Denison St. pitt&sherry explained proposed parking changes in Beauchamp Road – Richard was supportive. Pitt&sherry sent Richard the two community flyers
Goodman (Botany Bay Industrial Estate)	22/05/2018	Phone call & Email	pitt&sherry contacted the Asset Manager to notify of the proposal and offer flyer distribution. Follow up email was sent to Asset Manager with flyer 1 attached.
	25/05/2018	Email	Senior Property Manager contacted pitt&sherry and requested if DA had been issued by Council. Response was that DA has not yet been lodged.
	16/07/2018	Email	Flyer #2 emailed to Goodman with a request to distribute to their tenants

5.9 Community Engagement

The CSEP documents the methodology for community engagement in Table 4. During the progression of the project, the engagement methodology was adapted to maximise outcomes. Table 5-5 provides a summary of the engagement conducted to date across multiple communication platforms, noting the details of communication and any feedback received.

A key method of communication was the distribution of two flyers to the community, as follows. Figure 5-1 indicates the Flyer distribution area.

- **Flyer One:** Distributed to approximately 150 residents and businesses within a 500m radius of the proposed Site with a focus on those fronting the major roads (Beauchamp Road, Denison Street, Perry Street). The Flyer provides an overview and justification of the Project, with the inclusion of the site location and contact information. A copy is provided in **Appendix E**.
- **Flyer Two:** Distributed to approximately 150 residents and businesses within a 500m radius of the proposed Site. The Flyer provides an update on the Project and focuses on traffic issues, summarising the findings and recommendations from the traffic impact assessment including proposed parking changes. A copy is provided in **Appendix E**.

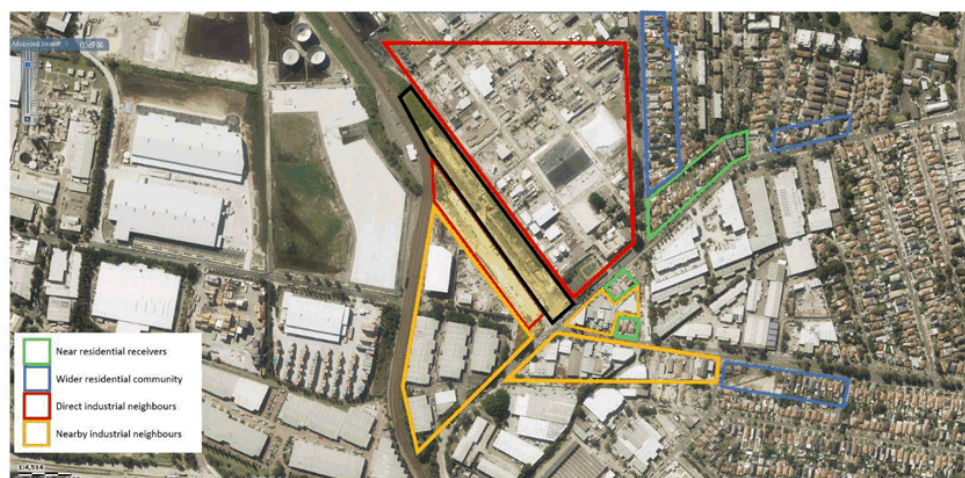


Figure 5-1 Flyer distribution locations

Over the course of the consultation period a number of phone calls and emails were received by Holcim from individuals and organisations seeking additional information or wishing to express their concerns. A summary of the communication received is provided in Table 5-5.

Table 5-5 Summary of community engagement performed to date

Stakeholder	Communication Method	Date	Details
General Community	Flyer 1	18/05/2018	Flyer 1 distributed to approximately 150 residents and businesses within a 500m radius of the Project Site
Neighbouring commercial operator	Phone	21/05/2018	Pitt&sherry contacted the front desk of 111 Beauchamp Rd (Garry's Auto Services) to ensure that they had received flyer 1 and clarify whether property was solely operated for commercial purposes or also included a residential component. Advice indicated the building owner leases the top floor as a residence.
Neighbouring commercial operator	Phone	21/05/2018	Pitt&sherry contacted the business owner of 24 Perry St (East Coast Glass) to ensure that they had received Flyer 1 and enquire about the use of 24 Perry Street. Business owner confirmed that they own 24 Perry street, which is currently undergoing renovations, but they intend on moving in to the house in the future. Pitt&sherry sent follow up email with Flyer 1 attached as per request on the phone.
Neighbouring resident and commercial operator	Phone Call	21/05/2018	Pitt&sherry contacted local resident and business owner of 105 Beauchamp Road (Manzanera Saw Works) to ensure that they had received flyer 1 and clarify whether the property was solely operated for commercial purposes or also included a residential



Stakeholder	Communication Method	Date	Details
			component. The business owner confirmed that the property was both business and residential, and has been operating for 30 years. He raised concern that his business involves precision CNC machines which are very sensitive to vibration, so a change in local vibration could impact his business.
Matrville Precinct Committee (MPC)	Phone call received from Chair of the Matrville Precinct Committee	21/05/2018	<ul style="list-style-type: none"> • MPC outlined their key concerns in relation to the Project: • Traffic/intersection congestion • Heavy vehicle types/numbers • Road safety • Compliance with road rules (weight restricted road limits etc) • Compliance with DA conditions (transport routes etc) <p>The community is concerned that waste collection trucks are using Perry Street, ignoring road weight limits and resulting in physical confrontations with neighbours.</p> <p>Community members have approached Council(s) and the police regarding their concerns. Protests have also been held on Perry Street to stop the trucks from using Perry Street.</p> <p>The community want assurance that commitments in any DA are enforceable. They believe truck drivers will end up taking whichever route they prefer and ignoring heavy vehicle routes outlined in the DA. The community wants assurance that Holcim can ensure compliance will be achieved.</p>
General Community	Flyer 2	17/07/2018	Flyer 2 distributed to approximately 150 residents and businesses within a 500m radius of the proposed Project Site.
Matrville Precinct Committee (MPC)	Holcim email to MPC	23/07/2018	Holcim requested attendance at the next Matrville Precinct Committee (MPC) meeting on 13 August 2018.
	MPC email to Holcim	24/07/2018	<p>Response from the MPC appreciating the correspondence and offer to attend MPC meeting. Suggesting September meeting as many members not attending in August.</p> <p>Update provided on previous Council engagement regarding parking on Perry Street.</p>



Stakeholder	Communication Method	Date	Details
Neighbouring resident (name withheld)	Email	24/07/2018	Pitt&sherry contacted by a nearby local resident on Denison Street concerned with potential traffic, parking, noise, safety, pollution, dust and compliance with traffic plans. Concern at the changes to the area over 30 years including large increase in heavy vehicles and designation of Denison St as a dangerous goods route. Not supportive of the Project.
Neighbouring resident (name withheld)	Email	25/07/2018	Pitt&sherry contacted by a nearby local resident on Beauchamp Road who does not want further truck traffic and is concerned with potential noise and dust. Not supportive of the Project.
Matraville Precinct Committee (MPC)	Holcim attendance and presentation at MPC Meeting	10/09/2018	<p>MPC invited Holcim to present information to the committee about the proposed concrete batch plant and aggregate terminal. Representatives of Holcim and pitt&sherry attended.</p> <p>Holcim provided an overview of its business operations, a description of the proposed project and the factors supporting its choice of the Banksmeadow site for the development. Pitt&sherry outlined the planning process with Bayside Council, the Environmental Impact Statement process and the various specialist studies undertaken to support the assessment. This included a discussion of key measures to help reduce potential impacts, such as inclusion of a noise barrier and proposed parking changes along Beauchamp Rd (part of the RMS State Road Network) and in Perry St to reduce traffic congestion at the Perry St intersection.</p> <p>The meeting attendees then addressed Holcim with various questions and concerns.</p> <p>Key themes included:</p> <ul style="list-style-type: none"> • Traffic and access: Concerns at increased traffic and heavy vehicles on already busy roads • Proposed transport routes (Foreshore drive / Beauchamp Road vs Beauchamp Rd / Denison Street) • Perry St: Perry St is not to be used by heavy vehicles. Residents keen to understand methods of enforcing/policing this • Proposed loss of parking spaces and concern about impacts on small businesses adjacent these changes • Noise, especially from aggregate mixers, trucks • Dust and risk of health effects



Stakeholder	Communication Method	Date	Details
			<ul style="list-style-type: none"> General amenity impacts on the residential community, which is largely in Randwick Council and not Bayside Council The business case: What other options did Holcim consider Display of the EIS: request that Holcim display it in Randwick LGA

5.10 Summary of Key Actions and Outcomes from Community Consultation

Summarised below are the key actions agreed or design changes undertaken in response to feedback from stakeholders during consultation and from related environmental assessment outcomes. As consultation is an ongoing process, actions will continue to be performed during the remainder of the submission process.

It has been agreed that:

- A 3-4 m high noise wall would be implemented near the frontage with Beauchamp Road, to minimise noise emissions;
- Haul trucks would be tracked via GPS to ensure compliance with designated haulage routes ("geofencing") and to ensure that Perry Street is not used by heavy vehicles;
- Holcim would continue to engage with Roads and Maritime Services regarding implementation of traffic mitigation measures (parking restrictions) along Beauchamp Road;
- Holcim would continue to engage with Randwick Council regarding implementation of traffic mitigation measures (parking restrictions) along a portion of Perry Street on approach to Beauchamp Road;
- Holcim will continue to engage with Matraville Precinct Committee and the broader community regarding the proposal and opportunities to minimise community impacts. Further correspondence in the form of fact sheets and community updates is proposed.



6. Environmental Risk Analysis

This chapter introduces and describes the key environmental risks and provides a comprehensive assessment of these risks related to the Project. The key potential environmental impacts have been identified through assessment of the Project scope, review of the SEARs issued by DP&E, and consultation with relevant government agencies.

This section describes the methodology for assessing the key environmental risks related to the Project and the outcomes of the risk analysis. The environmental risk analysis informs the scope of the EIS by ensuring all potential environmental impacts are identified and assessment is focused on the key risk areas. It responds to the following SEAR: the EIS must *'include an environmental risk assessment to identify the potential environmental impacts associated with the development'*.

6.1 Objective

An environmental risk analysis was undertaken to identify the potential environmental impacts of the Project and to assign a risk rating to each potential impact. The environmental risk analysis was further reviewed and revised following several consultation sessions with key stakeholders, evaluation of the SEARs and receipt of specialist reports and other relevant documentation.

The main objectives of the environmental risk analysis are to:

- Determine the key environmental impacts of the Project and assist stakeholders to focus on the issues for assessment
- Identify any additional key issues not specified in the SEARs that would require investigation
- Verification of the key environmental risks
- Encourage a level of investigation that is commensurate with the risk of the potential environmental impacts which may result from the Project.

6.2 Methodology

The environmental risk analysis was conducted in accordance with the principles of the Australian and New Zealand standard AS NZS ISO 31000:2009 Risk Management – Principles and Guidelines. The level of risk was assessed by considering the potential impacts of the Project prior to application of any mitigation or management measures.

Risk comprises the likelihood of an event occurring and the consequences of that event. Definitions for the level of consequence and likelihood are outlined in Table 6-1 and Table 6-2, respectively. Table 6-2 defines a risk matrix process giving scores based on likelihood and consequence. Table 6-4 provides an environmental risk assessment for this project.

Table 6-1 Risk Analysis Consequence Definitions

Consequence level	Definition
Catastrophic	Long term (greater than 3 months) and irreversible impacts. Resulting in a major prosecution under relevant environmental legislation.
Major	Medium term (between 1 and 3 months) and potentially irreversible impacts. Resulting in a fine or equivalent penalty under relevant legislation.
Moderate	Moderate and reversible impacts, or medium term (between 1 and 3 months).
Minor	Minor and reversible impacts, or short term impacts (less than 1 month).



Insignificant	Minor, negligible impacts.
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Table 6-2 Risk Analysis Likelihood Definitions

Likelihood	Definition	Probability
Almost certain	The event is almost certain to occur in the course of normal or abnormal construction or operational circumstances.	>90%
Likely	The event is more likely than not to occur in the course of normal or operational circumstances.	51% to 90%
Possible	The event may occur in the course of normal construction or operational circumstances.	26% to 50%
Unlikely	The event is unlikely to occur in the course of normal construction or operational circumstances.	5% to 25%
Very unlikely	The event may occur in exceptional construction or operational circumstances only.	<5%

Table 6-3 Risk matrix

	Likelihood					
		Very unlikely	Unlikely	Possible	Likely	Almost certain
Consequence	Catastrophic	15	19	22	24	25
	Major	10	14	18	21	23
	Moderate	6	9	13	17	20
	Minor	3	5	8	12	16
	Insignificant	1	2	4	7	11



Table 6-4 Risk assessment – Banksmeadow Rail Terminal and Concrete Plant, site clearance and preparatory works

Aspect	Timing	Potential Impact	Likelihood	Consequence	Risk Level
Aboriginal Heritage	Construction	Impacts to identified and unidentified heritage items and places.	Very Unlikely	Major	10
Air quality	Construction	Dust generated during construction of Project, particularly during earthworks and excavations.	Likely	Moderate	17
	Construction and operation	Local air quality impacts caused by emissions from vehicles, plant and machinery. Additionally, greenhouse gas emissions from energy use associated with vehicles and plants.	Likely	Moderate	17
Biodiversity	Construction	Destruction of potential habitat for threatened fauna species (including removal of hollow-bearing trees).	Unlikely	Moderate	9
	Construction	Adverse effect on threatened species and /or endangered ecological communities such that its local occurrence is likely to be placed at risk of extinction.	Unlikely	Moderate	9
	Construction	Unapproved removal and/or damage of planted trees, urban bushland and/or endangered ecological communities on site.	Unlikely	Moderate	9
	Construction/operation	Harm to fauna within or entering the site.	Possible	Minor	8
	Construction/operation	Alterations to drainage arrangements of the Site that feeds into Botany Bay.	Unlikely	Moderate	9
	Construction/operation	Contamination of waterways due to accidental spill or discharge of chemicals, fuels, oils and other contaminants that feed into Botany Bay causing downstream effects.	Possible	Moderate	9
	Operation	Possible increase in weeds following construction works.	Possible	Moderate	13
	Construction/operation	Disturbance to fauna from noise and vibration during construction works and operations.	Possibly	Minor	8
Bushfire	Construction/operation	Increased risk of bush fire associated with operating vehicles, plant and equipment powered by fuels over land containing combustible	Very Unlikely	Major	10



Aspect	Timing	Potential Impact	Likelihood	Consequence	Risk Level
		materials.			
	Construction/ operation	Increased ignition risks from construction and operational infrastructure and activities such as fuel storage.	Very Unlikely	Major	10
	Construction/ operation	Risk of bushfire in the adjacent forested and vegetated areas impacting on facility causing facility shutdown, evacuation and/or property damage, injury or loss of life.	Very Unlikely	Major	10
Contamination	Construction	Construction activities expose contamination present onsite.	Possible	Moderate	13
	Construction	Construction activities cause contamination due to accidental spill or discharge of chemicals, fuels, oils and other contaminants.	Possible	Moderate	13
	Operation	Site unsuitable for proposed use as a concrete batching and aggregate transfer facility due to Site contamination.	Possible	Moderate	13
Climate Change & Sustainability	Construction	Significant demand on non-renewable restricted resources such as fuels and metals.	Very unlikely	Moderate	6
	Construction / operation	Significant demand on energy resources in short supply.	Very unlikely	Moderate	6
Hazards	Operation	Inappropriate storage, handling or disposal of contaminated waste that have the potential to be infectious, toxic or radioactive.	Unlikely	Major	14
	Operation	Incorrect storage, handling or disposal of contaminated material.	Unlikely	Major	14
Historic Heritage	Construction	Impacts to unidentified heritage items and places.	Unlikely	Moderate	9
Hydrology (Surface water, groundwater and flooding)	Construction	Sediment laden runoff during construction entering the nearby waterways such as the Botany Bay.	Possible	Major	18
	Construction	Contamination due to accidental spill or discharge of chemicals, fuels, oils and other contaminants.	Possible	Major	18
	Construction	Changes to drainage arrangements.	Unlikely	Moderate	9
	Construction	Interception of groundwater.	Possible	Major	18



Aspect	Timing	Potential Impact	Likelihood	Consequence	Risk Level
	Operation	Contamination of land/water sources due to chemical spillage/leakage during transportation and storage of chemicals or during operations of the facility.	Possible	Major	18
	Operation	Existing drainage network unable to cope with increased catchment runoff.	Unlikely	Moderate	9
Noise and vibration	Construction	Noise and vibration impacts during construction and operation of the facility causing disruption to sensitive receivers.	Possible	Moderate	13
	Construction	Vibration impacts to structural integrity of nearby buildings or sensitive equipment.	Possible	Moderate	13
	Operation	Noise impacts to sensitive receivers during the operation of the facility especially from the rail terminal and the concrete plant operation, or night time operations.	Possible	Major	18
Socio-economic, land use & property	Construction	Impacts to the operations of nearby businesses and commercial areas.	Possible	Moderate	13
	Operation	Impacts to the operations of nearby businesses and commercial areas.	Possible	Moderate	13
Soils & geology	Construction	Construction activities cause erosion and sedimentation.	Likely	Moderate	17
	Construction	Construction activities expose Potential Acid Sulfate Soils (PASS) and create Acid Sulfate Soils (ASS).	Unlikely	Moderate	9
	Construction	Construction activities expose the water table and contaminated groundwater sources.	Possible	Major	18
	Construction	Construction activities expose unexpected soil contamination.	Possible	Major	18
	Operation	Operational activities cause contamination due to accidental spill or discharge of chemicals, high pH materials, fuels, oils and other contaminants.	Possible	Major	18
Traffic and Transport	Construction	Increased traffic and congestion to primary road network and haulage routes during construction of the facility.	Likely	Moderate	17
	Construction	Disruptions to public transport routes and services.	Possible	Minor	8



Aspect	Timing	Potential Impact	Likelihood	Consequence	Risk Level
	Operation	Contribution to further congestion on local roads and wider road network from Project traffic.	Likely	Moderate	17
	Operation	Potential for increase in demand or reduced availability of street parking.	Likely	Moderate	17
Utilities	Operation	Project operation creates strain on existing utilities.	Unlikely	Moderate	9
Visual	Construction	Temporary impacts to the visual environment and aesthetic quality of the surrounding landscape during construction of the facility.	Likely	Moderate	17
	Construction	Use of lighting towers during any night work would create an increase in light spillage and potential impact on residential properties at night.	Possible	Moderate	13
	Operation	Visual impact associated with new industrial buildings and infrastructure.	Likely	Minor	12
	Operation	Loss of bushland setting and screening vegetation on Project Site contributing to loss of amenity, aesthetic quality and visual character of the local area.	Likely	Minor	12
	Operation	Loss of visual privacy.	Very unlikely	Moderate	6
	Operation	Loss of solar access.	Very unlikely	Moderate	6
	Operation	Increased light spillage on residential properties at night.	Possible	Moderate	13
Waste	Construction	Spoil storage on site leading to potential run off.	Possible	Major	18
	Construction / operation	Inappropriate storage and/or disposal of waste.	Possible	Major	18



6.3 Summary of environmental risk analysis outcomes

Review of the existing environmental features and potential environmental impacts related to the Project was undertaken by the EIS authors as part of the first environmental risk analysis workshop. This discussion resulted in targeting specific environmental issues determined to be most relevant to the Project, based on the information gathered for the Preliminary Environmental Assessment (PEA). These issues were assessed in the environmental risk analysis and, using the methodology described above (based on the Australian and New Zealand standard *AS NZS ISO 31000:2009 Risk Management – Principles and Guidelines*) a risk level was allocated to the potential impacts identified for each issue.

The issues that were addressed in the environmental risk analysis were:

- Aboriginal heritage
- Air Quality
- Biodiversity
- Bushfire
- Contamination
- Climate Change & Sustainability
- Hazards
- Historic heritage
- Hydrology (Surface water, groundwater and flooding)
- Noise & vibration
- Socio-economic, land use & property
- Soils & geology
- Traffic & Transport
- Utilities
- Visual
- Waste.

Conclusion

Overall, the environmental risks presented by the Project are low to moderate. A number of features of the Project contribute to this assessment, including:

- The separation distances to the nearest residential and other sensitive receptors;
- The significant level of disturbance to the Site that has occurred previously;
- The proximity to major road network; and
- Existing surrounding industrial development.

The potential for amenity impacts due to increased traffic, noise and dust emissions were identified as key issues during consultation with the community. These key issues are assessed in detail in Chapter 7.



7. Environmental Impact Assessment

This chapter introduces and describes the key environmental risks and provides a comprehensive assessment of these risks related to the Project.

Each potential environmental impact was systematically reviewed with reference to the current scope of the Project; the SEARs issued by DP&E; the findings and recommendations (for management and mitigation measures) from the specialist reports; other documentation; as well as consultation with relevant government agencies and neighbouring landowners.

The environmental risk analysis informs the scope of the EIS by ensuring all potential environmental impacts are identified and that the EIS is focused on the key risk areas. A detailed assessment of the key risks has been completed below. It responds to the following SEARs requirements: the EIS must include *“an assessment of all potential impacts of the proposed development on the existing environment (including cumulative impacts if necessary) and develop appropriate measures to avoid, minimise, mitigate and/or manage these potential impacts”*.

The environmental risks analysis identified several key environmental issues, aligning with those identified within the SEARs. These issues were:

- Traffic and transport;
- Noise and vibration;
- Air quality;
- Soils, geology and contamination;
- Groundwater;
- Surface water and stormwater discharge;
- Visual amenity;
- Hazards and risk;
- Biodiversity;
- Indigenous heritage;
- Historic heritage;
- Socioeconomics, land use and property;
- Waste;
- Climate change and sustainability; and
- Cumulative impacts.



7.1 Traffic and Transport

A Traffic Impact Assessment (TIA) was undertaken by Bitzios Consulting to investigate the potential traffic impacts of the Proposal (**Appendix G**). A summary of the key findings of this assessment are outlined below.

7.1.1 Assessment Methodology

The methodology for the TIA included:

- Review existing traffic and transport conditions and issues, identify existing transport infrastructure in the area and consider how these could be affected by the Project;
- Site inspections to observe existing traffic conditions and operation of the Beauchamp Road/Perry Street intersection, and record vehicle queue lengths to calibrate the SIDRA models for the existing traffic scenarios. Inspections were undertaken during PM peak (4:00pm-6:00pm) on Wednesday 21 March 2018, during typical working and school and during AM peak (7:00am-9:00am) on Thursday 22 March 2018;
- The traffic impact assessment undertaken in accordance with the *Roads and Maritime Guide to Traffic Generating Developments*;
- Assess potential traffic and transport impacts and infrastructure provisions including:
 - a traffic impact assessment in accordance with Roads and Maritime Services guidelines
 - details of road transport routes and access to the site
 - road traffic predictions for the development (Project) during construction and operation and
 - assess impacts to the safety and function of the road network, and details of any road upgrades required for the development;
- Assess Project traffic generation and potential impact on the Beauchamp Road/Perry Street intersection and the surrounding road network during the AM and PM peak periods;
- Undertake existing and future SIDRA Intersection software (version 7.0) (SIDRA) modelling of the Beauchamp Road/Perry Street intersection; and
- Undertake swept path analysis of a B-double and other necessary vehicles turning into the facility from Beauchamp Road and around the internal roads.

7.1.2 Existing Environment

Beauchamp Road

Beauchamp Road is a state road running north-south between Denison Street and Botany Road, and a regional road running east-west between Malabar Road and Denison Street. It has two lanes in both directions with unrestricted kerbside parking north of Perry Street, bus stops, a signposted 60km/h speed limit and a 40km/h school zone between Bunnerong Road and Flack Avenue. Beauchamp Road includes signalised intersections at Botany Road, Perry Street, Denison Street and Bunnerong Road and is a designated truck route to Port Botany. There is currently a No Right Turn between 6:00am and 8:00pm daily from the Beauchamp Road/Perry Street intersection north approach into the Project Site access. Figure 7-1 illustrates a plan view of the proposed Project access and roadways in the vicinity of the Project Site.

Denison Street

Denison Street is a two-way state road running north-south between Wentworth Avenue and Beauchamp Road. It has two lanes in each direction, with predominately No Stopping and No Parking zones and a signposted 60km/h speed limit. Denison Street includes signalised intersections at Wentworth Avenue and Beauchamp Road.

**Perry Street**

Perry Street is a two-way local road running east-west between Bunnerong Road and Beauchamp Road. It has one lane in both directions, with unrestricted kerbside parking, several access driveways to residential lots and industrial businesses and a signposted 60km/h speed limit. Trucks 3.5 tonnes and over are not permitted to use Perry Street.

Buses

Bus route 309 between Port Botany Depot and Central Railway Square is the only bus service operating along Beauchamp Road, running every 10-15 minutes during peak periods and every 20 minutes during off-peak periods. Bus stops are located approximately 30 metres north of the Beauchamp Road/Perry Street intersection on Beauchamp Road. There are also many empty and school buses running along Beauchamp Road given its proximity to the Port Botany Bus Depot.

Walking

Footpaths are provided on both sides of Beauchamp Road, Perry Street and the access road. The Beauchamp Road/Perry Street intersection has signalised pedestrian crossings on all sides. The traffic lights have two phases (Phase A: Beauchamp Road, and Phase B: Perry Street/Access Road) and the pedestrian phases of the traffic lights run when the alternate traffic phase is running.



Figure 7-1 Project access and roads

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Project Access Road

The proposed access road to the Project is a two-way road running east-west between the Beauchamp Road/Perry Street intersection and the Veolia Transfer Terminal. It has one lane in both directions with a default 50km/h speed limit, then a signposted 20km/h speed limit within the Transfer Terminal approximately 35 metres west of Beauchamp Road. Figure 7-3 shows a view into the access road and to the proposed entry and egress gate (on the right in the photo) to the Project Site. Traveling straight along the access road would take you into the Veolia site.



Figure 7-2 Access road to Project entrance

Key Existing Traffic and Access Issues

Beauchamp Road northbound traffic queues from Denison Street back into the Beauchamp Road/Perry Street intersection. This is due to unrestricted kerbside parking forcing through traffic to merge into one lane, as well as possible signal non-coordination with the following Beauchamp Road/Denison Street intersection. The queue spillback also blocks vehicles turning right from Perry Street.

Vehicles turning left and right from Beauchamp Road into Perry Street are delayed by vehicles using driveways to access fronting businesses. This causes vehicles to queue back into the Beauchamp Road/Perry Street intersection, increasing safety risks to drivers and pedestrians.

Considerable conflict occurs between through vehicles on Perry Street and driveway vehicles. Through vehicles are forced to stop to allow vehicles to enter/exit the driveways, increasing delays on the Perry Street east approach to the Beauchamp Road/Perry Street intersection. In addition, vehicles using driveways closer to the intersection present key safety and operational issues. The Perry Street queues



block the driveways, meaning vehicles from Beauchamp Road must wait for traffic to move during the Perry Street green phase which causes queues to back into the intersection.

Unrestricted kerbside parking on the Perry Street east approach to the Beauchamp Road/Perry Street intersection provides primarily one lane on this approach, causing frequent long queues and delays given the short green signal time. Some drivers turning left into Beauchamp Road tend to use the right lane rather than manoeuvring into the 20-metre long left lane before turning.

Figure 7-3 illustrates the key issues described above.

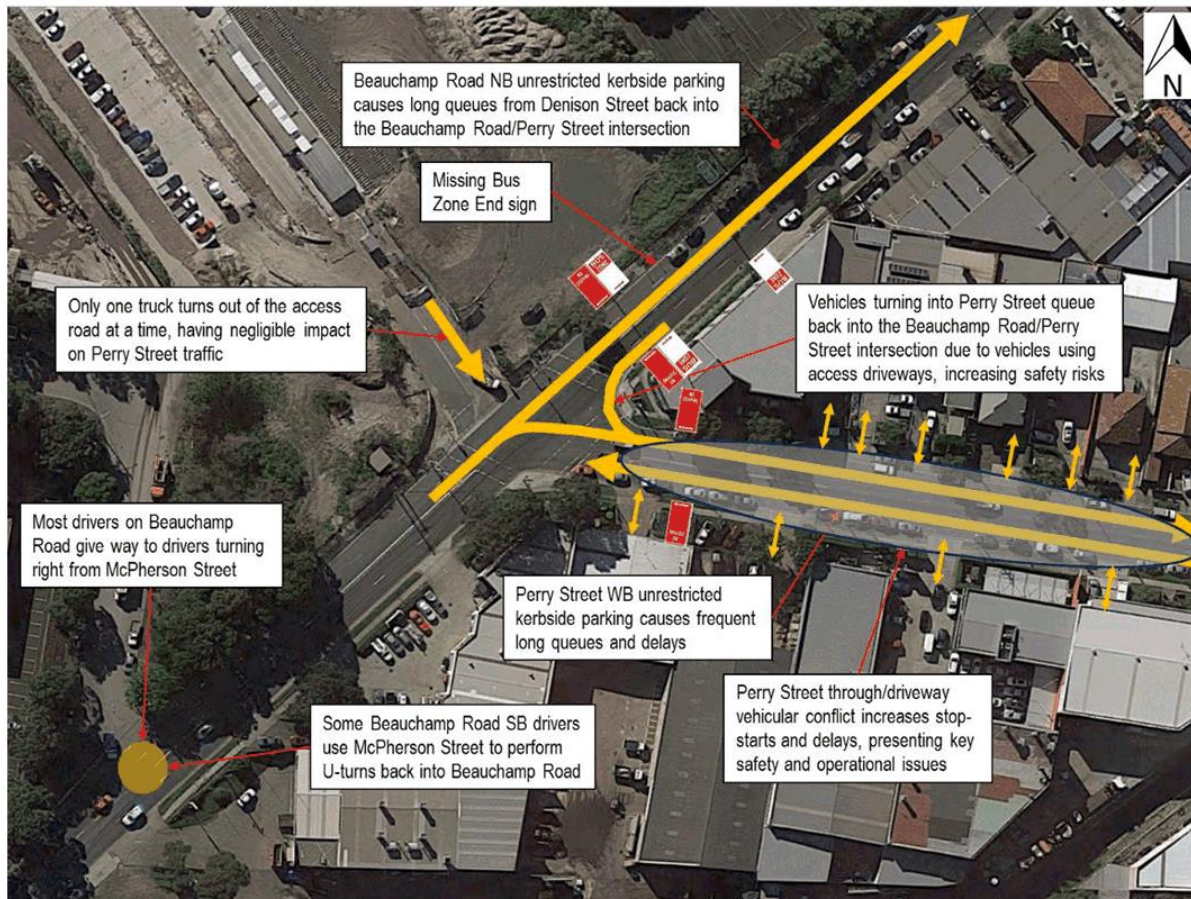


Figure 7-3 Site issues map

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133



Traffic surveys

Traffic surveys were undertaken at the Beauchamp Road/Perry Street intersection on Thursday 22 March 2018. The counts were classified into light vehicles, light trucks, and heavy trucks. The critical peak hours identified were 8:00am to 9:00am for the AM peak and 4:30pm to 5:30pm for the PM peak. The total turn movement counts at the Beauchamp Road/Perry Street intersection during these AM and PM peak hours are summarised in Figure 7-4 and Figure 7-5, respectively.

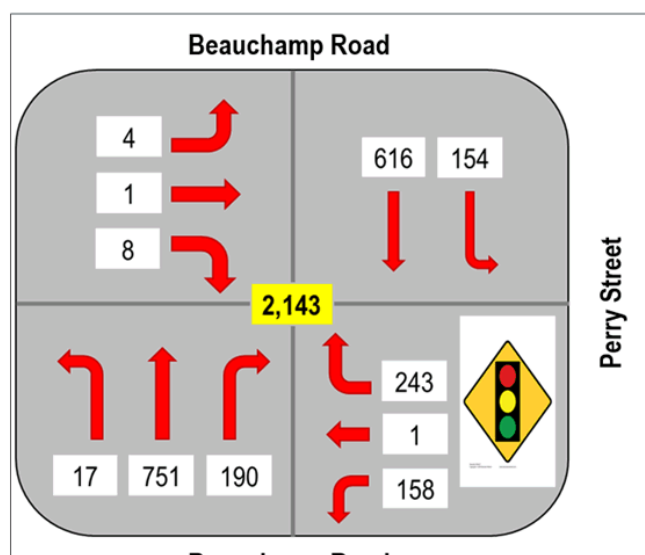


Figure 7-4 Beauchamp Road/Perry Street Intersection AM Peak Turn Volumes

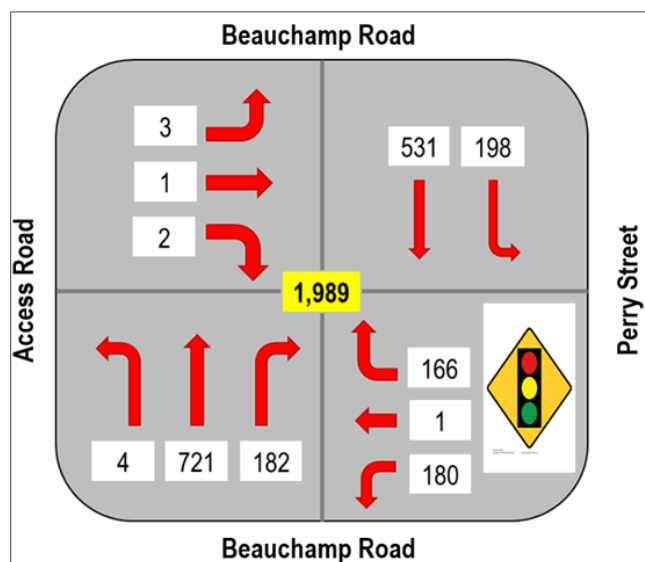


Figure 7-5 Beauchamp Road/Perry Street Intersection PM Peak Turn Volumes



7.1.3 Impact Assessment

Project Traffic Generation

Summaries of hourly traffic movements across the three Project stages were used to estimate the additional trips generated onto the surrounding road network (Stage 3 has two estimates: one for all trips being generated from 6:00am to 6:00pm; and one for trips being distributed throughout a 24-hour period). The traffic movements are separated into trips in and out by each vehicle type that are proposed to use the development, namely light vehicles, aggregate tippers, cement tankers and concrete agitators. The estimates at 8:00am and 5:00pm were used to determine the AM and PM peak hour traffic volumes generated by the Project during each stage, as shown in Table 7-1.

Table 7-1 Project In/Out Traffic Generation

Project Stage (Hours)	Light Vehicles		Aggregate Tippers		Cement Tankers		Concrete Agitators		Total Vehicles
	In	Out	In	Out	In	Out	In	Out	
AM Peak									
Stage 1 (6:00am-9:00pm)	4	2	0	0	1	1	10	10	28
Stage 2 (24 hours)	2	2	5	5	2	2	20	25	63
Stage 3 (6:00am-6:00pm)	2	2	7	7	2	0	32	32	84
Stage 3 (24 hours)	2	2	7	7	2	2	20	25	67
PM Peak									
Stage 1 (6:00am-9:00pm)	0	2	6	6	0	0	6	4	24
Stage 2 (24 hours)	2	16	8	8	1	3	10	5	53
Stage 3 (6:00am-6:00pm)	2	16	1	1	0	1	12	6	39
Stage 3 (24 hours)	2	16	4	4	1	3	10	5	45

The highest additional AM peak traffic will be during Stage 3 (6:00am-6:00pm scenario), which includes all aggregate deliveries by rail (except fine sand). The highest additional PM peak traffic will be during Stage 2 when all aggregates are delivered by road while the rail siding is under construction. Other trucks that will also access the Project Site include garbage trucks, delivery trucks, refuelling trucks and admixture trucks, though only in low, infrequent volumes.

Given the No Right Turn from the Beauchamp Road/Perry Street intersection north approach, it is assumed that all inbound vehicles will enter left from the south approach between 6:00am and 8:00pm, as well as during the AM and PM peak hours.

Table 7-2 summarises the overall proposed trip distribution. An equal north/south trip distribution will apply to all outbound vehicles for the proposed development. No vehicles would use Perry Street whatsoever. To ensure compliance Holcim would implement measures including GPS vehicle tracking to monitor and truck movements to ensure established haul routes are followed.

Table 7-2 Development In/Out Trip Distribution

Vehicle	Inbound		Outbound	
	North	South	North	South
Concrete Agitators	5%	95%	50%	50%
Vehicles <=19m	—	—	50%	50%
Vehicles >19m*	—	—	50%	50%



Truck Haulage Routes

Figure 7-6 and Figure 7-7 show the permitted truck routes to and from the site, respectively, suitable for B-doubles up to 26 metres long as per the Roads and Maritime Services online Restricted Access Vehicles Map. The map indicates that the left turn slip lane from Botany Road into Beauchamp Road is not permitted for vehicles longer than 19 metres, and that travel in the Harbour Tunnel is prohibited between 11:00pm and 5:00am daily.

