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## **Bayside Planning Panel**

**24/10/2017**

Item No	5.3
Application Type	Development Application
Application Number	DA-1997/49/F
Lodgement Date	3 August 2017
Property	<b>339-377 Forest Road, Bexley</b>
Owner	Coptic Orthodox Church (NSW) Property Trust
Applicant	Mr Talaat Nasralla
Proposal	Proposal to remove ten (10) trees within the site
No. of Submissions	Two(2) letters of objection and one(1) petition (57 signatures)
Cost of Development	N/A – S96
Report by	Helen Lai, Student Town Planner Marta Gonzalez-Valdes, Coordinator Major Assessments

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## **Officer Recommendation**

- 1 That this Section 96(1A) application, DA-1997/49/F, for modifications to the approved development at St Mary & St Mina's Coptic Orthodox Cathedral and College, 339-377 Forest Road, Bexley, be APPROVED for the removal of Trees No. 3 and 4 within the site only pursuant to Section 96(1A) of the Environmental Planning and Assessment Act 1979 and subject to the modifications to conditions of consent attached to this report.
  - 2 That the objectors be advised of the Bayside Planning Panel's decision.
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## **Attachments**

- 1 Section 96(1)(A) Planning Report
  - 2 Visual Tree Assessment and Risk Assessment Report
  - 3 Site Plan
  - 4 Landscape Plan
  - 5 Statement of Environmental Effects & Heritage Report
  - 6 Amended Notice of Determination
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## Location Plan



# BAYSIDE COUNCIL

## Section 96(1A) – Delegated Report

### 1. APPLICATION DETAILS

Application Number:	DA-1997/49/F
Date of Receipt:	3 August 2017
Property:	339-377 Forest Road, BEXLEY NSW 2207 Lot 11 DP 857373
Owner:	Coptic Orthodox Church (NSW) Property Trust
Applicant:	Mr T Nasralla
Proposal:	To remove ten (10) trees within the site
Recommendation:	PARTIAL APPROVAL
No. of submissions:	Two(2) letters and one(1) petition containing fifty-seven(57) signatures
Author:	Helen Lai – Student Town Planner Marta M Gonzalez-Valdes – Coordinator Development Assessment
Date of Report:	16 October 2017

### 2. SUMMARY OF ISSUES

- The proposal seeks consent for the removal of ten(10) trees as shown in the submitted Landscape Plan. However, the Tree Risk Assessment Report submitted by the applicant only referred to four(4) trees. The applicant advised that the application would only pursue the removal of four(4) trees as recommended in the Tree Risk Assessment Report. Council's Tree Management Officer has reviewed the information and concurs with the recommendation to remove Trees No. 3 and 4 (Southern Blue Gum and Camphor Laurel) subject to replacement trees being planted on site. However, recommends the retention of Trees 1 and 2 (Southern Blue Gums) as well as remedial pruning of those trees.
- The site is identified as Heritage Item 131 on Schedule 5 of Rockdale LEP2011 – Original Bexley School Buildings. Council's heritage advisor supports the proposal.

### 3. RECOMMENDATION

That this Section 96(1A) application, DA-1997/49/F, for modifications to the approved development at St Mary & St Mina's Coptic Orthodox Cathedral and College, 339-377 Forest Road, Bexley, be **APPROVED** for the removal of Trees No. 3 and 4 within the site only pursuant to Section 96(1A) of the Environmental Planning and Assessment Act 1979 and subject to the modifications to conditions of consent attached to this report.

That the objectors be advised of the Bayside Planning Panel decision.

#### 4. BACKGROUND

The following development applications are registered on this property:

- DA-1997/49 for proposed church and associated uses (residence, community hall, child care and primary school), approved on 16-Nov-1997.
- BA-1998/334 for church community hall Class 4, 9b, approved on 28-Sep-1998.
- DA-1997/49/A for s96 modification to modify consent to allow staged occupation of the church, school and facilities, approved on 10-Dec-1998.
- DA-2002/1208 for installation of new shed to be used for storage and bbq area, approved on 28-Oct-2002.
- DA-2004/1209 for s96 application addition of awnings to storage shed, approved on 10-Jun-2005.
- DA-2005/570 for proposed pergola, shared playground/car parking area and galvanised protective fence, approved on 26-Jun-2006.
- DA-1997/49/B for amendment to condition 8, approved on 07-Jul-2006.
- DA-2007/135 for erection of signage for existing church/school, approved on 25-Jan-2007.
- DA-1997/49/C for deletion of child care & priest residence from DA consent, approved on 07-Mar-2008.
- DA-2009/393 for erection of awning to existing shed located at Forest Road frontage, approved on 15-Jul-2009.
- PDA-2010/11 for alterations and additions to existing primary school, approved on 25-Sep-2009.
- DA-1997/49/D for s96 application to remove eight existing trees located along the northern boundary, partially approved on 06-Jun-2012.
- DA-1997/49/E for modification to utilise part of the building for Sunday school and vocational care centre for a maximum of 20 children at any time, withdrawn on 02-Dec-2013.
- DA-2015/90 for addition of a pergola between the community hall and school building within the St. Mary and St. Mina Coptic Orthodox, approved on 21-Oct-2014.

#### 5. PROPOSAL

Council is in receipt of a development application, DA-1997/49/F, at 339-377 Forest Road, Bexley on the site known as St. Mary and St. Mina Coptic Church Orthodox College and Cathedral. The proposal seeks the removal of ten(10) trees within the site. The Tree Risk Assessment Report submitted with the application, dated 29 May 2016, provided justification for the removal of the four(4) trees only as follows:

- Tree 1 – Southern Blue Gum – Located on the northern side of Bayview Street boundary
- Tree 2 – Southern Blue Gum – Located within the centre of the boundary with Bayview Street
- Tree 3 – Southern Blue Gum – Located next to Tree 3 in Bayview Street boundary
- Tree 4 - Camphor Laurel – Located within the centre of the Broadford Street boundary

The applicant was requested to provide additional information in support of the removal of Trees No. 5-10 as identified in the Landscape Plan, however, the applicant advised they did not want to pursue removal of those trees but only the ones identified in the Tree Risk Assessment Report. Thus, in the absence of supporting evidence provided to Council only Trees No. 1-4 as indicated in the Landscape Plan and Tree Risk Assessment Report have been considered in the assessment of this application.

The main reasons for seeking the removal of the trees as stated by the applicant are:



- *The works will ensure that structures are not adversely impacted by the existing tree roots. The structural integrity of the structures is maintained.*
- *The safety of children will be enhanced.*
- *There are no adverse impacts to the heritage item on the site, given the distance from the trees to the heritage item.*
- *Neighbours amenity is not adversely affected in terms of noise, views or outlook.*

In addition, the applicant argues the trees are not significant and their removal will not create significant environmental impacts.

Following the assessment of the information submitted and for the reasons explained in this report only the removal of trees 3 and 4 is supported. The approved modification involves the inclusion of the additional conditions as follows:

*85B. Notwithstanding condition 85A above, the Southern Blue Gum tree (Tree No. 3), located adjacent to Bayview Street and the Camphor Laurel tree (Tree No. 4) located adjacent to Broadford Street as identified in the Tree Risk Assessment Report dated 29 May 2016 and prepared by Urban Tree Management may be removed. During the removal of Tree No. 3 all care is to be taken to prevent any damage to Tree No. 2. No other site trees within the site may be removed. At least two(2) x 75 litre locally indigenous replacement trees shall be planted within the site on the Bayview Street and Forest Road boundaries following removal of the trees.*

*85C. The Southern Blue Gum trees identified as Trees No. 1 and 2 in the Tree Risk Assessment Report dated 29 May 2016 and prepared by Urban Tree Management located adjacent to Bayview Street shall be retained.*

*Within three (3) months of the issuing of this consent, remedial pruning of Trees No. 1 and 2 shall be undertaken to remove deadwood and branch stubs. The pruning shall be carried out by an experienced tree contractor with minimum AQF Level 3 qualifications in Arboriculture and be a Registered Practicing Arborist member of Arboriculture Australia or similar Arboriculture organisation. Options are to be explored for alternative fence treatment in lieu of brickwork to replace the damaged brick fence. The replacement fence materials must not damage the trees or their roots. Built up soil and debris behind the existing brickwork adjacent to the two trees shall be removed by hand to relieve pressure on the replacement fence.*

## 6. SITE LOCATION AND CONTEXT

The subject site is legally described as Lot 11 DP 857373 and is known as 339-377 Forest Road, Bexley or St. Mary and St. Mina Coptic Church Orthodox College and Cathedral. The site is an irregular trapezoidal shape with a boundary length of 114.3m along the east boundary, 163m along the south-west boundary, and 75.8m along the north-east boundary and 68.3m along the north-west boundary. The total site area is approximately 8366sq.m. The topography of the site is relatively flat.

The site contains an existing school and cathedral that is located west of Forest Road between Bayview Street and Broadford Street. Adjoining developments includes a petrol depot station located opposite the site on Forest Road and a mix of one to two storey dwellings located within close proximity to the subject site. Additionally, a 5-6 storey apartment is located further along Forest Road north-east of the site.

The site contains several significant trees. The site is identified as a heritage item on Schedule 5 of the Rockdale LEP2011: Item 131 – Original Bexley School Buildings at 339-377 Forest Road, Bexley.

## **7. REFERRALS**

### **7.1 INTERNAL**

The proposal has been referred to the following internal authorities:

- Heritage Advisor
- Tree Management Officer

Refer to comments provided by the Tree Management Officer under section 8.2.1.3. - Clause 5.9 Preservation of Trees or Vegetation and by the Heritage Advisor under section 8.2.1.3 – Clause 4.1.2 Heritage Conservation.

## **8. PLANNING CONSIDERATION**

### **8.1 S96(1A) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT**

Section 96(1A) of the Environmental Planning & Assessment Act 1979 states:

A consent authority may, on application being made by the applicant or any other person entitled to act on a consent granted by the consent authority and subject to and in accordance with the regulations, modify a development consent if:

- a) It is satisfied that the proposed modification is of minimal environmental impact, and

Comment: The proposal have been assessed by Council's Heritage Advisor and Tree Management Officer, who have considered the environmental impacts from the removal of Trees No. 1-4. Council's Heritage Advisor has supported the removal of the four(4) trees from a heritage perspective. However, in consideration of the comments provided by Council's Tree Management Officer, only the removal of Trees No. 3 and 4 and remedial pruning for Trees No. 1 and 2 is supported. In this regard, the proposed modifications are of minimal environmental impact.

- b) It is satisfied that the development to which the consent as modified relates is substantially the same development as the development for which consent was originally granted and before that consent as originally granted was modified (if at all), and

Comment: The application is only for modifications to the development consent to allow the removal of trees. The proposal remains as previously approved, namely a place of public worship and associated uses (community hall and educational establishment). The proposal will not change the land use or substantially alter the nature of the development. As such, it is considered substantially the same development.

- c) it has notified the application in accordance with:
- (i) the regulations, if the regulations so require, or
  - (ii) a development control plan, if the consent authority is a council that has made a development control plan that requires the notification or advertising of applications for modification of a development consent, and

Comment: The application has been notified in accordance with the provisions of Council's RDCP2011.

- d) It has considered any submissions made concerning the proposed modification within any period prescribed by the regulations or provided by the development control plan, as the case may be.

Comment: Two(2) letters of objections and one(1) petition have been received.

## **8.2 S96(3) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT**

S96(3) of the Environmental Planning and Assessment Act 1979 states:

*In determining an application for modification of a consent under this section, the consent authority must take into consideration such of the matters referred to in section 79C(1) as are of relevance to the development the subject of the application.*

An assessment of the application has been carried out under the provisions of Section 79(C) of the Environmental Planning and Assessment Act, 1979. The matters of relevance to this application have been considered. The following is an assessment of the proposed development under the provisions of Section 79C (1) of the Environmental and Planning Assessment Act.

### **8.2.1 Provisions of Environmental Planning Instruments (S79C(1)(a)(i))**

#### **State Environmental Planning Policy (Infrastructure) 2007 Clause 101 – Development with frontage to classified road**

The proposed development is located on land with a frontage to a classified road, i.e. Forest Road. In this regard, Clause 101- Development with frontage to a classified road, of the SEPP must be considered before consent can be granted.

The development involves access to and from the site from Forest Road. A secondary access also exists at the rear/side of the site from Broadford Street and Bayview Street.

The proposal does not involve any changes to the existing vehicular access to the site and is not for a traffic generating development. As such, the application has been considered in respect to the SEPP and no additional conditions of development consent are required to be imposed in this regard.

#### **Rockdale Local Environmental Plan 2011 (RLEP 2011)**

<b>Relevant Clauses</b>	<b>Compliance with objectives</b>	<b>Compliance with standard/provision</b>
8.2.1.1 Zone R2 Low Density Residential	Yes	Yes – see discussion
8.2.1.2 Clause 5.9 - Preservation of trees or vegetation	Yes	Yes – see discussion
8.2.1.3 Clause 4.1.2 - Heritage Conservation	Yes	Yes – see discussion
8.2.1.4 Acid Sulfate Soil – Class 5	Yes	Yes – see discussion
8.2.1.5 Earthworks	Yes	Yes – see discussion
8.2.1.6 Stormwater	Yes	Yes – see discussion
8.2.1.7 Essential Services	Yes	Yes – see discussion
8.2.1.8 Schedule 5 Environmental Heritage (Clause 5.10)	Yes	Yes

#### 8.2.1.1 Zone R2 Low Density Residential

The subject site is zoned R2 – Low Density Residential Zone under the provisions of Rockdale Local Environmental Plan 2011 (RLEP2011). The proposal as previously approved is defined as a place of public worship and educational establishment, which constitutes a permissible development only with development consent. The proposed removal of trees is ancillary to the permissible uses within the site.

The objectives of the zone are:

- To provide for the housing needs of the community with 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 ensure that land uses are carried out in a context and setting that minimises any impact on the character and amenity of the area.