Given this left turn restriction, inbound trucks would travel via the following routes:

- **Route 1** – Foreshore Road, Botany Road, and Beauchamp Road (vehicles up to 19 metres long);
- **Route 2** – Foreshore Road, Botany Road, Bumborah Point Road, Simblist Road, Friendship Road, Bumborah Point Road, Botany Road, and Beauchamp Road (vehicles over 19 metres long); or
- **Route 3** – Wentworth Avenue, Denison Street, and Beauchamp Road (vehicles of all lengths between 8:00pm and 6:00am only).

Given the No Right Turn from the Beauchamp Road/Perry Street intersection north approach, vehicles over 19 metres long could take Route 3 to deliver at night (subject to approval by Roads and Maritime Services).

Outbound trucks would travel via:

- **Route 1** – Beauchamp Road, Botany Road, and Foreshore Road towards the south and south-west; or
- **Route 2** – Beauchamp Road, Denison Street, and Wentworth Avenue towards the north and north-west.



Figure 7-6 Inbound Truck Haulage Routes

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137



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Construction Traffic

The hourly traffic movement summaries include construction volumes during Stage 1 and are separated into trips in and out by light vehicles, heavy construction vehicles and heavy fill vehicles. Proposed construction hours are between 7:00am and 6:00pm Monday to Friday, and between 8:00am and 1:00pm on Saturday.

Table 7-3 shows the estimates at 8:00am used to determine the AM peak hour construction traffic volumes generated during Stage 1 of the development, which is less than the Stage 1 development operational phase traffic. Construction traffic has been included in modelling all stages of development.

Table 7-3 Construction Traffic In/Out Traffic Generation - Stage 1

Light Vehicles		Heavy Construction Vehicles		Heavy Fill Vehicles		Total Vehicles
In	Out	In	Out	In	Out	
2	2	1	1	10	10	26

Construction Parking

Light vehicle parking during construction would be located adjacent to the Project Site on Orica property. A small footbridge would connect the parking area with the Project Site so that staff would not need to walk along the path on Beauchamp Road to get to the Project Site.

The location of the proposed compound for light vehicle parking can be seen in Figure 7-1. All heavy vehicles, plant and equipment would be delivered to and parked within the Project Site.

Beauchamp Road/Perry Street Sidra Intersection Analysis

Analysis of the Beauchamp Road/Perry Street intersection was undertaken using SIDRA modelling to assess the operational impact of Project traffic on the intersection. Using the existing traffic volumes, traffic assumptions and a future background traffic growth rate of 0.71% per year, the analysis was undertaken for the AM (8:00am-9:00am) and PM (4:30pm-5:30pm) peak hours of the 2018, 2019, 2020, and 2030 base and with Project development scenarios. The background traffic growth rate was determined using 2016 and 2031 Beauchamp Road and Perry Street traffic volume outputs from the Sydney Strategic Transport Models. Based on project timing information (details included in the TIA in **Appendix G**), Stage 1 is assumed operational in 2019, Stage 2 in 2020 and Stage 3 (both traffic estimates were assessed) in 2030 as a worst case for background traffic growth.

Table 7-4 shows the criteria adopted by Roads and Maritime Services in assessing the Level of Service (LoS) of signalised intersections.

Table 7-4 Level of Service Criteria for Signalised Intersections (based on Roads and Maritime Services)

Level of Service	Average Delay (seconds/vehicle)	Traffic Signals
A	<14	Good operation
B	15 to 28	Good with acceptable delays and spare capacity
C	29 to 42	Satisfactory
D	43 to 56	Operating near capacity
E	57 to 70	At capacity, incidents will cause excessive delays



Level of Service	Average Delay (seconds/vehicle)	Traffic Signals
F	>70	Excessive delays

Source: Roads and Maritime Services Guide to Traffic Generating Developments (2002)

In addition, Roads and Maritime's Traffic Modelling Guidelines stipulate that the practical degree of saturation (DoS) (i.e. practical operating capacity) of signalised intersections is 0.90. The SIDRA summary tables below colour-code each scenario's degree of saturation as follows:

- **black**: if the intersection operates below practical operating capacity (i.e. DoS <0.90 for signalised intersections);
- **yellow**: if the intersection operates above practical operating capacity but below theoretical capacity (i.e. DoS >0.90 but ≤1.00); and
- **red**: if the SIDRA output shows the intersection operating above theoretical capacity (i.e. DoS >1.0).

Table 7-5 summarises the AM and PM peak 2018, 2019, 2020, and 2030 base and with development SIDRA outputs. In developing the models:

- Heavy vehicles were not modelled in and out of Perry Street given the 3.5 tonne and over weight limit; and
- In the SIDRA model, concrete agitators were classified as light trucks, and aggregate tippers and cement tankers were classified as heavy trucks. Both assumptions were based on the truck specifications provided in Appendix E of the TIA.

Table 7-5 Existing Beauchamp Road/Perry Street Intersection SIDRA Results Summary

Scenario	AM Peak					PM Peak				
	Volume (veh)	Degree of Saturation (v/c)	Average Delay (sec/veh)	LoS	95th Percentile Queue (m)	Volume (veh)	Degree of Saturation (v/c)	Average Delay (sec/veh)	LoS	95th Percentile Queue (m)
2018 Base	2,143	0.99	23	B	136	1,989	0.99	17	B	64
2019 Base	2,157	1.00	25	B	144	2,000	0.99	18	B	87
2019 With Development Stage 1	2,186	1.01	27	B	164	2,024	0.99	18	B	87
2020 Base	2,171	1.00	26	B	155	2,017	1.00	19	B	96
2020 With Development Stage 2	2,241	1.05	33	C	202	2,070	1.00	20	B	96
2030 Base	2,330	1.08	64	E	541	2,166	1.18	63	E	371
2030 With Development Stage 3 Day Only	2,414	1.13	72	F	541	2,205	1.18	62	E	371
2030 With Development Stage 3 All Day	2,397	1.12	71	F	541	2,206	1.18	63	E	371

Key points from the SIDRA modelling results in Table 7-5 include the following:



- Intersection is shown to operate above theoretical capacity in the 2019 AM Peak with Development Stage 1, 2020 AM Peak with Development Stage 2, 2020 AM Peak with Net Banksmeadow Transfer Terminal Traffic, and 2030 AM and PM peak Base and with Development scenarios. Hence, the intersection requires upgrades (see recommended upgrades below);
- Beauchamp Road south approach is shown to operate above theoretical capacity, with long queues in both the 2030 AM and PM peak periods;
- Perry Street east approach is shown to operate above theoretical capacity, with long queues and excessive delays (>6 minutes) in both the 2030 AM and PM peak periods; and
- Access road west approach is shown to remain under 0.50 DoS in both the AM and PM peak periods, with queue lengths of approximately 71 metres and 50 metres respectively.

For the intersection to operate satisfactorily in the 2019, 2020, and 2030 base and with development scenarios, parking restrictions would be required to allow the kerbside lanes to be open to through traffic. Parking restrictions would likely still be required regardless of whether there is future development of the site or not given the existing intersection conditions and the function of Beauchamp Road, particularly for heavy vehicles.

Recommended Upgrades

In proposing future upgrades for the intersection, the following was concluded:

- Implementing parking restrictions would significantly improve intersection performance without the need to provide additional lanes;
- Increasing cycle times considerably and/or adding additional phases would significantly increase queues and delays;
- Keeping similar cycle times, but providing approximately 6 seconds more green time to Phase B (i.e. Perry Street) during both the AM and PM peak periods, would optimise intersection performance; and
- Adding a right turn bay on the Beauchamp Road south approach would only slightly improve future intersection performance.

With consideration of the above, Figure 7-8 shows the proposed upgrades to improve the 2019, 2020, and 2030 intersection performances in the base and with development scenarios.

Proposed improvements would include:

- Beauchamp Road northbound: convert the kerbside approach and exit lanes to Full Length Lanes;
- Beauchamp Road southbound: convert the kerbside approach lane to Full Length Lane; and
- Perry Street westbound: extend the left turn short lane to 77m.

To implement these improvements, parking restrictions would need to be introduced on Beauchamp Road and Perry Street. Roads and Maritime Service's Sydney Clearways Strategy outlines the following criteria for introducing Clearways:

- Directional traffic flows exceed 800 vehicles per hour per lane;
- Travel speeds are 30km/h or below during peak periods;
- The road is a strategic bus or freight transport corridor for moving people and goods; and
- Alternative public parking close to local businesses can be found, taking into account the quantity and usage of parking removed to extend or introduce a Clearway.



As Beauchamp Road does not meet the above criteria for Clearways, the following alternative times and restrictions are proposed, which have been generally supported by Roads and Maritime Services during consultation:

- Beauchamp Road northbound: full-time No Stopping between Botany Road and Denison Street (approximately 27 parking spaces would be lost);
- Beauchamp Road southbound: peak period No Parking Monday to Friday between Botany Road and Perry Street (approximately 16 parking spaces would be lost); and
- Perry Street westbound: an extension of the existing full-time No Stopping zone to 77 metres (approximately 7 parking spaces would be lost).

All existing bus stops on Beauchamp Road would remain in place. Consultation has been undertaken with Roads and Maritime Services regarding the proposed upgrades. The proposed alternative times and parking restrictions were generally supported by Roads and Maritime Services. Section 5 (Consultation) provides additional details regarding consultation with Roads and Maritime Services.

Table 7-6 summarises the 2019, 2020, and 2030 intersection performance with the proposed upgrades.

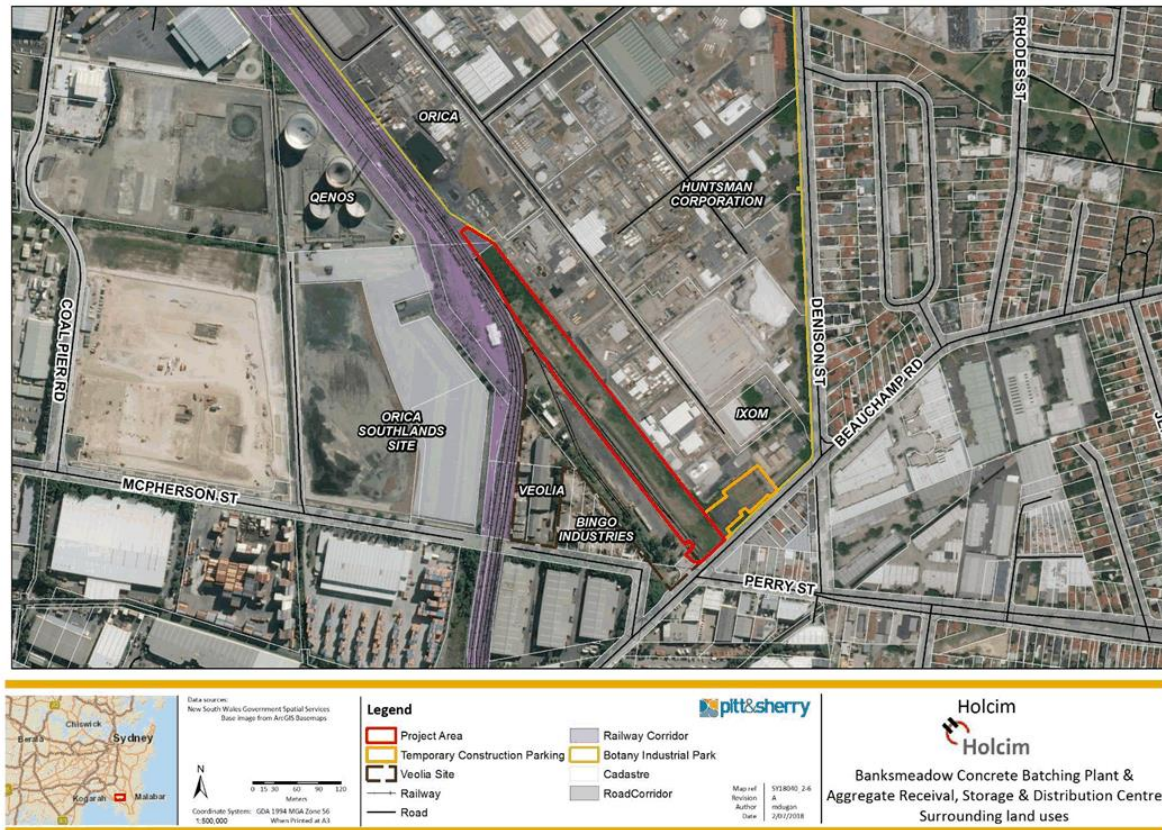


Figure 7-8 Proposed upgrades

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143



Table 7-6 Upgraded Beauchamp Road/Perry Street Intersection SIDRA Results Summary

Scenario	AM Peak					PM Peak				
	Volume (veh)	Degree of Saturation (v/c)	Average Delay (sec/veh)	LoS	95th Percentile Queue (m)	Volume (veh)	Degree of Saturation (v/c)	Average Delay (sec/veh)	LoS	95th Percentile Queue (m)
2019 Base	2,157	0.61	13	A	78	2,000	0.64	12	A	57
2019 With Development Stage 1	2,186	0.61	13	A	78	2,024	0.65	12	A	57
2020 Base	2,171	0.61	13	A	79	2,017	0.69	12	A	58
2020 With Development Stage 2	2,241	0.63	13	A	79	2,070	0.70	13	A	58
2030 Base	2,330	0.68	13	A	87	2,166	0.74	13	A	64
2030 With Development Stage 3 Day Only	2,414	0.68	14	A	87	2,205	0.74	13	A	64
2030 With Development Stage 3 All Day	2,397	0.68	14	A	87	2,206	0.74	13	A	64

The above results indicate that the upgraded intersection is expected to operate within practical capacity and provide a good LoS A, even with allowing heavy vehicles to turn right from the access road.

Wider Road Network Impact

The impact of development-generated traffic on the wider road network was also considered at the following intersections:

- Beauchamp Road/Botany Road; and
- Beauchamp Road/Denison Street.

The worst case for development-generated traffic is in the AM peak during Stage 3 (6:00am-6:00pm scenario) when 43 inbound vehicles are being added to 959 vehicles northbound (a 4.5% increase). This increase is a conservative estimate based on all traffic being generated between 6:00am and 6:00pm. The traffic generated in all other scenarios and for all other directions is much lower. Since the increase in traffic being added to the above two intersections is not significant (much less than 5% overall), detailed modelling of the intersections was considered unnecessary as the change in operational performance would be negligible.

Conclusions

The key findings of the TIA for the Project are summarised as follows:

- Beauchamp Road/Perry Street intersection is currently operating above practical capacity;
- Existing intersection is expected to operate above either practical capacity or theoretical capacity in all 2019, 2020, and 2030 base and with-development scenarios;
- kerbside parking restrictions would be required for the intersection to operate satisfactorily in the 2019, 2020, and 2030 base and with-development scenarios. As Beauchamp Road does not meet the criteria for Clearways, alternative times and restrictions are proposed;
- Proposed upgrades would facilitate operation of the intersection within practical capacity and provide a good LoS A in the 2019, 2020, and 2030 base and with development scenarios;



- The potential increase in traffic on the wider road network is not significant; and
- Given the surrounding arterial road network is already designed to allow heavy vehicles to travel and manoeuvre with large swept paths, any road safety issues at key intersections are considered negligible. There are houses along part of the eastern side of Denison Street, but no other public facilities in the immediate area and inbound heavy vehicles would only travel via Denison Street southbound at night given the No Right Turn into the access road.

The removal of parking along Beauchamp Road will further mitigate safety risks as drivers would not be forced to weave. However, the Beauchamp Road/McPherson Street intersection may require Keep Clear markings to improve safety for drivers turning out of McPherson Street.

7.1.4 Mitigation measures

The mitigation and management measures in Table 7-7 would be implemented to minimise potential traffic and access impacts.

Table 7-7 Traffic Mitigation Measures

Reference	Mitigation Measures
T1	<p>A Traffic management plan (TMP) for construction and operation will be developed in accordance with Roads and Maritime Services Guidelines and the Australian Standard AS1742.3. The plan will take into account staging of the Project and will include, at minimum:</p> <ul style="list-style-type: none"> • The designated routes of construction traffic to the site; • A map of the primary access routes highlighting critical locations; • Drivers Code of Conduct; • Carpooling/shuttle bus arrangements to minimise vehicle numbers during construction; • Scheduling of deliveries; • Community consultation requirements; • Any restrictions on traffic movements (such as residential areas, school pick-up and drop-off times); • Traffic controls (speed limits, signage, etc.); • A complaint handling procedure; and • An induction process for vehicle operators.
T2	An In-Vehicle Management System (IVMS) will be used to manage and track drivers. A GPS navigation system will be included to guide drivers to jobsites and ensure the established haul routes are being followed.
T3	All Project personnel will be provided training on the requirements of the TMP through site inductions, toolbox talks or specific training.
T4	The heavy vehicle route will be included within the Driver's Code of Conduct and will form part of the project inception meeting for the project for all staff and drivers.
T5	Traffic control will be provided in accordance with the approved construction TMP to manage traffic movements (vehicular, cycle and pedestrian) during construction and maintain the flow of traffic within the site and on surrounding public roads.
T6	Traffic management controls will be communicated to appropriate stakeholders which will include the local community in the site vicinity via a letter box drop.
T7	Directional signage will be installed to direct construction traffic, and warn other motorists of construction traffic. This signage is positioned in accordance with the approved Traffic



	Control Plans.
T8	All employees, subcontractors and suppliers will comply with the speed limits within the worksite.
T9	The Proponent will consult with Roads and Maritime, Bayside Council and Randwick Council to progress, agree and implement parking changes as required on Beauchamp Road and Perry Street.



7.2 Noise and Vibration

A Noise and Vibration Impact Assessment (NVIA) was prepared by Muller Acoustics to assess the potential construction, operational and road traffic noise and vibration impacts associated with construction and operation of the Project. The full NVIA is provided in **Appendix H**.

Methodology

The NVIA includes the following key tasks:

- Review construction and operating activities to identify noise generating plant, equipment, machinery or activities proposed to be undertaken as part of the project;
- Identify the closest and/or potentially most affected receptors situated within the area of influence to the project;
- Quantify the existing noise environment by conducting unattended and operator attended noise measurements at locations representative of the closest and/or potentially most affected receptors;
- Establish existing noise levels to determine project-specific construction Noise Management Levels (NMLs), and operational noise criteria;
- Undertake 3D noise modelling to predict noise levels that may occur as a result of the construction and operation of the project at the closest and/or potentially most affected receptors;
- Provide a comparison of predicted noise levels against relevant construction NMLs and operational noise criteria;
- Assess the potential noise and vibration impacts associated with construction and operational aspects of the project; and
- Provide feasible and reasonable noise and vibration mitigation and management measures, and monitoring options, where NMLs or operational noise criteria may be exceeded.

Policies and Guidelines

This NVIA has been conducted in accordance with the following key policy and guidelines:

- NSW Department of Environment and Climate Change (DECC), NSW Interim Construction Noise Guideline (ICNG), 2009;
- Environment Protection Authority's (EPA's), Noise Policy for Industry (NPI), 2017;
- NSW Department of Environment, Climate Change and Water (DECCW), NSW Road Noise Policy (RNP), 2011;
- NSW Department of Environment and Conservation (DEC) – NSW Environmental Noise Management – Assessing Vibration: A Technical Guideline (the NSW vibration guideline), February 2006; and
- Roads and Maritime Services (Roads and Maritime) 2016, Construction Noise and Vibration Guideline (CNVG);

The assessment has also considered and applied the following additional policy, guidelines and standards where relevant:

- Australian Standard AS 2436–2010(2016) (AS2436) – Guide to Noise and Vibration Control on Construction, Demolition and Maintenance sites;
- Australian Standard AS1055–1997 (AS1055) – Description and Measurement of Environmental Noise;
- Australian Standard AS IEC 61672.1–2004 (AS61672) – Electro Acoustics - Sound Level Meters Specifications Monitoring or Standards Australia AS1259.2-1990™ (AS1259) – Acoustics – Sound Level Meters – Integrating/Averaging as appropriate to the device;



- Australian Standard AS/IEC 60942:2004/IEC 60942:2003 (IEC60942) – Australian Standard – Electroacoustics – Sound Calibrators; and
- British Standards Institution BS 7385: Part 2-1993 (BS7385.2:1993) - Evaluation and Measurement for Vibration in Buildings – Part 2 – Guide to Damage Levels from Ground-borne Vibration, 1993.

Noise Assessment Methodology

Noise Logging

To establish the existing background noise environment of the Project area noise data was collected by a combination of unattended and attended noise measurements at representative locations around the site over 10 days during June 2018.

The NSW Office of Environment and Heritage (OEH) Industrial Noise Policy (INP) defines background and ambient noise for daytime, evening and night time periods as follows:

Table 7-8 Construction Periods

Period	Construction Hours
Day (Standard construction hours)	Monday to Friday - 7am to 6pm Saturdays - 8am to 1pm No construction on Sundays or Public Holidays
Evening (Period 1)	Monday to Friday – 6pm to 10pm, Saturdays – 1pm to 6pm, Sundays – 8am to 6pm.
Night (Period 2)	Monday to Friday – 10pm to 7am, Saturdays/Sundays – 6pm to 7am (8am on Sunday mornings).

Noise Modelling

Brüel and Kjær Predictor Type 7810 (Version 11.10) noise modelling software was used to assess potential noise impacts associated with the project. A three-dimensional digital terrain map giving all relevant topographic information was used in the modelling process. The model uses relevant noise source data, ground type, shielding such as barriers and/or adjacent buildings and atmospheric information to predict noise levels at the nearest potentially affected receivers. Plant and equipment were modelled at various locations and heights, representative of realistic construction and operational conditions for each stage of the project.

The model calculation method used to predict noise levels was in accordance with ISO 9613-1 'Acoustics - Attenuation of sound during propagation outdoors. Part 1: Calculation of the absorption of sound by the atmosphere' and ISO 9613-2 'Acoustics - Attenuation of sound during propagation outdoors. Part 2: General method of calculation'.

The three stages of the project development were modelled to calculate noise emissions from concurrent construction and operations. Details of the production rates and material movements are presented in Section 3 (Project Description) and in Section 7.1 (Traffic) of this EIS. Assumptions used in the noise modelling, including noise emission data and meteorological data and prevailing conditions, used in this assessment are summarised in the NVIA in **Appendix H**.

7.2.1 Existing Environment

A key element in assessing environmental noise impacts is understanding the existing ambient environment and background noise levels at the closest and/or potentially most affected receivers to the project.



Sensitive Receivers

From observations on site, review of aerial photos and other project information, potentially sensitive receivers that may be affected by noise from operations, construction activities and related road traffic have been identified. Table 7-9 presents a summary of receiver Identification, type, address and coordinates. These are reproduced graphically in Figure 7-9.

Table 7-9 Potentially affected sensitive receivers

ID	Type	Description Address
R0	Residential	14 Perry St
R1	Residential	18 Perry St
R2	Residential	20 Perry St
R3	Residential	22 Perry St
R4	Residential	30-34 Denison St
R5	Residential	36-40 Denison St
R6	Residential	44-50 Denison St
R7	Residential	52-60 Denison St
R8	Residential	62-70 Denison St
R9	Residential	72-80 Denison St
R10	Residential	82-86 Denison St
R11	Residential	22 Beauchamp Road
R12	Residential	24-30 Beauchamp Road
R13	Residential	32-42 Beauchamp Road
C10R1	Residential	105 Beauchamp Road
C11R2	Residential	111 Beauchamp Road
C1	Commercial	Beauchamp Road/Perry Street, Commercial South
C2	Commercial	Beauchamp Road, Commercial South
C3	Commercial	Beauchamp Road, Commercial South
C4	Commercial	Beauchamp Commercial South
C5	Commercial	Sareen Stone
C6	Commercial	Perry St Commercial South
C7	Commercial	Perry St Commercial South
C8	Commercial	Perry St Commercial North
C9	Commercial	Beauchamp Commercial North
C10 ¹	Commercial	105 Beauchamp Commercial North
C11 ²	Commercial	111 Beauchamp Commercial North



ID	Type	Description Address
C12	Commercial	Beauchamp/Denison Commercial North
C13	Commercial	Beauchamp/Denison Commercial North
C14	Commercial	Perry St Commercial
I1	Industrial	Recycling Centre
I2	Industrial	Orica Offices

Note 1: Mixed commercial/ residential single level dwelling.

Note 2: Upper floor residential above commercial premises

Background Noise levels

To quantify existing noise levels, long-term unattended noise measurements were undertaken at locations representative of receivers situated near the project together with operator attended monitoring to quantify ambient noise sources shown. The results of unattended monitoring are listed in Table 7-10 and the results for operator attended monitoring to quantify ambient noise sources are shown in Table 7-11.

The noise environment at existing residential receivers can be categorised as 'urban', which is described in the NPI as having an acoustical environment dominated by urban hum. This includes most traffic and/or industrial related sound sources which have through traffic and characteristically heavy and continuous flows during peak periods, near commercial or industrial districts.

The Rating Background Level (RBL), or LA90, is the overall single-figure background level representing each assessment period (day/evening/night) over the whole monitoring period. The noise level, which is equalled or exceeded for 90% of a given measurement period.

Table 7-10 Unattended Noise Monitoring Results

ID	Period ¹	Measured Background Level RBL LA90, dBA	Measured Ambient Noise Level LAeq, dBA	Road Traffic Noise Contribution LAeq, dBA
L1 Beauchamp Road	Day	55	62	61 ²
	Evening	54	60	
	Night	50	58	58
L2 Denison Road	Day	56	71	70 ²
	Evening	46	67	
	Day	55	62	67

Note 1: Monday to Saturday: Day 7am to 6pm; Evening 6pm to 10pm; Night 10pm to 7am. On Sundays and Public Holidays, Day 8am to 6pm; Evening 6pm to 10pm; Night 10pm to 8am.

Note 2: LAeq(15hr)

Table 7-11 Operator Attended Noise Monitoring Results

Location	Date/ Time	Measurement Descriptor, dBA			Comments (dBA contribution)
		L _A max	L _A eq	L _A 90	
20 Perry Street	3 April 18 20:10/22°C Calm	83	65	47	Constant traffic >48, 74-81 Insects masked by traffic Birds 49-52 Aircraft 49-56
30 Beauchamp Road	3 April 18 20:30/22°C	89	67	49	Constant traffic >48, 72-87

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150



Location	Date/ Time	Measurement Descriptor, dBA			Comments (dBA contribution)
		L _{Amax}	L _{Aeq}	L _{A90}	
	Calm				
70 Denison Street	3 April 18 20:50/21°C Calm	85	68	50	Constant traffic >48, 74-81 Insects masked by traffic Birds 47-52 Industrial site ~46 Local residential noise 48-56
20 Perry Street	3 April 18 22:00/21°C Calm	79	63	46	Constant traffic 42-76 Insects noise masked by traffic Pedestrian 49-58
30 Beauchamp Road	3 April 18 22:20/22°C Calm	77	62	43	Constant traffic >45, 62-70
70 Denison Street	3 April 18 22:50/21°C Calm	89	67	47	Constant traffic 48-84 Industrial site ~42

7.2.2 Construction Noise Criteria

In NSW, noise impacts arising from construction activities are managed in accordance with the *Interim Construction Noise Guideline* (ICNG). The guideline intends to provide respite for residents exposed to excessive construction noise outside the recommended standard hours whilst allowing construction during the recommended standard hours without undue constraints. The guideline has been developed to assist with the management of noise impacts, rather than to present strict numeric noise criteria for construction activities.

Construction Noise Management Levels (NMLs) for the Project and listed in Table 7-12 and these were adopted in accordance with the ICNG.

Table 7-12 Construction Noise Management Levels

Location	Assessment Period	RBL, dBA	NML dB LAeq(15min)
Residential Receivers Beauchamp Road	Day (Standard Hours)	55	65 (RBL+10dBA)
	Evening (OOH Period 1)	54	59 (RBL+5dBA)
	Night (OOH Period 2)	50	55 (RBL+5dBA)
Residential Receivers Denison Street Perry Street	Day (Standard Hours)	56	66 (RBL+10dBA)
	Evening (OOH Period 1)	46	51 (RBL+5dBA)
	Night (OOH Period 2)	45	50 (RBL+5dBA)
Commercial Receivers	When in Use	N/A	70
Industrial Receivers	When in Use	N/A	75



Figure 7-9 Sensitive receivers and noise logging locations

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152



7.2.3 Operational Noise Criteria

Project Noise Trigger Levels

The Noise Policy for Industry (NPI) sets out the procedure to determine the Project Noise Trigger Levels (PNTLs) relevant to an industrial development. The PNTL is the lower (more stringent) value of the Project Intrusiveness Noise Level (PINL) and Project Amenity Noise Level (PANL) determined in accordance with the NPI.

Project Intrusiveness Noise Level

The PINL (LAeq(15min)) is the RBL + 5dB and seeks to limit the degree of change a new noise source introduces to an existing environment. Hence, when assessing intrusiveness, background noise levels need to be measured.

Project Amenity Noise Level

PANL is relevant to a specific land use or locality. To limit continuing increases in intrusiveness levels, the ambient noise level within an area from all combined industrial sources should remain below the recommended amenity noise levels specified in the NPI. The NPI defines two categories of amenity noise levels:

- Amenity Noise Levels (ANL) – are determined considering all current and future industrial noise within a receiver area; and
- Project Amenity Noise Levels (PANL) – is the recommended levels for a receiver area, specifically focusing the project being assessed.

The derived PNTLs in accordance with the methodologies outlined in the NPI are presented in Table 7-13.

Table 7-13 Project Noise Trigger Levels

Receiver Type	Assessment Period ¹	PINL dB LAeq(15min)	PANL dB LAeq(15min)	PNTL dB LAeq(15min)
Residential Receivers Beauchamp Road	Day	60	58	58
	Evening	59	49	49
	Night	55	46	46
Residential Receivers Denison Perry Street	Day	61	58	58
	Evening	51	58	51
	Night	50	55	50
Commercial	When in Use	N/A	63	63
Industrial	When in Use	N/A	68	68

Note 1: Monday to Saturday: Day 7am to 6pm; Evening 6pm to 10pm; Night 10pm to 7am. On Sundays and Public Holidays, Day 8am to 6pm; Evening 6pm to 10pm; Night 10pm to 8am.

Maximum Noise Level Assessment (Sleep)



The potential for sleep disturbance from maximum noise level events from a project during the night-time period needs to be considered. The NPI considers sleep disturbance to be both awakenings and disturbance to sleep stages. Where night-time noise levels from a development/premises at a residential location exceed:

- LAeq(15min) 40dBA or the prevailing RBL plus 5dB, whichever is the greater, and/or
- LAmax 52dBA or the prevailing RBL plus 15dB, whichever is the greater.

The maximum noise level screening criterion shown in Table 7-14 is based on night time RBLs as per the NPI (the greater values are shown in bold).

Table 7-14 Maximum noise level screening criteria

Receivers	Trigger LAeq(15min)	RBL plus 5dB	Trigger LAmax	RBL plus 15dB
Residential at Beauchamp Road	40	55	52	65
Residential at Denison Street, Perry Street	40	50	52	60

Note 1: As per Section 2.5 of the NPI, the highest of the two criteria are adopted as the screening criteria.

Road Traffic Noise

The road traffic noise criteria are provided in the NSW Road Noise Policy (RNP). The 'sub arterial road' category, as specified in the RNP, was adopted for Beauchamp Road and for Denison Street. The relevant road noise criteria are as follows:

- Daytime (7am to 10pm): 60dBA LAeq,15hr external; and
- Night-time (10pm to 7am): 55dBA LAeq,9hr external.

Additionally, the RNP states where existing road traffic noise criteria are already exceeded, any additional increase in total traffic noise level should be limited to 2dB, which is generally accepted as the threshold of perceptibility to a change in noise level. Relative increase criteria are not applicable to local roads. Relative increase criteria for this assessment are as follows:

- Daytime (7am to 10pm): Existing traffic LAeq,15hr+12dB (external); and
- Night-time (10pm to 7am): Existing traffic LAeq9hr+12dB (external).

7.2.4 Impact Assessment

Mitigation Assumptions

The following assumptions and mitigation measures are included in the plant design and have been incorporated into the noise model:

- The batch plant is partially enclosed (sides and rear) dual alley type;
- Cement tanker loading points are enclosed on each side adjacent to the agitator loading bays;
- Washout bay area is enclosed on three sides, with the open side facing to the south;
- Rail unloader and aggregate unloading facility are fully enclosed;
- Install a temporary barrier (construction hoarding type 3m high, 10m in length) to the north of the slump stands to provide shielding from slumping operations; and
- A three metre (3m) high noise wall/ barrier is to be constructed adjacent to the exit road alignment to reduce noise emissions from heavy vehicles when leaving the site during Stage 2; and/ or



- A three metre (3m) high noise wall/ barrier, approximately 40m in length is to be constructed along the northern boundary and eastern frontage to Beauchamp Road to reduce noise emissions from the rail spur and heavy vehicles exiting the site during Stage 2 and Stage 3. In indicative noise wall is represented at the end of the rail siding shown in Figure 7-10.

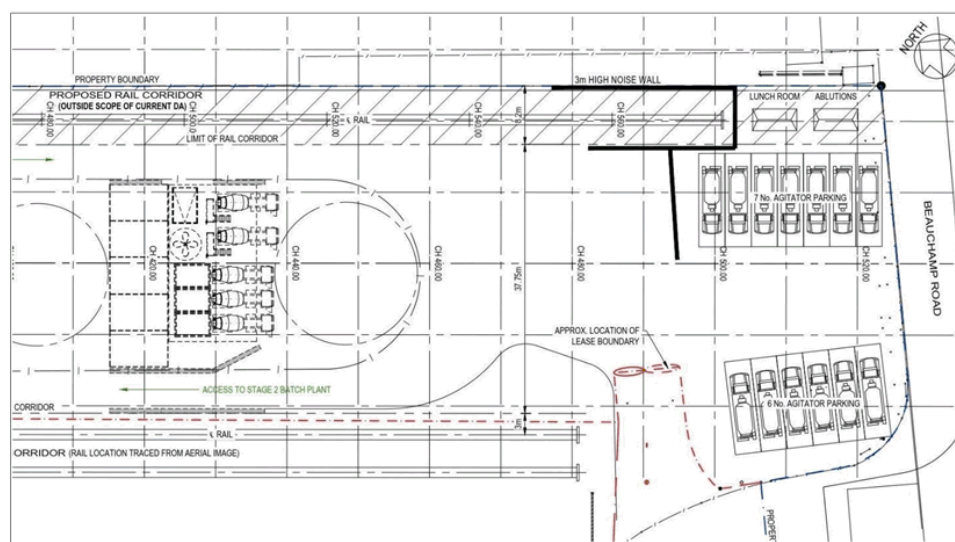


Figure 7-10 Indicative noise wall location

Construction Noise

Construction is expected to take approximately 18 months with works commencing in 2018. Construction activities would result in a short-term increase in localised noise levels, particularly for residences and other sensitive receivers located close to the Project Site. It is anticipated that construction would be largely carried out within standard construction hours:

- Monday to Friday: 7am to 6pm;
- Saturday: 8am to 1pm; and
- Sundays and Public Holidays: No work.

However, there may be a need for occasional night time concrete pours where hot weather is experienced and there may be occasional delivery of oversize loads to site during OOH periods. Rail construction activities are not covered by this application and are not in the scope of this NVIA.

The key noise generating activities are summarised in Section 3.15 (Construction Methodology) of the EIS. For construction, two specific scenarios have been calculated, for general construction concurrent with Stage 1 and Stage 2 operations; and piling activities as it has potential to generate high noise levels. It is assumed that piling is required for the foundations of the batching plant and material bins.

Table 7-15 Predicted Noise Levels - Construction

ID	Description	Construction Noise Level dB LAeq(15min)			NML Standard Hours dB LAeq(15min)	Compliance
		Stage 1	Stage 2	Piling		
R0	14 Perry St	33	24	41	66	Yes

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155



ID	Description	Construction Noise Level dB LAeq(15min)			NML Standard Hours dB LAeq(15min)	Compliance
		Stage 1	Stage 2	Piling		
R1	18 Perry St	32	25	40	66	Yes
R2	20 Perry St	33	28	41	66	Yes
R3	22 Perry St	34	32	42	66	Yes
R4	30-34 Denison St	41	42	42	66	Yes
R5	36-40 Denison St	42	37	55	66	Yes
R6	44-50 Denison St	39	39	54	66	Yes
R7	52-60 Denison St	41	36	49	66	Yes
R8	62-70 Denison St	42	36	54	66	Yes
R9	72-80 Denison St	42	43	53	66	Yes
R10	82-86 Denison St	40	42	48	66	Yes
R11	22 Beauchamp Road	42	39	43	65	Yes
R12	24-30 Beauchamp Road	43	38	48	65	Yes
R13	32-42 Beauchamp Road	43	36	51	65	Yes
C10R	105 Beauchamp Road	45	36	55	65	Yes
C11R	111 Beauchamp Road	42	38	52	65	Yes
C1	Beauchamp/Perry Commercial South	51	45	61	70	Yes
C2	Beauchamp Commercial South	49	45	61	70	Yes
C3	Beauchamp Commercial South	42	33	55	70	Yes
C4	Beauchamp Commercial South	41	36	46	70	Yes
C5	Sareen Stone	51	41	63	70	Yes
C6	Perry St Commercial South	40	35	45	70	Yes
C7	Perry St Commercial South	39	36	48	70	Yes
C8	Perry St Commercial North	32	21	37	70	Yes
C9	Beauchamp Commercial North	51	40	62	70	Yes
C10	105 Beauchamp Commercial North	44	35	52	70	Yes
C11	111 Beauchamp Commercial North	42	36	45	70	Yes
C12	Beauchamp/Denison Commercial North	37	26	38	70	Yes
C13	Beauchamp/Denison Commercial North	42	36	47	70	Yes
C14	Perry St Commercial	36	33	47	70	Yes
I1	Recycling Centre	57	42	72	75	Yes
I2	Orica Offices	42	34	44	75	Yes

Sleep disturbance

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156



The ICNG states that a sleep disturbance assessment is required where construction activities are planned to occur for more than two consecutive nights. Given that construction activities are primarily expected to occur during standard construction hours, sleep disturbance has not been considered in this assessment.