The trees proposed to be removed are a significant feature of the streetscape and the amenity of the area. Therefore the removal of the four trees is not supported as it does not meet objectives 3 above.

It is recommended that only Trees 3 and 4 are removed subject to planting of two (2) x 75 litre locally indigenous replacement trees on site along the boundaries of Bayview Street and Forest Road.

Subject to the above, the proposal is considered to be consistent with the objectives of the zone as the streetscape and amenity of the area will not be unreasonably impacted.

#### 8.2.1.2 Clause 5.9 - Preservation of trees or vegetation

The site contains trees that are subject to approval by Council under clause 5.9 of RLEP 2011. In accordance to the objectives of this zone, a person must not ringbark, cut down, top, lop, remove, injure or wilfully destroy any tree or other vegetation to which any such development control plan applies without the authority conferred by:

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

The objective of this clause is to preserve the amenity of the area through the preservation of trees and other vegetation.

The applicant sought approval for the removal of ten(10) trees, however, the Tree Risk Assessment Report addresses only Trees No. 1-4. Council's Tree Management Officer is unable to justify the proposed removal of Trees No. 5-10 due to the absence of supporting evidence provided to Council.

A Tree Risk Assessment Report prepared by a qualified Arborist has recommended the removal of Trees No. 1-4 to be replaced with suitable new plantings. However, following the site meeting with the Consultant Arborist engaged by the applicant, Council's Tree Management Officer has recommended the removal of Trees No. 3 and 4 only. Tree 3 identified as the Southern Blue Gum (*Eucalyptus globulus*) located adjacent to Bayview Street is in fairly poor condition with borer damage and a large cavity at 6 metres from the ground, which compromises the structural integrity of the tree. Tree 4 identified as the Camphor Laurel (*Cinnamom camphora*) located adjacent to Broadford Street is also supported for removal as the tree is causing damage to adjacent structures and far from fully grown.

Therefore, Trees No. 3 and 4 may be removed. No other site trees within the site may be removed. At least two (2) x 75 litre locally indigenous replacement trees shall be planted within the site along Bayview Street and Forest Road boundaries.

In regard to the retention of Trees 1 and 2, Council's tree management officer states:

"Trees 1 and 2 are significant elements of considerable age in the local landscape which contribute to the amenity of the area as a whole and to the heritage nature of the original school buildings on site. A visual tree inspection undertaken from ground level has revealed no obvious evidence of defects which cannot be managed with appropriate and regular pruning and maintenance"

To ensure the protection and longevity of Trees 1 and 2, a condition is included in the draft Notice of Determination regarding remedial pruning of the trees to remove the deadwood and branch stubs. All work is to be carried out by a contractor with minimum AQF Level 3 qualifications in Arboriculture and be a Registered Practising Arborist member of Arboriculture Australia or similar Arboriculture organisation. Options are to be explored for alternative fence treatment in lieu of brickwork to replace the damaged brick fence. The replacement fence material must not damage the trees or their roots. Built up soil and debris behind the existing brickwork adjacent to the two trees should be removed by hand to relieve pressure on the replacement fence. This is to be carried out within three months of approval.

Subject to compliance with the above Council is satisfied that the proposal is consistent with the objectives of this clause.

#### *8.2.1.3 Clause 4.1.2 - Heritage Conservation*

The site is listed as a heritage item on Schedule 5 of Rockdale LEP2011: Item 131 - Original Bexley School Buildings at 339-377 Forest Road, Bexley.

The applicant has provided justification from a heritage perspective for the removal of the trees.

Council's Heritage Advisor has assessed the proposal and provided the following Statement of Significance and physical description of the heritage item:

*"This school is significant as one of a number of schools established in the St. George Area, during the late nineteenth, early twentieth century. It is aesthetically significant as a prominent building on a bend in Forest Road. (State Heritage Inventory).*

*The school comprises the original single storey Victorian style school and a later two storey Federation style building. The Victorian block is brick construction with gable roof clad with corrugated iron. The ends of the building have elaborate groups of three windows with sandstone sills, heads and decorative medallions. The ends of the barge boards are decorated. The Federation style block is red brick construction on the ground floor contrasting with rough cast stucco on the first floor. Roof cladding is corrugated iron. The whole of the Victorian building which was originally face brick has been painted to match the rest of the buildings."*

*The statement of significance and physical description refer to the school buildings and the historic use of the school in the 19<sup>th</sup> and early 20<sup>th</sup> centuries.*

*The trees proposed to be removed are 3 mature Eucalyptus globulus (Southern Blue Gums) and one mature Cinnamomum camphora (Camphor Laurel). The Eucalyptus globulus is a fast growing large tree that can grow up to 8 metres in less than 3 years. In this case, very large trees can be over 200 years old. The ones in Bayview Street were mature in 1943 when they were captured on an aerial photograph. Whilst it is possible the trees were in existence when the school was built it is unlikely they were a planting that was related to the historical development of the school. For this reason they*

*do not form part of the heritage significance of the property. The Camphor Laurel is a much later planting and does not appear on the 1943 aerial photo. This tree is therefore not considered to have any historical value in relation to the school.”*

Therefore, Council’s Heritage Advisor has advised there are no heritage constraints to the removal of the four trees and thus, supports the proposal.

#### **8.2.1.4 Acid Sulfate Soil – Class 5**

Acid Sulfate Soils (ASS) – Class 5 affects the property. However, development consent is not required as the site is not within 500 metres of adjacent Class 1, 2, 3 or 4 which is below 5 AHD.

#### **8.2.1.5 Earthworks**

Earthworks including minor excavation may be required on site for the removal of Trees No. 3 and 4 as recommended by the Tree Management Officer. The objectives and requirements of Clause 6.2 of RLEP 2011 have been considered in the assessment of this application. It is considered that the proposed earthworks and excavation will not have a detrimental impact on environmental functions and processes, neighbouring uses, cultural or heritage items or features of the surrounding land.

#### **8.2.1.6 Stormwater**

There are no changes proposed to the previously approved stormwater system.

#### **8.2.1.7 Essential Services**

Services will generally be available on the site and there are no changes proposed.

### **8.2.2 Provisions of any proposed instrument that is or has been the subject of public consultation under this Act and that has been notified to the consent authority (S.79C(1)(a)(ii))**

There are no Draft Environmental Planning Instruments that apply to this proposal.

### **8.2.3 Provisions of Development Control Plans (S.79C(1)(a)(iii))**

#### **Development Control Plan 2011**

The application is subject to Rockdale DCP 2011. A compliance table for the proposed development is provided below:

Relevant Clauses	Compliance with objectives	Compliance with standard/provision
8.2.3.1 Views and Vista	Yes	Yes – see discussion
8.2.3.2 Heritage Conservation	Yes	Yes – see discussion
8.2.3.3 Groundwater Protection	Yes	Yes – see discussion
8.2.3.4 Soil Management	Yes	Yes – see discussion
8.2.3.5 Tree Presevation	Yes	Yes – see discussion
8.2.3.6 Streetscape and Site Context - General	Yes	Yes – see discussion

#### *8.2.3.1 Views and Vista*

The removal of the trees will not significantly change the views currently experienced by residents within the area. Council's Tree Management has supported the removal of Trees No. 3 and 4, however, have imposed conditions in the draft Notice of Determination for two(2) x 75 litre locally indigenous replacement trees to be planted on site, which will reduce the impacts on views and restore the character and aesthetic of the streetscape along Broadford Street and Bayview Street. Additionally, the retention of Trees No. 1 and 2 will maintain the existing streetscape and character of Bayview Street, thus have minimal adverse impacts on the surrounding views presently enjoyed by residents.

#### *8.2.3.2 Heritage Conservation*

The proposed development is located on land on which a heritage item is located. In this regard, a Heritage Impact Statement prepared by Damien O'Toole Town Planning has been submitted. The statement has provided the following comments related to heritage conservation:

- There are no adverse impacts to the heritage item on the site, given the distance from the trees to the heritage item.
- The works are not inconsistent with the objectives of RLEP2011, that is, to conserve the environmental heritage of Rockdale. Additionally, the work will have no adverse impacts to the heritage significance of the site.
- The listing for the item does not mention any tree as being a significant aspect of the site. This view is concurred with. The listing derives from the site's historical association with education uses and aesthetic significance of the buildings, but not for any landscaping reason.
- Accordingly the removal of four(4) trees that are causing damage to structures and to the potential safety of children is acceptable in heritage terms.
- The removal of trees will have some effect on the visual amenity of the area, however the need to remove the trees is more pressing. No significant view is affected.
- The setting of the heritage item is not materially affected. The removal of trees will ensure that the structural stability of the site is maintained. The subject trees do not contribute towards the cultural significance of the site. No significant view is affected.

Council's Heritage Advisor have assessed the plans and the Heritage Impact Statement provided. The removal of the four (4) trees is supported as there are no heritage related constraints. The proposed works is sympathetic in style to the heritage item in terms of scale, design, bulk and materials. It is considered the proposed development will be in keeping with the qualities that make the heritage item and it's setting significant.

#### *8.2.3.3 Groundwater Protection*

The site is affected by the Groundwater Protection Zone 3, however, it is considered that excavation in relation to the removal of Trees No. 3 and 4 is not deep enough to cause any adverse impact on the Zone.

#### *8.2.3.4 Soil Management*

A Soil and Water Management was not submitted as there is no demolition, new buildings & significant earthworks or inground pools proposed.

#### *8.2.3.5 Tree Preservation*

The development proposal have been considered in relation to Trees No. 1-4 only. Council's Tree Management Officer have assessed the four(4) trees and the removal of Trees No. 3 and 4 have been recommended. Appropriate conditions is to be imposed in the draft Notice of

Determination, regarding the removal of Trees No. 3 and 4, the retention of Trees No. 1 and 2 and for replacement tree planting of two 75 litre locally indigenous trees on in suitable locations on the Bayview Street and Forest Road Boundaries.

#### ***8.2.3.6 Streetscape and Site Context - General***

The site is located in a R2 – Low density residential zone. The immediate context is relatively low scale consisting of single and two storey dwellings and commercial uses along Forest Road. The site is in proximity to the Bexley neighbourhood centre, which is undergoing change, as reflected in 5-6 storey apartments situated north-east of the site on the corner of Frederick Street and Forest Road.

The trees are a significant feature of the streetscape and amenity to the area. The removal of Trees No. 3 and 4 will have some impact on the existing character of the street, particularly along the boundaries of Bayview and Broadford Street. However, the proposal is not considered to completely destroy the streetscape as replacement tree planting, as proposed will compensate for the trees lost. Additionally, the removal of Trees No. 1 and 2 located along Bayview Street is not supported. In this regard, the proposal will not adversely impact upon the streetscape, amenity and desired future character of the area.

The proposed works will not affect the significance of the heritage item and will be in keeping with the qualities that make the heritage item and it's setting significant.

The proposal is considered to be consistent with the objectives of this clause.

#### ***8.2.4 Provisions of Regulations (S.79C(1)(a)(iv))***

The provisions of the Regulations have been considered in the assessment of this development proposal where relevant to this S96 application.

#### ***8.2.5 Likely Impacts of the Development (S.79C(1)(b))***

The relevant matters pertaining to the likely impacts of the development have been addressed within the report. There are no further matters raised in this application that would alter the conclusions reached in the original assessment.

#### ***8.2.6 Suitability of the Site (S.79C(1)(c))***

The suitability of the site for the proposed development was considered as part of the assessment of the initial application. Additional conditions of consent are proposed to further minimise any impacts on neighbouring properties and the streetscape. There are no other major physical constraints or exceptional circumstances that would hinder the suitability of the site for the proposed development as modified.

#### ***8.2.7 Public Submissions (S.79C(1)(d))***

The development application has been notified in accordance with the provisions of Council's DCP. Two(2) letters of objection and one(1) petition containing fifty-seven(57) signatures have been received. In addition, the local newspaper, the St George and Sutherland Shire Leader, published an article titled 'Residents object to Bexley Coptic Church plan to remove trees', dated 28 August 2017.



The issues raised in the submission are discussed below:

**Issue 1: Safety**

Comment: Concerns have been raised regarding safety, such that, the trees identified to be removed are located in an area that is a parking lot not a playground. Additionally, the objectors suggests the retaining walls, footpaths and fence can be replaced without removing the trees. Council's Tree Management Officer has assessed the proposal and supports the removal of trees 3 and 4 only. Options are to be explored for alternative fencing to replace the damaged brickwork without removing Trees No. 1 and 2. This has been included as a condition of consent.

**Issue 2: Continuous breach of conditions from the original DA by the applicant.**

Comment: Concerns were raised regarding the applicant having continuously breached the conditions from the original DA without Council approval. Council advises this is not a relevant matter to this proposal.

**Issue 3: Character and aesthetic beauty**

Comment: It has been stated that the removal of the trees will destroy the character, peace and aesthetic of the area. It is further stated that the removal of the trees will impact the native wildlife that currently occupies the trees. Council advises that the removal of Trees No. 1 and 2 is not supported. Conditions imposed in the draft Notice of Determination for replacement tree planting in suitable locations on the Bayview Street and Forest Road boundaries will also restore part of the streetscape lost from the tree removal and continue to encourage native wildlife to the area. In this regard, it is considered there will be minimal impact to the character and aesthetic beauty of the streetscape surrounding the site.

**Issue 4: Noise**

Comment: The submission states that the removal of the trees will increase the level of noise currently experienced by residents and worsen the relationship between residents and the church. Council advises that the removal of Trees 3 and 4 will not significantly increase the level of noise as they are located towards the centre of the site along the boundaries and replacement planting is recommended to provide some buffer against the noise emanating from the church.

**Issue 5: Lack of consideration to neighbours and residents**

Comment: Concerns were raised regarding the lack of consideration the church has towards the residents living in the area. Council advises this is not a relevant planning matter to this proposal.

**Issue 6: Parking**

Comment: The residents claim that the removal of trees will increase chances of expanding the church and school, thus creating further parking issues. Council advises the proposal does not involve changes to the parking currently available on site. The proposal does not create the need for any additional car parking or an increase in floor area of the existing buildings on site. The existing driveway access will be retained. Therefore, the proposal has no impact to existing access, parking and traffic in the area.

**8.2.8 Public Interest (S.79C(1)(e))**

The proposed development as modified is considered satisfactory having regard to the objectives and requirements of Rockdale Local Environmental Plan 2011 and Development Control Plan 2011. Impacts on adjoining properties and the neighbourhood have been considered and addressed. Subject to compliance with the recommended conditions it is considered that the proposed development will be in the public interest.

## 9. CONCLUSION

The proposed modification is considered to satisfy the requirements of Section 96(1A) of the *EP&A Act 1979*, and it is recommended that the application be **approved** subject to the modifications to conditions of consent attached.



URBAN TREE  
MANAGEMENT

CONSULTING  
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# REPORT:

## TREE RISK ASSESSMENT

**339 Forest Road  
Bexley NSW**

Prepared 29 May 2016  
Reference 19229

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## **Appendices**

Appendix A Glossary of terminology

Appendix B Plan Showing location of subject trees.

Appendix C Plan (aerial Photograph) Showing location of subject trees.

## 1.0 SUMMARY & RECOMMENDATIONS

Urban Tree Management © has prepared this Tree Risk Assessment report for Tamer Mikhail on behalf of St Mary and St Minas College, 339 Forest Road, Bexley NSW 2207 (*the site*), to examine 4 trees within the grounds close to the property boundary to address concerns for the stability of the trees and risks to students, staff, parishioners attending *the site* and the public using the adjoining footpaths and streets from roots and potentially unsound branches.

Danny Draper (*the author*) attended *the site* on Wednesday 12 April 2017 and *the trees* were examined by a Visual Tree Assessment (VTA) (Mattheck and Breloer, 1994) conducted from the ground and a Tree Risk Assessment as a Level 2: *Basic Assessment* (Dunster *et al*, 2013, pp. 20-23).

The works recommended are prioritized 1-3:

Priority 1 - Immediate remedial action, unacceptable consequences/extreme safety risk, *Removal, Pruning, Isolation*

Priority 2 - Action within 6 months, *Removal, Pruning, Further investigative or scientific testing works required*

Priority 3 - Currently no action required within the next 12 months

This report assessed 4 trees with Recommendations presented in tabular form, **Table 1.0 *Priority 1 Trees to be removed or pruned*** and **Table 2.0 *Priority 2 Trees requiring further investigative works***. Trees identified as *Priority 3 Currently no action required within the next 12 months* do not require any works and are not included in the Recommendations.

The trees the subject of this report are indicated in Appendix C – *Plan (aerial Photograph) Showing location of the trees* included in the Tree Risk Assessment.

### Summary

Tree 1, 2 and 3 were planted in narrow garden beds close to the school boundary, tree 4 was planted or self-sown and all have developed crown projections over the street and root plates that have grown into the road reserve. Tree 4 is an environmental weed. The roots of all 4 trees have disrupted retaining walls and pavement in the street creating trip hazards where they cannot be safely pruned for reasons of stability. Trees 1-3 have previously shed branches into the street, into the playground and over a seating and table area (Tree 1) which has been isolated from the risk and are no longer used. The school has limited space and this area is important open space for the children. The trees are growing on a dry hill top surrounded by hard pavement in a heat island which is not conducive to their preferred growing environment and they have been predated by borers as a consequence in prolonged hot dry periods. While these tree are not likely to collapse immediately they are an inappropriate species selection for the location and for the restricted planting areas for large trees causing their large structural roots to disrupt light structures nearby. As Tree 1-3 continue to deteriorate they will pose a continuous risk to the people and property where they have been planted. Tree 1-4 should be removed while structurally sound and replaced with suitable new plantings. All Camphor Laurel should be removed from the school and replaced with non-invasive native trees.



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**Table 1.0 Priority 1** Trees to be removed or pruned as indicated with options.

Tree No	Priority for Removal – unacceptable consequences/extreme safety risk 1 = Yes	Priority for Pruning <u>Deadwooding</u> throughout crown. <u>Reduction Pruning</u> over target in <u>Lower / Mid / Upper</u> crown, to N, S, E, W. <u>Selective Pruning</u> over target in <u>Lower / Mid / Upper</u> crown, to N, S, E, W.
1	Cavity - in first order structural branch 400 mm diameter, Deadwood – medium volume throughout mid-upper crown, Lopped – mid crown with stubs up to 2 m long and 300 mm diameter with mature epicormic shoots distally over seating and playground to east, Detached branch – mid crown Fungal fruiting bodies – <i>Phellinus</i> sp. evident in branch tear wound on upper side of first order structural branch (FOSB) to north at 7 m. Crown projects over playground, seating within school, foot path in street, car parking in street and vehicular traffic in street.	
2	Has repeatedly shed branches >3 m long. Crown projects over playground, pavement and car park within school and foot path in street, car parking in street and vehicular traffic in street.	
3	Cavity - trunk wounds as lesions from Longicorn borers (Order Cerambycidae) on trunk from east to west affecting approx. 45% of trunk circumference, Borers – Longicorn Borer, Deadwood – Moderate volume large deadwood throughout, Other – tree declining. Crown projects over playground, pavement and car park within school and foot path in street, car parking in street and vehicular traffic in street.	

**Table 2.0 Priority 2** Trees requiring Removal, Pruning, Further investigative or scientific testing works.

Tree No	1 Aerial inspection 2 Aerial inspection & Resistograph test	1 Resistograph test of Trunk from ground 2 Aerial inspection & Resistograph test of Trunk	1 Root crown excavation 2 Root crown excavation & Resistograph test	1 Ongoing monitoring required	Removal <u>Deadwooding</u> throughout crown. <u>Reduction Pruning</u> over target in <u>Lower / Mid / Upper</u> crown, to N, S, E, W. <u>Selective Pruning</u> over target in <u>Lower / Mid / Upper</u> crown, to N, S, E, W.
4					<b>Remove</b> within 2 years. Growing 1-m from foot path in street. Greatest risk is from root growth causing damage and trip hazards. Particularly evident from 200 mm diameter first order root in street disrupting pavement.

## 2.0 METHODOLOGY & LIMITATIONS

Note: Individual methodologies applied as applicable.

- 2.1 A Level 2: *Basic Assessment* (Dunster *et al*, 2013, pp. 20-23) was conducted for each tree in this report. For a definition of *Basic Assessment*, see Glossary Part 2 – Appendix A.
- 2.2 The method of assessment of tree/s applied is adapted from the principles of Visual Tree Assessment (VTA) (Mattheck and Breloer, 1994) where each tree is assessed for anomalies that vary from expected average growth characteristics for the taxa when structurally sound, and a qualitative tree risk assessment using the *Level 2: Basic Assessment* of the Tree Risk Assessment Qualification (TRAQ) developed by the International Society of Arboriculture (ISA). The trees examined will be recorded on the UTM Site Assessment Record – Tree Risk Assessment TRAQ. This assessment and report is valid for 12 months from the date of inspection being the period that the likelihood of failure is estimated.
- 2.3 A Visual Tree Assessment is limited to observations made from the ground and trees as natural and dynamic living structures inherently have component parts that may be subject to failure and collapse in full or part despite appearing free from hazards and growth anomalies. This is due primarily to interactions with the environment (biotic and abiotic) such as predation from insects, birds and decay and ongoing multi-directional loading forces (primarily compression, tension and torsion) encountered from wind loading and rain. As their mass and shape changes over time, these often become foreseeable only by thorough investigative examination of the crown by an aerial inspection and/or testing of the structural branches and trunk with a Resistograph or root crown excavation examination and Resistograph testing. This is an example of TRAQ *Level 3: Advanced Assessment* (Dunster *et al*, 2013, pp. 23-34) and the assessor will make recommendations for such testing where it is considered necessary.
- 2.4 The *Level 2: Basic Assessment* of the Tree Risk Assessment Qualification (TRAQ) developed by the ISA considers the following process:
  - Locate and identify the tree or trees to be assessed.
  - Determine the targets and target zone for tree or branches of concern.
  - Review site history, conditions, and species failure profile.
  - Assess potential loads on the tree and its parts.
  - Assess general tree health.
  - Inspect the tree visually-using binoculars, mallet, probes, or shovel, as desired by the arborist or as specified in the scope of work.
  - Record observations of site conditions, defects and outward signs of possible internal defects and response growth.
  - If necessary, recommend an advanced assessment.
  - Analyze data to determine the likelihood and consequences of failure in order to evaluate the degree of risk.
  - Develop mitigation options and estimate residual risk for each option.
  - Develop and submit the report/documentation, including, when appropriate, advice on reinspection intervals.
- 2.5 Any dimensions recorded as averages, or by approximation are noted accordingly.
- 2.6 In this report Pruning as *Deadwooding* refers to *Large Deadwood* as defined in the Glossary.



- 2.7 Photographs are provided of Tree 2 showing areas of defects.
- 2.8 The meanings for terminology used in this report are shown in Appendix B and are taken from the following sources and shown in 2 sections as follows:  
Section 1, IACA Dictionary for Managing Trees in Urban Environments (Draper and Richards, 2009), and  
Section 2, Tree Risk Assessment Manual (Dunster *et al* 2013, pp. 163-170).
- 2.9 A Plan of the site showing the locations of the subject trees included in the Tree Risk Assessment is included as Appendix C.
- 2.10 Tree heights were recorded using a Nikon Forestry Pro Hypsometer or by approximation.

### **3.0 PRUNING STANDARDS**

- 3.1 Any pruning recommended in this report is to be to the Australian Standard® AS4373 *Pruning of amenity trees*, and conducted in accordance with the *Guide to Managing Risks of Tree Trimming and Removal Work*, July 2016, Safe Work Australia.
- 3.2 All pruning or removal works are to be in accordance with the appropriate Tree Management Policy where applicable, or Tree Management Order (TMO), or Tree Preservation Order (TPO).
- 3.3 Tree maintenance work is specialised and in order to be undertaken safely to ensure the works carried out are not detrimental to the survival of a tree being retained, and to assist in the safe removal of any tree, should be undertaken by a qualified arboriculturist with appropriate competencies recognised within the Australian Qualification Framework, with a minimum of 5 years of continual experience within the industry of operational amenity arboriculture, and covered by appropriate and current types of insurance to undertake such works.



## 4.0 TREE RISK ASSESSMENT

Tree No.	Genus & species / Common Name	Condition  G = Good F = Fair P = Poor M = Moribund D = Dead	Age  Y = Young M = Mature O = Overmature	Ht. Approx. Metres  *Approx	Defects  CH = Cavity / Hollow CB = Cracks/Bugs/Buckling FR = Fungal Fruiting bodies SL = Severe Lean (>45°) PL = Progressive Lean <45° DB = Detached branch BI = Bark Inclusion BD = Bird damage B = Borer L = Leptosid RD = Root Damage/Hawking / Soil cracks DW = Large deadwood OT = Other (Comment?)	Tree part	Conditions of concern	Part size, m	Fall distance, metres	Target number	Target protection	Likelihood						Risk rating of part (from Matrix 2)	Priority								
												Failure		Impact		Failure & Impact (from Matrix 1)				Consequences							
												Improbable	Possible	Probable	Imminent	Very low	Low			Medium	High	Unlikely	Somewhat likely	Likely	Very likely	Negligible	Minor
1	<i>Eucalyptus globulus</i>	F	M	15	CH – in first order structural branch 400 mm diameter, DW – medium volume throughout mid-upper crown, L – mid crown with stakes up to 2 m long and 300 mm diameter with insular apical rot, BI – bark inclusion in lower crown, PL – lean to east, DB – Mid crown, FR – Pseudotsuga. Evident in branch tear wound on upper side of first order structural branch (FOSB) to north at 7 m.	Detached branch	Collapse of branches as crown projects over street, staff visitors and pedestrians in school street	3 0	2 2	4	Fence around seating area, Perimeter fence	1	Very low	Low	Medium	High	Unlikely	Somewhat likely	Likely	Very likely	Negligible	Minor	Significant	Severe	M	Priority 1 - Remove	
2	<i>Eucalyptus globulus</i>	G	M	15	OT – has repeatedly shed branches >3 m long	First order structural branches	Collapse of crown projects over street, footpath in school carpark in school street	5 0 3 0	2 3	5	Pergola over seating area, Perimeter fence	1	Very low	Low	Medium	High	Unlikely	Somewhat likely	Likely	Very likely	Negligible	Minor	Significant	Severe	H	Priority 1 - Remove	
3	<i>Eucalyptus globulus</i>	P	M	14	CH – trunk wounds as lesions from Longicorn borers (Order Cerambycidae) on trunk from east to west affecting approx. 45% of trunk circumference B – Longicorn Borer, DW – large volume large deadwood, OT – tea declining	First order structural branches	Collapse of branches as crown projects over street, footpath in school carpark in school street	5 0 3 0	2 1	5	Pergola over seating area, Perimeter fence	1	Very low	Low	Medium	High	Unlikely	Somewhat likely	Likely	Very likely	Negligible	Minor	Significant	Severe	H	Priority 1 - Remove	
4	<i>Cinnamomum camphora</i> Camphor Laurel	F	M	6	BI – appears stable	First order structural branches	Crown projects over street or onto buildings	3 0 0	9				1	Very low	Low	Medium	High	Unlikely	Somewhat likely	Likely	Very likely	Negligible	Minor	Significant	Severe	M	Priority 2 - Remove

**Matrix 1. Likelihood matrix.**

Likelihood of failure	Likelihood of impacting target			
	Very low	Low	Medium	High
Imminent	Unlikely	Somewhat likely	Likely	Very likely
Probable	Unlikely	Unlikely	Somewhat likely	Likely
Possible	Unlikely	Unlikely	Unlikely	Somewhat likely
Improbable	Unlikely	Unlikely	Unlikely	Unlikely