Operational Noise

Operational activities would result in a permanent increase in localised noise levels, particularly for residences and other sensitive receivers located close to the Project Site. Increases in operational noise levels would be caused by those activities identified in Section 3 of this EIS. Noise contours for Stage 1, Stage 2 and Stage 3 are presented in the NVIA in **Appendix H**.

Noise levels were predicted at each assessed receiver assuming receiver heights of 1.5m above ground level. Table 7-16 summarises the predicted operational noise levels for Stage 1 and demonstrates the Project complies with the PNTLs at all receivers. It should be noted that two buildings have a shared use of commercial and residential with the address 105 and 111 Beauchamp Road.

Table 7-16 Predicted Operational Noise Levels – Stage 1

ID	Description	Predicted Noise Level dB LAeq(15min)	PNTL Daytime dB LAeq(15min)	Compliance
R0	14 Perry St	44	58	Yes
R1	18 Perry St	41	58	Yes
R2	20 Perry St	41	58	Yes
R3	22 Perry St	42	58	Yes
R4	30-34 Denison St	47	58	Yes
R5	36-40 Denison St	42	58	Yes
R6	44-50 Denison St	44	58	Yes
R7	52-60 Denison St	42	58	Yes
R8	62-70 Denison St	41	58	Yes
R9	72-80 Denison St	39	58	Yes
R10	82-86 Denison St	39	58	Yes
R11	22 Beauchamp Road	45	58	Yes
R12	24-30 Beauchamp Road	45	58	Yes
R13	32-42 Beauchamp Road	43	58	Yes
C10R	105 Beauchamp Road	58	58	Yes
C11R	111 Beauchamp Road	54	58	Yes
C1	Beauchamp/Perry Commercial South	61	63	Yes
C2	Beauchamp Commercial South	60	63	Yes
C3	Beauchamp Commercial South	57	63	Yes
C4	Beauchamp Commercial South	54	63	Yes
C5	Sareen Stone	62	63	Yes
C6	Perry St Commercial South	48	63	Yes
C7	Perry St Commercial South	46	63	Yes
C8	Perry St Commercial North	40	63	Yes
C9	Beauchamp Commercial North	58	63	Yes



ID	Description	Predicted Noise Level dB LAeq(15min)	PNTL Daytime dB LAeq(15min)	Compliance
C10	105 Beauchamp Commercial North	58	63	Yes
C11	111 Beauchamp Commercial North	56	63	Yes
C12	Beauchamp/Denison Commercial North	45	63	Yes
C13	Beauchamp/Denison Commercial North	44	63	Yes
C14	Perry St Commercial	49	63	Yes
I1	Recycling Centre	67	68	Yes
I2	Orica Offices	52	68	Yes

Table 7-17 summarises the predicted operational noise levels for Stage 2 and demonstrates the Project complies with the PNTLs at all receivers.

Table 7-17 Predicted Operational Noise Levels – Stage 2

ID	Description	Predicted Noise Level dB LAeq(15min)			PNTL dB LAeq(15min)			Compliance
		Day	Eve	Night	Day	Eve	Night	
R0	14 Perry St	37	36	36	58	51	50	Yes
R1	18 Perry St	35	34	34	58	51	50	Yes
R2	20 Perry St	36	34	34	58	51	50	Yes
R3	22 Perry St	36	34	34	58	51	50	Yes
R4	30-34 Denison St	36	35	35	58	51	50	Yes
R5	36-40 Denison St	38	36	36	58	51	50	Yes
R6	44-50 Denison St	38	37	37	58	51	50	Yes
R7	52-60 Denison St	37	36	36	58	51	50	Yes
R8	62-70 Denison St	36	35	35	58	51	50	Yes
R9	72-80 Denison St	36	35	35	58	51	50	Yes
R10	82-86 Denison St	35	34	34	58	51	50	Yes
R11	22 Beauchamp Road	37	36	36	58	49	46	Yes
R12	24-30 Beauchamp Road	37	36	36	58	49	46	Yes
R13	32-42 Beauchamp Road	37	36	36	58	49	46	Yes
C10R	105 Beauchamp Road	46	45	45	58	49	46	Yes
C11R	111 Beauchamp Road	44	43	43	58	49	46	Yes
C1	Beauchamp/Perry Commercial South	52	51	51	63			Yes
C2	Beauchamp Commercial South	49	48	48	63			Yes



ID	Description	Predicted Noise Level dB LAeq(15min)			PNTL dB LAeq(15min)			Compliance
		Day	Eve	Night	Day	Eve	Night	
C3	Beauchamp Commercial South	46	44	44	63			Yes
C4	Beauchamp Commercial South	42	40	40	63			Yes
C5	Sareen Stone	51	50	50	63			Yes
C6	Perry St Commercial South	44	42	42	63			Yes
C7	Perry St Commercial South	40	38	38	63			Yes
C8	Perry St Commercial North	36	35	35	63			Yes
C9	Beauchamp Commercial North	51	50	50	63			Yes
C10	105 Beauchamp Commercial North	46	45	45	63			Yes
C11	111 Beauchamp Commercial North	45	43	43	63			Yes
C12	Beauchamp/Denison Commercial North	40	38	38	63			Yes
C13	Beauchamp/Denison Commercial North	37	35	35	63			Yes
C14	Perry St Commercial	39	38	38	63			Yes
I1	Recycling Centre	54	53	53	68			Yes
I2	Orica Offices	44	43	43	68			Yes

Table 7-18 summarises the predicted operational noise levels for Stage 3 and demonstrates the Project complies with the PNTLs at all receivers.

Table 7-18 Predicted Operational Noise Levels – Stage 3

ID	Description	Predicted Noise Level dB LAeq(15min)			PNTL dB LAeq(15min)			Compliance
		Day	Eve	Night	Day	Eve	Night	
R0	14 Perry St	37	36	36	58	51	50	Yes
R1	18 Perry St	35	34	34	58	51	50	Yes
R2	20 Perry St	36	34	34	58	51	50	Yes
R3	22 Perry St	36	34	34	58	51	50	Yes
R4	30-34 Denison St	36	35	35	58	51	50	Yes
R5	36-40 Denison St	38	36	36	58	51	50	Yes
R6	44-50 Denison St	38	37	37	58	51	50	Yes
R7	52-60 Denison St	37	36	36	58	51	50	Yes
R8	62-70 Denison St	36	35	35	58	51	50	Yes



ID	Description	Predicted Noise Level dB LAeq(15min)			PNTL dB LAeq(15min)			Compliance
		Day	Eve	Night	Day	Eve	Night	
R9	72-80 Denison St	36	35	35	58	51	50	Yes
R10	82-86 Denison St	35	34	34	58	51	50	Yes
R11	22 Beauchamp Road	37	36	36	58	49	46	Yes
R12	24-30 Beauchamp Road	37	36	36	58	49	46	Yes
R13	32-42 Beauchamp Road	37	36	36	58	49	46	Yes
C10R	105 Beauchamp Road	46	45	45	58	49	46	Yes
C11R	111 Beauchamp Road	44	43	43	58	49	46	Yes
C1	Beauchamp/Perry Commercial South	52	51	51	63			Yes
C2	Beauchamp Commercial South	49	48	48	63			Yes
C3	Beauchamp Commercial South	46	44	44	63			Yes
C4	Beauchamp Commercial South	42	40	40	63			Yes
C5	Sareen Stone	51	50	50	63			Yes
C6	Perry St Commercial South	44	42	42	63			Yes
C7	Perry St Commercial South	40	38	38	63			Yes
C8	Perry St Commercial North	36	35	35	63			Yes
C9	Beauchamp Commercial North	51	50	50	63			Yes
C10	105 Beauchamp Commercial North	46	45	45	63			Yes
C11	111 Beauchamp Commercial North	45	43	43	63			Yes
C12	Beauchamp/Denison Commercial North	40	38	38	63			Yes
C13	Beauchamp/Denison Commercial North	37	35	35	63			Yes
C14	Perry St Commercial	38	36	36	63			Yes
I1	Recycling Centre	54	53	53	68			Yes
I2	Orica Offices	44	43	43	68			Yes



Maximum Noise Level Assessment - Operations

Typical L_{Amax} noise levels from transient events were assessed for the nearest residential receivers. A sound power level of 85dBA was used for a vehicle door slam in the car park at the east of the site for stage 1 and Stage 2; and a sound power level of 107dBA was used for shunting noise on the rail spur for Stage 3 plus the sources described for Stage 1 and Stage 2.

Table 7-19 summarises the noise levels from L_{Amax} events for Stage 3 and demonstrates the Project complies with the Screening Criterion at all receivers.

Table 7-19 Predicted Operational Maximum Noise Levels

ID	Description	Predicted Noise Level dB LAeq(15min)			Screening Criterion		Compliance
		Stage 1	Stage 2	Stage 3	LAeq(15min)	dB LA _{max}	
R0	14 Perry St	<35	<35	42	50	60	Yes
R1	18 Perry St	<35	<35	<35	50	60	Yes
R2	20 Perry St	<35	<35	<35	50	60	Yes
R3	22 Perry St	<35	<35	<35	50	60	Yes
R4	30-34 Denison St	<35	<35	<35	50	60	Yes
R5	36-40 Denison St	<35	<35	39	50	60	Yes
R6	44-50 Denison St	<35	<35	37	50	60	Yes
R7	52-60 Denison St	<35	<35	36	50	60	Yes
R8	62-70 Denison St	<35	<35	<35	50	60	Yes
R9	72-80 Denison St	<35	<35	<35	50	60	Yes
R10	82-86 Denison St	<35	<35	<35	50	60	Yes
R11	22 Beauchamp Road	<35	<35	<35	55	65	Yes
R12	24-30 Beauchamp Road	<35	<35	<35	55	65	Yes
R13	32-42 Beauchamp Road	<35	<35	<35	55	65	Yes
C10R	105 Beauchamp Road	<35	<35	46	55	65	Yes
C11R	111 Beauchamp Road	<35	<35	42	55	65	Yes

A detailed maximum noise level assessment is not required as predicted noise levels for night time operations do not exceed the maximum noise level screening criterion of 55dB LAeq(15min) and/or 65dB L_{Amax} at any residential receiver for the Beauchamp Road catchment and does not exceed 50dB LAeq(15min) and/or 60dB L_{Amax} for the Denison Street and Perry Street catchment.

Road Traffic Noise

Project vehicles would enter/exit the site via the eastern entry gate on Beauchamp Road. All heavy vehicle traffic would then continue to their destination via Beauchamp Road or Denison Street.

The closest offset distance to receivers along either Beauchamp Road or Denison Street are approximately 10m and 15m from the centreline and have been adopted as the nearest offset distance to product truck movements along the public road network. Road noise calculations have assumed that all vehicles will



enter the site via a left turn from Beauchamp Road, however, there may be a small percentage (5%) that may turn right into the project site from Beauchamp Road during after-hours periods. Vehicles leaving the site are assumed to consist of 50% right turn and 50% left turn onto Beauchamp Road. The number of vehicles expected to travel along Denison Street at this stage of the assessment is unknown, however, a worst-case assessment based on 100% of north bound vehicles on Beauchamp Road turning into Denison Street has been conducted.

Results in Table 7-20 demonstrate that existing traffic noise levels are below current road noise criteria, and that Project related noise levels would remain below relevant criteria and not increase existing road traffic noise levels by more than 2dB(A) and therefore satisfy the relative increase criteria.

Table 7-20 Predicted Road Traffic Noise Levels

Road Name	Predicted Noise Level dB LAeq(15hr) Day		Predicted Noise Level dB LAeq(9hr) Night	
	Beauchamp Road	Denison Street	Beauchamp Road	Denison Street
Offset to Nearest Receiver	10m	15m	10m	15m
Stage 1	50.3	47.7	39.1	36.4
Stage 2	56.9	54.2	54.3	51.6
Stage 3	57.3	54.6	52.6	49.9
Existing RTN Levels	61	70	58	67
Stage 1 + Existing	61.4	70.0	58.1	67.0
Stage 2 + Existing	62.4	70.1	59.5	67.1
Stage 3 + Existing	62.5	70.1	59.1	67.1
Stage 1 Change, dB	0.4	0.0	0.1	0.0
Stage 2 Change, dB	1.4	0.1	1.5	0.1
Stage 3 Change, dB	1.5	0.1	1.1	0.1
Comply relative increase criteria (<2dB)	Yes	Yes	Yes	Yes
RTN Criteria	60dB LAeq(15hr)		55dB dB LAeq(9hr)	
Comply RTN Criteria	Yes	Yes	Yes	Yes

Vibration

Vibration generating events are likely to occur during the construction phase during impact pile driving, vibratory pile driving and compaction using vibratory rollers.

The nearest vibration sensitive receivers (Beauchamp Road commercial) are a minimum of 20m from the site and up to 150m from piling works. Receiver ID C10 is potentially a more sensitive receiver due to the nature of the business type (ie sharpening of saws and blades) which requires the use of precision tools. This site is a minimum of 60m from the site and potentially up to approximately 200m from piling works areas.



Table 7-21 provides the recommended minimum working distances for the use of various vibration intensive sources to nearby receivers.

Table 7-21 Working Distances for Vibration Intensive Plant

Plant Item	Rating/ Description	Safe Working Distances	
		Cosmetic Damage (BS 7385)	Human Response (OH&E Vibration Guideline)
Vibratory Roller	<50 kN (Typically 1-2 tonnes)	5m	15m to 20m
	<100 kN (Typically 2-4 tonnes)	6m	20m
	<200 kN (Typically 4-6 tonnes)	12m	40m
	<300 kN (Typically 7-13 tonnes)	15m	100m
	>300 kN (Typically 13-18 tonnes)	20m	100m
	>300 kN (> 18 tonnes)	25m	100m
Small Hydraulic Hammer	(300kg – 5 to 12t excavator)	2m	7m
Medium Hydraulic Hammer	(900kg – 12 to 18t excavator)	7m	23m
Large Hydraulic Hammer	(1,600kg – 18 to 34t excavator)	22m	73m
Vibratory Pile Driver	Sheet Piles	2m to 20m	20m
Pile Boring	≤800mm	2m	N/A
Jackhammer	Hand held	1m	Avoid contact with structure
Compactor	852G	10	20
Dozer	D810 with ripper	2 (nominal)	10
Excavator	≤30 Tonne	10	15
Grader	≤20 Tonne	2 (nominal)	10
Truck Movements	-	-	10m

The minimum offset distances for a large hydraulic hammer (similar to impact piling) is 22m for cosmetic damage and 73m for human comfort. Hence it is likely that compliance with these criteria at the nearest residential receivers is not within the minimum offset distances. Similarly, residential receivers are not within the minimum offset distances for a vibratory pile driver.

Generally, vibratory rolling may take place anywhere on the site. Peak levels of vibration from rolling typically occur as the roller stops to change direction and a resonance is created as the roller (and vibrator) is stationary.

For the largest vibratory roller (>18t), compliance with the cosmetic damage criteria is expected within 25m and the nearest residential receiver is at a distance of 60m from the site. For human response and more sensitive receivers, such as C10, vibration levels may exceed the guideline values as the receiver is within 100m.



Once the final vibratory plant has been selected a review minimum offset distances should be conducted. Where minimum working distances are exceeded, real-time vibration monitoring should be undertaken at the nearest effected residence to ensure levels satisfy relevant structural and human response criteria.

Conclusions

The results of the NVIA demonstrate that construction noise levels satisfy relevant NMLs at all assessed receivers with the implementation of a noise wall and other mitigation measures such as localised barriers, scheduling and respite would minimise noise emissions.

Operational noise levels are predicted to satisfy the NPI PNTLs at all assessed receivers. However, recommendations to ensure noise levels are minimised and verified have been provided. Additionally, the NVIA demonstrates that the road noise criteria as specified in the RNP will be satisfied at all receivers on the proposed transport route and not lead to an increase of existing road noise levels by more than 2dB.

Vibration generating activities during construction will need to be managed to meet structural damage and human comfort criteria, specifically to meet the criteria for critical work areas that may potentially be affected. A review of vibratory construction equipment is required prior to works being undertaken to confirm offset distances to receivers.

Based on the NVIA results, there are no noise or vibration related issues which would prevent the approval of the project. The results of the assessment shows compliance with the relevant construction, operational and road noise criteria. Additionally, the results of the operational assessment demonstrate compliance with the relative EPA and DECCW policies, once ameliorative measures have been adopted.

7.2.5 Mitigation Measures

The following mitigation and management measures are recommended to minimise potential noise impacts.

Table 7-22 Noise and Vibration Mitigation Table

Reference	Mitigation Measures
Construction Mitigation Measures	
N1	A Construction Noise Vibration Management Plan (NVMP) will be prepared by the Contractor as part of the CEMP. The construction NVMP will include consideration of: <ul style="list-style-type: none"> Monitoring requirements (including surface water and groundwater monitoring); Mitigation measures; and Notification requirements.
N2	Construction hours will be undertaken during Interim Construction Noise Guideline (ICNG) standard hours only, unless as per an approved Out of Hours Works Procedure.
N3	Construction plant and equipment to be kept in good working order including implementing routine maintenance schedules.
N4	Regular "toolbox talks" on the requirement and management of noise and vibration generation during construction works.
N5	Where possible use localised mobile screens or construction hoarding around plant to act as barriers between construction works and receivers, particularly where equipment is near the site boundary and/or a residential receiver including areas in constant or regular use (eg unloading and laydown areas).
N6	Operate plant in a conservative manner (no over-revving), shutdown plant when not in use.



Reference	Mitigation Measures
	and park/start at farthest point from relevant assessment locations.
N7	Select the quietest suitable machinery available for each activity.
N8	Avoid noisy plant/machinery working simultaneously where practicable.
N9	Minimise impact noise wherever possible.
N10	Use a broadband reverse alarm in lieu of the traditional hi frequency type reverse alarm.
N11	Place signage at the front entrance advising truck drivers of their requirement to minimise noise both on and off-site.
N12	Use project related community consultation forums to notify residences within close proximity of the site with project progress, proposed/upcoming potentially noise generating works, its duration and nature and complaint procedure.
N13	Review vibratory plant to be used on site and the minimum working distances to the nearest receivers.
N14	Where minimum working distances are exceeded, vibration monitoring should be undertaken at the nearest effected receiver to ensure levels satisfy relevant structural and human response criteria.
N15	Where night works may be required, they are not to occur over more than two consecutive nights.
Operation Mitigation Measures	
N16	Undertake a detailed design assessment to determine the preferred noise barrier design options.
N17	Complete a one-off noise validation monitoring assessment to quantify emissions from site and to confirm emissions meet relevant criteria.
N18	Prepare an operational noise management protocol to minimise noise emissions and to respond to potential concerns from the community regarding project noise emissions.
N19	Operational plant and equipment will be kept in good working order including implementing routine maintenance schedules.
N20	Implement a site layout plan that minimises the requirement for truck and vehicle reversing.
N21	Develop a noise and vibration complaints handling process.



7.3 Air Quality

An Air Quality Impact Assessment (AQIA) was prepared by Todoroski Air Sciences to assess the potential air quality and odour impacts associated with the construction and operation of the Project. The AQIA is provided in **Appendix I**.

The AQIA was prepared in accordance with the following regulatory framework and air quality standards:

- *Protection of the Environmental Operations Act 1997*;
- *Protection of the Environmental Operations (Clean Air) Regulation 2010*;
- *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales (NSW EPA, 2016)*; and
- *National Environment Protection Council "National Environment Protection (Ambient Air Quality) Measure (NEPC, 2016)*.

A summary of the AQIA is provided in this section.

7.3.1 NSW EPA Criteria

Particulate Matter

Particulate matter, typically in the upper size range, that settles from the atmosphere and deposits on surfaces is characterised as deposited dust. The surface dust deposits are considered a nuisance that can adversely affect the amenity of an area by soiling property in the vicinity.

Particulate matter consists of dust particles of varying size and composition. Air quality goals refer to measures of the total mass of all particles suspended in air defined as the Total Suspended Particulate matter (TSP). The upper size range for TSP is nominally taken to be 30 micrometres (μm) as in practice particles larger than 30 to 50 μm will settle out of the atmosphere too quickly to be regarded as air pollutants.

Two sub-classes of TSP are also included in the air quality criteria, namely PM_{10} (particulate matter with equivalent aerodynamic diameters of 10 μm or less which can pass through the throat and nose and enter the lungs), and $\text{PM}_{2.5}$ (particulate matter with equivalent aerodynamic diameters of 2.5 μm or less which can enter the lungs and pass into the bloodstream). Exposure to PM_{10} and $\text{PM}_{2.5}$ can adversely affect lung and heart health. Nitrogen dioxide (NO_2) is also an air quality indicator as it can inflame and irritate the lungs, aggravate respiratory diseases and lower resistance to respiratory infections.

Air Quality Criteria

Table 7-23 summarises the air quality goals that are relevant to this assessment as outlined in the NSW EPA document *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales* (NSW EPA, 2017).

The air quality goals for total impact relate to the total dust burden in the air and not just the dust from the Project. Consideration of background dust levels needs to be made when using these goals to assess potential impacts.

Table 7-23 NSW EPA air quality impact assessment criteria

Pollutant	Averaging Period	Impact	Criterion
TSP	Annual	Total	90 $\mu\text{g}/\text{m}^3$
PM10	Annual	Total	25 $\mu\text{g}/\text{m}^3$



Pollutant	Averaging Period	Impact	Criterion
PM2.5	24 hour	Total	50µg/m ³
	Annual	Total	8µg/m ³
	24 hour	Total	25µg/m ³
Deposited dust	Annual	Incremental	2g/m ² /month
		Total	4g/m ² /month

Source: NSW EPA, 2017

µg/m³ = micrograms per cubic metre

g/m²/month = grams per square metre per month

7.3.2 Assessment Methodology

Dispersion Model

CALPUFF is an advanced "puff" air dispersion model which can deal with the effects of complex local terrain on the dispersion meteorology over the entire modelling domain in a three-dimensional, hourly varying time step. The model setup used is in general accordance with methods provided in the NSW EPA document *Generic Guidance and Optimum Model Setting for the CALPUFF Modeling System for Inclusion into the 'Approved Methods for the Modeling and Assessments of Air Pollutants in NSW, Australia'* (TRC, 2011).

Emissions from each operational activity of the Project were represented by a series of volume sources and were included in the CALPUFF model via an hourly varying emission file. Meteorological conditions associated with dust generation (such as wind speed) and levels of dust generating activity were considered in calculating the hourly varying emission rate for each source.

It should be noted that as a conservative measure, the effect of the precipitation rate (rainfall) in reducing dust emissions has not been considered in this assessment.

Modelling Technology

Modelling has been undertaken using the CALPUFF Modelling System and The Air Pollution Model (TAPM). The CALPUFF Modelling System includes three main components: CALMET, CALPUFF and CALPOST and a large set of pre-processing programs designed to interface the model to standard, routinely available meteorological and geophysical datasets.

TAPM is a prognostic air model used to simulate the upper air data for CALMET input. The meteorological component of TAPM is an incompressible, non-hydrostatic, primitive equation model with a terrain-following vertical coordinate for three-dimensional simulations. The model predicts the flows important to local scale air pollution, such as sea breezes and terrain induced flows, against a background of larger scale meteorology provided by synoptic analysis.

CALMET is a meteorological model that uses the geophysical information and observed/simulated surface and upper air data as inputs and develops wind and temperature fields on a three-dimensional gridded modelling domain.

CALPUFF is a transport and dispersion model that advects "puffs" of material emitted from modelled sources, simulating dispersion processes along the way. It typically uses the three-dimensional meteorological field generated by CALMET.

CALPOST is a post processor used to process the output of the CALPUFF model and produce tabulations that summarise the results of the simulation.



7.3.3 Existing Environment

Figure 7-11 presents the location of the Project and nearest and most representative receptors that were assessed in the AQIA. The nearest residential dwellings and identified sensitive receptor locations are situated to the south-east, approximately 200 metres (m) from the Project. Other identified sensitive receptor locations are situated further afield to the northeast of the site. Two industrial receptors located to the east and west of the site have also been considered in the AQIA, identified with prefix of IND.

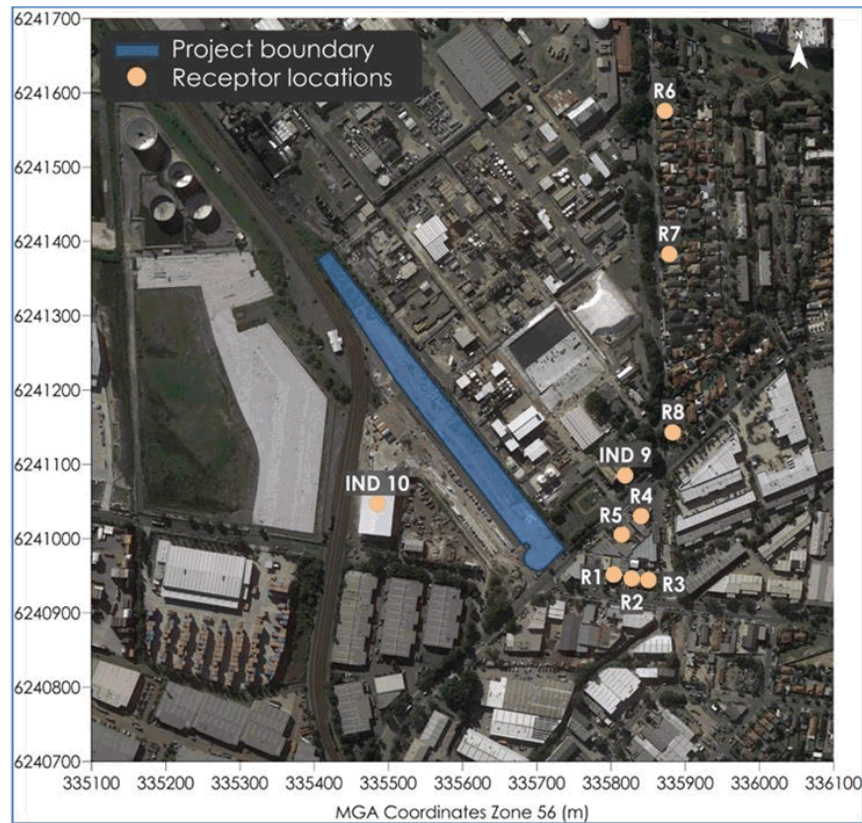


Figure 7-11 Sensitive receptors

Local Climate

Long-term climatic data from the Bureau of Meteorology weather station at Sydney Airport Aeronautical Meteorological Office (Site No. 066037) has been analysed to determine the character of the local climate within proximity of the project. The Sydney Airport AMO weather station is located approximately 4.6km northwest of the project.

The data collected indicates January is the hottest month with a mean maximum temperature of 26.6 degrees Celsius (°C) with July being the coldest month with a mean minimum temperature of 7.3°C.

Humidity levels tended to exhibit some variability and seasonal flux across the year. Mean 9am humidity levels range from 61 % (%) in October to 74% in June. Mean 3pm humidity levels varied from 49% in August to 63% in February.



Rainfall peaks during the first half of the year from the latter half of summer through to autumn, declining in the months leading into winter. The data collated indicates June is the wettest month with an average rainfall of 124.2 millimetres (mm) over 8.9 days with September being the driest month with a rainfall of 59.7mm over 6.8 days. Wind speeds during the warmer months have a greater spread between the 9am and 3pm conditions when compared with cooler months. Mean 9am wind speeds range from 12.6 kilometres per hour (km/h) in May to 25.3km/h in November. Mean 3pm wind speeds range from 17.1km/h in May to 25.3km/h in November.

Local Air Quality

The main sources of local air emission sources and pollutants comprises emissions from motor vehicle exhaust, locomotive emissions, domestic wood heaters, general urban activity, and various commercial and industrial activities. Locomotive emissions include those from the adjacent railway line and motor vehicle emissions from nearby Beauchamp Road and the Botany Goods Line, used by Pacific National.

Ambient air quality monitoring data from the nearest air quality monitors operated by OEH at Randwick, Earlwood and Rozelle (– three to eleven kilometres from the subject site – were used to quantify existing background levels for the assessed pollutants at the Project Site.

The OEH monitors the following air quality indicators:

- Particulate Matter less than 10 microns (PM10);
- Particulate Matter less than 2.5 microns (PM2.5); and
- Nitrogen Dioxide (NO2).



Figure 7-12 NSW EPA monitoring sites

PM₁₀ Monitoring

Table 7-24 shows annual average PM₁₀ concentrations at each of the three OEM monitoring sites were below the relevant criterion of 25 micrograms per cubic metre of air (25µg/m³). The maximum PM₁₀ concentrations over 24 hours recorded at each of the monitoring sites, however, exceeded the relevant EPA criterion of 50 micrograms per cubic metre of air (50µg/m³) over the period of review.

PM₁₀ concentrations are nominally highest during the months of spring and summer due to dry soils, windblown dust, occurrence of bushfires and increased pollen levels.

Table 7-24 Summary of PM₁₀ levels from NSW OEH monitoring (µg/m³)

Year	Randwick	Rozelle	Earlwood
Annual average			
2012	18.0	17.0	19.6
2013	18.9	18.3	19.9
2014	18.1	17.9	18.3
2015	18.6	16.6	17.1
2016	18.0	16.8	17.6
2017	19.2	18.1	18.0
Maximum 24-hour average			
2012	43.7	40.7	44.2



Year	Randwick	Rozelle	Earlwood
2013	55.3	58.5	63.1
2014	46.1	43.8	45.2
2015	77.4	60.3	66.5
2016	44.1	58.8	42.9
2017	56.0	54.1	59.8

PM_{2.5} Monitoring

Table 7-25 shows annual average PM_{2.5} concentrations recorded at the Earlwood monitoring station were 0.5 micrograms above the annual average EPA criterion of 8 micrograms per cubic metre of air (8µg/m³) in 2015. Readings from Rozelle indicated levels of particulate matter below 8µg/m³ in 2015 and for all other periods the annual average PM_{2.5} concentrations were at or below the EPA criterion.

The maximum 24-hour average PM_{2.5} concentrations recorded at these stations were found to exceed the relevant criterion of 25µg/m³ at times during the review period.

Bushfire events are known to have a significant impact on ambient air quality levels. The bushfire events occurring in late 2013 had a severe impact on the recording of ambient levels, affecting the reliability of the estimate in terms of the background level of data. Figure 7-13 presents satellite imagery showing the extent of the smoke plume on 21 October 2013, noting that the red patches in the image indicate the position of the active fire.

Table 7-25 Summary of PM_{2.5} levels from NSW OEH monitoring (µg/m³)

Year	Randwick ⁽¹⁾	Rozelle ⁽²⁾	Earlwood
Annual average			
2012	-	-	5.6
2013	-	-	7.9
2014	-	-	7.8
2015	-	7.2	8.5
2016	-	7.4	8.0
2017	-	7.2	7.3
Maximum 24-hour average			
2011	-	-	23.6
2012	-	-	20.7
2013	-	-	37.3
2014	-	-	22.7
2015	-	33.4	28
2016	-	49.4	33.3
2017	45.3	36.3	50.9



Figure 7-13 Satellite imagery showing smoke plume from bushfires on 21 October 2013

Estimated Background Dust Levels

As there is no readily available site-specific monitoring data for Banksmeadow, background dust levels around the Project Site were estimated to be similar to those recorded at the NSW OEH monitoring sites.

Annual average PM_{10} and $PM_{2.5}$ values from the Earlwood monitoring station for the 2012 calendar were used to represent the background levels for the Project as they were the highest of the three monitoring sites. The 2012 calendar period corresponds to the period of meteorological modelling used in the AQIA.

In the absence of data, estimates of the annual average background TSP and deposited dust concentrations has been determined from a relationship between PM_{10} , TSP and deposited dust concentrations and the measured PM_{10} levels. This relationship assumes that an annual average PM_{10} concentration of $25\mu g/m^3$ corresponds to a TSP concentration of $90\mu g/m^3$ and a dust deposition value of $4g/m^2/month$. This assumption is based on NSW EPA air quality impact criteria.

Applying this relationship with a measured annual average PM_{10} concentration of $19.6\mu g/m^3$ indicates an approximate annual average TSP concentration and deposition value of $70.6g/m^3$ and $3.1g/m^2/month$, respectively.

Summary of background dust levels

The annual average background air quality levels applied in this assessment are as follows:

- PM_{10} concentrations – $19.6\mu g/m^3$;
- $PM_{2.5}$ concentrations – $5.6\mu g/m^3$;
- TSP concentrations – $70.6\mu g/m^3$; and,
- Deposited dust levels – $3.1g/m^2/month$.



7.3.4 Impact Assessment

Based on the proposed three stages for operations, Stage 1 and Stage 2 have been identified as having the highest potential for air quality impacts based on the proposed schedule of operations and position of dust sources relative to surrounding sensitive receptors.

During Stage 1, the temporary concrete batching activity is closest to the sensitive receptor locations in the southwest. Stage 2 and Stage 3 would be largely similar with the facility at capacity, however Stage 3 would have reduced potential for dust emissions with the delivery of aggregates via rail instead of via road which occurs in Stage 2.

Dust Emissions

The main air pollutant likely to arise from the Project is identified as dust emissions. Other potential air emissions, such as nitrogen dioxide, carbon monoxide, odour, etc., are considered too low to generate any significant off-site pollutant concentrations and have not been assessed further in this study.

Dust emission estimates for the Project have been calculated by analysing the various types of dust generating activities taking place and utilising suitable emission factors sourced from US EPA developed documentation (US EPA, 1985 and Updates).

The estimated dust emissions for activities occurring in Stage 1 and Stage 2 are presented in Table 7-26. Detailed calculations of the dust emission estimates are provided in the AQIA (**Appendix I**). The peak operation scenarios have been assessed for only potential short-term air quality impacts occurring for a 24-hour period.

Table 7-26 Estimated annual TSP emissions rate for the Project

Activity	Stage 1		Stage 2	
	Average	Peak	Average	Peak
Sand delivery via road	65	135	453	1,235
Aggregate delivery via road	178	374	1,249	3,406
Unloading sand to storage bin	40	84	-	-
Unloading aggregate to storage bin	352	740	-	-
Sand transfer to hopper	40	84	-	-
Aggregate transfer to hopper	352	740	-	-
Unloading sand to hopper	-	-	110	301
Unloading aggregate to hopper	-	-	969	2,641
Sand transfer to elevated storage	-	-	110	301
Aggregate transfer to elevated storage	-	-	969	2,641
Delivering aggregate for export via road	-	-	677	677
Unloading aggregate to hopper	-	-	165	165
Aggregate transfer to elevated storage	-	-	525	525
Delivering cement material onsite	112	235	784	2,139
Unloading cement to elevated storage silo (pneumatic)	27	58	75	206
Weigh hopper loading	499	1,048	1,373	3,744
Mixer loading (central mix)	377	791	1,035	2,824
Agitator truck travelling onsite	594	1,247	4,168	11,368
Loading concrete washout with FEL	24	51	67	181
Transporting concrete washout offsite	14	29	48	130
Loading aggregate for export	-	-	472	472
Aggregate export	-	-	338	338



Activity	Stage 1		Stage 2	
	Average	Peak	Average	Peak
Wind erosion	1,393	1,393	1,393	1,393
Diesel exhaust due to onsite plant/ equipment	87	166	230	571
Total TSP emissions (kg/yr)	4,154	7,174	15,211	35,261

Dispersion Modelling Results

The dispersion model predictions presented in this section include those for the operation of the Project in isolation (incremental impact) and the operation of the Project with consideration of other sources [total (cumulative) impact]. The results show the predicted:

- Maximum 24-hour average PM_{2.5} and PM₁₀ concentrations;
- Annual average PM_{2.5} and PM₁₀ concentrations;
- Annual average TSP concentrations; and,
- Annual average dust (insoluble solids) deposition rates.

Table 7-27 and Table 7-28 present the predicted incremental particulate dispersion modelling results at each of the assessed receptor locations for Stage 1 and Stage 2 respectively.