**Matrix 2. Risk rating matrix.**

Likelihood of failure & impact	Consequences of Failure		
	Negligible	Minor	Significant
Very likely	Low	Moderate	High
Likely	Low	Moderate	High
Somewhat likely	Low	Low	Moderate
Unlikely	Low	Low	Low
			Severe
			Extreme
			High
			Moderate
			Low

## 4.1 TREE ASSESSMENT – VTA Assessment of tree/s or stand/s of trees.

UTM Tree No / Stand No	Genus & species / Common Name	Condition G = Good F = Fair P = Poor M = Moribund D = Dead	Age Y = Young M = Mature O = Overmature	Crown Form D = Dominant C = Codominant I = Intermediate S = Suppressed F = Forest E = Emergent	HT Approx. metres	Crown spread metres / Orientation R = Radial or other	Crown Symmetry 1 = symmetrical 2 = asymmetrical / Orientation	Crown cover density % / D = dominant	DBH In mm @ 1.4m, or other, as indicated / trunk orientation R = radial, e.g. N/S / DARB Diameter above root buttress	Trunk Lean 1 = Upright/Slight 2 = Moderate 3 = Severe 4 = Critical 5 = Acaulescent / Orientation ST = Static P = Progressive SE = Self-correcting	Roots evident @ 1 = None 2 = Adventitious 3 = Basal Flare 4 = Buttresses 5 = First Order Roots (FOR), No. & distribution e.g. R = radial, or one each to N, S, E, NE and W	Pests & diseases 1 = No 2 = Yes (If 2 see comments)	Branch included 1 = No 2 = Yes 3 = NA	Vigour Good 2 = Low Vigour	Form Good form 2 = Poor form	SRV Age, Year Condition / Index Rating / ESTIMATED LIFE EXPECTANCY 1 Long 2 Medium 3 Short	Significance based on TARS 1=High 2=Medium 3=Low / Retention Value 1=High 2=Medium 3=Low 4=Remove
1	<i>Eucalyptus globulus</i> Southern Blue Gum	F	M	D	15	18x12 N/S	2 W	85 90	700, R / 850	1	5 x 5, SSW, W, E, N, NW	2	1	1	2	MGVF - 9 1	2 2
2	<i>Eucalyptus globulus</i> Southern Blue Gum	G	M	C	14	9 R	2 N	85 90	650, R / 700	1	1.	1	1	1	1	MGVG - 10 1	2 2
3	<i>Eucalyptus globulus</i> Southern Blue Gum	P	M	C	14	12x8 E/W	2 E	75 75	600, R / 650	1	1.	2	1	2	2	MGVP - 6 2	2 2
4	<i>Cinnamomum camphora</i> Camphor Laurel	F	M	C	6	10x7 E/W	2 SE	90 90	400, R at ground / 400	5	5 x 2, S, NW	1	2	2	2	MGVF - 9 1	2 2
No.	Comments																
1	Previously pruned in lower crown to east, reducing crown projection over playground 5 m away, with stubs up to 2 m long, 300 mm diameter with epicormic shoots distally. Phellinus sp. Fungal fruiting bodies evident in branch tear wound on upper side of first order structural branch (FOSB) to north at 7 m. Medium volume large deadwood throughout mid-upper crown. Crown projects over street, footpath in street, seating and table area within school, playground within school and church forecourt. The tree is growing within a confined garden bed 1 m wide with root growth disrupting the boundary fence and pavement in the street creating trip hazards. Pruning the roots is not acceptable as the tree may become unstable or be weakened by decay pathogens entering the wounds affecting structural roots and trunk.																
2	Crown projects over street and footpath in street, pergola with seating within the school, and has shed branches onto the pergola. The tree is growing within a confined garden bed 1 m wide with root growth disrupting the boundary fence and a low retaining wall causing it to be rotated into the street, and pavement in the street creating trip hazards. Pruning the roots is not acceptable as it tree may become unstable or be weakened by decay pathogens entering the wounds affecting structural roots and trunk.																
3	The tree is growing within a confined garden bed <1 m wide with root growth disrupting the boundary fence and a low retaining wall causing it to be rotated into the street, and pavement in the street creating trip hazards. Trunk wound with lesion caused by Longicorn Borer extending from east to west affecting approximately 45% of trunk circumference. Moderate volume large deadwood throughout. Tree declining. Pruning the roots is not acceptable as the tree may become unstable or be weakened by decay pathogens entering the wounds affecting structural roots and trunk.																
4	Environmental weed species. Growing 1 m from property boundary and foot path within street with a first order root to southeast 200 mm diameter disrupting the pavement in the street creating trip hazards. Pruning the roots is not acceptable as the tree may become unstable or be weakened by decay pathogens entering the wounds affecting structural roots and trunk.																

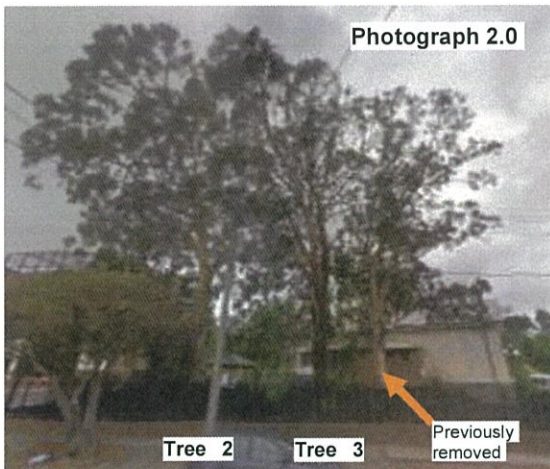


## Photographs of subject trees



**Photograph 1.0** View to north of Tree 1 (center) *Eucalyptus globulus* – Southern Blue Gum, showing crown projection over street, proximity to boundary and foot path in street.

Source: Google, Street View, 17 Bayview Street, Bexley, 14 February 2014, viewed 29 May 2017,  
<https://www.google.com.au/maps/@-33.9463684,151.1269986,3a,75y,24.02h,113.7t/data=!3m6!1e1!3m4!1s!Mu2RVzzl6ZTYKxg7i8ylq!2e0!7i13312!8i6656>



**Photograph 2.0** View to north of Trees 2 and 3 *Eucalyptus globulus* – Southern Blue Gum, showing crown projection over street, proximity to boundary, damaged retaining wall and foot path in street.

Source: Google, Street View, 17 Bayview Street, Bexley, 14 February 2014, viewed 29 May 2017,  
<https://www.google.com.au/maps/place/339+Forest+Rd,+Bexley+NSW+2207/@-33.946727,151.1272657,3a,82.3y,50.61h,116.89t/data=!3m6!1e1!3m4!1s!LafpE3DYL5eUcTW0okHRw!2e0!7i13312!8i6656!4m5!3m4!1s0x6b12ba1c95c314bd:0xecf4546e0651d7bb!8m2!3d-33.946126!4d151.127346>



**Photograph 3.0** View to southwest of Tree 4 *Cinnamomum camphora* – Camphor Laurel, showing crown projection over street, proximity to boundary and foot path in street. Arrow indicates location of disrupted pavement in street.

Source: Google, Street View, 5 Broadford Street, Bexley, December 2015, viewed 29 May 2017,  
<https://www.google.com.au/maps/@-33.9458002,151.1276813,3a,75y,207.35h,91.15t/data=!3m6!1e1!3m4!1sCVW7YCKZIDV0G9QhlniQw!2e0!7i13312!8i6656>

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## DISCLAIMER

The author and Urban Tree Management take no responsibility for actions taken and their consequences, contrary to those expert and professional instructions given as recommendations pertaining to safety by way of exercising our responsibility to our client and the public as our duty of care commitment, to mitigate or prevent hazards from arising or risks from being eliminated or mitigated or managed to reduce harm or damage, from a failure moment in full or part, from a structurally deficient or unsound tree or a tree likely to be rendered thus by its retention and subsequent deterioration from modification/s to its growing environment either existing or proposed, either above or below ground, contrary to our advice.



# Appendix A

## Glossary Parts 1 & 2

### Part 1

Source:

Draper BD and Richards PA 2009, *Dictionary for Managing Trees in Urban Environments*, Institute of Australian Consulting Arboriculturists (IACA), CSIRO Publishing, Collingwood, Victoria, Australia.

#### Age of Trees

**Age** Most trees have a stable biomass for the major proportion of their life. The estimation of the age of a tree is based on the knowledge of the expected lifespan of the taxa *in situ* divided into three distinct stages of measurable biomass, when the exact age of the tree from its date of cultivation or planting is unknown and can be categorized as *Young*, *Mature* and *Over-mature* (British Standards 1991, p. 13, Harris *et al*, 2004, p. 262).

**Young** Tree aged less than <20% of life expectancy, *in situ*.

**Mature** Tree aged 20-80% of life expectancy, *in situ*.

**Over-mature** Tree aged greater than >80% of life expectancy, *in situ*, or *senescent* with or without reduced *vigour*, and declining gradually or rapidly but irreversibly to death.

#### Condition of Trees

**Condition** A tree's *crown form* and growth habit, as modified by its *environment* (aspect, suppression by other trees, soils), the *stability* and *viability* of the *root plate*, trunk and structural branches (first (1<sup>st</sup>) and possibly second (2<sup>nd</sup>) order branches), including structural defects such as wounds, cavities or hollows, *crooked* trunk or weak trunk/branch junctions and the effects of predation by pests and diseases. These may not be directly connected with *vigour* and it is possible for a tree to be of *normal vigour* but in *poor condition*. Condition can be categorized as *Good Condition*, *Fair Condition*, *Poor Condition* and *Dead*.

**Good Condition** Tree is of good habit, with *crown form* not severely restricted for space and light, physically free from the adverse effects of *predation* by pests and diseases, obvious instability or structural weaknesses, fungal, bacterial or insect infestation and is expected to continue to live in much the same condition as at the time of inspection provided conditions around it for its basic survival do not alter greatly. This may be independent from, or contributed to by *vigour*.

**Fair Condition** Tree is of good habit or *misshapen*, a form not severely restricted for space and light, has some physical indication of *decline* due to the early effects of *predation* by pests and diseases, fungal, bacterial, or insect infestation, or has suffered physical injury to itself that may be contributing to instability or structural weaknesses, or is faltering due to the modification of the *environment* essential for its basic survival. Such a tree may recover with remedial works where appropriate, or without intervention may stabilise or improve over time, or in response to the implementation of beneficial changes to its local environment. This may be independent from, or contributed to by *vigour*.

**Poor Condition** Tree is of good habit or *misshapen*, a form that may be severely restricted for space and light, exhibits symptoms of advanced and *irreversible decline* such as fungal, or bacterial infestation, major die-back in the branch and *foliage crown*, *structural deterioration* from insect damage e.g. termite infestation, or storm damage or lightning strike, ring barking from borer activity in the trunk, root damage or instability of the tree, or damage from physical wounding impacts or abrasion, or from altered local environmental conditions and has been unable to adapt to such changes and may decline further to death regardless of remedial works or other modifications to the local *environment* that would normally be sufficient to provide for its basic survival if in *good to fair* condition. Deterioration physically, often characterised by a gradual and continuous reduction in *vigour* but may be independent of a change in *vigour*, but characterised by a proportionate increase in susceptibility to, and *predation* by pests and diseases against which the tree cannot be sustained. Such conditions may also be evident in trees of advanced senescence due to normal phenological processes, without modifications to the growing environment or physical damage having been inflicted upon the tree. This may be independent from, or contributed to by *vigour*.

**Moribund** Advanced state of decline, dying or nearly dead.

**Dead** Tree is no longer capable of performing any of the following processes or is exhibiting any of the following symptoms;  
*Processes*

Photosynthesis via its foliage crown (as indicated by the presence of moist, green or other coloured leaves);

Osmosis (the ability of the root system to take up water);

Turgidity (the ability of the plant to sustain moisture pressure in its cells);

Epicormic shoots or *epicormic strands* in Eucalypts (the production of new shoots as a response to stress, generated from latent or adventitious buds or from a *lignotuber*);

*Symptoms*

Permanent leaf loss;

Permanent wilting (the loss of turgidity which is marked by desiccation of stems leaves and roots);

Abscission of the *epidermis* (bark desiccates and peels off to the beginning of the sapwood).

## Branch

**Branch** An elongated woody structure arising initially from the trunk to support leaves, flowers, fruit and the development of other branches. A branch may itself fork and continue to divide many times as successive *orders of branches* with the length and taper decreasing incrementally to the *outer extremity* of the *crown*. These may develop initially as a gradually tapering continuation of the *trunk* with minimal division as in a *young tree* or a tree of *excurrent habit*, or in a *sapling*, or may arise where the trunk terminates at or some distance from the *root crown*, dividing into *first order branches* to form and support the *foliage crown*. In an *acaulescent* tree, branches arise at or near the *root crown*. Similarly branches may arise from a *sprout mass* from damaged *roots, branches or trunk*.

**Orders of branches** The marked divisions between successively smaller branches (James 2003, p. 168) commencing at the initial division where the trunk terminates on a *deliquescent* tree or from *lateral* branches on an *excurrent* tree. Successive branching is generally characterised by a gradual reduction in branch diameters at each division, and each gradation from the trunk can be categorised numerically, e.g. first order, second order, third order etc. (See Figure 21.)