The results show the proposed operation would be below the relevant incremental criteria (2 g/m²/month) at the assessed receptor locations in both stages.

The peak scenario assumes peak production levels occur over the entire modelling period, whereas this would only occur on occasion during the year. The predicted maximum 24-hour average PM_{2.5} and PM₁₀ levels for the peak scenario are also relatively low at the majority of sensitive receptor locations.

Table 7-27 Particulate dispersion modelling results for Stage 1 – Incremental impact

Receptor ID	PM _{2.5} (µg/m ³)		PM ₁₀ (µg/m ³)			TSP (µg/m ³)	DD (g/m ² /month)
	24-hour average	Annual average	24-hour average	Peak 24-hour average	Annual average	Annual average	Annual average
R1	0.6	0.1	2.3	4.6	0.5	1.0	0.1
R2	0.5	0.1	1.9	3.8	0.4	0.8	0.1
R3	0.5	0.1	1.6	3.3	0.3	0.7	0.1
R4	0.5	0.1	1.7	3.4	0.4	0.8	0.1
R5	0.6	0.1	2.1	4.3	0.5	1.0	0.1
R6	0.1	0.0	0.3	0.6	0.0	0.1	0.0
R7	0.1	0.0	0.5	1.1	0.1	0.1	0.0
R8	0.3	0.0	1.0	1.9	0.2	0.3	0.0
IND 9	0.5	0.1	1.7	3.6	0.4	0.8	0.1
IND 10	0.6	0.1	2.2	4.5	0.2	0.5	0.1

Table 7-28 Particulate dispersion modelling results for Stage 2 – Incremental impact

Receptor ID	PM _{2.5} (µg/m ³)		PM ₁₀ (µg/m ³)			TSP (µg/m ³)	DD (g/m ² /month)
	24-hour average	Annual average	24-hour average	Peak 24-hour average	Annual average	Annual average	Annual average



Receptor ID	PM _{2.5} (µg/m ³)		PM ₁₀ (µg/m ³)			TSP (µg/m ³)	DD (g/m ² /month)
	24-hour average	Annual average	24-hour average	Peak 24-hour average	Annual average	Annual average	Annual average
R1	1.3	0.2	4.7	11.7	0.8	2.5	0.2
R2	1.1	0.2	4.0	10.0	0.7	2.0	0.2
R3	1.0	0.2	3.6	8.8	0.6	1.7	0.2
R4	1.0	0.2	3.4	8.7	0.7	1.9	0.2
R5	1.3	0.2	4.3	10.9	0.8	2.5	0.3
R6	0.4	0.0	1.4	3.7	0.1	0.3	0.0
R7	0.4	0.1	1.7	4.3	0.2	0.5	0.1
R8	0.7	0.1	2.5	6.3	0.4	1.0	0.1
IND 9	1.0	0.2	3.6	9.0	0.7	2.0	0.2
IND 10	2.5	0.3	9.9	25.1	1.3	3.5	0.5

The cumulative (total) impact is defined as the modelling impact associated with the operation of the Project combined with the estimated ambient background levels in Section 7.3.3. The predicted cumulative annual average PM_{2.5}, PM₁₀, TSP and dust deposition levels due to the Project during Stage 1 and Stage 2 with the estimated background levels are presented in Table 7-29 and Table 7-30, respectively.

Table 7-29 Particulate dispersion modelling results for Stage 1 – Cumulative impact

Receptor ID	PM _{2.5} (µg/m ³)	PM ₁₀ (µg/m ³)	TSP (µg/m ³)	DD (g/m ² /month)
	Annual average			
	Air quality impact criteria			
	8	25	90	4
R1	5.7	20.1	71.6	3.2
R2	5.7	20.0	71.4	3.2
R3	5.7	19.9	71.3	3.2
R4	5.7	20.0	71.4	3.2
R5	5.7	20.1	71.6	3.2
R6	5.6	19.6	70.7	3.1
R7	5.6	19.7	70.7	3.1
R8	5.6	19.8	70.9	3.1
IND 9	5.7	20.0	71.4	3.2
IND 10	5.7	19.8	71.1	3.2

Table 7-30 Particulate dispersion modelling results for Stage 2 – Cumulative impact

Receptor ID	PM _{2.5} (µg/m ³)	PM ₁₀ (µg/m ³)	TSP (µg/m ³)	DD (g/m ² /month)
	Annual average			
	Air quality impact criteria			
	8	25	90	4
R1	5.8	20.4	73.1	3.3
R2	5.8	20.3	72.6	3.3
R3	5.8	20.2	72.3	3.3
R4	5.8	20.3	72.5	3.3
R5	5.8	20.4	73.1	3.4
R6	5.6	19.7	70.9	3.1
R7	5.7	19.8	71.1	3.2



R8	5.7	20.0	71.6	3.2
IND 9	5.8	20.3	72.6	3.3
IND 10	5.9	20.9	74.1	3.6

The results in Table 7-29 and Table 7-30 indicate the predicted levels would be below the relevant criteria at the assessed receptor locations.

Total (Cumulative) 24-hour average PM_{2.5} and PM₁₀ Concentrations

An assessment of total (cumulative) 24-hour average PM_{2.5} and PM₁₀ impacts was undertaken in general accordance with the methods outlined in the Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales (NSW EPA, 2017).

A Level 2 contemporaneous assessment approach where the measured background levels are added to the day's corresponding predicted dust level from the Project was applied. Ambient (background) PM_{2.5} and PM₁₀ concentration data corresponding with the year of modelling (2012) from the NSW OEH monitoring site at Earlwood were applied to represent the prevailing background levels in the vicinity of the Project and representative sensitive receptor locations.

The results indicate that the Project does not increase the number of days above the 24-hour average criterion at the assessed receptors.

7.3.5 Mitigation Measures

The mitigation and management measures listed in Table 7-31 would be implemented to minimise potential air quality impacts from the Project.

Table 7-31 Air Quality Mitigation Measures

Reference	Mitigation Measure
AQ1	<p>Prepare and implement an Air Quality Management Plan (AQMP) for construction and operational stages of the Project. The AQMP will include measures to manage and monitor air emissions including dust and will include consideration of the following:</p> <ul style="list-style-type: none"> Activities to be assessed during adverse weather conditions and modified as required (e.g. cease activity where reasonable levels of dust cannot be maintained using the available means). Engines of on-site vehicles and plant switched off when not in use. Vehicles and plant are to be fitted with pollution reduction devices where practicable. Maintain and service vehicles according to manufacturer's specifications. Overflow alarms and pressure control valves installed on silos. Minimise area and amount of stockpiled material. Water suppression on stockpiles and material storage areas if material found to be excessively dusty. Reduce drop heights from loading and handling equipment where practical. Design of the plant to include dust control measures such as: continuous dust extraction system at loading point, watering, enclosing aggregate transfer facilities etc. Cement silos fitted with dust filters. Sealed driving surfaces of the site to be cleaned regularly.



Reference	Mitigation Measure
	<ul style="list-style-type: none"> • Apply site speed limits. • Cover vehicle loads when transporting material off- site. • Street cleaning to remove any material tracked onto public roads.

7.4 Soils, Geology and Contamination

An assessment of soils, geology and contamination has been undertaken for the Project. Information on the existing environment was obtained through a combination of desktop searches, a geotechnical survey report prepared by GHD (**Appendix J**), preliminary site investigation (PSI) and detailed site investigation (DSI) prepared by Hibbs & Associates 2017 (**Appendix K** and **Appendix L**). Potential impacts of the Project have been identified and assessed for the construction and operation of the Project, and mitigation measures developed to address specific risks.

The soil sampling program for the DSI was carried out between 17 and 20 April 2018. The soil sampling for the geotechnical investigation was undertaken on 3 May 2018.

The desktop assessment included searches and reference to the following resources:

- Australian Soil Resource Information System;
- 1:100 000 sheet (Chapman and Murphy, 1989);
- Botany Bay LEP 2013;
- NSW Geology Plus; and
- eSPADE NSW Soil and Land Information.

7.4.1 Existing Environment

Land-uses and contamination

The Botany Bay industrial area has been heavily used by industries such as tanneries, wool scourers, chemical manufacturers, metal platers, service stations, depots, landfills and dry cleaners for at least 100 years. Due to comparatively less stringent environmental legislation in the past, environmental protection controls were not put in place. Consequently, the Project site is very disturbed with surrounding lands and groundwater contaminated due to poor historical land use practices.

The zoning surrounding the property is predominantly IN1 – General Industrial. There are also two areas of R2 – Low Density Residential – zones located to the northeast and east of the site. Industrial sites within 500m of the Project site are listed below (refer to Figure 1-3):

- Orica Australia Botany Industrial Park (BIP) site to the north and northeast;
- Beauchamp Road to the southeast;
- Exxon Mobil Former Terminal to the north-west;
- McPherson Recyclers Pty Ltd (operational as Bingo) to the southwest;
- Veolia Waste transfer station to the southwest;
- Caltex Sydney terminal to the southwest; and
- Southlands industrial development site to the west.

Within 500 m of the Project site, a total of 47 (13 current and 34 former) contaminated land records of notices relating to six sites were issued under the CLM Act 1997. Surrounding the Project site there are 11



sites registered by the NSW EPA as contaminated under Section 58 of the CLM Act 1997 including those previously regulated under the Environmentally Hazardous Chemicals Act, 1985.

Lot 20 in DP 1231202 was notified as contaminated to the NSW EPA and is listed as Site ID N007 – Pacific National Rail Siding (Beauchamp Road). However, the contamination is on the portion of Pacific National land leased by Veolia and has been subject to a separate detailed site investigation and Remediation Action Plan (RAP) approved by the EPA.

Soil Landscapes

The Project site is generally flat with an elevation of approximately 10m in the southeast and east, gently sloping towards the northwest with an elevation of 6m.

The soil landscape of the Sydney 1:100 000 sheet (Chapman and Murphy, 1989) maps the Project site on two predominant soil landscapes. The Tuggerah (AETg) soil type, prevalent across the northwest border of the site, is defined as gently undulating to rolling coastal dune fields. These consist of north-south oriented dunes with podzols on the dunes and podzol/humus podzol intergrades on the swales.

The remainder of the site is mapped as Disturbed Terrain (DTxx), an extensively disturbed landscape. This generally consists of fill including soil, rock, building and waste materials and is hummocky to level plain terrain.

Acid Sulfate Soils

The Australian Soil Resource Information System (www.asris.csiro.au, ASRIS/CSIRO, 2016) maps the Project site within an area that “has a low probability with unknown confidence for the occurrence of acid sulfate soils (ASS)” (meaning that ASS is unlikely to be present). The Project site is located on land that is ranked as Class 4.

A Class 4 rank requires further investigation to determine ASS presence if:

- Works beyond 2m below *natural* ground surface; or
- Works by which the water-table is likely to be lowered beyond 2m below natural ground surface are to be carried out.

The DSI soil analysis concluded the material sampled at most of the locations does not constitute acid sulfate soil. The soil at SBH07-06 at 3m bgl was slightly acidic (pH 5.7), however it does not trigger the ASS category, which must include a pH of <4. The geotechnical investigation reported that the Project site is considered low to zero risk in relation to acid sulfate soil at the investigation locations.

Geology

The Botany Basin is an erosional depression within the Triassic *Hawkesbury Sandstone* that spans approximately 80 square kilometres. Cut through the bedrock underlying the Banksmeadow area is *The Lakes Valley*, a Tertiary paleochannel during the Quaternary period, has subsequently been in-filled with unconsolidated to semi-consolidated sands, silts, clays and peat lenses. These sediments collectively form the Botany Sands Aquifer (BSA).

The *Hawkesbury Sandstone* bedrock is estimated to be 80m thick (Figure 7-14). Three stratigraphic units overlay the bedrock. The basal unit overlying sandstone bedrock consists of fluvial and marine sands, estuarine muds and peats which fill the Lakes Valley at thicknesses from 0 m to 45 m. Overlaying this, and forming the most substantial of the units, is the ‘Botany Sands’ unit. This unit is comprised of aeolian and littoral dune and beach sands with discontinuous lenses and bands of inter-dunal peat and clay. This unit reaches a maximum thickness of 30 m. Closest to the current land surface is a unit of Holocene aeolian sands which are predominantly derived from aeolian (wind-blown) sand deposits.



The cross section of the Botany Basin sediments illustrates the layers of the Botany Basin sediments, including the lower layers of the Hawkesbury sandstone, bedrock paleochannel with layers such as Botany Sands, stiff clay, Holocene channel and dunes and the Ashfield shale located closer to the surface.

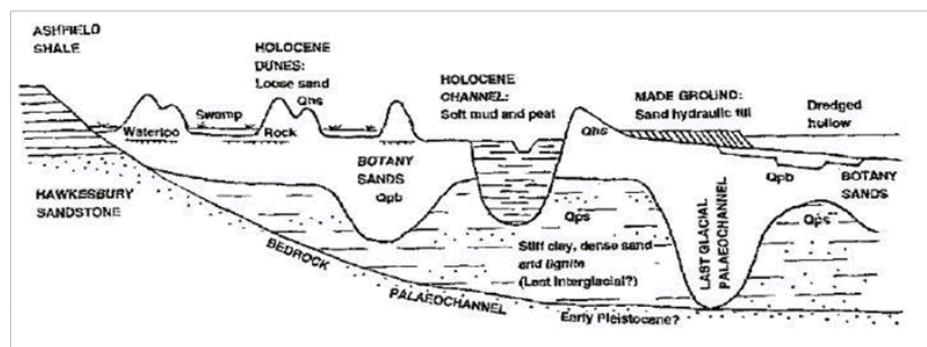


Figure 7-14 Conceptual schematic of Botany Basin sediments (Hartley 2004)

Geotechnical Survey

Fieldwork undertaken on the 3 May 2018 comprised drilling of three boreholes to depths ranging from 1.50m to 8.25m bgl (Figure 7-15) and standard penetration tests excavated to depths ranging from 0.5m to 7.5m bgl. The principal geotechnical conditions of the Project site comprise sequences of four main elements: fills above general ground level (stockpiles); filled depressions/ voids; residual clays; and bedrock. The soil types encountered during the site assessment included:

- BH01 – Sand or clayey gravelly sand, with medium dense consistency, low plasticity, depths of 3.1m bgl;
- BH02 – Sand or clayey gravelly sand, dense consistency, low to medium plasticity, depths of 1.7m bgl;
- BH03 – Silty clay, soft to firm consistency, depth of 2.8m bgl; and
- Estuarine/Aeolian soils were encountered in both samples, ranging in consistency from generally fine to medium grained and based on Standard Penetration Test (SPT) values were assessed as being medium dense to very dense.

Fill material was encountered to depths of 3.1, 1.7 and 2.8 m bgl at BH01, BH02 and BH03, respectively. Aeolian / Estuarine sands were encountered in each of the boreholes to termination depths.

The Photo-Ionisation Detector (PID) readings ranged between 0.2 and 1.8 ppm indicating that the presence of volatile organic compounds (i.e. organic compounds that become vapours that may be hazardous to human health) was relatively low at the sampling locations.

Soil samples were tested in a NATA accredited laboratory and results were compared to guideline criteria listed in National Environmental Protection Council (NEPC), National Environment Protection (Assessment of Site Contamination) Measure (NEPM), 1999 (Amended 2013). As the Project site is industrial, the NEPM Health Investigation Levels and Health Screening Levels for commercial and industrial purposes (HIL D and HSL D) were used.

The following reporting was made in the geotechnical report:

- No obvious visual evidence of contamination identified in the boreholes during drilling;
- No asbestos detected in the soil samples analysed;
- The preliminary in-situ waste classification for the soil encountered at the sampling locations indicated that the soil is likely to be classified as General Solid Waste for disposal purposes; and



- Concentrations of contaminants of potential concern (including metals, BTEX, TRH and PAH) in analysed soil samples were below the adopted human health investigation and screening levels for commercial and industrial land use.

Although asbestos was not reported in any soil sample analysed, fill material was encountered at every sampling borehole.

Two soil samples were tested to assess their potential aggressivity towards buried concrete and steel structures. The results were assessed against the criteria set out in AS2159-2009 for aggressivity to concrete and steel respectively. Based on the above criteria, both soil samples were classified as having “mild” aggressiveness to concrete structures and being “non-aggressive” to steel structures.

The Geotechnical investigation location plan (Figure 7-15) illustrates the location of borehole testing locations on the site.



Figure 7-15 Geotechnical Investigation Borehole Locations

7.4.2 Detailed Site Investigation

A soil sampling program was carried out for the DSI between 17 and 20 April 2018 in accordance with EPA NSW “Sampling Design Guidelines” and included the following scope in relation to soil and contamination. Sampling locations can be seen in Figure 7-16 and Figure 7-17:

- A detailed site investigation comprising soil and stockpile samples collection and laboratory analysis;
- Drilling and soil sampling from four bore hole locations (GWBH01 – GWBH04);
- Collection of sixty soil samples from twelve locations (SBH-01 – SBH-12), at variable depths to determine the extent of soil contamination (excluding asbestos), of which four samples were tested to identify presence of acid sulfate soils;



- Test pitting at ten locations and collection of ten samples to identify extent of contamination due to asbestos containing materials;
- Collection of 12 samples from existing two stockpiles (SP-1 and SP-2) for waste classification purpose; and
- Laboratory analysis of soil and groundwater samples for relevant analytical parameters determined from previous investigations and site inspections.

The following reporting was made in the DSI report:

- Evidence of fill material was present in few of the boreholes drilled across the site.
- No asbestos containing materials were identified in any of the soil samples collected (however one (1) piece of asbestos was found in a stockpile located on-site, see below);
- Low levels of a range of chemical contaminants were identified in some of the soil samples analysed from a majority of the boreholes;
- No soil sample results for any analyte exceeded the Site Acceptance Criteria for HIL D Commercial / Industrial as outlined in Schedule B1 of the National Environmental Protection Measure (2013 Amendment). As such, it is considered that a remedial action plan (RAP) is not required to proceed with the Project;
- There is no evidence of acid sulfate soil existing on the site;
- There was no identifiable soil contamination resulting from the previous usage of the site; and
- The stockpile samples identified the material generally as 'General Solid' waste. However; a single piece of potential asbestos-containing material (ACM) was found, therefore stockpile SP01 is considered as "special waste asbestos".



Figure 7-16 DSI Bore Hole sampling locations (Hibbs & Associates, 2018)



Figure 7-17 DSI Test Pit and Stockpile sampling locations (Hibbs & Associates, 2018)



7.4.3 Impact Assessment

Construction

Section 3 describes in detail the construction methodology of the Project, and in summary would include soil disturbance activities including:

- Site establishment;
- Cut and fill activities such as:
 - Bulk cut and fill works to level the Project site with excavation occurring up to approximately 2m below ground level and filling (clean imported fill); and
 - Re-compaction of existing fill materials, and placement/compaction of relocated or imported fill materials.
- Vegetation clearance would be undertaken by Pacific National prior to commencement of Project construction;
- Excavation and trenching for inground infrastructure and utility works;
- Construction of internal access roads and car parking, including the building and use of temporary access roads;
- Stockpiling;
- Movement of plant and vehicles over unsealed surfaces; and
- Additionally, construction activities have the potential to impact soils through compaction and dispersion of soils off-site by construction vehicles; generate dust; and cause accidental spills or leaks that could lead to contamination of soil.

Heavy rain events and windblown dust may cause erosion, sedimentation and exposure to airborne particulates, potentially causing impacts to downslope and downstream habitats and to human health.

Contamination exposure has the potential to impact human health and the environment through various exposure pathways, including:

- Fill material is likely to have been imported onto the site for levelling purposes during land reclamation. The source of the fill material is unknown. Common contaminants associated with fill are heavy metals, TRH, BTEX, PAH, PCB, OC, OCP, VOCs, phenols and asbestos;
- Previous land use (rail siding) which may have resulted in asbestos, heavy metals, TRH, BTEX, PAH, and VOCs; and
- Historical botany industrial park land-uses / operations – possible contamination of the subject site through migration in groundwater, or of liquid contaminants through soils. Transfer of contaminants through dust deposition. Common contaminants which may have migrated onto the site include heavy metals, TPH, BTEX, PAH, phenols, heavy metals, MAH, CHCs and HVOs.

Aside from asbestos found in Stockpile SP01, the soil on the Project site was found not to exceed the relevant industrial land analyte concentration guidelines. The stockpile containing asbestos (SP01) would be removed and disposed of safely and in accordance with relevant legislation and guidelines, and a clearance certificate would be issued by a suitably qualified person. A Health and Safety (H&S) plan would be developed for construction and operation to minimize occupational health risk (see also contaminated groundwater management in Section 7.5). No remedial action plan (RAP) is required to proceed with the Project.



To avoid the interception of the groundwater table, the proposed earthworks are unlikely to expose soil greater than 2m Bgl due to the planned construction methodology (e.g. maintaining shallow excavation and use of driven piles). This will minimise the amount of soil disturbance during construction.

The DSI and geotechnical assessment reports concluded it would be unlikely for acid sulfate soils to be present or disturbed during earthworks.

A CEMP would be developed and include an unexpected contamination find procedure and an erosion and sediment control plan developed in accordance with Managing Urban Stormwater: soils and construction 4th Edition, (Landcom, 2004), aka the 'Blue Book'.

With the implementation of appropriate measures to manage and control potential impacts from severe rain events, dust and contamination, construction of the Project is considered unlikely to significantly impact human health and the environment.

Operation

The operation of the Project would be unlikely to impact soils. The risk of soil erosion during operation would be minimal as all areas impacted during construction would be sealed or rehabilitated and disturbed land surface would be landscaped and turfed as part of progressive stabilisation to prevent soil erosion from occurring.

- An environmental management plan shall be prepared for the Project including, but not limited to:
 - Unexpected Finds Protocol (UFP) to manage unexpected contamination, asbestos-containing materials and acid sulfate soils; and
 - Details of planned extraction rates for construction dewatering and procedures to handle and dispose of contaminated groundwater.

The assessment is based on the findings at discrete test locations only. If during the construction stage, any signs of contamination not identified previously are encountered, they would be appropriately assessed and managed per the UFP.

7.4.4 Mitigation Measures

The mitigation and management measures in Table 7-32 are recommended to minimise potential soil, geology and contamination impacts. Other safeguards and management measures that would address soil impacts are identified in sections covering air quality (Section 7.3), groundwater contamination (Section 7.5) and waste (Section 7.13).

Table 7-32 Soils and Geology Mitigation Measures

Reference	Mitigation Measures
Construction Mitigation Measures	
S2	A soil and water management plan (SWMP) will be prepared as part of the CEMP in accordance with Managing Urban Stormwater Guidelines Volume 1, 4th Edition "the Blue Book" (Landcom, 2004) and Volume 2 (DECC, 2008).
S3	The SWMP will also include arrangements for managing wet weather events, including monitoring of potential high-risk events (such as storms) and specific controls and follow-up measures to be applied in the event of wet weather.
S4	An Unexpected Finds Protocol (UFP) will be developed to manage unexpected contamination, asbestos-containing materials and acid sulfate soils.



Reference	Mitigation Measures
S5	Erosion and sediment control measures (in accordance with Managing Urban Stormwater Guidelines Volume 1, 4th Edition the "Blue Book" (Landcom, 2004)) will be prepared and implemented as part of the CEMP Erosion and sediment control measures will be implemented prior to commencement of construction and are not to be removed until the works are complete and disturbed areas are stabilised.
S6	A Spill Prevention and Response Procedure will be prepared and implemented to address accidental spills and leaks from machinery and vehicles.
S7	Signage and barriers will be installed to establish any known asbestos containing areas (e.g. SP01) so that workers are aware of their locations prior to and during removal.
S8	Water carts will be used as necessary to minimise dust generation.
S9	Prior to any off-site disposal of spoil generated during construction, the spoil will be waste classified in accordance with NSW EPA (2014) Waste Classification Guidelines.
Operation Mitigation Measures	
S10	An Operational Environmental Management Plan will be prepared and implemented which includes spill response measures and dust control measures.
S11	A Health and Safety (H&S) plan will be developed, including the requirements for contaminated groundwater management to minimize occupational health risk.



7.5 Groundwater

A groundwater impact assessment (GIA) has been undertaken by Hibbs and Associates for the Project (**Appendix M**). Additional information on the existing environment has been obtained through a combination of desktop searches and via review of the PSI and DSI results (**Appendix K** and **Appendix L**). Potential groundwater impacts of the Project have been identified and assessed for the construction and operation of the Project, and mitigation measures developed to address specific risks.

7.5.1 Existing Environment

Regional Context

The dominant hydrogeological unit in the Banksmeadow/Botany area comprises an extensive series of interconnected unconfined and semi-confined porous aquifers, collectively referred to as the Botany Sands Aquifer (BSA). The BSA is of low to moderate productivity with a general groundwater flow to the southwest towards Botany Bay. The BSA covers an area of about 18,300 hectares and has an average water-bearing thickness of approximately 15 m.

The aquifer is estimated to sustainably supply 22,500 ML/ year of groundwater. An estimated 6,000ML/yr is currently allocated for use. The water holding capacity of the sand aquifer is estimated to contain up to 300 litres of water per cubic metre of sand.

Botany Sand is predominantly composed of medium grained sands, with a small proportion of silt and clay-sized particles. The porosity of Botany Sand was estimated to be 15-20%, possibly higher, based on grain size analysis and the presence of well sorted and angular particles. Compared to Hawkesbury Sandstone, the BSA is likely to have a significantly higher permeability as it is not cemented.

The PSI (**Appendix K**) identified a total of 55 registered boreholes within 500 m of the site. An (undocumented) groundwater monitoring well was found in the approximate centre of the site during a site visit by Hibbs and Associates on 7 February 2018.

Due to the historic and present heavy use by industrial activities for the last 100 years, parts of the BSA are contaminated, mostly with lead, copper, mercury, zinc, cobalt, nickel, chlorinated hydrocarbons (CHC) and per- and poly-fluoroalkyl substances (PFAS). The NSW Government restricts water use through imposition of a Temporary Water Restrictions Order for the Botany Sands Groundwater Source, issued in February 2018 (which replaces the 2006 Order).

The ban on domestic use was imposed in the interest of public health and the zones were based on current and historical land use activity and therefore the potential for contamination. The key changes in 2018 to the 2006 Order include consolidation from four zones to two areas. The boundaries of the two areas are largely the same as the four former zones (see Figure 7-18).

Water extraction in area 1 is only allowed if the groundwater extracted is:

- For remediation, temporary construction dewatering, testing or monitoring purposes; or
- Under the authority of a water access licence specified in the Order and:
 - the water is 'fit for purpose' as defined in the Order, and
 - records of testing are kept in accordance with the requirements specified in the Order.

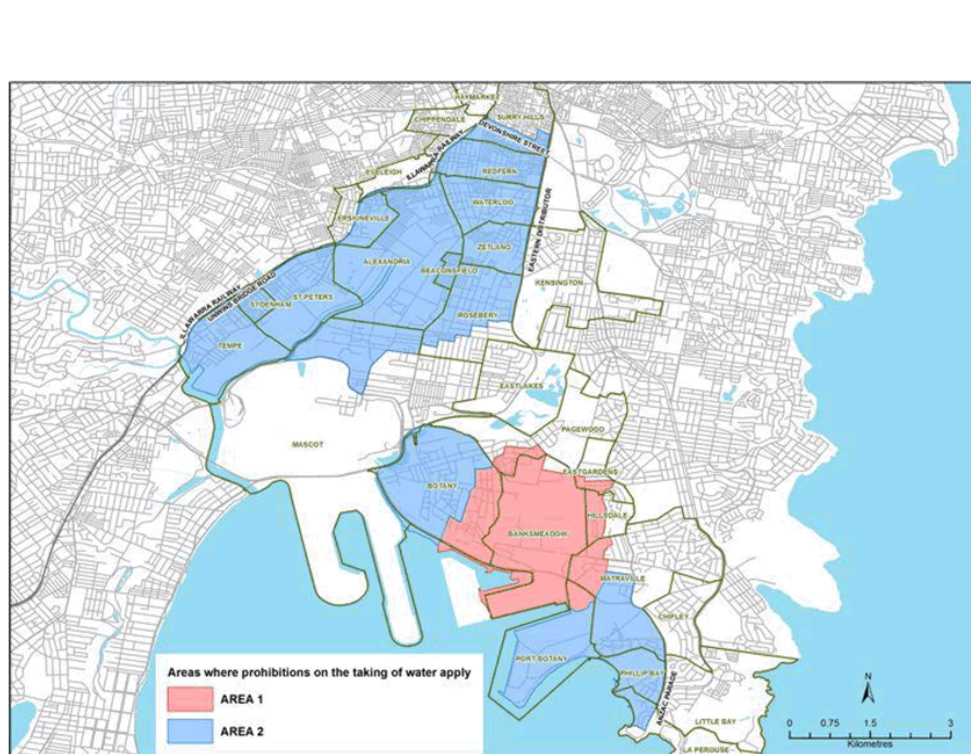


Figure 7-18 Groundwater restriction areas (Source: DPI Water)

In response to the NSW EPA Notice of Clean-Up Action (NCUA) No. 1030236, dated 26 September 2003, Orica commenced the Botany Groundwater Clean-up Project which involved installation of a groundwater treatment plant (GTP). The plant was fully operational in March 2007 and is currently treating 6 ML/day. The groundwater is extracted from wells along three containment lines, shown in Appendix 9 of the PSI.

Groundwater

Four groundwater monitoring well groups with three individual wells in each group were installed by Hibbs and Associates at the Project Site between 17 and 20 April 2018. Well depths ranged from 5.1 to 9.2 metres below ground level (bgl). The well groups, named GWB01 to GWB04 (from east to west), each comprises three wells sub-named A, B and C, which are shallow, medium, deep, respectively. Sampling was carried out one week after development of the new wells. Depth to groundwater and the depth of all wells were measured in one round before commencing the actual groundwater sampling process. Groundwater well locations are illustrated in Figure 7-19.

Following is a summary of the general groundwater characteristics per the DSI (**Appendix L**):

- Temperatures in all wells ranged from 22 to 23.57°C;
- DO ranged from 0.21 to 3.19 ppm, with the lowest oxygen levels in BH02-A and the in BH03-C;
- Redox conditions ranged from negative (BH03, BH04 and BH05) to oxidising (BH01 and BH02);
- pH ranged accordingly from slightly alkaline towards south-east (BH01 and BH02) and slightly acidic towards north-west (BH03, BH04 and BH05); and
- Electrical conductivity ranged from 1323 µS/cm at BH01-B to 8109 µS/cm at BH02-C.



Groundwater Site Acceptance Criteria (SAC)

Groundwater results were compared to ANZECC/ARMCANZ (2000) Australian and New Zealand Guidelines for Fresh and Marine Water Quality. The threshold concentration values presented in the ANZECC/ARMCANZ (2000) guidelines are applicable to aquatic ecosystems and their receiving waters.

ANZECC/ARMCANZ (2000) sets the guideline for aquatic ecosystems based on site-specific factors such as biological effect data and the level of ecosystem disturbance. The thresholds do not represent an inevitable environmental issue, but rather suggest that further investigations may be necessary.

The trigger values cater for the protection of 80-99% of marine and freshwater species and specific trigger values are presented in Table 3.4.1 in the ANZECC guidelines. For the groundwater investigation, low risk trigger values of 90% and 95% of marine species for most contaminants were selected, considering the receiving environment, a highly disturbed marine ecosystem.

Groundwater results were also compared against the National Environment Protection (Assessment of Site Contamination) Measure 2013 (NEPM) Groundwater Investigation Levels (GILs) for potential human health and environmental impacts. In absence of Australian standards for CHCs, the Dutch Ministry of Public Housing, Land Use and Environment (VROM) Circular on Target Values and Intervention for groundwater remediation were referred to for assessment of the contamination status.

Per- and polyfluoroalkyl substances (PFAS) results were compared with those provided in Table 5 of the PFAS National Environmental Management Plan (HEPA 2018), aquatic ecosystems marine water guideline values for 80% and 90% species protection.



Figure 7-19 Groundwater well locations (source: Hibbs 2018c)



Groundwater Contamination

Heavy Metals

Water samples were field filtered and following summarises the laboratory results:

- At most monitoring wells the concentration of lead, copper, mercury and zinc exceeded ANZECC 90% Protection of Marine Water Species guideline values:
 - The maximum lead concentration was 0.074 mg/l at GWBH03-C compared to the guideline value of 0.0066 mg/l;
 - The maximum copper concentration was 0.051 mg/l at GWBH02-C compared to the guideline value of 0.003 mg/l;
 - The maximum concentration of mercury was 0.85 mg/l at GWBH01-C compared to the guideline value of 0.0007 mg/l;
 - The maximum zinc concentration was 0.22 mg/l at GWBH03-C compared to guideline the value of 0.023 mg/l;
- At GWBH04-C mercury concentration was 0.0005 mg/l, exceeding the ANZECC 95% Protection of Marine Water Species standards of 0.0004 mg/l;
- Cobalt concentration exceeded NEPM GILs (marine water) standard of 0.001 mg/l in eight samples (GWBH01-B, GWBH01-C, GWBH02-B, GWBH02-C, GWBH03-A, GWBH03-B, GWBH03-C and GWBH-05). The maximum concentration recorded was 0.013 mg/l at GWBH03-C;
- Nickel concentration exceeded NEPM GILs (marine water) at all well locations. The maximum concentration recorded was 0.035 mg/l at GWBH03-B;
- Lead concentration exceeded at GWBH04-C and QC104 and found to be 0.006 mg/l, when compared with GILs (marine water) standard of 0.0044 mg/l; and
- Mercury concentration exceeded at GWBH03-C and found to be 0.0003 mg/l, when compared with GILs (marine water) standard of 0.0001 mg/l.

Chlorinated Hydrocarbons (CHCs)

The analytical results showed elevated detections for the following chlorinated hydrocarbons:

- Tetrachloroethene;
- 1,2-cis dichloroethene, and
- Vinyl chloride

Tetrachloroethene exceeded the Dutch Intervention value of 40 µg/L at GWBH04-C and QC204 (duplicate of GWBH04-B). The maximum concentration was recorded as 170 µg/L (at GWBH04-C);

Vinyl chloride exceeded the Dutch Intervention value of 5 µg/L in five (5) samples (GWBH04-A, GWBH04-B, GWBH04-C, QC104, QC204). The maximum concentration was recorded as 1,220 µg/L at QC204 which is an inter-lab duplicate of GWBH04-B where the levels were recorded as 800 µg/L.

Other chlorinated hydrocarbons which were detected in the groundwater samples at elevated levels included:

- Ethylene dichloride (EDC, 1,2- dichloroethane) concentration recorded at GWBH04-A as 3,000 µg/L (3 mg/l);
- The sum parameter chlorinated hydrocarbons (CHCs) was recorded at GWBH04-A as 4,070 µg/L (4 mg/l) with
 - 1,2-cis-dichloroethene (1,2-cis-DCE, cDCE) found in well group GWBH#4 between 1.237 µg/L and 3,080 µg/L.



A summary of all exceedances is listed in Table 19 of the DSI (**Appendix L**).

The highest concentration of CHCs on site were identified in the GWBH#4 group (located in the north-west part of the Project Site) and given the concentrations of CHCs identified, it can be projected that this part of the site is situated at the fringe of the existing southern/central groundwater contamination plumes (Orica).

PFAS

A total of three samples were collected from GW05, GWBH03-B and GWBH04-C for PFAS (including PFOS/PFOA) analysis. Sample results in GW05 exceeded the PFAS NEMP 2018 interim marine 80%, while GWBH03-B and GWBH04-C exceeded the PFAS NEMP 2018 Interim marine 90% value.

Other Contaminants

The groundwater analysis showed low level detections of some other contaminants of concern including TPH, TRH, BTEX, acetone, carbon disulfide, phenols, MAHs, and halogenated benzenes as summarised in Appendix 6 of the DSI (**Appendix L**).

Groundwater Depth and Flow

Groundwater depths were measured and reported in the DSI (**Appendix L**) at levels between 2.38 mbgl in the north-west corner of the Project Site near the rail corridor to 4.88 mbgl at the south-east end of the Project Site closer to the main site entrance from Beauchamp Road). A summary of the groundwater depths in each well is provided in Table 7 33.

Appendix 6 of the PSI (**Appendix K**) reproduces the regional water table elevations and shallow groundwater flow lines from the *November 2017: Progress Report 28 - Figures - Progress Reports* (produced by Golder Associates for Orica and published on Orica's website). The groundwater flow direction is towards Botany Bay, located approximately 1 km west of the site (Figure 7-20).

A survey was commenced on 9 July 2018 to assess water level variation over the period of a month. Two water level loggers were installed at two groundwater bores, one at GWBH4-C and one at GWBH1-C.

Geotechnical Assessment

Fieldwork undertaken on the 3 May 2018 by GHD comprised drilling of three boreholes to depths ranging from 1.5m to 8.25m bgl. Groundwater was observed in bore holes in BH01, BH02 and BH03 (Figure 7-15). In BH01, the groundwater level was intercepted at 4.7m bgl at a fine to medium grained, trace of aeolian material of dark grey sand. BH02 the groundwater was intercepted at 4.7m bgl at a fine to medium grained, aeolian, pale brownish-grey sandy soil. In BH03 the groundwater was intercepted at 4.5m bgl at a fine to medium grained aeolian, brownish-grey soil.

During the assessment two samples were tested to assess their potential aggressivity towards steel structures and concrete respectively. The results conclude that both samples were classified as "mild" aggressiveness to concrete and being "non-aggressive" to steel structures.

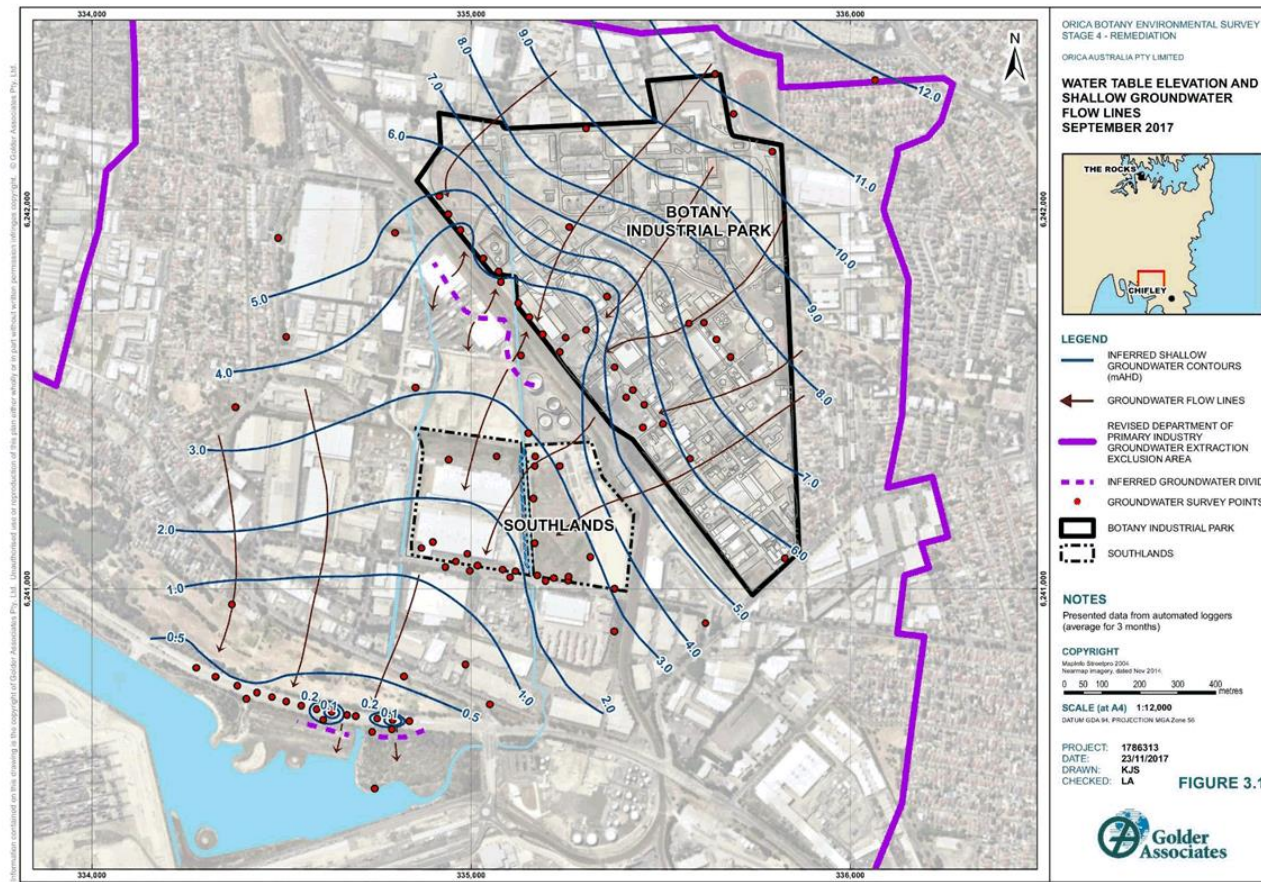


Figure 7-20 Shallow groundwater table elevations and flow lines (source: Orica 2017 report/website; Goldier Associates)

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193



Table 7-33 Groundwater well summary

Well ID		Easting, Northing	Ground (RL)	Distance between ground level and TOC (m)	TOC (RL)	Water depth from TOC (m)	Ground Water Level (RL)
GWBH01	A	335692.107, 6241007.950	9.754	0.88	10.634	-	-
GWBH01	B		9.754	0.89	10.644	5.7	4.944
GWBH01	C		9.754	0.75	10.504	5.63	4.874
GWBH02	A	335610.036, 6241106.056	8.404	0.9	9.304	4.82	4.484
GWBH02	B		8.404	0.9	9.304	4.8	4.504
GWBH02	C		8.404	0.87	9.274	4.8	4.474
GWBH03	A	335534.113, 6241204.884	7.707	0.9	8.607	4.13	4.477
GWBH03	B		7.707	0.98	8.687	4.24	4.447
GWBH03	C		7.707	0.78	8.487	4.8	3.687
GWBH04	A	335458.900, 6241307.114	7.07	0.87	7.94	3.25	4.69
GWBH04	B		7.07	0.87	7.94	3.28	4.66
GWBH04	C		7.07	0.93	8	4.51	3.49
GWBH05	-	335557.210, 6241176.012	8.045	0.24	8.285	4.06	4.225

7.5.2 Impact Assessment

In groundwater samples, concentrations of lead, copper, mercury, zinc, cobalt, nickel, some CHCs and PFAS exceeded the SAC. Excavation works below approximately 2 mbgl in the north-west of the site would be likely to encounter groundwater. However, these contaminant levels only have significance in terms of direct exposure or disposal, should groundwater dewatering be required. At most of the well locations, the highest contaminants concentration was recorded at the deepest well within each group of wells (around 9mbgl).

In light of the contaminated groundwater, the Project has been designed to forego the need for deep excavations (below 2m bgl) and aims to avoid any groundwater dewatering activities that could result in handling and disposal of contaminated groundwater.

As the area is declared a “groundwater extraction exclusion zone”, there is no plan for groundwater extraction and use during construction or operation.

Groundwater Dependant Ecosystems

GDEs are communities of plants, animals and other organisms whose extent and life processes are dependent on groundwater, such as wetlands and vegetation on coastal sand dunes. Sources reviewed to understand potential GDEs potentially impacted by the project include:

- Water Sharing Plan for the Greater Metropolitan Region Groundwater Sources (NOW, 2011)
- BOM Atlas of Groundwater Dependent Ecosystems
- Threatened species database (Office of Environment and Heritage)

A review of the Atlas of Groundwater Dependent Ecosystems (BOM, 2012) showed that there are no GDE hydraulically down-gradient of the site. Groundwater quality is discussed in more detail in Section 6.0.



The only off-site receiving water body is Botany Bay, with Port Botany located approximately one kilometre to the south of the site which is unlikely to be impacted by the proposal.

In absence of any groundwater extraction, the proposed works are unlikely to cause a change to groundwater flows towards GDE.

Excavation and Construction Methodology

The following techniques and methodology would be used so that the extraction and dewatering of groundwater can be avoided during construction and operation:

- Temporary (mobile) plant would employ shallow slab foundations, at approximately one-half metre depths, therefore limiting excavation requirements;
- Permanent plant (including aggregate bins and batching plant) would use driven piles only. Therefore groundwater would be intersected; however, dewatering would not be required and open pit excavation would not be required;
- The conveyor would use a combination of slab pads and piles; however, the pads would also be approximately one-half metre deep only, therefore minimising excavation requirements;
- Retaining walls would be constructed to level the Project Site for establishment of travel lanes and plant/equipment areas; however, these would be approximately one-half to 1 metre in depth, therefore limiting the excavation requirements and avoiding groundwater interception;
- A survey model was used to estimate the contaminated groundwater level, whilst assessing the stormwater basin capacity. Groundwater well GWBH04 has a ground level of 7.07m, and ground water sits at approximately 4.7m. The stormwater basin floor would be kept at approximately 750mm above the ground water (500mm buffer + 250mm liner allowance), thus limiting the stormwater basin depth to a maximum of 1.6m bgl; and
- The stormwater basin would be designed and constructed to be sealed to avoid infiltration of stormwater to groundwater, and to avoid groundwater contamination of the stormwater basin.

The groundwater quality sampling results show elevated concentrations of some chemicals exceeding SAC (heavy metals, CHCs and PFAS). Whilst dewatering would be avoided through the methods noted above, there is still risk of requiring some groundwater dewatering if groundwater is inadvertently intersected during construction.

If dewatering is unexpectedly required, groundwater would be handled and disposed of lawfully and the appropriate licences for construction dewatering obtained. Sampling and analysis would be conducted by a NATA accredited laboratory and all the monitoring records would be maintained. The options in Figure 7-34 would be need to be considered for disposal.

Table 7-34 Potential groundwater disposal options

Disposal method	Suitability
On-site Absorption	On-site absorption is suitable if the contaminants levels in water are complying with background water quality criteria for the site and comprises discharge of water onto the ground surface in an area where it will be absorbed into the underlying soils and groundwater. Total suspended solids (TSS) content would not be an issue of concern for this method of disposal.
Disposal to Storm Water	The water need to be disposed of to storm water drains need to meet with the requirements of the authority running the storm water system, which is BBC and comply with the Australian Water Quality Guidelines for Fresh and Marine Waters (ANZECC, 2000) guidelines. This option is suitable for uncontaminated



Disposal method	Suitability
	waters, with low TSS.
Disposal to Sewer Under a Trade Waste Agreement	This method of disposal would require a TWA with Sydney Water. Should disposal of water be required under a TWA with Sydney Water, then the sampling, analytical and reporting regime will be undertaken as per the negotiated licensed conditions.
Disposal in Accordance with POEO Act, 1997	This disposal method is suitable for water with high levels of contaminants which involves disposal as a liquid waste to a licensed liquid waste contractor in accordance with the POEO Act, 1997. This method is likely to be costly, however, it allows for off-site treatment. Laboratory analytical results would need to be provided to the waste contractor.
On-site Treatment	<p>On-site treatment followed by disposal by one of the above methods. If direct disposal by one of the above methods is considered unsuitable due to the water quality or cost, on-site treatment could be conducted prior to disposal. On-site treatment may include for example removal of suspended solids and pH adjustment which are standard requirements for construction sites water prior to disposal to storm water or sewer. In addition, the following would be undertaken:</p> <ul style="list-style-type: none"> • Untreated water must be held until results from monitoring are available for review and it is agreed by the Site Auditor that the water is suitable for re-use or discharge. • Record of the disposal will be kept at site. • While handling groundwater, controls will be implemented to ensure that works do not exacerbate the spread of contaminants and that workers are suitably briefed to avoid health impacts from potential contact with these waters.

A Health and Safety (H&S) plan would be developed that includes a procedure for contaminated groundwater management and testing to minimize occupational health risk.

Contractor H&S plans would also include the requirements for contaminated soil and contaminated groundwater management to minimize occupational health risk.

7.5.3 Mitigation measures

Reference	Mitigation Measure
Construction Mitigation Measures	
GW1	Groundwater interception and dewatering will be avoided during construction through a detailed design process that emphasises shallow excavation and use of driven piles.
GW2	A Health and Safety (H&S) plan would be developed that includes a procedure for contaminated groundwater management and testing to minimize occupational health risk.
Operation Mitigation Measures	
GW3	The sedimentation basin will be designed and constructed as a sealed basin to prevent inflows and mixture of groundwater with stormwater runoff water.
GW4	As the Project is within the water extraction restricted Area 1, extraction of groundwater



Reference	Mitigation Measure
	is only allowed for remediation, temporary construction dewatering, testing or monitoring purposes or under the authority of a water access licence specified in the order, and the water is 'fit for purpose' as defined in the Temporary Water Restrictions Order for the Botany Sands Groundwater Source issued in February 2018.



7.6 Surface water and stormwater drainage

A Concept Stormwater Management Plan (Concept SMP) has been prepared for the Project (**Appendix N**) describing the stormwater management strategy and providing preliminary estimates of the stormwater infrastructure sizing. In addition, a Flood Advice Letter was provided by Bayside Council noting the extent to which the Project site may be flood affected by the 1% Annual Exceedances Probability (AEP) flood.

The following documents (in addition to the SEARs) were reviewed outlining the various criteria and design inputs for stormwater management:

- City of Botany Bay Stormwater Management Technical Guidelines – Development Control Plan;
- Botany Bay and Catchment Water Quality Improvement Plan;
- Sydney Catchment Authority Using MUSIC in Sydney's Drinking Water Catchment; and
- Bayside Council Flood Advice Letter for 1 Beauchamp Road, BANKSMEADOW.

7.6.1 Existing Environment

The Project site is located within an established urban area on the edge of a low plateau approximately 1km from the shore of Botany Bay. The terrain on the low plateau is generally flat with no distinctive flow paths or waterways. Drainage in the area has been substantially altered by urban and industrial development, including the construction of concrete channels, roads (e.g. Beauchamp Road) and stormwater collection facilities. No distinctive overland flow paths run into the Project site as Beauchamp Road intercepts and redirects drainage flows. The Project site generally slopes to the north-west towards an urban drainage channel known as Springvale Drain located approximately 200m to the west of the Project site. The Springvale Drain runs from north to south before discharging into Botany Bay south of Foreshore Road (Figure 7-21).

To the south west, Veolia has developed a rail terminal, access roads and hardstand areas however, its stormwater capture and treatment system drains to the north-west, eventually into the Springvale Drain and is separate from the existing and proposed Project site drainage.

Bayside Council's flood advice letter outlines the results of Bayside Council's overland flood modelling which rated the flood risk exposure for the Project site for a 1% AEP event as low hazard, indicating some fringe flooding (**Appendix F**). This flood study was completed in 2014 and was based on LiDAR data from 2008. Current site survey suggests that the low-lying land inundated in the 2014 study in the Project site no longer exists.





7.6.2 Impact Assessment

Concept Stormwater Management Plan

Bayside Council advised that concept drainage plans must be provided for the Project Development Application. The conceptual stormwater drainage design prepared by **pitt&sherry** is presented in **Appendix N**.

The site naturally flows away from Beauchamp Road into the ARTC railway corridor at the north-western boundary. As such, it has been agreed in principle with the ARTC during consultation to continue discharging the Project site stormwater to the railway corridor, providing the proposed development does not worsen the flows (Figure 7-22).

The proposed stormwater management strategy was developed by analysis of the local climate, proposed site layout and design, and based on operations comprising the mixing and batching of concrete. The stormwater management strategy identifies three categories for stormwater on a typical concrete batching site per the *Code of practice for the concrete batching industry EM1305* (Department of Environment and Heritage Protection; Queensland Government):

- Contaminated water: water that has encountered alkaline (e.g. concrete slurry) materials and become alkaline;
- Dirty Water: water that as encountered particulate materials and become laden with suspended solids; and
- Clean Water: water from areas not impacted by alkaline or dirty materials.

Despite the Project site undergoing further development, the pre-development stormwater run-off conditions are assumed to be similar to the current conditions. As such, to meet ARTC's requirement for not worsening flows at the legal point of discharge, the detention basin would be designed to reduce 1% AEP flows by 20% from 1.09 to 0.87 m³/s. It is expected this is close to, or better than flow under pre-development conditions.



Figure 7-22 Overall site drainage

First Flush System

A first flush capture system would be applied to areas of the Project site to contain alkaline and entrained fine particle contaminants resulting from the batching process and agitator truck wash area. Contaminated water captured in a first flush would be reused in the batching process. Other areas of the Project site would be subject to stormwater drainage collection and storage facilities.

Concrete wash water is typically highly alkaline (approximately pH 12) and is also characterised by a high content of suspended solids. Wash water is generated from the following areas:

- Washing out of agitator trucks;
- Yard wash down;
- Wash down from slump stands;
- Yard stormwater; and
- Washing down of agitators.

The wash water system will be designed using the Cement Concrete & Aggregates Australia (CCAA) publication *First flush and water management systems: guide and principals* (CCAA 2013). Figure 7-23 illustrates a concept for a typical first flush system.

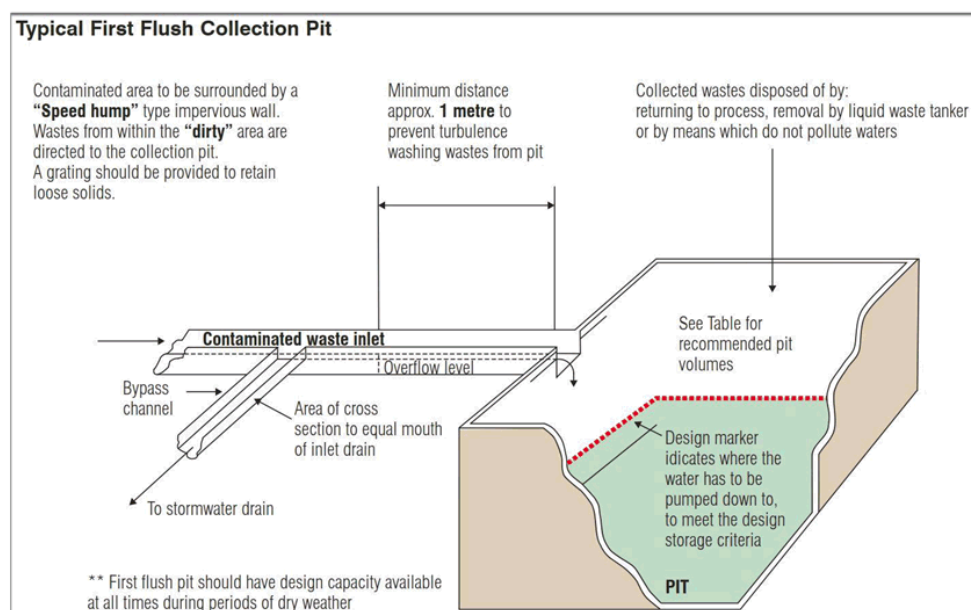


Figure 7-23 First flush concept only (CCAA 2013)

Wash water is continuously generated by the agitator wash out system which is fully roofed to prevent stormwater adding to the volume of wash water generated. All wash water undergoes primary treatment to remove gross solids (typically greater than 5mm diameter) in a collection tank and then becomes slurry water.

When in a storm event the slurry water storage system is filled, the overburden runoff then accumulates into collection tanks and overflows into the first flush tank. An overflow is designed as a first flush bypass system to prevent subsequent water becoming contaminated.

The first flush tank would be designed to accept 20mm of rainfall across the collection area, before bypassing to the stormwater collection basin. Periodically the silt is removed from the collection tanks and stored in the agitator wash out for drying and removal to be recycled (Waste section 7.13).

Detention Basin

The filling and emptying of the detention basin has been modelled in HEC-HMS, using Australian Rainfall and Runoff 2016 (ARR2016) temporal patterns. The hydrological model was calibrated by comparing peak 1%AEP flows with the flows estimated by the Rational Method. Based on the model analysis, the detention basin characteristics in Table 7-35 are recommended.

Table 7-35 Detention basin characteristics

Characteristic	Recommendation
Inflow	1.09 m ³ /s
Outflow	0.87 m ³ /s
Maximum storage volume	660 m ³
Maximum storage elevation	6.27 m AHD



Characteristic	Recommendation
Total depth	1.0 m
Freeboard	0.3 m
Weir Elevation	6.0 m AHD
Weir Width	4.0 m

The following key points are assumed:

- Site area = 2.4ha;
- Harvested water tank of 400kL is not to be included in the calculations as it may be full during major storm events; and
- Flooding of site in storm permissible.

Perimeter walls may be needed to the sides of the detention basin to retain the required volume of water and to add an allowance for freeboard.

The Concept SMP describes the frequency and quantum of stormwater discharges to adjacent property (e.g. the railway corridor) and Beauchamp Road. The stormwater would undergo pollutant removal treatment by sedimentation in a detention basin at the lower end of the site (north-west), with the potential for flocculant dosing if necessary, to meet water quality criteria needed for use in the batching process and for discharge from the Project site.

Offsite discharge water quality requirements would comprise the following industry standards (i.e. Blue Book) unless otherwise specified in under the approval or EPL:

- < 50 mg/L TSS (total suspended solids);
- No visible oil or grease; and
- pH between 6.5 and 8.5.

The detention basin, as described above, would be sufficient to manage and treat the stormwater for the entire Project site. During operation, the water in the detention basin would be monitored regularly and treated if required (for example, dosed with a flocculating agent) to achieve water quality objectives prior to discharge.

Typically, a deep pool to retain water for reuse would be included however, due to the presence of groundwater contamination the basin would be designed with the following characteristics:

- Basin invert would be designed to maintain a minimum of 750mm above the groundwater level; and
- Basin would be suitably lined (sealed) to prevent migration of groundwater into the basin and to prevent contamination of discharge outflows.
- A pump system to transfer water from the detention basin to permanent water storage tanks would be used to improve re-use capabilities, subject to availability of space on the Project site during full operations.

MUSIC Modelling

A Model for Urban Stormwater Improvement Conceptualisation, or MUSIC model, of the treatment train was developed using the characteristics listed in Table 7-36 to identify the water quality characteristics of the developed site. As per Sydney Catchment Authority's (SCA) *Using MUSIC in Sydney's Drinking Water Catchment* (SCA, 2012), areas that are unvegetated in the post-development state should have specific



inputs for Total Suspended Solids (TSS), Total Phosphorous (TP) and Total Nitrogen (TN). Thus these recommended inputs were applied to the MUSIC model as prescribed.

Table 7-36 Model inputs

Characteristic	Input
Site	
Zoning	Industrial
Total area	2.4 ha
% Impervious	100% (conservative considering potential landscaping etc.)
Detention basin characteristics	
Surface area	943 m ²
Extended detention depth	0.45 m
Low flow pipe diameter	125 mm
Overflow weir width	4 m
Notional detention time	4.83 hrs
High flow bypass 0.87 m ³ /s	0.87 m ³ /s
Evaporative loss	75%
Total Suspended Solids k value	15000 m/yr
Total Suspended Solids C* value	90 mg/L

The results of the MUSIC model are generally good, as shown in Table 7-37, with almost all the pollutants exceeding the target percentage reduction. The only pollutant not achieving the target reduction is Total Nitrogen (TN). This is generally a very difficult pollutant to remove without biological processes. However, given there would be little organic material within the Project site, TN is not expected to occur in significant quantities.

Table 7-37 MUSIC model results

Pollutant	Sources	Residual Load	Target Reduction	%	% Reduction
Total Suspended Solids (kg/yr)	43100.0	2750.0	80		93.6
Total Phosphorus (kg/yr)	19.1	5.82	55		69.5
Total Nitrogen (kg/yr)	75.8	59.5	40		21.5
Gross Pollutants (kg/yr)	783	0	90		100

Water Balance and Reuse

Runoff would be harvested and stored for reuse on site or captured and treated in a detention basin. Figure 3-20 provides an overview of the recycling and reuse process. The stormwater re-use system would be developed further during detailed design of the Project.

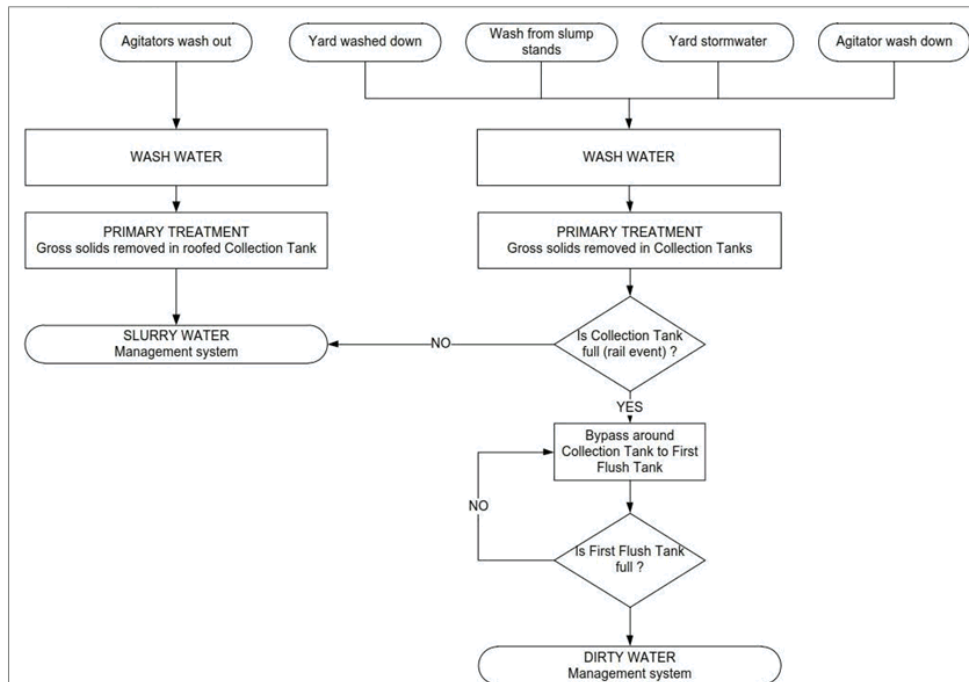


Figure 7-24 Washout management

Some of the stormwater runoff will be harvested and reused in the concrete batching process. The stormwater harvesting and reuse will have beneficial effects by reducing the volume of stormwater discharged from site, and by reducing the quantity of stormwater pollutants. However, the details of the stormwater harvesting and reuse system have not yet been developed, and the quantities have not yet been estimated through water balance modelling. Even if many details are not yet known, some features and functions can be described in broad terms, as follows:

- The concrete batching plant is unlikely to be in operation during major storms. The beneficial extraction of water for the concrete batching process is therefore unlikely to be operating during the storms, which justifies its exclusion from the detention basin calculations;
- Stormwater runoff will flow by gravity into the detention basin/sump at the north-west end of the site, as illustrated in Figure 7-22;
- Stormwater will be pumped from the detention basin/sump to a holding tank, where it will be stored for reuse in the concrete batching process;
- The annual rainfall at the site is about 1083 mm (per Sydney Airport AMO). Given that the collection area is expected to be about 15,000 m², this will yield a volume of water up to about 16,000 m³ per year. Some of this runoff will be lost to evaporation and infiltration;
- Total water demand is estimated at 473 m³ per day, which comprises the following components

– Process water used in the manufacture of concrete	450 m ³ per day
– Washing of agitator trucks	17 m ³ per day
– Amenities	6 m ³ per day
– TOTAL	473 m ³ per day



- Assuming that the plant operates for 5 days a week, 48 weeks per year, the total water demand is about 130,000 m³ per year.

Water and sewerage will also be provided for the small number of staff on site and are expected to equate to normal demands for commercial development.

7.6.3 Mitigation Measures

The mitigation and management measures in Table 7-38 are recommended to minimise potential surface water and stormwater impacts.

Table 7-38 Surface water and stormwater mitigation measures

Reference	Mitigation Measures
Construction Mitigation Measures	
SW1	An Erosion and Sediment Control Plan would be prepared and implemented in accordance with Managing Urban Stormwater: soils and construction 4th Edition, (Landcom, 2004), aka the 'Blue Book'.
Operation Mitigation Measures	
SW2	A water collection, recycling and reuse system will be designed and implemented to enable the reuse of process and wash water.
SW3	Detailed design development of the detention basin will include: <ul style="list-style-type: none"> • stormwater harvesting and reuse system • water monitoring program • asset management plan to maintain the detention basin.
SW4	The detention basin will be monitored regularly and treated if required (for example, dosed with a flocculating agent) to achieve water quality objectives prior to discharge.
SW5	Due to the presence of groundwater contamination, the detention basin would be suitably lined to prevent contamination of outflows and inflows.



7.7 Visual Amenity

A Visual Impact Assessment (VIA) was prepared by Envisage Consulting Pty Ltd and a site inspection for the VIA was undertaken on 31 May 2018. The VIA assessed the potential impacts from the Project on the visual amenity of the surrounding environment and is provided in full in **Appendix P**.

More specifically, the visual assessment considers the following:

1. The visual character of the surrounding landscape;
2. Existing views to the Project Site;
3. The sensitivity and magnitude of the landscape to alteration by the Project;
4. The visual character and extent of the Project; and
5. Viewer sensitivity and magnitude to alteration of the environment by the Project.

7.7.1 Existing Environment

The Project Site at 1 Beauchamp Road, Banksmeadow is located within a general industrial zone under SEPP (Three Ports) and is adjacent to the Botany Industrial Park (BIP) chemical manufacturing. The locality of the Project Site is on the main Botany freight rail line, which is less than 1km from Port Botany to the south and approximately three (3) km from the Sydney Airport to the north west.

The buildings and facilities bordering the Project Site include Banksmeadow Waste Transfer Terminal (Veolia) directly south, Botany Industrial Park to the north and north west, Beauchamp Road from the south east and vacant land from the west of the Project Site.

The Project Site is close to major freight transport links for the region of Port Botany such as the Botany Goods Line and the Port of Botany Bay within 1km of the Project Site. These transport links accommodate the commercial interest in the region. This includes several commercial buildings and facilities which utilise the goods lines and the port for the exportation purposes. Figure 7-25 illustrates the context of the Project Site. Figure 7-26 and Figure 7-27 illustrate the character of the Botany Industrial Park (BIP) area.

The nearest residential precincts occur at Denison Street (200m to the north-east), McCauley Street (300m to the south east), and Stephen Road/Brighton Street (over a kilometre to the north-west). However, during 150 community letter box drops on 18 May 2018, two buildings discovered had a shared use of commercial and residential with the address 105 and 111 Beauchamp Road. The two properties, along with several residences in Perry St (14, 18, 20, 22) are the nearest residential neighbors of the Project Site.

The key visual features of the proposed Project include:

- Site entrance at the intersection of Beaumont Road and Perry Street, Banksmeadow;
- Parking area for light vehicles near the site entrance;
- Separate parking area for agitator trucks within the Site;
- Agitator truck washing area;
- Eight cement silos up to 30 metres (m) in height, with a load tower approximately 12m in height;
- An aggregate storage bin approximately 30m in height and 38m long;
- An aggregate feed conveyor approximately 86m long, which rises from ground level to the top of the aggregate bin over its length;
- An additive store area approximately 4.5m in height;
- Offices and amenities; and
- A noise wall.

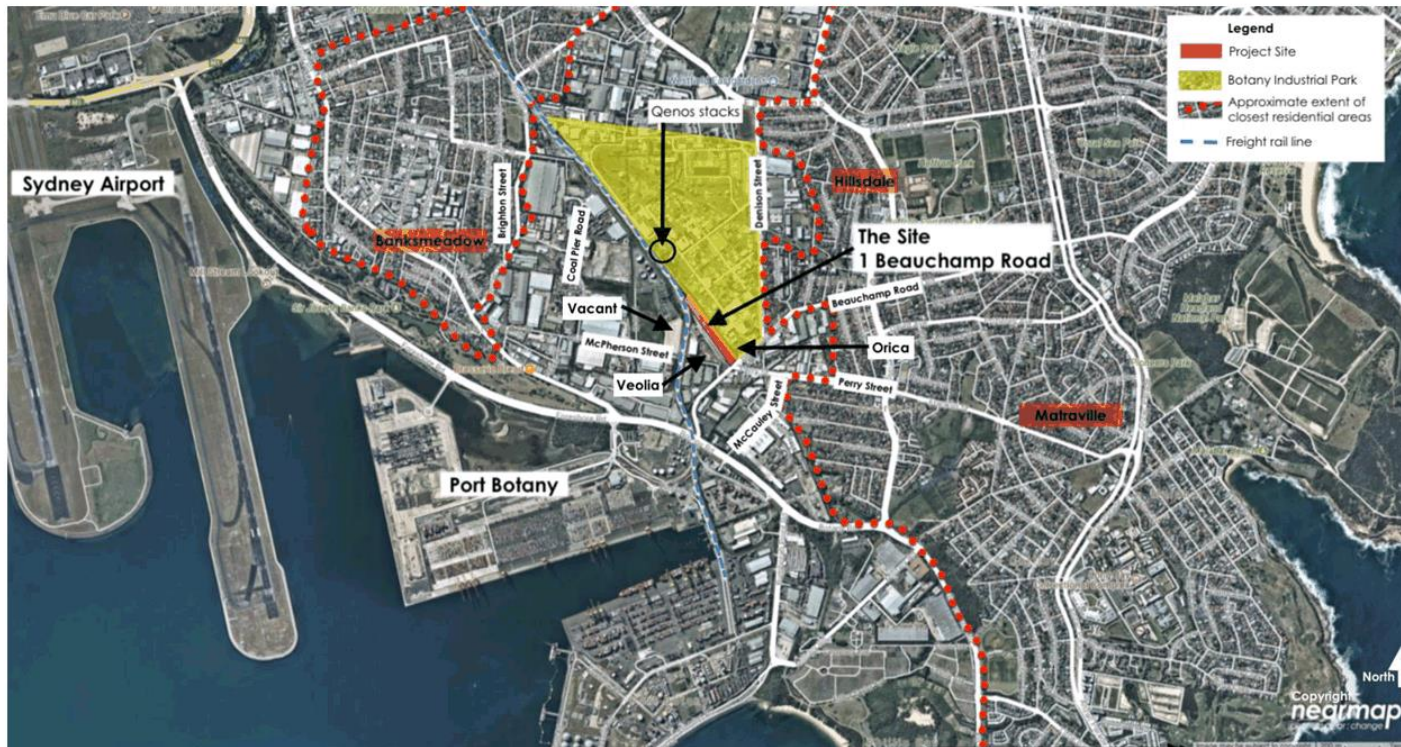


Figure 7-25 Visual context of the Project Site



Figure 7-26 Character of the Botany Industrial Park - north and north-west of Project (image: BIP newsletter)



Figure 7-27 Qenos flare stacks (image: BIP newsletter)

Assessment Criteria

The guidelines used for the VIA includes the New South Wales Roads and Traffic Authority, 2013. *Environmental Impact Assessment Guidance Note – Guidelines for Landscape Character and Visual Impact Assessment*. Under the Roads and Maritime EIA-N04 guideline, two main types of visual effects (or impacts) are assessed:

- effect on the landscape character; and
- effect on key viewpoints (visual impact).

The determination of the effect on landscape character and viewpoints are based on the combination of two criteria – the sensitivity and the magnitude of change, defined by Roads and Maritime (2013) as follows:



- Sensitivity - The sensitivity of a landscape character zone or view and its capacity to absorb change. In the case of visual impact this also relates to the type of viewer and number of viewers (Table 7-39); and
- Magnitude - The measurement of the scale, form and character of a development Project when compared to the existing condition. In the case of visual assessment this also relates to how far the Project is from the viewer (Table 7-40).

When combined, the determination of the Project's visual impact on the landscape is based on the sensitivity and magnitude of change matrix in Table 7-41.

Table 7-39 Sensitivity Ranking Criteria

Sensitivity	Criteria (general guide only, some or all may apply)
High	<ul style="list-style-type: none"> ▪ Landscape or heritage of high to very high conservation value or ▪ Public views with a high to very high number of users or ▪ Viewers are in close proximity or ▪ The site has a high visual prominence or ▪ Viewers have opportunity for prolonged or stationary views
Moderate	<ul style="list-style-type: none"> ▪ Landscape or heritage of moderate conservation value or ▪ Public views with a moderate to high number of viewers or ▪ Viewers are in close or moderate proximity or ▪ The site is visually prominent or ▪ Private views in close proximity with mostly unimpeded views
Low	<ul style="list-style-type: none"> ▪ Some landscape or heritage conservation value but of lower visual value or ▪ Public views for a small number of users or ▪ Viewers at a more distant proximity and ▪ Site is less visually prominent ▪ Viewers have short-time period to view / transitory views
Negligible	<ul style="list-style-type: none"> ▪ Landscape has no or very little heritage or visual value ▪ Very few people can view ▪ Viewers are long distance from site ▪ Site is not visually prominent ▪ Viewers have short time period to view / no private/stationary views

Table 7-40 Magnitude of Change Ranking Criteria

Magnitude	Criteria (general guide only, some or all may apply)
High	<ul style="list-style-type: none"> ▪ Significant size and extent of area affected ▪ Permanent and irreversible change ▪ The Project forms a significant and immediately apparent part of the scene, and one that significantly contrasts in scale and character (either existing or planned) and is severely detrimental to the quality of the scene.
Moderate	<ul style="list-style-type: none"> ▪ Moderate in size and extent of area affected ▪ Temporary, or if permanent, effects reduced over time ▪ The Project becomes the dominant feature of the scene to which other elements become subordinate, and one that significantly contrasts in scale and character (either existing or planned), possibly reducing the quality of the scene.
Low	<ul style="list-style-type: none"> ▪ Small in size and extent of area ▪ Temporary, or if permanent, visual effects able to be reduced substantially ▪ The Project forms a visible and recognisable new element within the overall scene, yet one that is



Magnitude	Criteria (general guide only, some or all may apply)
	relatively compatible with the surrounding character (either existing or planned).
Negligible	<ul style="list-style-type: none"> The Project constitutes only a minor component of the wider view, which might be missed by the casual observer or receptor. Awareness of the Project would not have a marked effect on the overall quality of the scene.