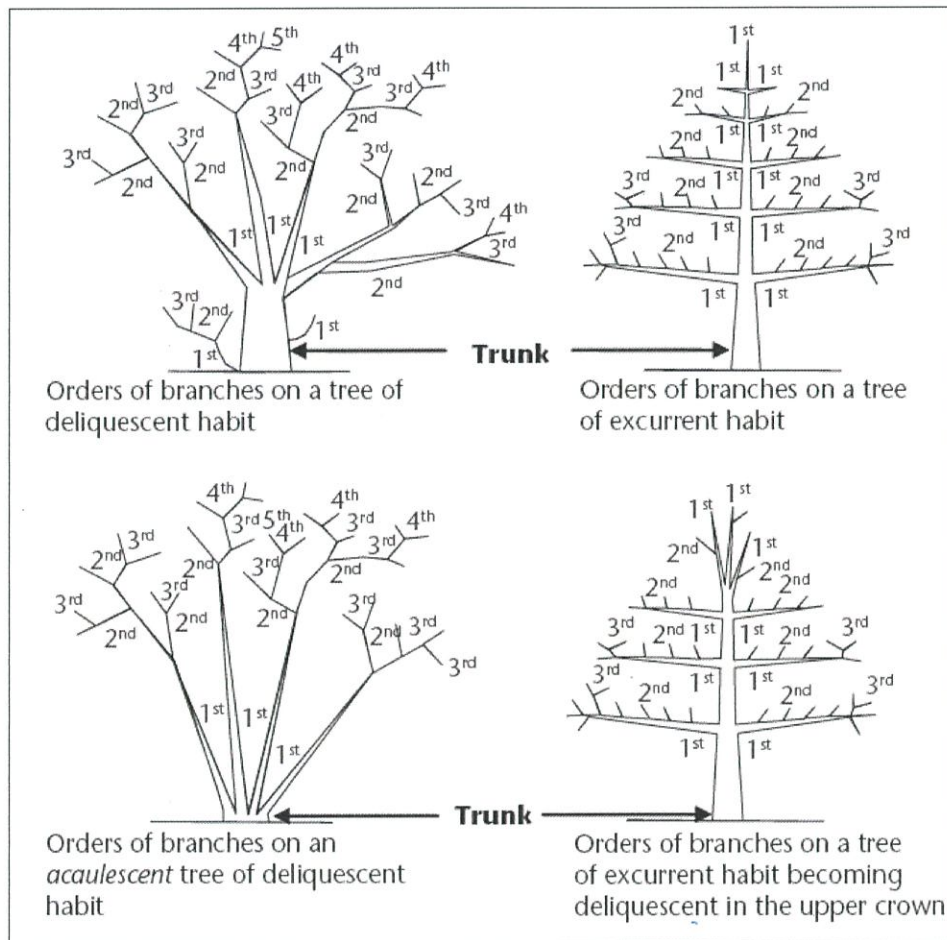


Figure 21 Orders of branches



## **Crown**

**Canopy** 1. Of multiple trees, the convergence, or merging in full or part, of the crowns of two or more trees due to their proximity, where competition for light and space available in a forest environment is limited as each tree develops forming a continuous layer of foliage. 2. Used as a plural for crown. 3. Sometimes synonymously used for crown (USA).

**Crown** Of an individual tree all the parts arising above the trunk where it terminates by its division forming branches, e.g. the branches, leaves, flowers and fruit; or the total amount of foliage supported by the branches. The crown of any tree can be divided vertically into three sections and can be categorised as *lower crown*, *mid crown* and *upper crown* (Figure 8). For a *leaning* tree these can be divided evenly into crown sections of one-third from the *base* to *apex*. The volume of a crown can be categorised as the *inner crown*, *outer crown* and *outer extremity of crown* (Figure 9).

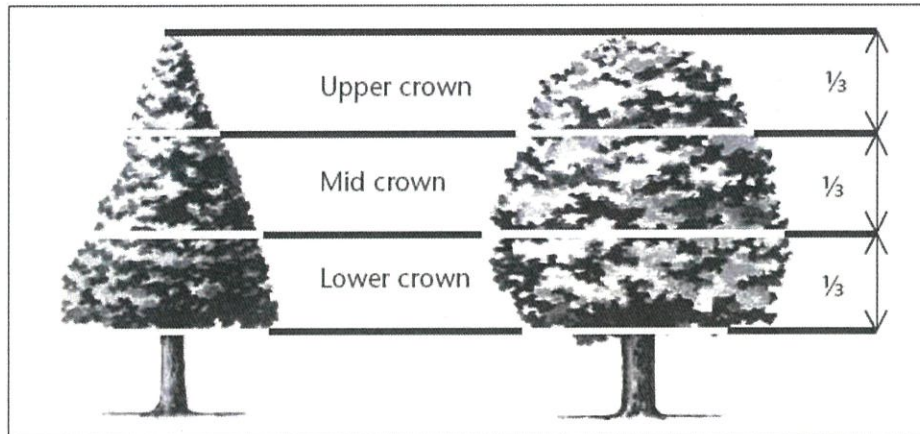


Figure 8 Sections of crown.

**Lower crown** The *proximal* or lowest section of a crown when divided vertically into one-third ( $\frac{1}{3}$ ) increments. See also *Crown*, *Mid crown* and *Upper crown*.

**Mid crown** The middle section of a crown when divided vertically into one-third ( $\frac{1}{3}$ ) increments. See also *Crown*, *Lower crown* and *Upper crown*.

**Upper crown** The *distal* or highest section of a crown when divided vertically into one-third ( $\frac{1}{3}$ ) increments. See also *Crown*, *Mid crown* and *Lower crown*.

## **Deadwood**

**Deadwood** Dead branches within a tree's crown and considered quantitatively as separate to *crown cover* and can be categorised as *Small Deadwood* and *Large Deadwood* according to diameter, length and subsequent *risk* potential. The amount of dead branches on a tree can be categorized as *Low Volume Deadwood*, *Medium Volume Deadwood* and *High Volume Deadwood*. See also *Dieback*.

**Deadwooding** Removing of dead branches by *pruning*. Such pruning may assist in the prevention of the spread of *decay* from *dieback* or for reasons of safety near an identifiable target.

**Small Deadwood** A dead branch up to 10mm diameter and usually <2 metres long, generally considered of low *risk* potential.

**Large Deadwood** A dead branch >10mm diameter and usually >2 metres long, generally considered of high *risk* potential.

**High Volume Deadwood** Where >10 dead branches occur that may require *removal*.

**Medium Volume Deadwood** Where 5-10 dead branches occur that may require *removal*.

**Low Volume Deadwood** Where <5 dead branches occur that may require *removal*.

## **Dieback**

**Dieback** The death of some areas of the *crown*. Symptoms are leaf drop, bare twigs, dead branches and tree death, respectively. This can be caused by root damage, root disease, bacterial or fungal canker, severe bark damage, intensive grazing by insects, *abrupt changes* in growth conditions, drought, water-logging or over-maturity. Dieback often implies reduced *resistance*, *stress* or *decline* which may be temporary. Dieback can be categorized as *Low Volume Dieback*, *Medium Volume Dieback* and *High Volume Dieback*.

**High Volume Dieback** Where >50% of the *crown cover* has died.

**Medium Volume Dieback** Where 10-50% of the *crown cover* has died.

**Low Volume Dieback** Where <10% of the *crown cover* has died. See also *Dieback*, *High Volume Dieback* and *Medium Volume Dieback*.

## **Epicormic shoots**

**Epicormic Shoots** Juvenile shoots produced at branches or trunk from *epicormic strands* in some Eucalypts (Burrows 2002, pp. 111-131) or sprouts produced from dormant or latent buds concealed beneath the bark in some trees. Production can be triggered by fire, pruning, wounding, or root damage but may also be as a result of *stress* or *decline*. Epicormic shoots can be categorized as *Low Volume Epicormic Shoots*, *Medium Volume Epicormic Shoots* and *High Volume Epicormic Shoots*.

## **General Terms**

**Cavity** A usually shallow void often localized initiated by a *wound* and subsequent *decay* within the trunk, branches or roots, or beneath bark, and may be enclosed or have one or more opening.

**Decay** Process of degradation of wood by microorganisms (Australian Standard 2007, p. 6) and fungus.

**Included bark** 1. The bark on the inner side of the *branch union*, or is within a concave *crotch* that is unable to be lost from the tree and accumulates or is trapped by *acutely divergent* branches forming a *compression fork*. 2. Growth of bark at the interface of two or more branches on the inner side of a branch union or in the crotch where each branch forms a branch collar and the collars roll past one another without forming a graft where no one collar is able to subsume the other. Risk of failure is worsened in some taxa where branching is *acutely divergent* or *acutely convergent* and ascending or erect.

**Hollow** A large void initiated by a *wound* forming a *cavity* in the trunk, branches or roots and usually increased over time by *decay* or other contributing factors, e.g. fire, or fauna such as birds or insects e.g. ants or termites. A hollow can be categorized as an *Ascending Hollow* or a *Descending Hollow*.

**Visual Tree Assessment (VTA)** A visual inspection of a tree from the ground based on the principle that, when a tree exhibits apparently superfluous material in its shape, this represents repair structures to rectify *defects* or to reinforce weak areas in accordance with the *Axiom of Uniform Stress* (Mattheck & Breloer 1994, pp. 12-13, 145). Such assessments should only be undertaken by suitably competent practitioners.

## **Leaning Trees**

**Leaning** A tree where the *trunk* grows or moves away from upright. A lean may occur anywhere along the *trunk* influenced by a number of contributing factors e.g. genetically predetermined characteristics, competition for space or light, prevailing winds, aspect, slope, or other factors. A *leaning* tree may maintain a *static lean* or display an increasingly *progressive lean* over time and may be hazardous and prone to *failure* and *collapse*. The degrees of leaning can be categorized as *Slightly Leaning*, *Moderately Leaning*, *Severely Leaning* and *Critically Leaning*.

**Slightly Leaning** A leaning tree where the trunk is growing at an angle within 0°-15° from upright.

**Moderately Leaning** A leaning tree where the trunk is growing at an angle within 15°-30° from upright.

**Severely Leaning** A leaning tree where the trunk is growing at an angle within 30°-45° from upright.

**Critically Leaning** A leaning tree where the trunk is growing at an angle greater than >45° from upright.

**Progressively Leaning** A tree where the degree of *leaning* appears to be increasing over time.

**Static Leaning** A leaning tree whose lean appears to have stabilized over time.

## **Periods of Time**

**Periods of Time** The life span of a tree in the urban environment may often be reduced by the influences of encroachment and the dynamics of the environment and can be categorized as *Immediate*, *Short Term*, *Medium Term* and *Long Term*.

**Immediate** An *episode* or occurrence, likely to happen within a twenty-four (24) hour period, e.g. tree failure or collapse in full or part posing an imminent danger.

**Short Term** A period of time less than <1 – 15 years.

**Medium Term** A period of time 15 – 40 years.

**Long Term** A period of time greater than >40 years.



## **Trunk**

**Trunk** A single stem extending from the *root crown* to support or elevate the *crown*, terminating where it divides into separate *stems* forming *first order branches*. A trunk may be evident at or near ground or be absent in *acaulescent* trees of *deliquescent* habit, or may be continuous in trees of *excurrent* habit. The trunk of any *caulescent* tree can be divided vertically into three (3) sections and can be categorized as *Lower Trunk*, *Mid Trunk* and *Upper Trunk*. For a *leaning* tree these may be divided evenly into sections of one third along the trunk.

**Acaulescent** A *trunkless* tree or tree growth forming a very short *trunk*. See also *Caulescent*. (See Fig. 21)

**Caulescent** Tree grows to form a *trunk*. See also *Acaulescent*. (See Fig. 21)

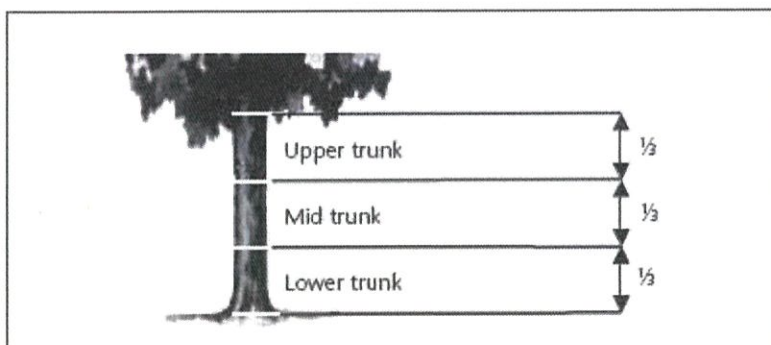


Figure 28 Trunk sections.

**Lower trunk** Lowest, or *proximal* section of a trunk when divided into one-third ( $\frac{1}{3}$ ) increments along its *axis*. See also *Trunk*, *Mid trunk* and *Upper trunk*.

**Mid trunk** A middle section of a trunk when divided into one-third ( $\frac{1}{3}$ ) increments along its *axis*. See also *Trunk*, *Lower trunk* and *Upper trunk*.

**Upper trunk** Highest, or *distal* section of a trunk when divided into one-third ( $\frac{1}{3}$ ) increments along its *axis*. See also *Trunk*, *Lower trunk* and *Mid trunk*.

## Roots

**First Order Roots (FOR)** Initial woody roots arising from the *root crown* at the base of the *trunk*, or as an *adventitious root mass* for structural support and *stability*. Woody roots may be buttressed and divided as a marked gradation, gradually tapering and continuous or tapering rapidly at a short distance from the root crown. Depending on soil type these roots may descend initially and not be evident at the root crown, or become buried by changes in soil levels. Trees may develop 4-11 (Perry 1982, pp. 197-221), or more first order roots which may radiate from the trunk with a relatively even distribution, or be prominent on a particular aspect, dependent upon physical characteristics e.g. leaning trunk, *asymmetrical crown*; and constraints within the growing *environment* from topography e.g. slope, soil depth, rocky outcrops, exposure to predominant wind, soil moisture, depth of *water table* etc.

**Orders of Roots** The marked divisions between woody roots, commencing at the initial division from the base of the trunk, at the *root crown* where successive branching is generally characterised by a gradual reduction in root diameters and each gradation from the trunk and can be categorized numerically, e.g. *first order roots*, second order roots, third order roots etc. Roots may not always be evident at the *root crown* and this may be dependent on species, age class and the growing environment. Palms at maturity may form an adventitious root mass.