Table 7-41 Landscape character and visual impact grading matrix

		Magnitude			
Sensitivity		High	Moderate	Low	Negligible
	High	High impact	High-moderate impact	Moderate impact	Negligible
	Moderate	High-moderate impact	Moderate impact	Moderate – low impact	Negligible
	Low	Moderate impact	Moderate – low impact	Low impact	Negligible
	Negligible	Negligible impact	Negligible impact	Negligible impact	Negligible

The Project Site is within an existing industrial area and the use proposed for the Site is industrial. The Project Site does not have landscape characteristics that are particularly scenic or attractive, or which require conservation. Using the criteria listed in Table 7-39 landscape character is rated as having low sensitivity due to:

- The surrounding industrial landscape includes large scale warehouses, manufacturing plant and rail lines, and is therefore of a type not sensitive to change;
- The Site is adjacent a busy road servicing Port Botany and Sydney Airport. Generally, public views from the road are only available for a short-time period and transitory as people move through the industrial area; and
- The Site is mostly low lying, not visually prominent, and does not have visual value as a landscape or heritage site.

Magnitude of change based on construction and operation of the Project is assessed in detail below.

Public viewpoints assessed

Five (5) public viewpoints have been identified as potentially sensitive. They are shown in Table 7-42 and illustrated in Figure 7-28. A photograph of each viewpoint is shown of Viewpoints 1 to 5 in Figure 7-29, Figure 7-30, Figure 7-31 and Figure 7-32.

Table 7-42 Viewpoints assessed

Viewpoint	Description	View to Project	Visual Sensitivity
VP 1: Perry	Perry Street and Beauchamp	From the intersection,	Low.



Viewpoint	Description	View to Project	Visual Sensitivity
Street / Beauchamp Road intersection	Road are busy with traffic servicing the adjoining industries, as well as being thoroughfares to Port Botany and Sydney Airport. The intersection of the two roads provides the highest exposure of the Site to public view.	direct views into the Site are possible. A typical view shows large-scale manufacturing plants within BIP. The view is dominated by the bulk of the Orica chemical plant with the 70m high Qenos stacks seen in the background.	The momentary, public nature of the intersection has a high number of users, and views are close; however, the Project Site is not visually prominent in comparison to the BIP, to the north of the Project, which is at a higher elevation and wider than the Proposed.
VP 2: Beauchamp Road residences	105 and 111 Beauchamp Road are the closest residential receivers to the Project Site (which is approximately 70m from the closest residence). They are also the closest residences to the proposed construction parking area (which is approximately 30m from both residences). The residence at 111 Beauchamp Road is located above an auto service workshop. 105 Beauchamp Road is a single level, detached dwelling, with a saw sharpening service workshop located at the rear.	The view from the two residential properties is of the Orica site across a foreground of heavy Beauchamp Road traffic servicing the industrial area and Port Botany. The existing street vegetation effectively screens the Project Site and most of the Orica site from view from both residences. It is possible to see into the Orica site at the site entrance off Beauchamp Road.	Low. The two residences on Beauchamp Road have a private view of the Project, however they are also commercial premises and have existing views of industrial plants and light industries. Street vegetation also provides screening.
VP 3: Perry Street residences*	There are private properties at 14, 18, 20, 22 Perry Street within the industrial zone. The Site is approximately 120m from the closest residence. The residences are surrounded by light industries.	The view is of industrial premises opposite, and on either side of Perry Street. The view includes several smash repairers, car body part suppliers, a hydraulic repair service, and a concrete contractor.	N/A. It is not possible to see the Site from the Perry Street residences due to the angle of Perry Street in relation to the Site, and the height of intervening buildings. It would also not be possible to see the Project post-construction. Hence, the viewpoint from these private properties is not considered further.
VP 4: Denison Street residences	Private residential properties line the northern side of Denison Street, opposite the Botany Industrial Park. The closest residence with a potential view is	From these residential properties, the view is of the chemical industries opposite on Denison Street and includes industrial warehouses,	Low. The view is of existing industries – including chemical manufacturing plants and plumes with a low scenic visual value.



Viewpoint	Description	View to Project	Visual Sensitivity
	approximately 300m from the Site, and approximately 145m from the proposed construction parking area.	manufacturing plants, shipping containers and stockpiles of raw materials. The Qenos stacks are visible behind the infrastructure. It is possible that the top of the tall proposed structures (the cement silos at up to 30m tall and the aggregate bins at 30m tall) would be visible in the background behind the existing industrial buildings.	The view would continue to be dominated by the closer, large-scale chemical manufacturing plants of Botany Industrial Park in the foreground.
VP 5: Brighton Street residences	Brighton Street, north west of the Site, is a residential street elevated approximately 20m above the industrial area. The residences are over 1km from the Site. Brighton street comprises single, one and two-story residential dwellings. Many have verandas/decks to take advantage of the elevation and view. There is a primary school at the southern end of Brighton Street.	From the footpath and road of Brighton Street, it can be seen that many of the residential properties would have extensive views over the lower lying industrial area and BIP.	Low. The Project is over 1km from the residences within an industrial area. The view comprises industrial facilities including chemical manufacturing and plumes with a low scenic visual value.



Figure 7-28 Visual points assessed

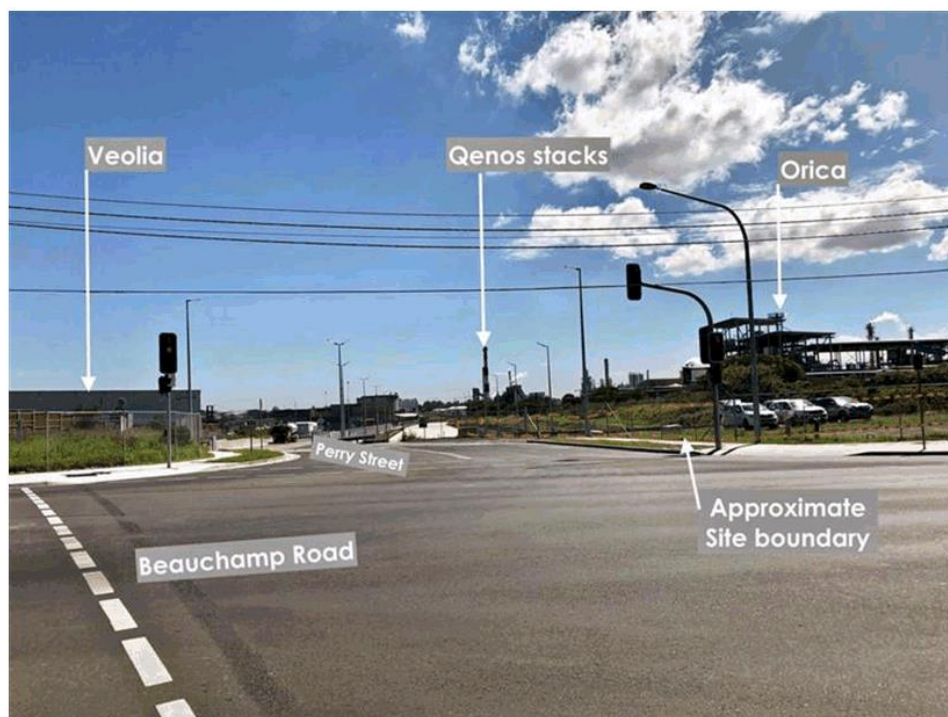


Figure 7-29 Viewpoint 1 – Existing views from Perry Street/Beauchamp Road intersection (Envisage Consulting Pty Ltd, 2018)



Figure 7-30 Viewpoint 2 – Existing views from Orica entrance driveway (opposite Beauchamp Road residences) (Envisage Consulting Pty Ltd, 2018)

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215



Figure 7-31 Viewpoint 4 – Views from Denison Street residences (Envisage Consulting Pty Ltd, 2018)

**Note viewpoint 4- Denison Street residences have views of the chemical industries, however, the Proposed site will not be visible from these residences due to the Project Sites low elevation. Viewpoint 4 is considered negligible to the Project's impact.

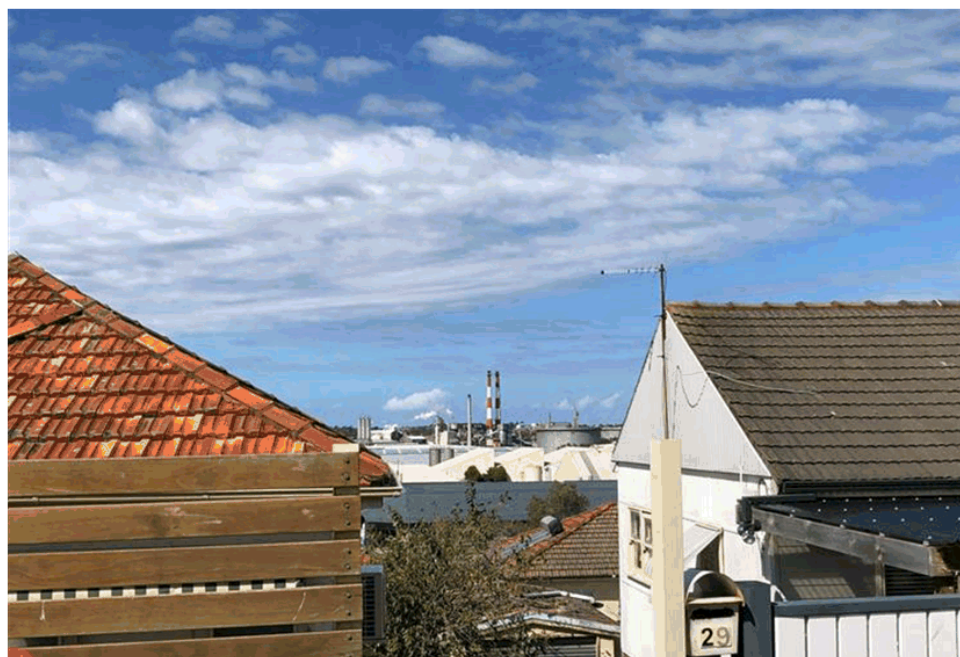


Figure 7-32 Viewpoint 5 - Views from Brighton Street residences (Envisage Consulting Pty Ltd, 2018)



7.7.2 Impact Assessment

Construction

Construction includes activities undertaken and equipment used for construction purposes throughout all Stages (1-3) of the Project, including construction of mobile concrete plant and permanent concrete plant. It does not include construction of the rail siding or aggregate drop off point as these elements are being constructed separately by Pacific National.

The magnitude of change to landscape character during construction is rated as low as:

- The Project Site is narrow with limited street exposure, and the extent of area affected would be comparatively small in relation to surrounding large scale lots;
- Construction would include parking of approximately 12 agitator trucks adjacent Beauchamp Road which would be a recognisable new element, although temporary;
- Construction would include installation and operation of tall structures (such as the almost 17m tall temporary cement silos), however, these structures would be set back at least 100m from Beauchamp Road, and be located on ground lower in elevation compared to Beauchamp Road; and
- Construction activities would be visible and recognisable however, the activities would be relatively compatible with the surrounding character.

An assessment of the potential visual impacts to viewpoints during construction are summarised in Table 7-43.

Table 7-43 Visual impact to viewpoints during construction

Viewpoint	Visual Sensitivity	Magnitude	Impact
VP 1: Perry Street/Beauchamp Road intersection	Low.	Moderate There will be temporary change to the visual amenity during construction including agitator trucks within the proposed parking area, temporary production area of an elevation of about 17m (above ground) however these cement silos would be at least 100m away from Beauchamp Road. Given the scale of the neighbouring Botany Industrial Park these elements would not be visually prominent.	Low - moderate
VP 2: Beauchamp Road residences	Low.	Low The only visible change would be the temporary increase in light vehicles entering the Orica site to access the construction carpark during the morning and afternoon.	Low
VP 3: Perry Street residences*	N/A.	N/A.	N/A
VP 4: Denison Street residences	Low.	Low It is unlikely construction activities would be visible from this viewpoint. Only operation of very tall equipment, such as cranes, would be visible from this viewpoint. It is unlikely the temporary batching plant would be visible as it	Low



Viewpoint	Visual Sensitivity	Magnitude	Impact
		would be located back from Beauchamp Road and unlikely to be visible at this angle.	
VP 5: Brighton Street residences	Low.	Low. It is unlikely that construction activities would be visible from this viewpoint. However, use of tall cranes would possibly be seen above existing buildings in the foreground. At almost 17m tall, possibly the top of the temporary batching plant may be visible; however, the temporary plant would over 1km distant from the residences and would be small in scale compared to the neighbouring industrial buildings.	Low

The elements for the construction period mentioned above would be temporary and limited to the construction period. However, the Project would require permanent works such as the removal of vegetation (completed by Pacific National) to accommodate the Project rail siding. The Project Site's vegetation would unlikely contribute to the amenity and character of the local area and screens views of the Project from properties and the road.

Overall it is considered that the visual impact during construction would be relatively minor.

Operation

Operation of the Project includes the permanent fixtures, activities undertaken and equipment used for operational purposes during Stage 3 of the Project, that is, operation of the permanent concrete plant (not the mobile plant). It also includes operation of the rail siding and aggregate unloading facility installed by Pacific National.

The magnitude of change to landscape character during operation is rated as low. An indicative scale of the view from the Beauchamp Road and Perry Street intersection is provided in Figure 7-33. The changes would include the following:

- The proposed Project includes tall elements (such as the 12m high load tower, the 30m high aggregate bin, and the cement silos up to 30m high), however, these structures are not dissimilar in nature and scale to the existing building form in the vicinity and are located on lower elevated areas than surrounding industrial buildings;
- Small scale infrastructure is proposed in the area adjacent Beauchamp Road which has most public exposure. This area would comprise the staff car park (light vehicles), the Site entrance, and single storey office and amenities buildings;
- Frequent truck movements in and out of the Site may be noticeable to passing road users, however, road users are temporarily in the area and sighting active use of the Site entrance would be a matter of chance; and
- The Project forms a visible and recognisable new element within the overall scene, yet one that is relatively compatible with the surrounding character.

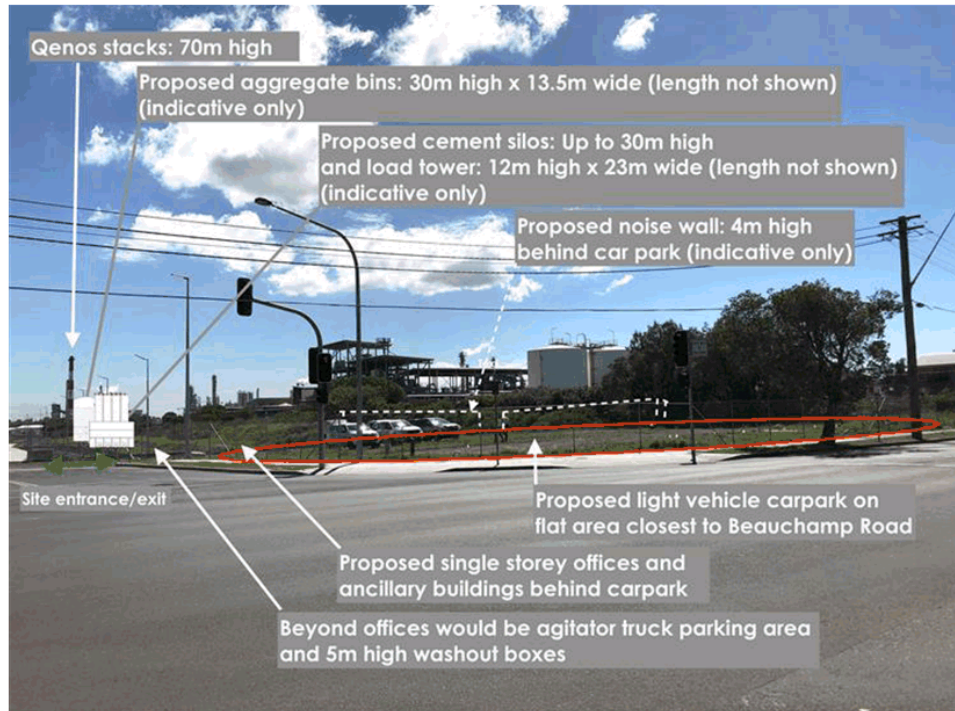


Figure 7-33 Indicative scale of tallest Project structures (approximate)

The visual impact to viewpoints during operation are listed in Table 7-44.

Table 7-44 Visual impact to viewpoints during operation

Viewpoint	Visual Sensitivity	Magnitude	Impact
VP 1: Perry Street/Beauchamp Road intersection	Low.	<p>Moderate</p> <p>The proposed Project elements, although tall and bulky, would be similar in scale to the adjacent industrial warehouses, plants and stacks.</p> <p>The tallest structures of the Project would be located well within the Site (at least 300m from Beauchamp Road), and the largest structures would be located at a lower elevation compared to the intersection and adjoining industrial land to the north.</p> <p>The parking area near the Project Site entrance would be used for parking of light vehicles only and agitator trucks would be parking further within the Project Site. Vehicle movements would increase during operation of the Project as well as the additional silos and aggregate bins to a height of 30m. Both the increase in traffic numbers and the two tall structures will be visible during</p>	Low - moderate



Viewpoint	Visual Sensitivity	Magnitude	Impact
		operation but are compatible with the height of the adjacent industrial buildings.	
VP 2: Beauchamp Road residences	Low.	Negligible. Following construction, the temporary carpark at the Orica site would no longer be used for the Project. The proposed structures of the Project would be unlikely to be visible.	Negligible.
VP 3: Perry Street residences*	N/A.	N/A.	N/A.
VP 4: Denison Street residences	Low.	Low. It is possible that the top of the proposed 24 and 30m tall silos and aggregate bins could be visible from this viewpoint in the background behind the existing industrial buildings. However, the view would continue to be dominated by the closer, large-scale chemical manufacturing plants of the BIP in the foreground.	Low.
VP 5: Brighton Street residences	Low.	Low. The Project post-construction tallest assets (silos and aggregate bins) may be visible from this viewpoint, however, the view would continue to be dominated by the surrounding tall and large scale chemical manufacturing plants in the Botany Industrial Park.	Low.

7.7.3 Mitigation Measures

The mitigation and management measures listed in Table 7-45 would be implemented to minimise visual impacts from the Project.

Table 7-45 Visual Amenity Mitigation Measures

Reference	Mitigation Measures
Construction Mitigation Measures	
V1	During construction, reduce dust impacts by not undertaking earth works on windy days, use of dust mitigation measures and covering exposed earth as soon as possible.
V2	Rehabilitate disturbed areas as soon as possible.
V3	Utilise dust mitigation measures during earthworks to prevent dust plumes from forming.
Operation Mitigation Measures	
V4	A landscape plan will be completed as part of Stage 2 design documentation.
V5	External walls and roofing materials of proposed buildings to be of a non-reflective material, such as brick, concrete block, rendered concrete or masonry, metal or fibre cement cladding



Reference	Mitigation Measures
	systems, or pre-coloured metal sheeting.
V6	The colour of the external walls and roofing to be neutral or recessive (i.e. colours that do not have a high contrast), to reduce visual dominance.
V7	<p>Create an attractive street entrance to the Project including:</p> <ul style="list-style-type: none"> • Using black mesh fencing or black palisade fencing (black blends into surroundings) as security fencing in visually prominent areas such as along the Beauchamp Road boundary; and • Limit entrance signage in terms of size and garish colours and rationalise to minimise number of signs.
V8	Plant trees near the entrance and within the light vehicle car park for general amenity and shade and along the boundary with Beauchamp Road for screening
V9	Limit off-site lighting impacts associated with the Project to comply with Australian Standard AS4282 (INT) 1995 - Control of Obtrusive Effects of Outdoor Lighting



7.8 Hazards and Risk

A Risk Analysis and Evaluation (RAE) report was prepared by **pitt&sherry** (**Appendix Q**). The RAE was undertaken following the guidelines of AS/NZS ISO 31000:2009 Risk Management Principles and Guidelines and the NSW Department of Planning Hazardous Industry Advisory Papers HIPAP Nos. 4, 6 and 10.

A multi-party workshop was facilitated by **pitt&sherry** on 27 June 2018 to provide a forum for open discussion and to consider various aspects related to the development and operation of the Project. The RAE also includes a Traffic Risk Assessment (TRA) to analyse the risks related to traffic generation, its impacts on local traffic and impacts on operations from existing traffic on local roads as identified in the TIA, and the potential for dangerous goods movements along Denison Street/Beauchamp Road.

Due to the location of the proposed facility, a draft Emergency Response Plan (ERP) was also prepared and is included in this report taking into account potential incidents that could occur at the BIP.

Additional documentation reviewed in development of the RAE included:

- DCP No 30 - Botany-Randwick Industrial Area Land Use Safety Study (2003);
- DCP No 33 - Industrial Development (2003);
- Botany-Bay-Precinct Emergency Sub Plan – A sub plan to the NSW State Disaster Plan (2011);
- Ixom Chlor-Alkali plant ERP;
- Orica ERP; and
- Occupational Health Management Plan for the project (Hibbs, 2018).

7.8.1 Existing Environment

Sources of Risk

The analysis takes into consideration normal operations, abnormal operations, natural disasters or impacts, and external intervention such as terrorism, vandalism or impacts from/to neighbouring industrial and residential areas. The method and findings of the hazard assessment process is presented as a risk register in Appendix B of the RAE and as an editable online spreadsheet for regular monitoring and update as part of ongoing risk management process by Holcim as a 'live document'. The risk register has been prepared following the guidelines of AS/NZS ISO 31000:2009 Risk Management Principles and Guidelines.

The RAE analysed the possible events deriving from various phases/operations and identified hazards as per the NSW Department of Planning Hazardous Industry Advisory Papers:

- HIPAP No 4 – Risk Criteria for Land Use Safety Planning;
- HIPAP No 6 – Hazard Analysis; and
- HIPAP No 10 – Land Use Safety Planning.

Based on these requirements, the following key risk areas were analysed:

- Construction phase, including:
 - Earth works;
 - Import fill;
 - Fill disposal (classified waste disposal);
 - Construction vibration;
 - Construction noise;
 - Construction traffic;
 - Construction waste;
- Process Wastes:



- Waste concrete;
- Highly alkaline wash water from site and truck cleaning (high pH);
- General waste from kitchen/offices;
- Stormwater;
- Operation Equipment:
 - Trucks;
 - Concrete agitator plant;
 - Conveyors and truck loading equipment;
 - Cement Silos;
- Storage:
 - Aggregate bins;
 - Fine sand quarantine stockpile;
 - Cement Silos;
 - Additive storage;
 - Various hazardous chemicals, stored as per chemicals register 9021-R-SF-RG-007-B;
 - Waste storage;
 - Water storage;
 - Contaminated water storage;
- Services:
 - Power – mains power with new pad-mounted 1,500kVA electrical transformer;
 - Compressed air – two screw-type air compressors with refrigerated dryers;
 - Potable water – town water supply; and
 - Sewerage – mains connection by local water authority.

7.8.2 Impacts assessment

SEPP 33 Determination

All chemicals would be stored in appropriate store rooms, fully contained and banded. Holcim maintains a hazardous chemical register identified as 9021-R-SF-RG-007, which is prepared in alignment with SEPP33. Upon review of the registers, the RAE assessed that the hazardous materials stored on site would not exceed the SEPP 33 thresholds. Therefore, the Project is not considered hazardous as per SEPP 33 HIPAP No 6 and does not constitute a hazardous industry or a potentially hazardous industry. Chemicals managed on site are indicated in Table 7-46 and in **Appendix Q**.

Table 7-46 Chemicals managed onsite

Location	Dangerous Goods Class & Packing Group (PG)	Quantity	Threshold value
Delvo Admixture Store	Class 8; PG II	3kL	25t
Admixture Store	Class 9; PG III	10kL	N/A
Truck Wash	Class 8; PG II	2kL	25t

Preliminary Risk Screening

Details of the risk assessment process including the risk rating system are provided in the RAE (**Appendix Q**) and accompanying risk register within the RAE. The hazards assessed to be of significant risk (with an initial



risk score above 8), their control measures and residual risk are summarised in Table 7-47. The risk register is envisaged to be maintained by Holcim as a live document employing routine risk monitoring and recording of progress.

It is noted that as per the Botany Bay LEP 2013, the area is not identified as flood-prone however based on Council's advice, the site has minor flood risk. Stormwater drainage from the Project site is largely independent of external flows. The Project proposes to manage surface stormwater flows via a drainage capture and treatment system designed in accordance with Bayside Council DCP and other relevant requirements.

The main areas of concern in the project development and operation are:

- Ensuring that if groundwater is encountered, it is contained and tested during construction until it is made certain that there are no contamination issues encountered;
- Ensuring that hygiene procedures are followed during construction to minimise human contact with potential contamination;
- Construction activities to be kept above groundwater whenever possible to eliminate any potential contaminated groundwater issues; and
- The site is within the blast zone of Huntsman and Ixom. In case of a fire or explosion on the Orica site, windsocks would be located around the site to indicate the best evacuation route and ensure onsite personnel are trained regarding activation and implementation of the Emergency Response Plan (ERP) including relevant evacuation procedures prepared by MHFs in the precinct.



Table 7-47 Significant risks

Hazard Identification (as per HIPAP 4, 10)			Risk Analysis (see Appendix B for details)			
Source of Risk	Identified Hazards	Potential Risk	Existing Controls of Identified Risk / Hazard (If any)	Additional Risk Control / Treatment	Responsibility	Timeline
Historical background	Unidentified environmental incidents	Left-over pollution impacts, exacerbated impacts on minor future incidents during construction of the site	The area has been identified as a major hazardous industry precinct due to presence of Major Hazard Facilities (MHF) eg chemical manufacturing sites such as Orica, Ixom, Qenos and Huntsman. Construction phase need site geo test for piling, exposed contaminated soil; site investigation has been done at various depth 2-5m, some asbestos identified; Ground water has been intercepted at 4m depth.	Site specific ERP in conjunction with existing BIP ERP; follow Unidentified Find Protocol and dewatering protocols and avoid dewatering through the use of driven piles. Contain and test quality of stormwater exposed to potentially contaminated soil after rain event to determine potential for stormwater contamination at the construction site. Construction activities to be kept above groundwater level to avoid exposing potentially contaminated groundwater. Focus on site management plans for risk management by subcontractors. Contractor management plan should have their own due diligence clarified. Ensure personal hygiene protocols set and followed during construction phase	Holcim, contractor	Pre-construction and construction phases
Historical background	Conflicts with past site owners - Pacific National had not undertaken due diligence reviews prior to their taking over the site from NSW State Rail Authority	The past owner Pacific National had undertaken dumping of potential hazardous materials as has been identified. Stockpiling of materials by Veolia during construction of their material on this site - material tested	ask Orica for past information on events and follow ups - Hibbs - esp on groundwater contamination Pacific National EMPs	Check with Pacific National EMPs on storage of materials on site and potentially the previous site owners - state rail authority. Contain and test quality of stormwater exposed to potentially contaminated soil after rain event to determine potential for stormwater contamination at the construction site.	Holcim, Pacific National	Planning stage

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225



Hazard Identification (as per HIPAP 4, 10)			Risk Analysis (see Appendix B for details)			
Source of Risk	Identified Hazards	Potential Risk	Existing Controls of Identified Risk / Hazard (If any)	Additional Risk Control / Treatment	Responsibility	Timeline
		and found evidence of asbestos.		Construction activities to be kept above groundwater level to avoid exposing potentially contaminated ground water.		
Land use conflicts - Construction	Conflicts with neighbouring operations during construction	Neighbouring operations Veolia and Bingo can potentially generate odour, dust and noise and pose a fire risk. There are residential properties within 100m distance. Commercial business with precision equipment might get affected by site vibrations - such as during piling for construction	Discuss with the sensitive commercial business and agree on timing or other controls re vibration management	Construction noise management plan	Contractor	Pre-construction and Construction phases
Land use conflicts - Construction	Non-compatible operations in the neighbourhood - land use / parking / traffic Beauchamp Road is designated as a hazardous chemical route	Potential construction phase traffic - heavy parking on Perry St causes traffic issues and complaints.	It has been proposed to remove parking from Beauchamp Road with restrictions on truck movement. During construction, there shall be no parking on road and placement of amenities for site contractor personnel. Holcim needs to prepare and implement traffic management plan which shall be considering the neighbouring industrial facilities operations. Detailed traffic modelling and truck monitoring should also be part of implementation of the plan.	Liaise with RMS regarding parking changes; follow traffic consultant recommendations	Holcim (operational), contractor (construction)	Approvals and Construction phase
Land use	Minor	Normal construction	Undertake noise and vibration	Liaison with affected parties and	Holcim	Approvals

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226



Hazard Identification (as per HIPAP 4, 10)			Risk Analysis (see Appendix B for details)			
Source of Risk	Identified Hazards	Potential Risk	Existing Controls of Identified Risk / Hazard (If any)	Additional Risk Control / Treatment	Responsibility	Timeline
conflicts - Construction	construction stage environmental impacts - noise	noise however sensitive neighbours may be affected by vibration during 3-week period of piling and construction phase	assessment study; Undertake community consultation; liaise with neighbours for their operational and human impact; Prepare and implement a noise and vibration management plan.	negotiate solutions		and Construction phase
Land use conflicts - Construction	Minor construction stage environmental impacts - dust	Not much dust expected other than normal site preparation and construction phase. Dust from any potentially contaminated site soil can cause relevant impacts. Dust from Bingo can create issues	Undertake site soil assessment and air quality assessment and follow recommendations; water truck for dust management during site preparation; implement air quality mitigation measures in the air quality assessment during construction	Dust management and unexpected find management during construction	Contractor	Site preparation and construction phases
Land use conflicts - Operational	Minor operational environmental impacts - dust	Trucks tracking dust off site or dust from tipping of materials on site	Dust management plan; wheel wash planned to be installed with the high pH wash water to be managed with appropriate measures to neutralise, if relevant and required. Dust extraction system to be incorporated into the design. Provide cladding to the top in the design of loading bays. Tipping should be managed and monitored - trucks may need to reverse to tip to the right spot - review site design to make sure site traffic will not be impacted; dust suppression mechanisms including water sprays. design of facilities to minimise drop distances for materials and avoid	Check with Veolia operational details regarding interaction Design should consider minimising product drop distances to avoid wind impacts. Implement air quality mitigation measures recommended in the air quality assessment report and as required for operational stage	Holcim operations	Design of facility; Operational phase



Hazard Identification (as per HIPAP 4, 10)			Risk Analysis (see Appendix B for details)			
Source of Risk	Identified Hazards	Potential Risk	Existing Controls of Identified Risk / Hazard (If any)	Additional Risk Control / Treatment	Responsibility	Timeline
			wind impacts			
Land use conflicts - Operational	Minor operational environmental impacts - surface flows during storm events	Transport of sediment and/or pollution	Stormwater management and sediment control mechanisms are incorporated in the design. A sealed dam with a first flush system will be used to collect sediment laden stormwater for reuse. Appropriate measures will be used to dose to reduce pH if water has to be pumped out.	Site should have sufficient stormwater retention capability - to be incorporated in the design of facilities.	Holcim	Design of facility; Operational phase
Land use conflicts - Operational	Minor operational environmental impacts - traffic	Parking and truck movement can cause complaints from community	Traffic management plan for neighbouring units to be checked- undertake traffic modelling - truck monitoring; propose to remove parking from Beauchamp Rd- restrictions on truck movement; GPS tracking of trucks accessing the site; no parking on road; placement of amenities for site contractor personnel	Truck monitoring; propose to remove parking from Beauchamp Rd- restrictions on truck movement; GPS tracking of trucks accessing the site; no parking on road; placement of amenities for site contractor personnel; Liaise with RMS on parking changes	Holcim	Operational phase
Heat radiation	Incident heat flux radiation over 4.7kW/m ² (chance more than 50 in a million/yr)	Injury to people/ public - residential and sensitive areas	no heat generation on site; a possible transformer to be (1.5MVA) placed accordingly. Prevalent wind will push fire to the road. Fires at Orica site will have impact on the site. Prepare an evacuation plan accordingly.	Prepare evacuation route through Veolia if possible for a fire event on site. Install wind socks strategically placed around site to indicate wind direction at plant) (obtain Orica's, Ixom's and Huntsman's ERPs to understand what their response is to a fire and what evacuation alarms and procedures they have. This information needs to be part of the ERP for the site so that when an alarm goes off on any of the sites, personnel know how to respond.	Holcim	Construction, operational phases



Hazard Identification (as per HIPAP 4, 10)			Risk Analysis (see Appendix B for details)			
Source of Risk	Identified Hazards	Potential Risk	Existing Controls of Identified Risk / Hazard (If any)	Additional Risk Control / Treatment	Responsibility	Timeline
Explosion overpressure	Explosions in other sites	Injury to people	The site is within the blast zone of Huntsman and Ixom. no flammable liquids or materials on site. Orica/Ixom is the possible explosion risk. Review quantitative risk evaluation and risk mitigation measures by Veolia transfer station and all relevant MHFs in the BIP (Orica, Ixom, Genos, Huntsman) and prepare ERP accordingly.	Prepare, implement and monitor ERP, maintain open communication with neighbouring operations such as Orica, Ixom and Huntsman	Holcim operations	Operational phase
Explosion overpressure	Incident explosion overpressure over 14 kpa more than 50 chances per million/yr	Damage to systems onsite	no flammable liquids or materials on site. Orica is the possible explosion risk. Review Orica's/BIP and Veolia waste transfer station quantitative risk evaluation and risk mitigation measures and prepare ERP accordingly.	Prepare, implement and monitor ERP, maintain open communication with neighbouring operations such as Orica, Ixom and Huntsman	Holcim operations	Operational phase
Explosion overpressure	Explosions in other sites	Damage to systems onsite	The site is within the blast zone of Huntsman and Ixom. no flammable liquids or materials on site. Orica is the possible explosion risk. Review Orica's/BIP and Veolia waste transfer station quantitative risk evaluation and risk mitigation measures and prepare ERP accordingly.	Prepare, implement and monitor ERP, maintain open communication with neighbouring operations such as Orica, Ixom and Huntsman	Holcim operations	Operational phase
Toxic exposure	Toxic exposure from fugitive emissions from other sites	Pollution to environment affecting site operations	Groundwater samples tested from 4 boreholes on site and 12 wells constructed onsite. Some exceedances noted for heavy metals and CHCs. Possible emissions from Orica in the past, as per groundwater assessment. Due to location and groundwater plume, concentrations need	Minimise activities that might intercept groundwater table during construction and operations, including installation of retaining walls to be managed by Pacific National. Mitigation measures include clear separation of construction areas with fenced exclusion zones.	Holcim	Operational phase



Hazard Identification (as per HIPAP 4, 10)			Risk Analysis (see Appendix B for details)			
Source of Risk	Identified Hazards	Potential Risk	Existing Controls of Identified Risk / Hazard (If any)	Additional Risk Control / Treatment	Responsibility	Timeline
			groundwater extraction exclusion.	Minimise pumping out of groundwater. Where pump out is required, contain any water and remove from site by licensed contractors to a licensed liquid waste facility. Undertake groundwater monitoring to review conditions during excavation.		



Traffic Risk Assessment

Traffic generation from the Project was modelled and assessed in the TIA, summarised in Section 7.1. The RAE analysed risks related to traffic generation, impacts on local traffic and operations from existing traffic on local roads, and the potential for dangerous goods movements along Denison Street/Beauchamp Road. It is noted that Beauchamp Road is a designated hazardous chemical route.

The Project would use the existing two-way access road way at the Beauchamp Road / Perry Street intersection, which currently serves the Veolia transfer terminal

The TIA reported that the Beauchamp Road / Perry Street intersection is currently operating above practical capacity with heavy traffic during the AM and PM peak hours. Unrestricted kerbside parking on Beauchamp Road north approach to the intersection was noted to cause northbound traffic queues. A high number of driveway accesses on Beauchamp Road and unrestricted kerbside parking on Perry Street were noted to contribute to vehicular conflict, with associated safety and operational hazards.

The TIA considered hourly traffic movements across the various Project stages with traffic modelling suggesting that the highest additional AM peak traffic would be during stage 3 of the Project, and highest additional PM traffic during stage 2. Movements from service vehicles (garbage trucks, deliveries etc) were considered infrequent and not significantly contributing to traffic. The maximum number of truck movements during stage 3 mainly arise from concrete agitators. However, these vehicles would use only Beauchamp Road and Perry Street would be off-limits to truck traffic.

Through consultation with Roads and Maritime Services it became apparent that the following commercial and residential growth in the area could contribute to increased traffic flows along the major roads:

- A portion sub division of the Orica site to create a new business park off Corish Circle;
- Increased container and bulk liquid transports from Port Botany;
- Growth in apartment, shopping centre and warehousing on Bunnerong Road/Wentworth Avenue and in the Banksmeadow and Botany precincts; and
- Seasonal tourist movements.

There is a high likelihood of the Beauchamp Road / Perry Street intersection reaching theoretical capacity by 2030, based on the three Project stages. Parking restrictions recommended in the TIA would be required to address this. As with any major construction work, the risk of receiving community complaints due to parking and traffic congestion is high.

To ameliorate the consequences to traffic congestion, no stopping restrictions on Beauchamp Road and Perry Street and upgrades to the intersection are proposed. This would include no stopping restrictions on Beauchamp Road and Perry Street as recommended in the TIA. Monitoring of truck movements using a GPS tracking system during operations would ensure that established haul routes are strictly followed by drivers. During construction and operation, worker parking would not be allowed on public roads and placement of amenities for site contractor personnel will be located internal to the site facilities.

All traffic and transportation related hazards were analysed for likelihood and consequence at the risk workshop and documented in the risk spreadsheet in the RAE. If a particular hazard was found to have significant risk associated with it, risk mitigation/control measures are prescribed in the risk register spreadsheet aimed at reducing the likelihood (see Table 7-47).

A Traffic Management Plan would be prepared and implemented for construction and operation of the Project taking into consideration neighbouring industrial facilities operations. Based on the risk workshop discussions, transportation of hazardous materials to and from the Project site would be limited. Hazards



related to transportation of materials by other businesses in the BIP are included in the risk assessment in the TRA.

Draft Emergency Response Plan

A draft Emergency Response Plan (ERP) has been prepared in consideration of the Emergency Response Plan developed for the Botany Industrial Precinct (BIP) and potential incidents in other areas of the BIP. The ERP can be found in Appendix D of the RAE.

7.8.3 Mitigation Measures

The mitigation and management measures listed in Table 7-48 would be implemented to minimise potential hazard and risk impacts from the Project. Other safeguards and management measures that would address hazard and risk impacts are identified in sections covering traffic (Section 7.1), air quality (Section 7.3), soils and contamination (Section 7.4), groundwater contamination (Section 7.5) and waste (Section 7.13).

Table 7-48 Hazard and risk mitigation measures

Reference	Mitigation Measures
Construction Mitigation Measures	
HR1	Chemicals should be stored as per their MSDS precautions and in separate bunded areas.
HR2	The risk register developed as part of the RAE will be reviewed periodically and maintained as a live document to monitor progress of risk control.
Operation Mitigation Measures	
HR3	The Operational Environmental Management Plan (OEMP) would be required to provide procedures for the management of solids, particulates and liquids.
HR4	An Emergency Response Plan (ERP) will be prepared in consideration of the Emergency Response Plan developed for the Botany Industrial Precinct (BIP) and potential incidents in other areas of the BIP. The ERP will also include a methodology to engage appropriately with the community



7.9 Biodiversity

A desktop review of relevant information was undertaken to provide an understanding of ecological values occurring or potentially occurring on the Project Site and in the wider region. The resources reviewed included vegetation and topographic maps, aerial photography (historical) and relevant literature.

Relevant spatial ecological datasets were queried to identify vegetation communities, and locations of previously recorded threatened flora and fauna species mapped in the vicinity of the Project Site. The searches included:

- NSW Wildlife Atlas by the NSW Office of Environment and Heritage (OEH). A search was undertaken on the 21 February 2018 to determine threatened species records listed under the Biodiversity Conservation Act 2016 (BC Act) within 10km of the Project Site;
- The Protected Matters Search Tool (PMST) by the Commonwealth Department of the Environment and Energy (DoEE). A search was conducted on 21 February 2018 with the coordinates (-33.95809E 151.22218S) to determine protected matters records listed under the EPBC Act to within 10 km of the Project Site; and
- The Native Vegetation of the Sydney Metropolitan Area V3 (DECCW 2016).

7.9.1 Existing environment

Site inspection

A site inspection was undertaken on 16 March 2018. The Project Site was shown to be highly disturbed with scattered stockpiles, flat graded areas of fill and mostly exotic groundcovers with scattered growth of native and exotic shrubs and small trees. Figure 7-34 through Figure 7-37 highlight the existing vegetation on the Project Site.



Figure 7-34 Exotic groundcovers over spoil stockpiles



Figure 7-35 Exotic groundcovers over disturbed site



Figure 7-36 Shrub and small tree growth over disturbed site

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234



Figure 7-37 Casuarina regrowth at the boundary with Orica

Review of historical aerial imagery

Historical (1943) aerial photographs viewed on the NSW Land and Property Management SIX Viewer (www.maps.nsw.gov.au accessed 16 May 2018) reveals the Project Site as highly-disturbed and mostly cleared vegetation within the Project area and surrounds. There appears to be ground covers and some shrubs in the northern part of the Project Site. There is a building visible in the south-west of the Project Site. The photograph appears to show some small tree or shrub dominated vegetation in the south-west of the Site (refer to Figure 7-38).

Imagery from October 2011 show the northern half of the Project Site largely cleared of vegetation. By June 2014 the southern half of the site was also largely cleared. The Project Site remains largely cleared although the northern-most part of the Project Site now has a dense mixture of exotic shrubs and a few native young regrowth sprouts, most of which are under 300mm in diameter.

Vegetation mapping

Vegetation mapped within 500m of the Project Site was reviewed using the Native Vegetation of the Sydney Metropolitan Area V3 (2016).

The vegetation within the Project Site is mapped as weeds and exotic vegetation, predominantly located to the west with some vegetation patches running north west to south west of the site. The vegetation is dominated by weeds, exotic species and degraded urban vegetation resulting from historical and existing development of the land.

The closest small scatter of mapped native vegetation community to the Project is Coastal Flats Swamp Mahogany Forest vegetation community approximately 60 metres west of the Project Site across the rail corridor. Coastal Flats Swamp Mahogany Forest is identified by DECCW (2009) as being equivalent to [pitt&sherry](#) ref: SY18040_HOLCIM_BANKSMEADOW_EIS_REVD_clean.docx

235



Swamp Sclerophyll Forest on Coastal Floodplains, an endangered ecological community listed under the BC Act. The vegetation mapping of the Project Site is shown in Figure 7-39.

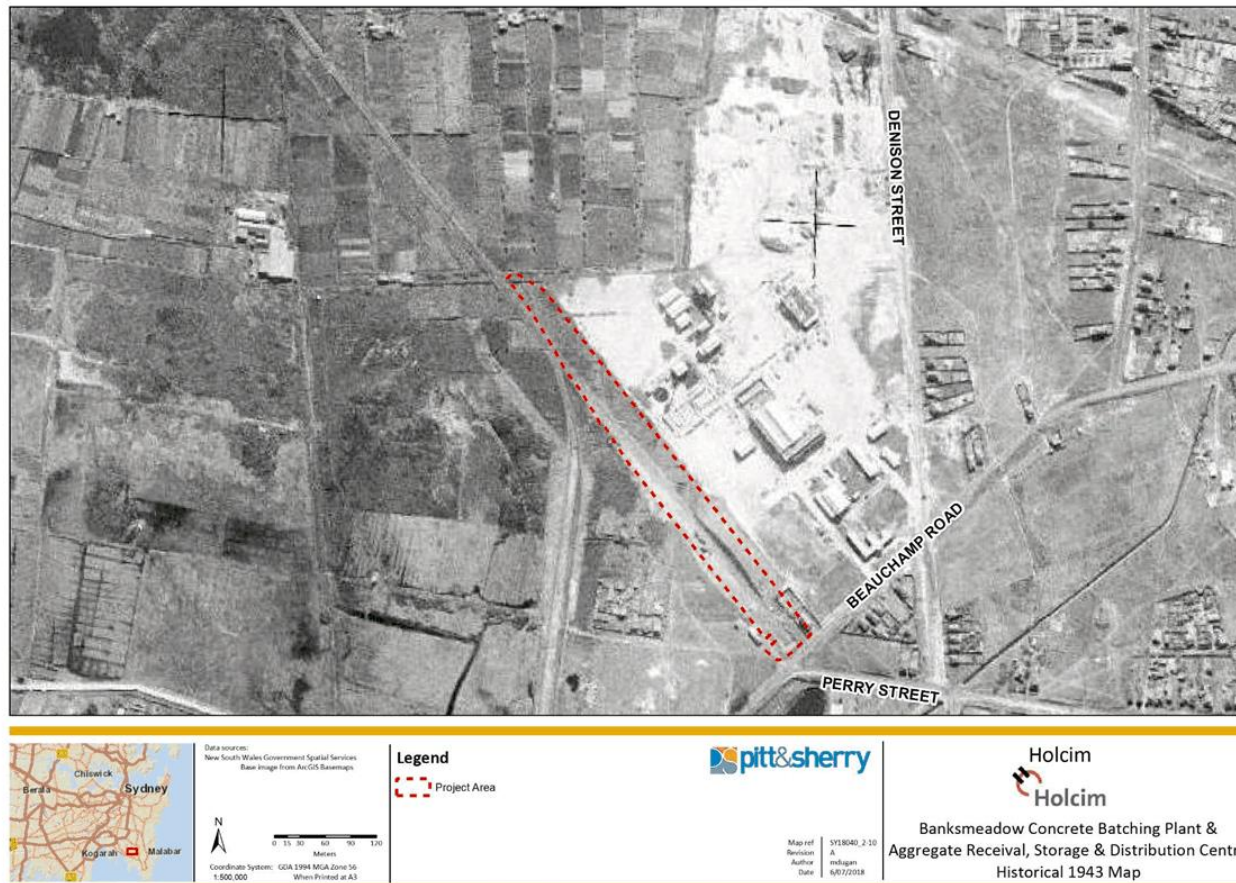


Figure 7-38 1943 Aerial Photograph of the Project Site (Source SIX Maps, NSW Government Spatial Services)

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237

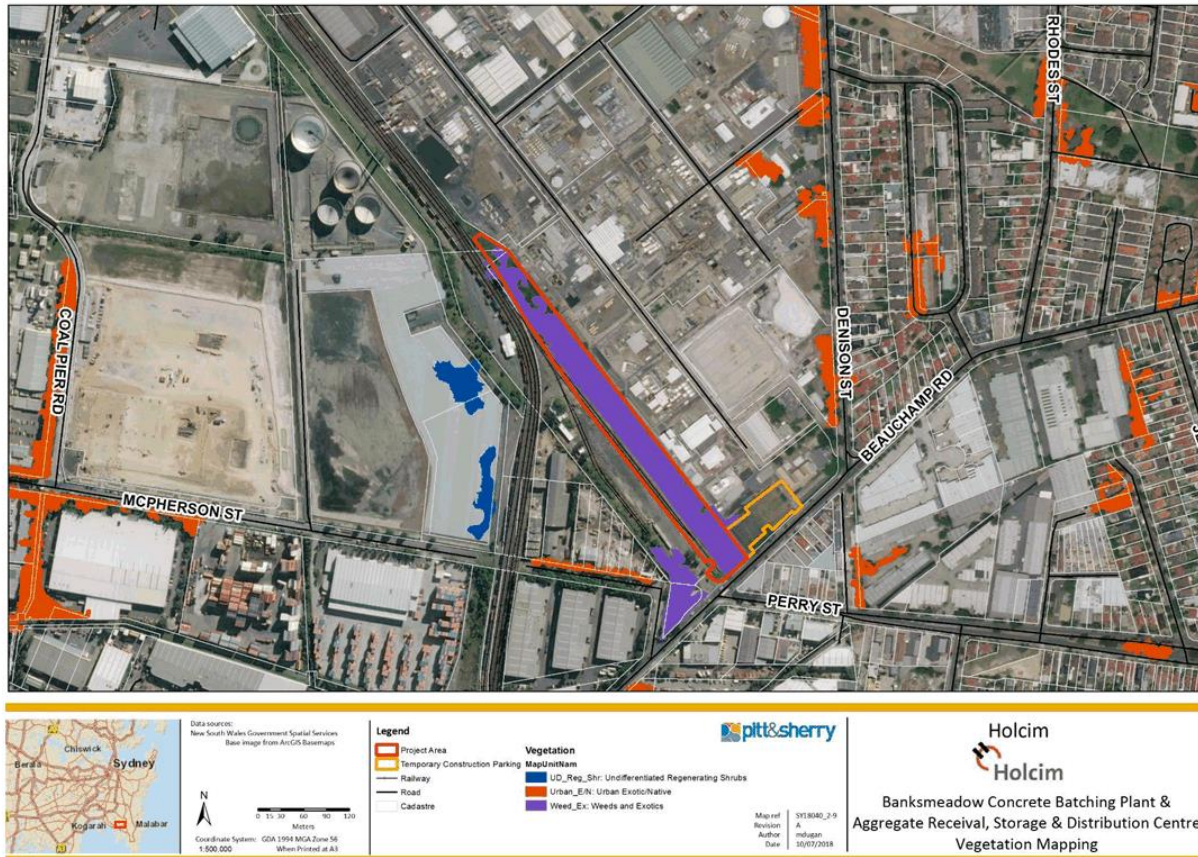


Figure 7-39 Mapped vegetation communities from Native Vegetation of the Sydney Metropolitan Area V3 (2016)

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238



NSW Bionet Atlas Search

A search was conducted on the 21 February 2018 of the OEH Wildlife Atlas and found that there were no recorded threatened flora, fauna or ecological communities mapped within the Project Site. The search revealed six (6) threatened flora species and twenty-eight (28) threatened fauna species (2 amphibians, 1 reptile and 22 birds) and 16 endangered ecological communities mapped within 10km of the Project Site (see **Appendix R**).

Commonwealth Matters of National Environmental Significance (MNES)

An EPBC protected matters report was undertaken on the 21 February 2018 (10km buffer of the Project) to identify Matters of National Environmental Significance (MNES) that have the potential to occur within the Project Site and surrounds. The assessment was undertaken in accordance with the Commonwealth Significant Impact Assessment Guidelines (DoE 2013) which lists a suite of significant impact criteria to assist in determining whether there is likely to be a significant impact on MNES and thus whether a referral to the Commonwealth DoEE is required.

The search identified records of threatened flora and fauna species previously recorded, or likely to occur, within 10km of the Site. A summary of the results of the protected matters search are provided Table 7-49. The EPBC Protected Matters Report is contained in **Appendix R**.

Table 7-49 EPBC Protected Matters Search Tool Results

MNES	Number of MNES identified within a 10km buffer from the Site
World Heritage Properties	3
National Heritage Places	6
Wetlands of International Importance	1
Great Barrier Reef Marine Park	None
Commonwealth Marine Area	None
Listed Threatened Ecological Communities	10
Listed Threatened species	
Listed birds	37
Listed fish	3
Listed frogs	2
Listed mammals	12
Listed flora species	16
Listed reptiles	6
Listed migratory marine birds	15
Listed migratory terrestrial species	7
Listed migratory wetland species	32

Weeds

The BioNet Atlas search found weeds near the proposal site, therefore some may occur on the Project Site and surrounding area. The Project Site is located in the Local Land Services region of Greater Sydney, the NSW WeedWise Priority weeds for Greater Sydney. One hundred and six (106) priority weeds are listed on the NSW WeedWise listing for Greater Sydney (**Appendix R**).



7.9.2 Impact Assessment

The Project Site is highly modified and disturbed from years of historical and recent development. The Project Site is unlikely to contain any threatened flora or fauna species and currently comprises scattered areas of shrubs and isolated vegetation located within an industrialised area. The connectivity of the area for fauna potentially moving to and from the site is very low due the fencing around the site, restricting fauna access. The Project Site is largely covered with exotic plant species and has the potential to contain pathogens and declared noxious weeds.

Construction Impacts

Clearing of vegetation on the Project Site would be required prior to construction of the Project. Bayside Council has approved clearing of the land based on an earlier application by Pacific National. Clearing works would be undertaken in accordance with this existing approval. The impacts to vegetation clearing are therefore not considered as they do not form part of this development application.

Potential biodiversity impacts during construction include the following:

- Introduction and/ or spread of noxious weeds and pathogens;
- Disturbance of fauna during construction due to light, noise and air quality impacts generated by vehicles, equipment and construction activities; and
- Fauna mortality or injury.

Operational Impacts

The operation of the facility may involve some impact on fauna and flora of the area. The direct biodiversity impacts that must be managed during the operation of the Project include:

- Introduction and/ or spread of noxious weeds by failure to maintain the proposed landscape and the specified native plant species of the Project; and
- Disturbance of fauna during operation due to light, noise and air quality impacts generated by vehicles, equipment and construction activities

7.9.3 Mitigation Measures

The mitigation and management measures in Table 7-50 are recommended to minimise potential biodiversity impacts within the construction & demolition and the operational phase of the Project.

Table 7-50 Biodiversity mitigation measures

Reference	Mitigation Measures
Construction Mitigation Measures	
B1	Erosion and sedimentation control devices would be installed in accordance with the CEMP.
B2	Due to the low biodiversity values of the site, it would not be expected to be a habitat for fauna, however, any injured fauna would be captured where possible and taken to a local wildlife carer.
B3	Declared noxious weeds are to be managed according to requirements under the Noxious Weeds Act 1993.
B4	No exotic grasses or other plants with weed potential should be introduced to the site.
B5	Construction plant and equipment would be cleaned and washed prior to entering and leaving the Project Site.
Operation Mitigation Measures	
B6	A Landscape Concept Plan would be prepared, showing landscape areas, planting zones, and an indicative landscaping plant species list. In accordance with the Botany

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240



Reference	Mitigation Measures
	Bay DCP, the nominated plant species for the landscaping would largely be of native, locally indigenous species.
B7	The landscaped zone on the northern boundary of the Project would preference species that would be the most suitable to capture pollutants including dust, emissions and particulates from aggregate transport from infrastructure to truck and truck movements.



7.10 Indigenous Heritage

A desktop Aboriginal assessment was conducted by **pitt&sherry** on the 21 February 2018. This assessment included review of the following publicly available databases:

- Office of Environment and Heritage Aboriginal Heritage Information Management System (AHIMS) Search (200m buffer);
- OEH Atlas of Aboriginal Places;
- Commonwealth National Native Title Tribunal register; and
- Protected Matters Search Tool (21 February 2018).

7.10.1 Existing Environment

The Project is located in the Local Aboriginal Land Council of La Perouse (La Perouse LALC). La Perouse LALC recognizes the Bidiagal (Bidjigal) and Gadigal clans as the traditional occupants of the north-west of Botany Bay and Sydney's north coast.

In the year of 1881, approximately 15 Aboriginal people were reported as 'camping on the reserve' at Botany Bay (most likely Meadow Reserve near the Government Pier at Banksmeadow), and 35 in a larger camp at La Perouse (Nugent, M., 2005). In the 1830's Banksmeadow was better known by Aboriginal communities by its Aboriginal name of Bunnerong (Curby, P., 2009).

The Project Site and surrounds have been previously, and are now currently, highly disturbed from industrial and rail infrastructure development.

7.10.2 Impact Assessment

The AHIMS search on the 21 February 2018 provided no results of Aboriginal sites within a 200m boundary of the Project. The Project Site is not a declared Aboriginal Place identified on the NSW Atlas of Aboriginal Places and is not the subject of a Native Title Claim, application or Indigenous Land Use Agreement under the Native Title Act 1993 (search of the Native Title Register on 15/09/15).

The Project Site is highly disturbed and surrounded by industrial areas. The Project Site and surrounding areas have been cleared, disturbed and filled over years of industrial development, therefore the potential to find Aboriginal items is low.

Given the historically high disturbance levels associated with industrial and rail development, it is unlikely that any Aboriginal objects remain on the Project Site or remain in their original depositional context, with the exception of possibly deeper deposits.

7.10.3 Mitigation Measures

The mitigation measures listed in Table 7-51 will be implemented to address the potential for Aboriginal heritage impacts.

Table 7-51 Mitigation Measures

Reference	Mitigation Measures
Construction Mitigation Measures	
AB1	An Unexpected Finds Protocol which addresses unexpected Aboriginal heritage finds will be included in the CEMP to be completed by the construction contractor.
AB2	If suspected Aboriginal objects, such as stone artefacts are identified during works, works

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242



	must cease within 10m of the affected area and an archaeologist called in to assess the finds. If the finds are found to be Aboriginal objects, the OEH must be notified under section 89A of the NPW Act. Appropriate management or avoidance should be sought if Aboriginal objects are to be moved or harmed.
AB4	In the extremely unlikely event that human remains are found, works should immediately cease and the NSW Police are to be contacted. If the remains are suspected to be Aboriginal, the OEH may also be contacted at this time to assist in determining appropriate management.



7.11 Historic Heritage

A review of applicable State and Federal heritage registers was undertaken on 21 February 2018 to identify any non-Indigenous heritage items within the vicinity of the Project Site.

A search of the following registers, inventories and databases were undertaken:

- SEPP (Three Ports);
- Botany LEP 2013;
- State Heritage Inventory (s70 registers);
- NSW State Heritage Register (SHR); and
- The Australian Heritage Database (including Commonwealth and National Heritage lists and the Register of the National Estate).

7.11.1 Existing Environment

The existing land uses of the Project Site included a long history of commercial business use within the area. A search of the National Heritage Register and the NSW Register found there were no items of national heritage significance either within the Project Site or within a 5 km buffer of the Project Site.

The search found that within a 5km buffer of the Project Site, there were no heritage items of National significance. However, there were some locally listed heritage items within the SEPP (Three Ports) which are in close proximity to the Project Site.

There are four local significant items listed in the SEPP (Three Ports) within 1km of the Project listed in Table 7-52 and shown in Figure 7-40; however, the Project is highly unlikely to impact the Orica and mature Ficus tree located on the corner of Denison and Beauchamp Streets.

Table 7-52 Historical heritage items near the Project Site

Heritage item	Address	Property Lot and DP	Distance from Project Site
Main Administration Building— "Orica" and Mature Ficus	Corner of Denison and Beauchamp Streets	Lot 11, DP 1039919	Building: 20m Ficus: 75m
Pier Hotel	1751 Botany Road	Lot 1, DP 1031248	864m
Botany Bay Hotel	1807 Botany Road	Lot A, DP 333268	73m



Figure 7-40 Local heritage listed items under the SEPP (Three Ports) 2013

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245



7.11.2 Impact Assessment

The Main Administration Building- Orica and the Mature Ficus tree are both located to the north east of the Project Site at the intersection of Beauchamp Road and Denison Street, within the BIP. The construction parking compound would be located just to the south of these heritage items, approximately 15m away from the Main Administration Building – Orica and 65m away from the Mature Ficus.

Vehicle movements into the proposed construction compound carpark would use Denison Street and Beauchamp Road and enter near the Orica “Main Administration Building”, however they would be would not harm or modify the heritage context of the building and fig tree. The compound carpark would be primarily for light vehicles. Heavy vehicles and large deliveries of equipment and supplies would access the Project Site itself rather than the compound carpark.

The construction and operation of the Project would occur within the Project boundary and have no impact on the heritage items identified in Table 7-52. Considering the existing high level of disturbance on and near the Project Site, it is unlikely the Project would result in the discovery of other heritage items during construction and operation of the Project.

7.11.3 Mitigation measures

The mitigation measures in Table 7-53 would be implemented to minimise historic heritage impacts.

Table 7-53 Historical Heritage Mitigation Measures

Reference	Mitigation Measure
Construction Mitigation Measures	
HH1	An Unexpected Finds Protocol (Heritage) which addresses unexpected historic heritage finds will be included in the Construction Environmental Management Plan to be completed by the construction contractor.
HH2	Should any unexpected historical heritage archaeological items be discovered during construction, work will cease in the vicinity of the find and a qualified heritage consultant will have to be consulted. Work will be able to recommence in the area of the find on the advice of the qualified heritage consultant.
HH3	The details of the location of the two heritage items near the construction compound parking area on Orica land will be included in the Traffic Management Plan for the Project.



7.12 Socio-economic, Land Use and Property

A desktop review of relevant socio-economic, land use and property data was undertaken to determine any impacts associated with the Project. The review included an assessment of the social and economic environment within which the Proposal is located and the potential interactions of the Proposal with this environment, including:

- an assessment of the likely economic and social impacts of the development;
- an assessment of the potential impacts on local and regional communities;
- the reasons why the development should be approved having regard for economic and social considerations; and
- a description of the measures that would be implemented to minimise any potential for adverse social and economic impacts of the project.

The statistical data is drawn from the census data compiled by the Australian Bureau of Statistics (ABS) for 2016.

7.12.1 Existing Environment

The Proposal is located on industrial land adjacent to the BIP to the north, the Botany Goods Rail Line to the west and Veolia Banksmeadow Transfer Terminal to the south. The Project Site is zoned as IN1- general industry under the SEPP (Three Ports).

The Project sits in the suburb of Banksmeadow within the Bayside LGA, a recent amalgamation The Botany Bay and Rockdale Councils (September 2016). The Bayside Council area is located in Sydney's southern and south-eastern suburbs, about 10km south of the Sydney CBD. Bayside LGA is bounded by the City of Canterbury Bankstown, Wollongong, the Cooks River, the Inner West Council area and the City of Sydney in the north, Randwick City in the east, Botany Bay and the Georges River in the south, and the Georges River Council area in the west.

Local businesses and industry

Bayside LGA includes a variety of residential, industrial and commercial land uses. However, the land surrounding the Project Site consists primarily of industrial and commercial uses. The larger industrial properties to the north are within the BIP to the north (Orica, Qenos, Ixom, Broadspectrum and Huntsman). Veolia and Bingo are located to the south. The rail corridor sits to the west of the Project Site. A number of commercial premises are located along Beauchamp Road and Perry Street to the east of the Project and include wholesalers, landscape and building supplies and auto repair shops, among others.

The number of businesses in Banksmeadow in 2013 was 326, which grew to 341 in June 2015. The resident population estimate within Banksmeadow was less than twenty (20) (ABS 2016) This supports the zoning within the Banksmeadow area being industrial rather than being a focused area for residential properties.

The 2017 Estimated Resident Population for Bayside Council Area is 170,279, with a population density of 34.11 persons per hectare (ABS 2016). In the Bayside Council area, the census determined that of the population, 51.4% of people did not change address (51.4%), 29.3% moved from elsewhere in Australia, and 12.3% moved from overseas. A total of 14,672 people, or 34.2% of those who moved within Australia, moved just within the Bayside Council area.

An estimated 75,975 people were employed in the Bayside Council area in 2016, of which 64% worked full-time and 33% part-time. Health Care and Social Assistance is the highest source of employment across Bayside Council Area, accounting for 10.9% of total employment (ABS, 2016). Retail Trade and Accommodation and Food Services are major contributors to the Bayside employment, adding a further 9.9% and 9.1% respectively. The three categories, along with Professional, Scientific and Technical Services, Construction and Education and Training, account for 61% of the total employment within the area.

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247



Social infrastructure includes community facilities, libraries, open space and recreation facilities. There are no known council owned social infrastructure facilities within the immediate area of the Project.

7.12.2 Impact Assessment

Land use

The Project Site is located on approximately 2.4ha of land, of which approximately 2.3ha is owned by Pacific National and 0.1ha is owned by Railcorp / ARTC. The Project sits on land zoned IN1 general industrial under the SEPP (Three Ports) and is located within an existing industrial area. It is compatibly sited in-between the newly constructed Veolia waste transfer terminal. The land is currently vacant; therefore the Project would provide a higher-value use than it now has.

The Project Site would be leased by Pacific National under a long-term land-use agreement. Land for the temporary construction compound carpark would be leased from Orica.

Social impacts

Construction and operation of the Project is not expected to lead to any long-term detrimental socio-economic impacts or cause changes to the socio-economic structure of the surrounding LGAs. The Proposal is located on industrial zoned land (IN1) and represents an appropriate use of the site and is consistent with the surrounding industrial land uses. The Project would also support further growth and infrastructure improvements in the greater Sydney area.

The Project would provide a significant regional benefit delivering increasing industrial resource use, creating employment opportunities and reducing road congestion of the highway from Marulan to Sydney.

The nearest residential suburbs to the Project Site are Matraville and Hillsdale which are respectively 100m and 150m from the Project. The residents within these areas, and several along Beauchamp Road, have been recognised as stakeholders of the Project and engaged within the community consultation initiatives described in Section 5.

The impact of this Project would not pose an issue for social infrastructure and facilities

Construction impacts

Construction of the Project would potentially increase traffic, noise and air impacts for the duration of the construction phase if not appropriately managed. Potential impacts on traffic, noise, air quality associated with construction and operation of the Project have been assessed and are presented in the relevant section of this EIS.

The construction of Project would create new temporary employment which would contribute positively to the local economy.

Operational impacts

The operation of the Project would create new full-time, part-time and casual jobs, which provides economic benefits for the area. The Project Site is well positioned to contribute, and support infrastructure and development projects through the expanding Sydney area such as Westconnex, the Sydney Light Rail and the Sydney Metro projects. The necessity of concrete to be delivered within the fast-growing CBD, eastern, inner-western and northern suburbs is imperative to the socio-economics of Sydney area development. The location of the asset in Banksmeadow, will greatly reduce logistics-based cost components and has the potential to positively influence the financial and delivery outcomes of these important public and private works.



The Project would assist in local and regional development and infrastructure targets, as prioritised in the ten objectives under the Greater Sydney Plan in which this Project would be achieving targets towards goal 1,5,6,9 and 10 (Greater Sydney Commission, 2018). The Project benefits would also provide local councils with a long-term solution to the increase of traffic flowing through the Bayside Local Government Area and associated aggregate transport routes from Lynwood Colliery in NSW.

Upon completion, the Project would provide an additional 45 - 60 on-site jobs and numerous support roles for associated contractors.

While there are numerous positive socio-economic aspects to the Banksmeadow project, it does have the potential to cause some minor negative disruptions to traffic flows, use parking spaces that would otherwise be used by members of the public to access shopping areas within the vicinity of the site and place additional demands on public facilities.

Operation of the Project is not expected to cause any long-term detrimental socio-economic impacts or alteration to the socio-economic structure of the surrounding LGAs. The Project Site is on industrial zoned land and fit for the designated use. The localised operational impacts would therefore be minimal as the surrounding area.

7.12.3 Mitigation Measures

The mitigation and management measures listed in Table 7-54 are recommended to minimise potential socio-economic impacts.

Table 7-54 Socioeconomic, Land Use and Property Mitigation Measures

Reference	Mitigation Measure
Construction Mitigation Measures	
SE1	Community consultation to be undertaken with stakeholders to inform the public of the upcoming works and allow them to comment on the Project.
SE2	Employment opportunities for local sub-contractors should be maximised where possible.
SE3	A complaint handling procedure and register will be implemented to assist in recording and managing potential conflict with the local community during operations.
SE3	A Construction Environmental Management Plan (CEMP) will be developed and implemented for the project including a 24-hour contact telephone number and a communications page on the Holcim website.
Operation Mitigation Measures	
S4	An operational environmental management plan (OEMP) will be provided to staff, contractors, subconsultants and stakeholders of the Project/ This OEMP would provide a number for a 24-hour contact telephone number and a communications page on the Holcim website.
S6	A community and stakeholder communications register would be maintained throughout the operation of the Project Site.
SE1	A complaint handling procedure and register would be implemented to minimise potential impacts on the local community during the construction and operation phases of the Proposal.



7.13 Waste

An assessment was undertaken of measures that would be implemented to avoid, minimise, mitigate, offset, manage and/ or monitor potential impacts associated with the waste generated from the Project.

7.13.1 Policy Setting

The waste regulatory framework is administered under the principal legislation of the *Protection of the Environment Operations Act 1997* (POEO Act) and the *Waste Avoidance and Resource Recovery Act 2001* (WARR Act). The purpose of these Acts is to prevent degradation of the environment, eliminate harmful wastes, reduce the amount of waste generated and establish priorities for waste reuse, recovery and recycling. The WARR Act establishes a waste hierarchy, which comprises the following principles:

- Avoidance of waste – minimising the amount of waste generated during construction by avoiding unnecessary resource consumption (i.e. avoiding the use of inefficient plant and construction equipment and avoiding materials with excess embodied energy, waste and excessive packaging);
- Resource recovery – reusing, reprocessing and recycling waste products generated during construction to minimise the amount of waste requiring disposal; and
- Disposal – where resources cannot be recovered, they would be appropriately disposed of to minimise the potential adverse environmental impacts likely to be associated with their disposal.

Waste generated from the Project will be managed in accordance with the principles of the hierarchy and classified in accordance with the EPA *Waste Classification Guidelines* to ensure that any waste leaving the site is transported and disposed of lawfully and tracked when necessary.

7.13.2 Impact Assessment

The Project stages would cause some minor impacts on waste from the site preparation including excavation, construction and the operation of the Project. The likely waste streams generated by the Project are detailed in this Section.

Site preparation and grading

Potential waste streams generated during the site preparation stage of the Project include:

- Concrete / asphalt;
- Asbestos materials (known through previous investigations – detailed site investigation);
- Remnant drainage and pipes which comprise of metal and plastic materials;
- Remnant wiring;
- Site excavation excess spoil; and
- Rail infrastructure (redundant).

Construction

Potential waste streams generated during the construction stage include:

- Green waste (Pacific National to undertake vegetation removal);
- Liquid waste from equipment use and dewatering;
- Contaminated groundwater (Section 7.5);
- Effluent from staff ablutions facilities (sewage);
- General domestic waste from on-site staff (lunch packaging, office waste etc.);



- Excess spoil from earthworks not suitable for reuse as backfill;
- Contaminated soil;
- Chemicals including adhesives, resins, paints and curing agents;
- Silt fencing and sandbags associated with erosion and sediment control measures;
- Construction materials packaging including cardboard, drums and plastic wrap; and
- Maintenance of equipment waste including oily rags, tyres and other associated materials.

A full list of waste materials likely to be encountered during construction, and their expected classification under the EPA Waste Classification Guidelines, is found in Table 7-55.

Table 7-55 Potential Waste Generated on-site during construction

Waste material and description	Waste classification	Management Details
Green Waste Trees, shrubs, groundcover and weeds	General Solid Waste (non-putrescible)	Pacific National has obtained a separate Bayside Council approval for vegetation removal across the Project Site .
Liquid waste Oil, fuels and contaminated water from equipment washing.	Liquid waste.	A limited amount of liquid waste is expected to be generated by the Project. Onsite testing may be carried out on the waste water generated onsite to see if it is within discharge limits. If the waste water is not within discharge limits the wastewater collected in the tanks would be pumped out and taken to an offsite licenced facility on a regular basis.
Effluent waste (Sewage) On-site staff use of toilet.	Liquid Waste and General Solid Waste (putrescible).	There are no existing toilets for use during the Construction phase – the construction contractors will use temporary portable amenities. These amenities will be serviced by the provider.
General waste Paper, cardboard, aluminium cans, steel, plastics, glass, food waste, plastic wrap, etc. generated by onsite staff.	General Solid Waste (non-putrescible and putrescible).	General waste would require removal from site. This should be separated into recyclable and non-recyclable waste. This should be regularly collected from the site and transported to the nearest licenced waste disposal facility by an appropriately licenced contractor.
Excavated soil Fill, topsoil, subsoil, rock, gravel and silt.	General Solid Waste (non-putrescible).	If the spoil is considered suitable then it would be reused as backfill as much as possible however other management options for spoil include beneficial offsite reuse or disposal to landfill. Soil not considered suitable due to Potential Acid Sulphate Soils (unlikely based on the detailed site investigation) would be treated using lime and then reused. If following treatment (or for other reasons) these soils are still not considered suitable then soil should be transported to the nearest licenced waste disposal facility.
Construction	General Solid	The construction of the Project is not expected to generate a

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251



Waste material and description	Waste classification	Management Details
Waste Concrete, metal, steel, timber, fittings, strapping, plastic wrapping, packaging, electrical and plumbing components.	Waste (non-putrescible).	significant amount of construction waste. All attempts would be made to separate and reuse or recycle building materials.
Contaminated waste/spoil Potential for concrete, bricks and asbestos.	Special Waste (asbestos). If any other is found this will need to be determined.	A small amount of asbestos was identified in one of the existing spoil stockpiles on the Project Site that will need to be removed. A single piece of asbestos containing material (ACM) was observed during and confirmed during laboratory analysis in stockpile 1 (see Figure 7-17). Therefore, the whole stockpile is categorised as special waste asbestos. If any additional contaminated waste is found the waste would require classification and disposal to an appropriately licenced facility.

Contingency procedures and remedial actions for the management of potentially contaminated material (e.g. asbestos) discovered during construction would be provided in an Unexpected Finds Protocol (Waste). The protocol would be developed by the contractor prior to the commencement of construction and implemented in the case of unanticipated discovery of contaminated material during construction of the proposal.

Operational impacts

- General domestic waste:
 - Non-recyclable waste;
 - Food waste;
 - Mixed recycling (plastics, glass and metals); and
 - Paper and cardboard.
- Liquid and solid waste from concrete batching.
- Effluent waste (sewage).

One of the primary operational requirements for the Project is managing waste water from concrete batching and related activities and from stormwater runoff during rain events. An integrated water and concrete washout system would be implemented for the Project and include facilities to capture, recycle and re-use as much water in the concrete batching process as possible. This would reduce the amount of potable water requirements and assist in achieving discharge limit requirements under an Environment Protection Licence. A conceptual framework for the detailed design of water recycling and reuse is provided in **Appendix O**.