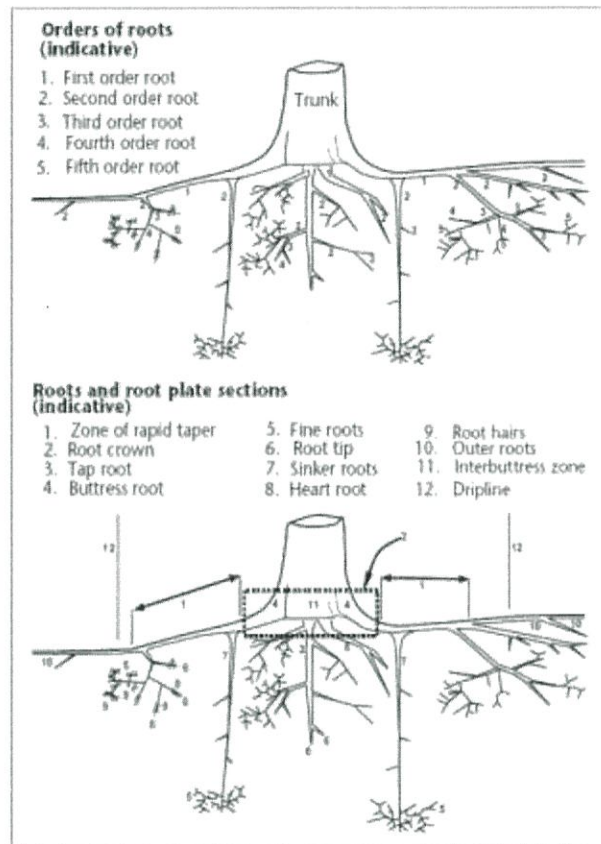


Figure 22 Orders of Roots

**Root Plate** The entire root system of a tree generally occupying the top 300-600mm of soil including roots at or above ground and may extend laterally for distances exceeding twice the height of the tree (Perry 1982, pp. 197-221). Development and extent is dependent on water availability, soil type, *soil depth* and the physical characteristics of the surrounding landscape.

**Root Crown** Roots arising at the base of a trunk.

**Zone of Rapid Taper** The area in the *root plate* where the diameter of *structural roots* reduces substantially over a short distance from the *trunk*. Considered to be the minimum radial distance to provide structural support and *root plate* stability. See also *Structural Root Zone (SRZ)*.

**Structural Roots** Roots supporting the infrastructure of the *root plate* providing strength and *stability* to the tree. Such roots may taper rapidly at short distances from the *root crown* or become large and woody as with gymnosperms and dicotyledonous angiosperms and are usually 1<sup>st</sup> and 2<sup>nd</sup> order roots, or form an *adventitious root mass* in monocotyledonous angiosperms (palms). Such roots may be crossed and grafted and are usually contained within the area of *crown projection* or extend just beyond the *dripline*.



## Part 2

### Source:

Dunster JA, Smiley ET, Matheny N, and Lilly S 2013, *Tree Risk Assessment Manual*, International Society of Arboriculture, Champaign, IL. USA.

**Acceptable risk** The degree or amount of risk that the owner, manager, or controlling authority is willing to accept.

**Acceptable risk threshold** The highest level of risk that does not exceed the owner's/manager's tolerance.

**Advanced assessment** An assessment performed to provide detailed information about specific tree parts, defects, targets, or site conditions. Specialized equipment, data collection and analysis, and/or expertise are usually required.

**Basic assessment** Detailed visual inspection of a tree and surrounding site that may include the use of simple tools. It requires that a tree risk assessor walk completely around the tree trunk looking at the site, aboveground roots, trunk, and branches.

**Breach of duty (of care)** Failure to take reasonable care to avoid injury or damage to a person or property in a situation where the law imposes a duty of care.

**Client** Person or organization contracting services.

**Conclusions** The summary and results of a risk assessment.

**Consequences** Outcome of an event.

**Consequences of failure** Personal injury, property damage, or disruption to activities due to failure of a tree or tree part.

**Constant occupancy** A target is present at nearly all times, 24 hours a day, 7 days a week.

**Defect** An imperfection, weakness, or lack of something necessary. In trees, defects are injuries, growth pattern, decay, or other conditions that reduce the tree's structural strength.

**Degree of harm** The amount or extent of injury, damage, or disruption.

**Disruption** A delay or interruption of progress or continuity.

**Drive-by (assessment)** Limited visual inspection from only one side of the tree, performed from a slow-moving vehicle; also may be called a windshield assessment.

**Duty of care** Legal obligation that requires an individual to apply reasonable actions when performing tasks that may potentially harm others.

**Ethics** The body of moral principles or values governing a group or individual's conduct.

**Event** Occurrence of a particular set of circumstances. In tree risk assessment, a tree or tree part impacting a target.

**Extreme (risk rating)** Defined by its placement in the risk matrix (see Matrix 2, section 4.0 Tree Risk Assessment); failure is *imminent* with a *high* likelihood of impacting the target, and the consequences of the failure are *severe*.

**Harm** Personal injury or death, property damage, or disruption of activities.

**Hazard** Situation or condition that is likely to lead to a loss, personal injury, property damage, or disruption of activities: a likely source of harm. In relation to trees, a hazard is the tree part(s) identified as a likely source of harm.

**Hazard tree (synonymous, hazardous tree)** A tree identified as a likely source of harm.

**High (likelihood of impact)** The failed tree or branch will most likely impact the target. This is the case when a fixed target is fully exposed to the assessed tree or near a high-use road or walkway with and adjacent street tree.

**High (risk rating)** Defined by its placement in the risk matrix (see Matrix 2, section 4.0 Tree Risk Assessment) consequences are *significant* and likelihood is *very likely* or *likely*, or consequences are *severe* and likelihood is *likely*.

**Imminent (likelihood of failure)** Failure has started or is most likely to occur in the near future, even if there is no significant wind or increased load.

**Impact** Striking a target or causing a disruption that affects activities.

**Improbable (likelihood of failure)** The tree or branch is not likely to fail during normal weather conditions and may not fail in many severe weather conditions within the specified time frame.

**Inspection** An organised and systematic examination.

**Inspection frequency** The number of inspections per given unit of time (e.g., once every three years).

**Inspection interval** The time between inspections.

**Level(s) of assessment** Categorisation of the breadth and depth of analysis used in an assessment.

**Liability** Something for which one is responsible. Legal responsibility.

**Likelihood** The chance of an event occurring. In the context of tree failures, the term may be used to specify: (1) the chance of a tree failure occurring; (2) the chance of impacting a specified target; and (3) the combination of the likelihood of a tree failing and the likelihood of impacting a specified target.

**Likelihood of failure** The chance of a tree failure occurring within the specified time frame.

**Likelihood of failure and impact** The chance of a tree failure occurring and impacting a target within the specified time frame.

**Likelihood of impact** The chance of a tree failure impacting a target during the specified time frame.

**Likely (likelihood of failure and impact)** Defined by its placement in the likelihood matrix (see Matrix 1, section 4.0 Tree Risk Assessment); imminent likelihood of failure and medium likelihood of impact, or probable likelihood of failure and high likelihood of impact.

**Limitations** Restraints or factors that restrict the precision, applicability, or extent of something.

**Limited visual assessment** A visual assessment from a specified perspective such as foot, vehicle, or aerial (airborne) patrol of an individual tree or a population of trees near specified targets to identify specified conditions or obvious defects.

**Low (likelihood of impact)** It is not likely that the failed tree or branch will impact the target.

**Low (risk rating)** Defined by its placement in the risk matrix (see Matrix 2, section 4.0 Tree Risk Assessment); consequences are *negligible* and likelihood is unlikely, or consequences are *minor* and likelihood is *somewhat* likely.

**Matrix** A rectangular array of rows and columns used to facilitate problem solving and decision making.

**Medium (likelihood of impact)** The failed tree or branch may or may not impact the target, with nearly equal likelihood.

**Minor (consequences)** Low-to-moderate property damage, small disruptions to traffic or a communications utility, or very minor injury.

**Mitigation** In tree risk management, the process for reducing risk.

**Mitigation options** Alternatives to reducing risk.

**Mitigation priority** Established hierarchy for mitigation of risk ratings, budget, resources, and policies.

**Mobile target** A target that is in motion or intermittently moving.

**Moderate (risk rating)** Defined by its place in the risk matrix (see Matrix 2, section 4.0 Tree Risk Assessment); consequences are *minor* and likelihood is *very likely* or *likely*, or likelihood is *somewhat likely* and consequences are *significant* or *severe*.

**Movable target** Target that can be relocated.

**Multiple risks** The concept that any tree, part, or failure mode could represent more than one type of risk.

**Negligible** Failure to exercise due care.

**Negligible (consequences)** low-value property damage or disruption that can be replaced or repaired and does not involve personal injury.

**Occasional occupancy** occupied by people or targets infrequently or irregularly.

**Occupancy rate** The amount of time targets are within a target zone.

**Owner/manager** The person or entity responsible for tree management or the controlling authority that regulates tree management.

**Possible (likelihood of failure)** Failure could occur, but it is unlikely during normal weather conditions within the specified time frame.

**Prioritizing targets** A process for classifying and ranking targets according to importance of value.

**Probability** The measure of the chance of occurrence expressed as a number between 0 (zero) and 1 (one), where 0 (zero) is impossibility and 1 (one) is absolute certainty. Often expressed as a percentage.

**Probable (likelihood of failure)** Failure may be expected under normal weather conditions within the specified time frame.

**Protection factors** Structures, trees, branches, or other factors that would prevent or reduce harm to targets in the event of a tree failure.

**Qualitative tree risk assessment** A process using ratings of consequences and likelihood to determine risk significance levels (e.g., *extreme*, *high*, *medium*, or *low*) and to evaluate the level of risk against qualitative criteria.

**Quantitative tree risk assessment** A process to estimate numerical probability values for consequences and to calculate numeric values for risk.

**Recommendations** One or many alternatives that are promoted to achieve a desired outcome, based on professional judgement.

**Reporting (risk assessment reporting)** Presenting the client with a summary statement describing in detail the results of an assessment.

**Residual risk** Risk remaining after mitigation.

**Retain and monitor** The recommendation to keep a tree and conduct follow-up assessments after a stated inspected interval.

**Risk** The combination of the likelihood of an event and the severity of the potential consequences. In the context of trees, risk is the likelihood of a conflict or tree failure occurring and affecting a target, and the severity of associated consequences-personal injury, property damage, or disruption of activities.

**Risk aggregation** The consideration of risks in combination.

**Risk analysis** The systematic use of information to identify sources and to estimate the risk.

**Risk assessment** The process of risk identification, analysis, and evaluation.



**Risk categorisation** The process of assigning risk and risk factors to categories based on severity or hierarchy.

**Risk evaluation** The process of comparing the assessed risk against given risk criteria to determine the significance.

**Risk management** The application of policies, procedures, and practices used to identify, evaluate, mitigate, monitor, and communicate tree risk.

**Risk matrix (risk rating matrix)** A tool for ranking and displaying risks by assigning ratings for consequences and likelihood.

**Risk perception** The subjective perceived level of risk from a situation or object, often differing from the actual level of risk.

**Risk rating** The level of risk combining the likelihood of a tree failing and impacting a specified target, and severity of the associated consequences.

**Risk tolerance** Degree of risk that is acceptable to the owner, manager, or controlling authority.

**Scope of work** The defined project objectives and requirements.

**Severe (consequences)** Serious personal injury or death, damage to high-value property, or disruption of important activities.

**Somewhat likely (likelihood of failure and impact)** Defined by its placement in the likelihood matrix (see Matrix 1, section 4.0 Tree Risk Assessment); *imminent* likelihood of failure and *low* likelihood of impact, or *probable* likelihood of failure and *low* likelihood of impact, or *probable* likelihood of failure and *medium* likelihood of impact, or *possible* likelihood of failure and *high* likelihood of impact.

**Standard of care** Degree of care that a reasonable person should exercise in performing duty of care; a measurement used to assess whether an individual acted in a reasonable manner.

**Stratifying targets** A process for classifying and ranking targets according to importance or value.

**Structural defect** Feature, condition or deformity of a tree that indicates a weak structure or instability that could contribute to tree failure.

**Target** People, property or activities that could be injured, damaged, or disrupted by a tree.

**Target-based actions** Risk mitigation actions aimed at reducing the likelihood of impact in the event of tree failure.

**Target management** Acting to control the exposure of targets to risk.

**Target value** The monetary worth of something; the importance or preciousness of something.

**Target zone** The area where a tree or branch is likely to land if it were to fail.

**Time frame** Time period for which an assessment is defined; time period for recommended mitigation.

**Tree-based actions** Risk mitigation actions aimed at reducing the likelihood of tree failure.

**Tree conflict** An interference between the needs of a tree and society or infrastructure.

**Tree risk assessment** A systematic process used to identify, analyse, and evaluate tree risk.

**Tree risk evaluation** The process of comparing the assessed risk against given risk criteria to determine the significance of the risk. to identify, evaluate, mitigate, monitor, and communicate tree risk.

**Tree risk management** The application of policies, procedures, and practices, used to identify, evaluate, mitigate, monitor, and communicate tree risk.

**Unacceptable risk** A degree of risk that exceeds the tolerance of the owner, manager, or controlling authority.

**Unlikely (likelihood of failure and impact)** defined by its placement in the likelihood matrix (see Matrix 1, section 4.0 Tree Risk Assessment); *possible* or *probable* likelihood of failure and *low* likelihood of impact, or *possible* likelihood of failure and *medium* likelihood of impact, or *improbable* likelihood of failure with any likelihood of impact rating, or any likelihood of failure rating with *very low* likelihood of impact.

**Verbal report** Oral report; results of the risk assessment delivered to the client orally.

**Very likely (likelihood of failure and impact)** Defined by its placement in the likelihood matrix (see Matrix 1, section 4.0 Tree Risk Assessment); *imminent* likelihood of failure and *high* likelihood of impact.