It is proposed that all waste generated during the operation of the Project will be segregated in accordance with an operational waste management plan (OWMP).

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252



All waste would be managed in accordance with the requirements of the WARR Act, the POEO Act, the NSW EPA Waste Classification Guidelines 2009 (DECCW, 2009) and the principles of the waste management hierarchy. Waste disposal will be undertaken by licensed contractors.

The classification and description of each of the general waste types to be potentially generated by the Project, and their expected classification under the EPA Waste Classification Guidelines, is summarised in Table 7-56.

Table 7-56 Potential waste generated on-site during operation

Waste material and description	Waste classification	Management Details
Green Waste Trees, shrubs, groundcover and weeds	General Solid Waste (non-putrescible)	Only a small amount would be generated from landscape maintenance activities. A landscape contractor would manage via preferred management strategy for green waste is to reuse suitable material for mulch if it is suitably weed free and complies with the EPA mulch exemption.
Effluent waste (Sewage) On-site staff use of toilet.	Liquid Waste and General Solid Waste (putrescible).	Effluent would be connected to the existing sewer main at Beauchamp Road.
General waste Paper, cardboard, aluminium cans, steel, plastics, glass, food waste, plastic wrap, etc. generated by onsite staff.	General Solid Waste (non-putrescible and putrescible).	General waste would require removal from site. This should be separated into recyclable and non-recyclable waste. This should be regularly collected from the site and transported to the nearest licenced waste disposal facility by an appropriately licenced contractor.
Contaminated waste Potential for concrete, bricks and asbestos.	If any is found this will need to be determined.	No contaminated waste is expected to be generated by the Project. If any is found the waste would require classification and disposal to an appropriately licenced facility.
Concrete slurry Potential for wet concrete mixture as a result of exposed stockpiles in the Project Site.	General Solid Waste (non-putrescible and putrescible).	General waste would require removal from site. This should be separated into recyclable and non-recyclable waste. This should be regularly collected from the site and transported to the nearest licenced waste disposal facility by an appropriately licenced contractor.
Liquid waste Oil, fuels and contaminated water from equipment washing.	Liquid waste	Onsite testing may be carried out on the waste water generated onsite to see if it is within discharge limits. If the waste water is not within discharge limits the wastewater collected in the tanks would be pumped out and taken to an offsite licenced facility on a regular basis.
Returned concrete Hardened concrete	General solid waste (non-putrescible)	Where the volume is greater than 0.4m ³ the agitator truck is diverted to a recycler. Where the volume is less than 0.4m ³ the agitator discharges the returned (plastic) concrete into a lined skip bin to harden. The hardened concrete is periodically removed from site to a recycler where the concrete is crushed and re-used for concrete batching and road-base
Wash Water Contaminated water	Liquid waste	Concrete wash water is typically highly alkaline with significant suspended solids. Wash water is generated from:

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253



Waste material and description	Waste classification	Management Details
from concrete plant/equipment washing.		<ul style="list-style-type: none"> • Washing out of agitator trucks; • Yard wash down; • Wash down from slump stands; • Yard stormwater; and • Washing down of agitators. <p>The wash water system is designed using the CCA publication "First flush and water management systems: guide and principals" to ensure best practices are adopted. Figure 7-41 summarises the wash water management process so that it is recycled back into the concrete batching process.</p>
Slurry Water Mixed slurry/sludge collected from sediments and recovered from waste water storage systems.	Liquid waste	<p>Slurry water is stored for use in the production of concrete in stirred tanks. Periodically these tanks are cleaned out and the silt at the bottom of the tanks managed as solid washout. Slurry water is blended with dirty water (from the first flush system – see Section 7.6) to produce process water for reuse in concrete batching.</p>
Solid Wash Out Returned concrete that has been washed out and dried	General solid waste (non-putrescible)	<p>Solid wash out has the consistency of clay and is a mixture of aggregates and sand from the original concrete containing hydrated lime and other cementitious materials that cause alkalinity.</p> <p>Solid wash out does not require a licensed transporter and does not need to be tracked. However, it must be disposed of to a licensed facility. The solid wash out is stored under cover to prevent contamination of stormwater. The material is either reused in the concrete batching process or returned to a licenced quarry.</p>

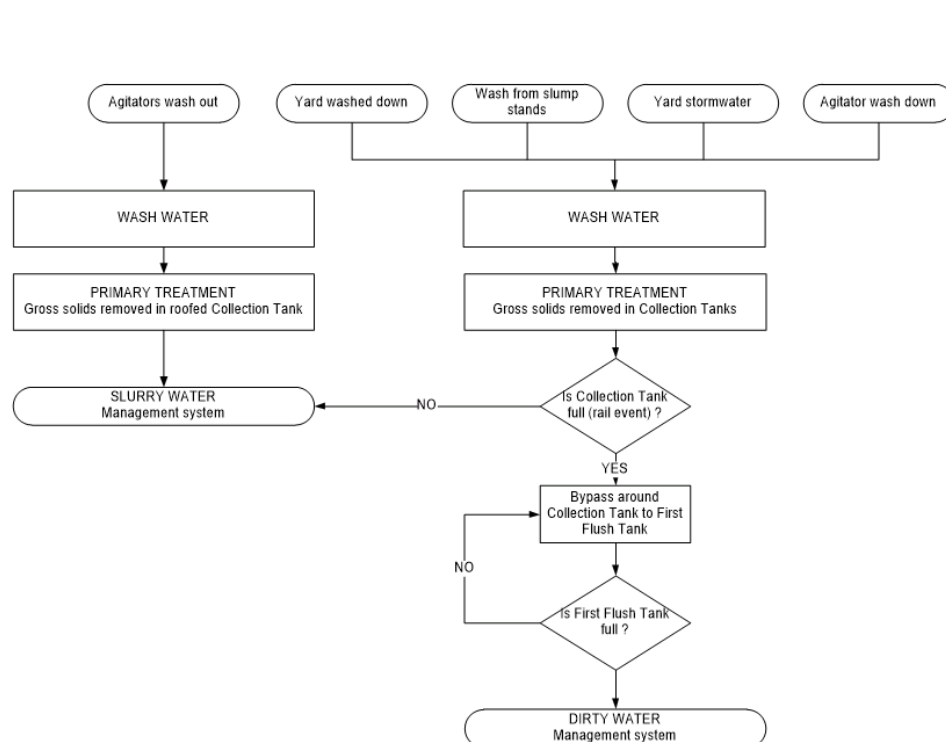


Figure 7-41 Wash water management

The Project would generate recyclables from the construction and operation of the facility. The closest licenced recycling facility is the Bingo Banksmeadow Recycling Centre, which is located immediately south of the Project Site. There are many licenced landfill sites within 10km of the Project Site, however it is expected during the construction and operation of the Project is to be managed onsite with recycling and rubbish bins with a licenced waste service provider.

7.13.3 Mitigation Measures

The mitigation and management measures in Table 7-57 are recommended to minimise potential waste impacts.

Table 7-57 Waste Mitigation Measures

Reference	Mitigation Measures
Construction Mitigation Measures	
WM1	<ul style="list-style-type: none"> Provision and signage of recycling and general waste bins be implemented to use by staff, contractors and visitors to the site.
WM2	<ul style="list-style-type: none"> Waste management strategies and mitigation measures contained in the CEMP would be communicated to all employees and contractors during site induction, prior to commencing works at the site.
WM3	<ul style="list-style-type: none"> Asbestos containing material in the existing stockpiles will be properly disposed of at a licenced facility in accordance with the SafeWork NSW Code of Practice, section 274 of the <i>Work Health and Safety Act</i> (The WHS Act).
WM4	<ul style="list-style-type: none"> Contingency procedures and remedial actions for the management of potentially

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255



Reference	Mitigation Measures
	contaminated material (e.g. asbestos) discovered during construction would be provided in an Unexpected Finds Protocol (Waste).
Operation Mitigation Measures	
WM5	<p>An Operational Waste Management Plan (OWMP) will be prepared and implemented to manage any construction waste. The OWMP will include but not be limited to:</p> <ul style="list-style-type: none"> • Measures to avoid and minimise waste associated with the project; • The procedure for assessing, classifying and storing waste in accordance with the EPA Waste Classification Guidelines (<i>EPA, 2014</i>) and management options; • Separate collection bins and storage area for the reuse, recycling and landfill of materials on-site; • Procedures for transport and disposal of waste including storage of waste which prevents dispersal due to weather conditions; • Waste and recycling bin storage area will be located in a easily accessible and safe location for collection; • Management of concrete liquid and solid waste streams; and • Roles and responsibilities of contractors and Holcim ensuring compliance with the waste management plan. • Monitoring, tracking, record keeping, including retainment of waste dockets, and reporting of waste requirements.



7.14 Cumulative Impacts

7.14.1 Introduction

Clause 228 of the *EP&A Regulation 2000* requires the consideration of any cumulative environmental effect with other existing or likely future activities in the context of existing and proposed developments that will occur within a surrounding location and during the construction or operation of the Project to ensure that potential impacts are not considered in isolation. Identifying potential cumulative impact assists in developing appropriate environmental management measures and provides a basis for coordinated planning and environmental monitoring. This section focuses on identifying cumulative impacts where these impacts could potentially be significant.

7.14.2 Existing Environment

The Project is located within the vicinity of commercial businesses within the SEPP (Three Ports) zone IN1-general industry. These surrounding industries include waste transfer and waste recovery facilities, chemical manufacturing and other commercial/industrial land-uses. The industry in this area produces existing noise, air emissions, increased traffic and other associated effects.

Assessment of the Project included identifying existing conditions for each aspect, described in detail in Section 7 of this EIS.

7.14.3 Impacts Assessment

Construction impacts

The construction stage of the Project has the potential to create temporary environmental impacts. During this stage of the Project it is expected the impacts of construction would exceed operational impacts, particularly for traffic, air quality and noise. However, as these potential impacts are temporary and it is expected these would lessen once Stage 3 of the Project commences.

Operation impacts

There is expected to potentially be ongoing impacts during operation, however these would be mitigated through the management measures listed in Section 7.14 of this EIS. Table 7-58 below details the potential cumulative impacts that could result from the Project.

Table 7-58 Potential Cumulative Impacts

Impact	Potential Cumulative Impact	Addressed in Section
Traffic and access	A TIA was prepared by Bitzios Consulting (refer Appendix G). Potential traffic and access impacts were assessed using existing baseline traffic data, prediction of traffic growth in the area (immediate locality and the background traffic data) and the impact of the increase of traffic for the Project. The findings from the report found that with the implementation of proposed parking mitigation measures (No Stopping designation) along Beauchamp Road and Perry Street, the impact of the Project would have no further impact on the traffic and access of the area.	Section 7.1
Noise and vibration	Mac Consulting prepared a NVIA (Appendix H). Based on the NVIA results, the Project would be compliant with the relevant construction, operational and road noise criteria. There would be no noise or vibration	Section 7.2

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257



Impact	Potential Cumulative Impact	Addressed in Section
	related issues which would prevent the approval of the project. It is unlikely the Project would result in significant cumulative impacts on noise and vibration.	
Biodiversity	The existing Project site is disturbed with a low biodiversity value. Commonwealth and NSW biodiversity searches concluded there were no threatened species, communities or populations located in the Project sites immediate area. Since the Project site existing land use is highly disturbed and value is low, it is unlikely for the Project would result in significant cumulative impacts on Commonwealth or NSW listed species, communities or populations. Therefore, the minimal impact would be on the removal of some scattered exotic and native vegetation which is not a cumulative impact.	Section 7.4
Indigenous heritage	The desktop searches assessed the existing environment and concluded it was unlikely that items of Indigenous significance would be located on the Project site, and there were no sites identified in the surrounding vicinity as significant to Indigenous heritage. The likelihood of relics and indigenous items is low due to previous clearing of the Project land. It is not expected the Project site would be a suitable site to discover indigenous heritage items.	Section 7.10
Historic heritage	The desktop assessment found two local heritage items under SEPP (Three Ports). The heritage items – “Orica Main Administration Building” and the “Mature Ficus” – are located approximately 60 metres to the north of the Project site. Although the heritage items are located nearby, construction and operation of the Project is unlikely to impact these heritage items or result in cumulative heritage impacts	Section 7.11
Soils, contamination and Geology	Mitigation measures such as sediment and stormwater capture and treatment controls would be part of the Project design and operation. Any contaminated soil on the site (i.e. asbestos) would be removed and disposed of appropriately in accordance with relevant guidelines and legislation. The planned sealed stormwater capture basin would assist in avoiding contamination and soil erosion impacts from the Project. It is unlikely the Project would result in significant cumulative impacts to soil or cumulative impacts due to contamination.	Section 7.4
Groundwater	The existing groundwater is contaminated with heavy metals, hydrocarbons and other chemicals from historic industrial uses including the Orica site north of the Project. The Project site would be primarily sealed over and It is unlikely the Project would result in significant cumulative impacts on groundwater.	Section 7.5
Surface water and stormwater drainage	The Project site is in a low flood risk area. The construction and operation of the Project would not require substantial filling or raising of the ground elevation, and is not expected to cause major issues regarding flooding on the surrounding area. It is unlikely for the Project site or surrounding area to significantly impact the surface water/ drainage of the area.	Section 7.6
Visual amenity	The cumulative impacts on visual amenity in the locality would be low as the surrounding land is zoned general industry under the SEPP (Three Ports) containing existing industry nearby. The visual character of the area is well-suited to industries that are distributed throughout the Banksmeadow area and the addition of the Project is not expected to	Section 7.7

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258



Impact	Potential Cumulative Impact	Addressed in Section
	cause cumulative visual amenity impacts.	
Air quality	Air quality within the locality of the Project site has been assessed by Todoroski Air Services. It is unlikely for the Project to contribute to significant air emissions or dust within the construction or operation stages that result in cumulative impacts. The construction, including excavation activities may cause some dust to form over the Project site. However, mitigation measures would be enforced to prevent air quality impacts during construction and operation.	Section 7.3
Waste	The waste during the construction and operation of the Project would be managed in accordance to the Protection of the Environment Operations (Waste) Regulation 2014. An integrated water and concrete washout system would be implemented for the Project and include facilities to capture, recycle and re-use as much water in the concrete batching process as possible. Whilst there would be some waste generated during construction and operation of the Project, it is not expected that significant cumulative waste impacts would be caused by the Project.	Section 7.13
Socio-economic, land use and Property	Banksmeadow and the surrounding suburbs of Botany, Hillsdale and Matraville are predominately general industrial and residential zoned. Due to the zoning of general industrial for the Project area, the Project is considered generally suitable to the socio-economics of the area. There would also be new temporary and permanent jobs created within the area that would contribute to the local economy.	Section 7.12
Hazards and Risk	The Project has the potential to generate emissions including CO ₂ , dust and other particulates without the correct mitigation measures in place. However, adequate mitigation measures will be implemented to prevent these incidents from occurring.	Section 7.8
General	Other cumulative impacts are unlikely to occur; however, mitigation measures have been added to manage the possibility of additional cumulative impacts occurring.	Section 7.14

7.14.4 Mitigation Measures

The potential cumulative impacts associated with the Project and other major developments would be further considered as the detailed design and detailed construction planning are developed. The Project would coordinate activities with the proponents of these other major proposals to minimise any potential cumulative impact.

In the event that these (or other) developments do occur concurrently with the Project, the potential for any such cumulative impacts would need to be considered and managed by the Construction Contractor once the timing of other developments become known. The CEMP would need to include a process to review and update mitigation measures as new work begins or if complaints are received.

The following mitigation and management measures are recommended to minimise potential cumulative impacts.

Table 7-59 Cumulative Impacts Mitigation Measures

Reference	Mitigation Measure
Construction	

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259



CU1	The CEMP would incorporate measures to manage cumulative construction impacts. The CEMP and relevant sub-plans would be reviewed and updated as required (such as when new work begins or if complaints are received) to incorporate potential cumulative impacts from surrounding development activities as they become known.
Operation	
CU2	The Traffic Management Plan will include coordination with Veolia regarding timing and numbers of vehicle movements using the access road to enter onto and exit from Beauchamp Road.



8. Management and Mitigation Measures

8.1 Introduction

Management and mitigation measures have been identified in this EIS to minimise adverse environmental, social and economic impacts that could potentially arise from the Project. These management and mitigation measures would be implemented during the construction and operation of the Project. The identified management and mitigation measures would be incorporated into contractual arrangements with future contractors for construction and operation of the Project.

The measures provided are proven and understood to manage construction risks associated with the proposed stages of the Project. Successful implementation would reduce the risks of construction and operational impact.

8.2 Consolidated Summary of Management and Mitigation Measures

Management and mitigation measures outlined in this document would be incorporated into the construction and operation of the Project. These management and mitigation measures would minimise any potential adverse impacts arising from the Project on the surrounding environment.

Traffic and Transport	
T1	<p>A Traffic management plan (TMP) for construction and operation will be developed in accordance with Roads and Maritime Services Guidelines and the Australian Standard AS1742.3. The plan will take into account staging of the Project and will include, at minimum:</p> <ul style="list-style-type: none"> • The designated routes of construction traffic to the site; • A map of the primary access routes highlighting critical locations; • Drivers Code of Conduct; • Carpooling/shuttle bus arrangements to minimise vehicle numbers during construction; • Scheduling of deliveries; • Community consultation requirements; • Any restrictions on traffic movements (such as residential areas, school pick-up and drop-off times); • Traffic controls (speed limits, signage, etc.); • A complaint handling procedure; and <p>An induction process for vehicle operators.</p>
T2	<p>An In-Vehicle Management System (IVMS) will be used to manage and track drivers. A GPS navigation system will be included to guide drivers to jobsites and ensure the established haul routes are being followed.</p>
T3	<p>All Project personnel will be provided training on the requirements of the TMP through site inductions, toolbox talks or specific training.</p>
T4	<p>The heavy vehicle route will be included within the Driver's Code of Conduct and will form part of the project inception meeting for the project for all staff and drivers.</p>
T5	<p>Traffic control will be provided in accordance with the approved construction TMP to manage traffic movements (vehicular, cycle and pedestrian) during construction and maintain the flow of traffic within the site and on surrounding public roads.</p>



T6	Traffic management controls will be communicated to appropriate stakeholders which will include the local community in the site vicinity via a letter box drop.
T7	Directional signage will be installed to direct construction traffic, and warn other motorists of construction traffic. This signage is positioned in accordance with the approved Traffic Control Plans.
T8	All employees, subcontractors and suppliers will comply with the speed limits within the worksite.
T9	The Proponent will consult with Roads and Maritime, Bayside Council and Randwick Council to progress, agree and implement parking changes as required on Beauchamp Road and Perry Street.
Noise and Vibration	
Construction	
N1	A Construction Noise Vibration Management Plan (NVMP) will be prepared by the Contractor as part of the CEMP. The construction NVMP will include consideration of: <ul style="list-style-type: none"> • Monitoring requirements (including surface water and groundwater monitoring); • Mitigation measures; and • Notification requirements.
N2	Construction hours will be undertaken during Interim Construction Noise Guideline (ICNG) standard hours only, unless as per an approved Out of Hours Works Procedure.
N3	Construction plant and equipment to be kept in good working order including implementing routine maintenance schedules.
N4	Regular "toolbox talks" on the requirement and management of noise and vibration generation during construction works.
N5	Where possible use localised mobile screens or construction hoarding around plant to act as barriers between construction works and receivers, particularly where equipment is near the site boundary and/or a residential receiver including areas in constant or regular use (eg unloading and laydown areas).
N6	Operate plant in a conservative manner (no over-revving), shutdown plant when not in use. and park/start at farthest point from relevant assessment locations.
N7	Select the quietest suitable machinery available for each activity.
N8	Avoid noisy plant/machinery working simultaneously where practicable.
N9	Minimise impact noise wherever possible.
N10	Use a broadband reverse alarm in lieu of the traditional hi frequency type reverse alarm.
N11	Place signage at the front entrance advising truck drivers of their requirement to minimise noise both on and off-site.
N12	Use project related community consultation forums to notify residences within close proximity of the site with project progress, proposed/upcoming potentially noise generating works, its duration and nature and complaint procedure.
N13	Review vibratory plant to be used on site and the minimum working distances to the nearest receivers.

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262



N14	Where minimum working distances are exceeded, vibration monitoring should be undertaken at the nearest effected receiver to ensure levels satisfy relevant structural and human response criteria.
N15	Where night works may be required, they are not to occur over more than two consecutive nights.
Operation	
N16	Undertake a detailed design assessment to determine the preferred noise barrier design options.
N17	Complete a one-off noise validation monitoring assessment to quantify emissions from site and to confirm emissions meet relevant criteria.
N18	Prepare an operational noise management protocol to minimise noise emissions and to respond to potential concerns from the community regarding project noise emissions.
N19	Operational plant and equipment will be kept in good working order including implementing routine maintenance schedules.
N20	Implement a site layout plan that minimises the requirement for truck and vehicle reversing.
N21	Develop a noise and vibration complaints handling process.
Air Quality	
AQ1	<p>Prepare and implement an Air Quality Management Plan (AQMP) for construction and operational stages of the Project. The AQMP will include measures to manage and monitor air emissions including dust and will include consideration of the following:</p> <ul style="list-style-type: none"> • Activities to be assessed during adverse weather conditions and modified as required (e.g. cease activity where reasonable levels of dust cannot be maintained using the available means). • Engines of on-site vehicles and plant switched off when not in use. • Vehicles and plant are to be fitted with pollution reduction devices where practicable. • Maintain and service vehicles according to manufacturer's specifications. • Overflow alarms and pressure control valves installed on silos. • Minimise area and amount of stockpiled material. • Water suppression on stockpiles and material storage areas if material found to be excessively dusty. • Reduce drop heights from loading and handling equipment where practical. • Design of the plant to include dust control measures such as: continuous dust extraction system at loading point, watering, enclosing aggregate transfer facilities etc. • Cement silos fitted with dust filters. • Sealed driving surfaces of the site to be cleaned regularly. • Apply site speed limits. • Cover vehicle loads when transporting material off- site. • Street cleaning to remove any material tracked onto public roads.



Soil, Geology and Contamination	
Construction	
S2	A soil and water management plan (SWMP) will be prepared as part of the CEMP in accordance with Managing Urban Stormwater Guidelines Volume 1, 4th Edition "the Blue Book" (Landcom, 2004) and Volume 2 (DECC, 2008).
S3	The SWMP will also include arrangements for managing wet weather events, including monitoring of potential high-risk events (such as storms) and specific controls and follow-up measures to be applied in the event of wet weather.
S4	An Unexpected Finds Protocol (UFP) will be developed to manage unexpected contamination, asbestos-containing materials and acid sulfate soils.
S5	Erosion and sediment control measures (in accordance with Managing Urban Stormwater Guidelines Volume 1, 4th Edition the "Blue Book" (Landcom, 2004)) will be prepared and implemented as part of the CEMP Erosion and sediment control measures will be implemented prior to commencement of construction and are not to be removed until the works are complete and disturbed areas are stabilised.
S6	A Spill Prevention and Response Procedure will be prepared and implemented to address accidental spills and leaks from machinery and vehicles.
S7	Signage and barriers will be installed to establish any known asbestos containing areas (e.g. SP01) so that workers are aware of their locations prior to and during removal.
S8	Water carts will be used as necessary to minimise dust generation.
S9	Prior to any off-site disposal of spoil generated during construction, the spoil will be waste classified in accordance with NSW EPA (2014) Waste Classification Guidelines.
Operational	
S10	An Operational Environmental Management Plan will be prepared and implemented which includes spill response measures and dust control measures.
S11	A Health and Safety (H&S) plan will be developed, including the requirements for contaminated groundwater management to minimize occupational health risk.
Groundwater	
Construction	
GW1	Groundwater interception and dewatering will be avoided during construction through a detailed design process that emphasises shallow excavation and use of driven piles.
GW2	A Health and Safety (H&S) plan would be developed that includes a procedure for contaminated groundwater management and testing to minimize occupational health risk.
Operation	
GW3	The sedimentation basin will be designed and constructed as a sealed basin to prevent inflows and mixture of groundwater with stormwater runoff water.
GW4	As the Project is within the water extraction restricted Area 1, extraction of groundwater is only allowed for remediation, temporary construction dewatering, testing or monitoring purposes or under the authority of a water access licence specified in the

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264



	order, and the water is 'fit for purpose' as defined in the Temporary Water Restrictions Order for the Botany Sands Groundwater Source issued in February 2018.
Surface Water and Hydrology	
Construction	
SW1	An Erosion and Sediment Control Plan would be prepared and implemented in accordance with Managing Urban Stormwater: soils and construction 4th Edition, (Landcom, 2004), aka the 'Blue Book'.
Operation	
SW2	A water collection, recycling and reuse system will be designed and implemented to enable the reuse of process and wash water.
SW3	Detailed design development of the detention basin will include: <ul style="list-style-type: none"> stormwater harvesting and reuse system water monitoring program asset management plan to maintain the detention basin.
SW4	The detention basin will be monitored regularly and treated if required (for example, dosed with a flocculating agent) to achieve water quality objectives prior to discharge.
SW5	Due to the presence of groundwater contamination, the detention basin would be suitably lined to prevent contamination of outflows and inflows.
Visual Amenity	
Construction	
V1	During construction, reduce dust impacts by not undertaking earth works on windy days, use of dust mitigation measures and covering exposed earth as soon as possible.
V2	Rehabilitate disturbed areas as soon as possible.
V3	Utilise dust mitigation measures during earthworks to prevent dust plumes from forming.
Operation	
V4	A landscape plan will be completed as part of Stage 2 design documentation.
V5	External walls and roofing materials of proposed buildings to be of a non-reflective material, such as brick, concrete block, rendered concrete or masonry, metal or fibre cement cladding systems, or pre-coloured metal sheeting.
V6	The colour of the external walls and roofing to be neutral or recessive (i.e. colours that do not have a high contrast), to reduce visual dominance.
V7	Create an attractive street entrance to the Project including: <ul style="list-style-type: none"> Using black mesh fencing or black palisade fencing (black blends into surroundings) as security fencing in visually prominent areas such as along the Beauchamp Road boundary; and Limit entrance signage in terms of size and garish colours and rationalise to minimise number of signs.
V8	Plant trees near the entrance and within the light vehicle car park for general amenity

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265



	and shade and along the boundary with Beauchamp Road for screening
V9	Limit off-site lighting impacts associated with the Project to comply with Australian Standard AS4282 (INT) 1995 - Control of Obtrusive Effects of Outdoor Lighting
Hazards and Risk	
Construction	
HR1	Chemicals should be stored as per their MSDS precautions and in separate bunded areas.
HR2	The risk register developed as part of the RAE will be reviewed periodically and maintained as a live document to monitor progress of risk control.
Operational	
HR3	The Operational Environmental Management Plan (OEMP) would be required to provide procedures for the management of solids, particulates and liquids.
HR4	An Emergency Response Plan (ERP) will be prepared in consideration of the Emergency Response Plan developed for the Botany Industrial Precinct (BIP) and potential incidents in other areas of the BIP. The ERP will also include a methodology to engage appropriately with the community
Biodiversity	
Construction	
B1	Erosion and sedimentation control devices would be installed in accordance with the CEMP.
B2	Due to the low biodiversity values of the site, it would not be expected to be a habitat for fauna, however, any injured fauna would be captured where possible and taken to a local wildlife carer.
B3	Declared noxious weeds are to be managed according to requirements under the Noxious Weeds Act 1993.
B4	No exotic grasses or other plants with weed potential should be introduced to the site.
B5	Construction plant and equipment would be cleaned and washed prior to entering and leaving the Project site.
Operational	
B6	A Landscape Concept Plan would be prepared, showing landscape areas, planting zones, and an indicative landscaping plant species list. In accordance with the Botany Bay DCP, the nominated plant species for the landscaping would largely be of native, locally indigenous species.
B7	The landscaped zone on the northern boundary of the Project would preference species that would be the most suitable to capture pollutants including dust, emissions and particulates from aggregate transport from infrastructure to truck and truck movements.
Indigenous Heritage	
AB1	An Unexpected Finds Protocol which addresses unexpected Aboriginal heritage finds will be included in the CEMP to be completed by the construction contractor.

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266



AB2	If suspected Aboriginal objects, such as stone artefacts are identified during works, works must cease within 10m of the affected area and an archaeologist called in to assess the finds. If the finds are found to be Aboriginal objects, the OEH must be notified under section 89A of the NPW Act. Appropriate management or avoidance should be sought if Aboriginal objects are to be moved or harmed.
AB3	In the extremely unlikely event that human remains are found, works should immediately cease and the NSW Police are to be contacted. If the remains are suspected to be Aboriginal, the OEH may also be contacted at this time to assist in determining appropriate management.
Historic Heritage	
HH1	An Unexpected Finds Protocol (Heritage) which addresses unexpected historic heritage finds will be included in the Construction Environmental Management Plan to be completed by the construction contractor.
HH2	Should any unexpected historical heritage archaeological items be discovered during construction, work will cease in the vicinity of the find and a qualified heritage consultant will have to be consulted. Work will be able to recommence in the area of the find on the advice of the qualified heritage consultant.
HH3	The details of the location of the two heritage items near the construction compound parking area on Orica land will be included in the Traffic Management Plan for the Project.
Socio-economy, land use and property	
Construction	
SE1	Community consultation to be undertaken with stakeholders to inform the public of the upcoming works and allow them to comment on the Project.
SE2	Employment opportunities for local sub-contractors should be maximised where possible.
SE3	A complaint handling procedure and register will be implemented to assist in recording and managing potential conflict with the local community during operations.
SE3	A Construction Environmental Management Plan (CEMP) will be developed and implemented for the project including a 24-hour contact telephone number and a communications page on the Holcim website.
Operational	
S4	An operational environmental management plan (OEMP) will be provided to staff, contractors, subconsultants and stakeholders of the Project/ This OEMP would provide a number for a 24-hour contact telephone number and a communications page on the Holcim website.
S6	A community and stakeholder communications register will be maintained throughout the operation of the Project site.
S7	A complaint handling procedure and register would be implemented to minimise potential impacts on the local community during the construction and operation phases of the Proposal.
Waste	

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267



Construction	
WM1	Provision and signage of recycling and general waste bins be implemented to use by staff, contractors and visitors to the site.
WM2	Waste management strategies and mitigation measures contained in the CEMP would be communicated to all employees and contractors during site induction, prior to commencing works at the site.
WM3	Asbestos containing material in the existing stockpiles will be properly disposed of at a licenced facility in accordance with the SafeWork NSW Code of Practice, section 274 of the <i>Work Health and Safety Act</i> (The WHS Act).
WM4	Contingency procedures and remedial actions for the management of potentially contaminated material (e.g. asbestos) discovered during construction would be provided in an Unexpected Finds Protocol (Waste).
Operational	
WM5	<p>An Operational Waste Management Plan (OWMP) will be prepared and implemented to manage any construction waste. The OWMP will include but not be limited to:</p> <ul style="list-style-type: none"> • Measures to avoid and minimise waste associated with the project; • The procedure for assessing, classifying and storing waste in accordance with the EPA Waste Classification Guidelines (<i>EPA, 2014</i>) and management options; • Separate collection bins and storage area for the reuse, recycling and landfill of materials on-site; • Procedures for transport and disposal of waste including storage of waste which prevents dispersal due to weather conditions; • Waste and recycling bin storage area will be located in a easily accessible and safe location for collection; • Management of concrete liquid and solid waste streams; and • Roles and responsibilities of contractors and Holcim ensuring compliance with the waste management plan. <p>Monitoring, tracking, record keeping, including retainment of waste dockets, and reporting of waste requirements.</p>
Cumulative Impacts	
Construction	
CU1	The CEMP would incorporate measures to manage cumulative construction impacts. The CEMP and relevant sub-plans would be reviewed and updated as required (such as when new work begins or if complaints are received) to incorporate potential cumulative impacts from surrounding development activities as they become known.
Operational	
CU2	The Traffic Management Plan will include coordination with Veolia regarding timing and numbers of vehicle movements using the access road to enter onto and exit from Beauchamp Road.



9. Conclusion

This chapter provides the justification for the Project taking into account its biophysical, social and economic impacts, the suitability of the Site and whether or not the Project is in the public interest. The Project is also considered in the context of the objectives of the EP&A Act, including the principals of ecologically sustainable development (ESD) as defined in Schedule 2 of the EP&A Regulation.

9.1 Benefits of the proposal

Construction and operation of the Project would create new full-time, part-time and casual jobs, which provides economic benefits for the area. The Project Site is well positioned to contribute, and support infrastructure and development projects through the expanding Sydney area such as Westconnex, the Sydney Light Rail and the Sydney Metro projects.

The necessity of concrete to be delivered within the fast-growing CBD, eastern, inner-western and northern suburbs is imperative to the socio-economics of Sydney area development. The location of the asset in Banksmeadow, will greatly reduce logistics-based cost components and has the potential to positively influence the financial and delivery outcomes of these important public and private works.

In addition, the following benefits would be realised:

- 500,000 tonnes of concrete grade aggregate from Holcim's Lynwood Quarry would be transported to the Banksmeadow Project Site via rail and removed via the Hume Highway, the M5 and its associated tunnel network. The Project equates to removing between 30,000 to 40,000 truck movements from approximately 160km of NSW roads;
- Freighting aggregates directly from Lynwood quarry to Banksmeadow will remove truck movements from approximately 60km of Sydney's metro road network;
- Removal of vehicle movements will assist with the reduction of congestion and pollution and improve NSW road safety;
- The Project Site is zoned appropriately as IN1 General Industrial, wherein a rail freight terminal and concrete plant are permitted with consent;
- The Project Site is situated in-between Orica and Veolia which both facilities already operate 24/7;
- The Project Site would provide an additional availability of a reliable and proximate supply of concrete and aggregates to Roads and Maritime Services specification (30 mins from vehicle loading to concrete placing), Westconnex, Sydney Light Rail, Sydney Metro and associated private residential, commercial and industrial developments; and
- Upon completion, the project would provide an additional 45 - 60 jobs and numerous support roles for associated contractors.

9.2 Ecologically sustainable development

Clause 7(1)(f) of the EP&A Regulation requires an EIS to provide justification for a development with specific reference to the principles of ecologically sustainable development (ESD) as set out in the Regulation. This is provided below.

9.2.1 The precautionary principle

This principle states '*if there are threats of serious or irreversible damage, lack of scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation*'.

This EIS has been prepared utilising the precautionary principle. An analysis of alternative options was undertaken to weigh the impacts of each option and reduce the risk of serious and irreversible impacts on the environment.



A range of specialist studies were also undertaken as part of the EIS to assess key issues in detail, provide impartial specialist input to assist in the development process, and identify appropriate mitigation and management strategies.

9.2.2 Inter-generational equity

This principle states, *'the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations'*.

The Project would result in amenity impacts however would not result in any impacts that are likely to adversely impact on the health, diversity or productivity of the environment for future generations. The Project would benefit future generations by improving access to health facilities for future generations.

9.2.3 Conservation of biological diversity and ecological integrity

This principle states the *'diversity of genes, species, populations and communities, as well as the ecosystems and habitats to which they belong, must be maintained and improved to ensure their survival'*.

The environment in which the proposal would be located is predominantly cleared due to past operations. An assessment of the existing local environment was carried out to identify and manage any potential impacts of the proposal on local biodiversity.

The Project would not have a significant impact on biological diversity and ecological integrity. A biodiversity assessment and appropriate site-specific safeguards are provided in Section 7.9.

9.2.4 Improved valuation, pricing and incentive mechanisms

This principle requires *'costs to the environment should be factored into the economic costs of a project'*.

The environmental consequences of the Project have been assessed in this EIS and mitigation measures identified for factors with potential for adverse impact. Implementing the mitigation measures would impose an economic cost on the capital and operating costs of the Project. This signifies that environmental resources have been given appropriate valuation.

The Project has been designed with an objective of minimising potential impacts on the surrounding environment. This indicates that the concept design for the Project has been developed with an environmental objective in mind.



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271



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Appendix A

Secretary's Environmental Assessment Requirements (SEARs)

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Appendix B

Summary Table of Key (SEARs)

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Appendix C

Concept Design



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Appendix D

Project Stages Site Plans and Survey

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Appendix E

Community Engagement Flyers

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Appendix F

Community and Stakeholder Engagement Feedback

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Appendix G

Traffic Impact Assessment

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Appendix H

Noise and Vibration Assessment

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Appendix I

Air Quality Report

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Appendix J

Geotechnical Report



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Appendix K

Preliminary Site Investigation and Risk Assessment

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Appendix L

Detailed Site Investigation

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Appendix M

Groundwater Impact Assessment

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Appendix N

Preliminary Stormwater Plan

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Appendix O

Water Reuse and Recycling Plan

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Appendix P

Visual Impact Assessment

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Appendix Q

Risk Assessment and Evaluation Report

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Appendix R

Transport Risk Assessment Report

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Appendix S

Outline Construction methodology

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