**Very low (likelihood of impact)** The chance of the failed tree or branch impacting the specified target is remote. This is the case in a rarely used site fully exposed to the assessed tree or an occasionally used site that is partially protected by trees or structures.

**Visual assessment** Method of assessing the structural integrity of trees using external symptoms of mechanical stress (such as bulges, reactive growth, etc.).

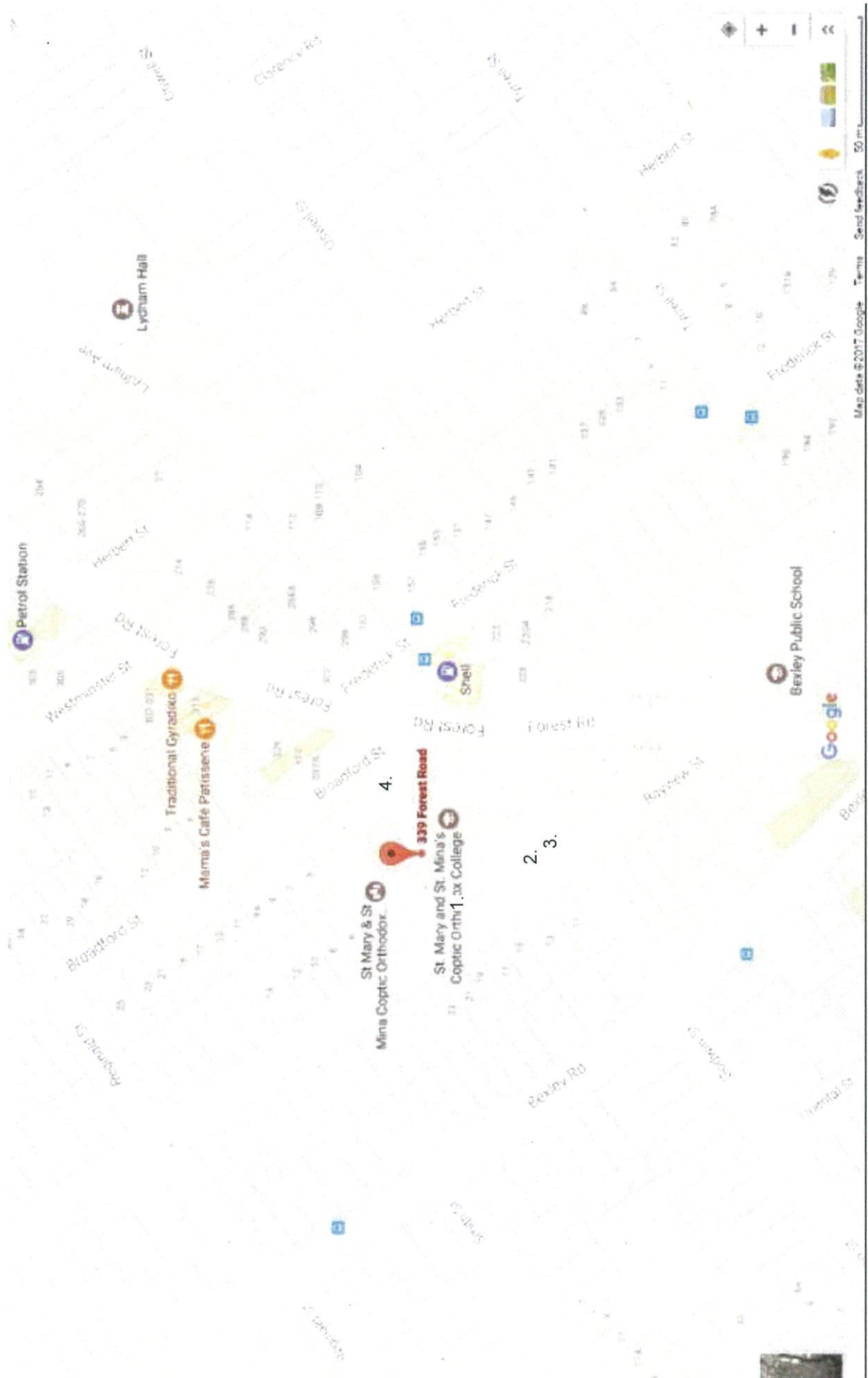
**Walk-by (assessment)** A limited visual inspection, usually from one side of the tree, performed as the tree risk assessor walks by the tree(s).

**Work order** A written document detailing the work to be completed and authorising performance of contracted work.

**Written report** A document with text, images, and/or references, delivered in print or electronic form, containing the results of the risk assessment.

## Appendix B – Plan Showing location of subject trees - 339 Forest Road, Bexley NSW

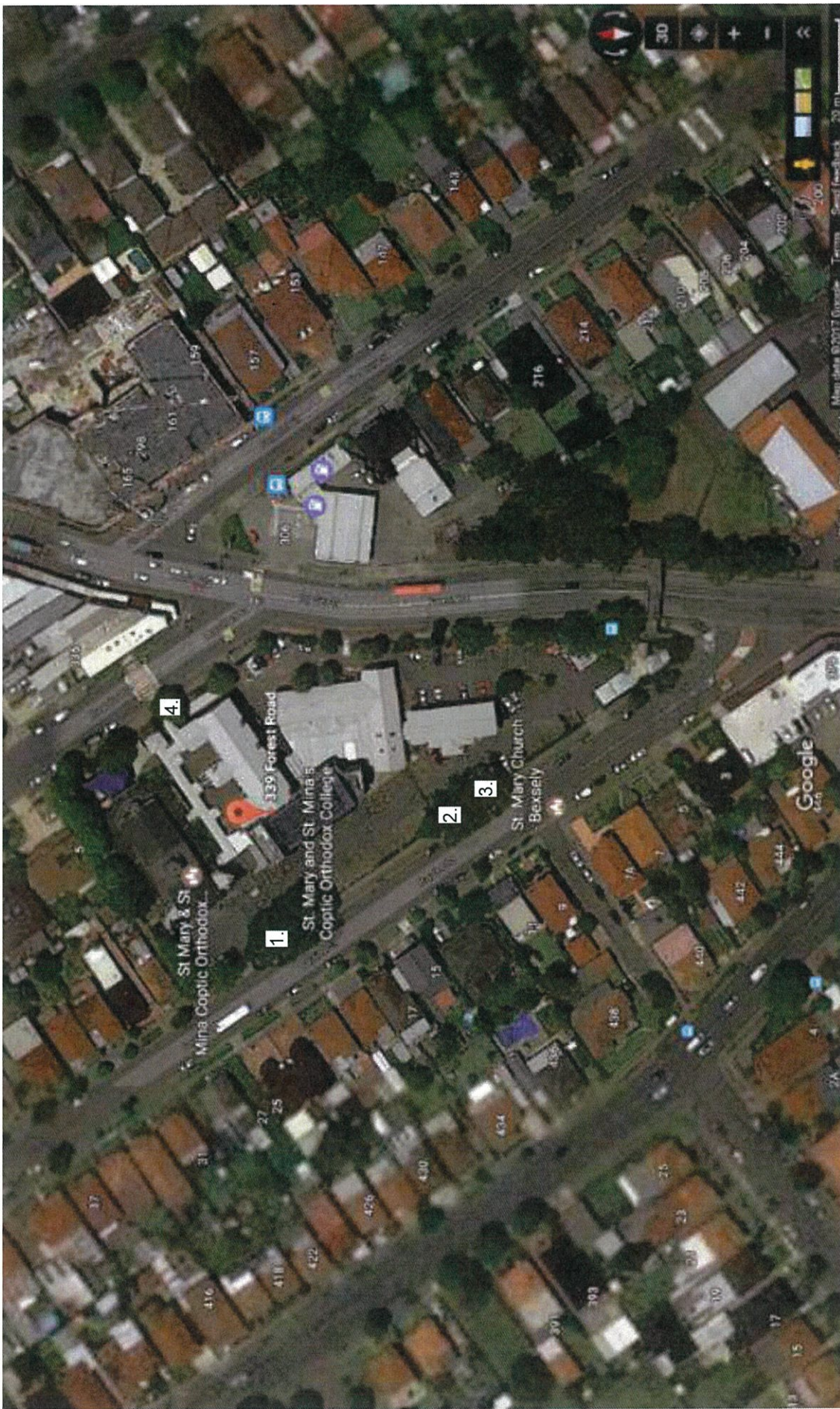
Source: Google Maps, viewed 29 May 2017, <https://www.google.com.au/maps/place/339+Forest+Rd,+Bexley+NSW+2207/@-33.9460881,151.12689,18z/data=!4m5!3m4!1s0x6b12ba1c95c314bd:0xecf4546e0651d7bb18m2!3d-33.946126!4d151.127346>





**Appendix C – Plan (aerial Photograph) Showing location of subject trees – 339 Forest Road, Bexley NSW.**

Source: Google Maps, viewed 29 May 2017, <https://www.google.com.au/maps/place/339+Forest+Rd,+Bexley+NSW+2207/@-33.9463388,151.1267646,267m/data=!3m1!1e3!4m5!3m4!1s0x6b12ba1c95c314bd:0xect4546e0651d7bb18m2!3d-33.946126!4d151.127346>





BROADFORD STREET

FOREST ROAD

BAYVIEW STREET

0 10 20 30

AS BUILT

THIS DRAWING TO BE READ IN CONJUNCTION  
WITH BCA REPORT DATED 27.05.2010,  
PREPARED BY BLACKETT, MAGUIRE + GOLDSMITH

NOTES  
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PROCEEDING WITH WORK.  
THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL OTHER DRAWINGS AND  
SPECIFICATIONS FOR THE PROJECT.  
ALL DIMENSIONS SHALL BE VERIFIED ON SITE PRIOR TO COMMENCEMENT OF CONSTRUCTION.  
ON FABRICATION ON AND OFF SITE.  
FIGURED DIMENSIONS TO BE USED RATHER THAN SCALING.

REV	DATE	AMENDMENT
A	09/04/2010	ISSUE FOR TENDER
B	13/05/2010	SITE ACCESS GATES RELOCATED AND SECURITY FENCE REVISED
C	28/05/2010	ISSUE FOR CONSTRUCTION
D	18/10/2010	ISSUE FOR CONSTRUCTION CERTIFICATE APPLICATION
E	12/04/2011	ISSUE TO INCLUDE AMENDMENTS FROM AUTHORIZATION NUMBERS 197.1 & 197.2 INCLUDING AMENDMENTS 1, 2 & 3
F	28/11/2011	AS BUILT

REV	DATE	AMENDMENT

PROJECT CONSULTANTS:

STRUCTURAL: AWT Consulting Engineers 9922 2466  
HYDRAULIC: G J Sparks & Partners 9891 5033  
MECH & ELEC: Meinhardt 9699 3088  
LANDSCAPE: Ladd-Hudson Architects 9810 1778  
QUANTITY SURVEYOR: Rider Levett Bucknall 9922 2277



ST MARY & ST MINA'S  
COPTIC ORTHODOX COLLEGE  
ADDITIONAL CLASSROOM BLOCK  
BEXLEY CAMPUS, 339-377 FOREST ROAD, BEXLEY 2207

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SITE PLAN

DRAWING SCALE: 1:250@A1 DATE: APRIL 2010 PLOT DATE: 28/11/11  
PROJECT NO: 04867 DRAWING NO: A.01 REVISION: F






BROADFORD STREET

PLANT SCHEDULE

Code	Plant Name	Pot Size	Mature Size	Qty
ER	Eleocharis reticulatus	75Litre	6.0m	3No.
TL	Tristaniopsis laurina	75Litre	6.0m	4No.
339-337 Forest Road Bexley				9 June 2017

TREE LEGEND

-  EXISTING TREE TO BE RETAINED
-  EXISTING TREE TO BE REMOVED
-  PROPOSED TREE TO BE PLANTED

FOREST ROAD

BAYVIEW STREET

0 10 20 30

  
**Michael Siu**  
Landscape Architects  
PO Box 550 Hurstville NSW 1481  
michael@msla.com.au  
02 9557 9833 | 0417 280 249

Tree Replacement Plan

St Marys & St Mina's Coptic  
Orthodox College  
339-377 Forest Road Bexley

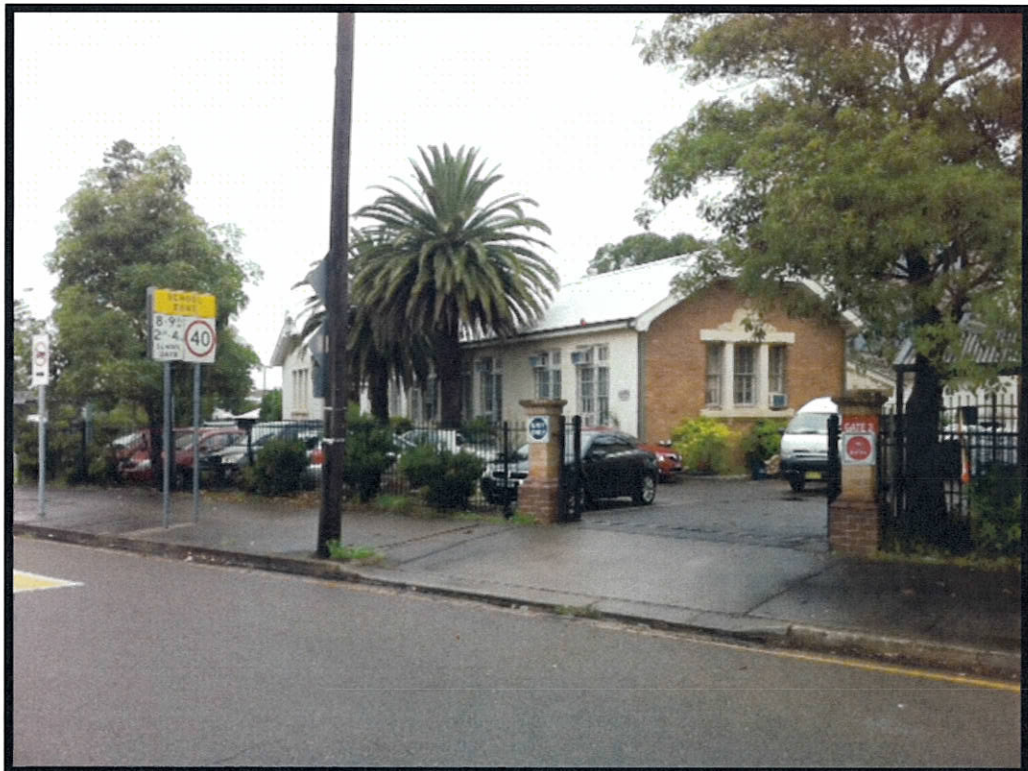
1:250@A1 Dwn: 1.01/1- K22012 9 June 17



## Statement of Environmental Effects and Heritage Assessment

### St Mary & St Mina's Coptic Orthodox Cathedral and College

339-377 Forest Road, Bexley



Removal of trees

July 2017

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## **1.0 Introduction**

This Statement is submitted in support of a Development Application (DA) for the subject site located at 339-377 Forest Road Bexley. The site contains a Place of Worship and a school. The site is listed as a heritage item under Rockdale Council's LEP 2011.

The proposed development involves the removal of 10 trees that are causing damage to the existing buildings on the site and are a significant potential danger to school children. The submission of a DA was requested by Council following initial enquires made by the Church.

This submission is accompanied by an Arborist report and Engineer's Building report, which discuss the health of the subject trees and damage caused by the trees respectively.

An assessment of the proposed development has not identified any unreasonable adverse environmental impacts likely to arise as a result of the proposal. It is therefore recommended that consent for the proposed development is granted subject to Council's standard conditions.



## 2.0 Site Location and Description

The subject site is located on the western side of Forest Road, between the junctions of Bayview Street and Broadford Street. The subject site measures approximately 8,400m<sup>2</sup> in area and contains a Cathedral, School and associated parking for these uses.

The site contains many significant mature trees. Some of these trees are causing damage to the surrounding footpath and to the structural integrity of walls and stormwater channels.



Figure 1: Aerial view of site.

### Historical Background

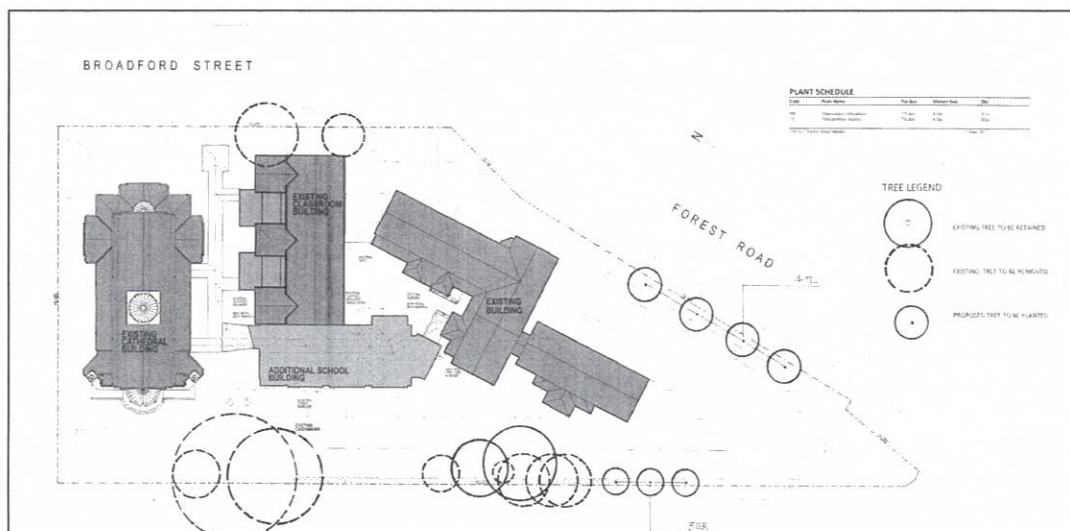
The site contains a heritage item, being noted as the *Original Bexley School Buildings*, built in 1889 and containing Victorian and later Federation era structures. The Office of Environment and Heritage provides background information in respect of the site.

The land on which this school is built was first granted to James Chandler on the 19th October 1831 by Governor Brisbane (1300 acres). This land was divided into estates during the 1880s and known as the Lynton Heights Estate Oriental Estate.

In June 1885 local residents George Preddey, Joseph Davis (Lyndham Hall) and James Glen petitioned the Government to erect a school at Bexley. The Government refused, stating that the whole was motivated by land developers wanting to use the proximity of a school as a selling point for their land - and in any case there was

plenty of room at the schools already established at Arncliffe, Kogarah and Hurstville. These schools however soon became over crowded in the population explosion which followed the opening of the railway.

In December 1886 land was secured in Forest Road and work commenced on the first Bexley school. It was a two roomed structure of brick and slate consisting of one large and one small class room. The school finally opened in 1887 with an enrolment of 103 pupils. By 1889 enrolments had reached 258 and the school had three teachers. In 1917 a second building was built to accommodate what had become a seriously over crowded school. The New larger building accommodated the older students whilst the smaller earlier building became the infants school. In 1922 the Department of Education resumed land across Forest Road and two years later a new primary school building was built. Between 1938 and 1962 the original school buildings were used as the Bexley Home Science Secondary School.

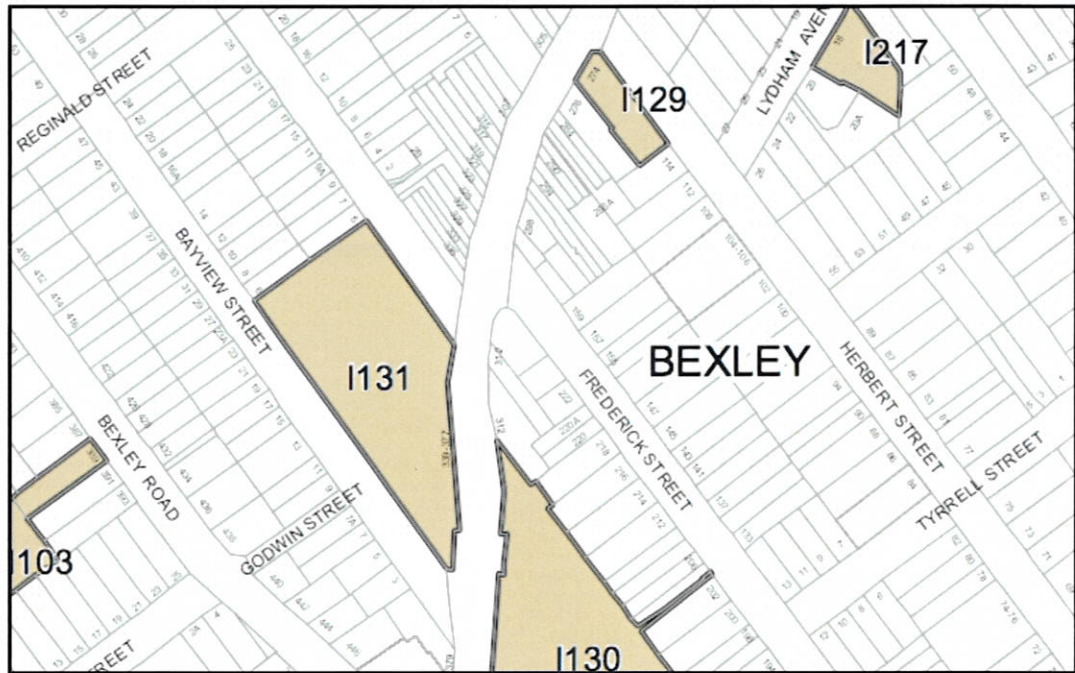


**Figure 2: Aerial view of site. – The 10 subject trees are along Bayview Street and Broadford Street as shown above.**

This school is significant as one of a number of schools established in the St. George area, during the late nineteenth, early twentieth century. It is aesthetically significant as a prominent building on a bend in Forest Road.

The school comprises the original single storey Victorian style school and a later two storey Federation style building. The Victorian block is brick construction with gable roof clad with corrugated iron. The ends of the building have elaborate groups of three windows with sandstone sills, heads and decorative medallions. The ends of the barge boards are decorated. The Federation style block is red brick construction on the ground floor contrasting with rough cast stucco on the first floor. Roof cladding is corrugated iron. The whole of the Victorian building which was originally face brick has been painted to match the rest of the buildings.



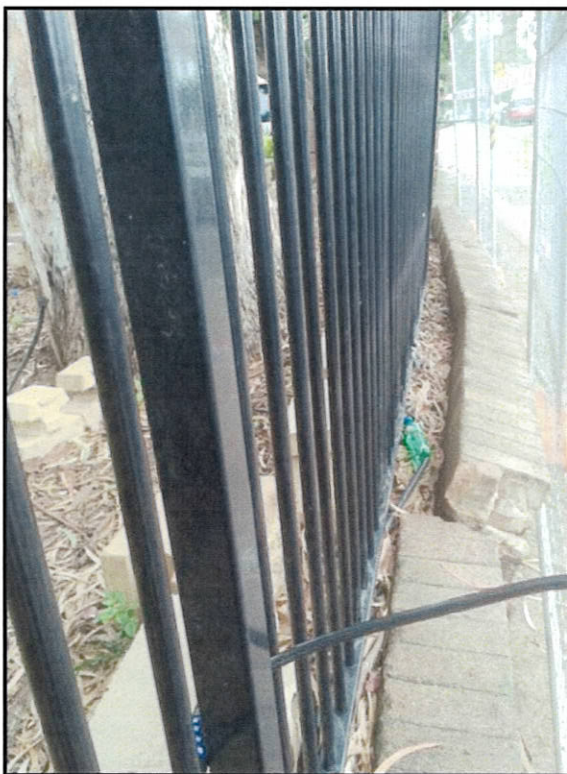


**Figure 3: The site is noted as a heritage item (I131) in Council's LEP 2011.**

**3.0 Photographs around Subject Site**



**Figure 4: Damage caused by tree no.1.**



**Figure 5: Damage caused by tree no.1.**





**Figure 6: Damage caused by tree no.1.**



**Figure 7: Damage caused by tree no.3.**





**Figure 8: Damage caused to children's play area by falling branches.**

#### **4.0 Proposed Development**

The works seek to remove 10 trees as shown on the landscaping plan to the boundary of the site.

As noted the trees are causing physical harm to surrounding structures and causing potential harm to the safety of schoolchildren at the site.

The submission is accompanied by an engineer's/building report and an arborist report. Both reports recommend that the 10 subject trees be removed.

#### **5.0 Statutory Planning Considerations**

The Environmental Planning and Assessment Act 1979 is the principle planning legislation in NSW. Section 79C (1) of the Act specifies the matters that the consent authority must consider when determining any development application.

- Provisions of any environmental planning instrument - S79(1) (a) (i)
- Provisions of any draft environmental planning instrument - S79(1) (a) (ii)
- Provisions of any development control plan - S79(1) (a) (iii)
- Provisions of the Regulations - S79(1) (a) (iii)
- The likely impacts of the development, including environmental impacts on the natural and built environment and social and economic impacts on the locality - S79(1) (b)
- The suitability of the site for development - S79(1) (c)
- Any submissions made in accordance with the Act or Regulations - S79(1) (d)
- The public interest - S79(1) (e).

Following is an assessment of the matters of relevance referred to in Section 79C(1) of the Act.

##### **5.1 S.79C(1)(a) Provisions of any environmental planning instrument, draft instrument, development control plan or matter prescribed by the regulations**

The planning instruments of most relevance to this application are:

- Rockdale Local Environmental Plan 2011 (LEP 2011);
- Rockdale Development Control Plan 2011 (DCP 2011).

##### **5.1.1 Rockdale Local Environmental Plan 2011 (LEP 2011)**

Rockdale Local Environmental Plan 2011 is the comprehensive Local Environmental Plan applying to the site.

Relevant provisions of LEP 2011 are considered below.



**Rockdale LEP 2011 – Relevant Clauses**

Clause/Requirement	Summary of proposal	Compliance/Non Compliance
<b>Clause 1.2 Aim of Plan</b>		
<i>Aims of Plan:</i>		
To provide a vibrant area in which Rockdale residents can live, work and play.	The works are not inconsistent with the objectives of the plan.	Complies.
To conserve the environmental heritage of Rockdale.	The works will have no adverse impact to the heritage item on the site. The works have no adverse impact to the heritage significance of the site.	Complies.
<b>Clause 2.8 Zoning Controls</b>		
<i>Site is zoned Residential R2 Low Density Residential. The objectives of Zone R2 are:</i>		
To provide for the housing needs of the community within a low density residential environment.	The works will have no adverse impact to amenity.	Complies.
To enable other land uses that provide facilities or services to meet the day to day needs of residents.		
<b>Clause 5.9 Preservation of trees or vegetation</b>		
The objective of this clause is to preserve the amenity of the area, including biodiversity values, through the preservation of trees and other vegetation.	Trees have been assessed by an arborist who advises that the subject trees should be removed given their damage to surrounding structure.	Complies.
This clause does not apply to a tree or other vegetation that the Council is satisfied a risk to human life or property.	The trees are causing potential harm to safety and need to be removed.	
<b>Clause 5.10 – Heritage Conservation</b>		
<i>The dwelling is a heritage item and located in a heritage conservation area under the Rockdale LEP2011. The objectives of the Heritage Conservation clause are:</i>		

<p>To conserve the environmental heritage of Rockdale;</p> <p>To conserve the heritage significance of heritage items and heritage conservation areas including associated fabric, settings and views, and</p> <p>To conserve known or potential archaeological sites, and</p> <p>To conserve places of Aboriginal heritage significance.</p> <p>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 significance of the item or area concerned.</p>	<p>The listing for the item does not mention any tree as being a significant aspect of the site. This view is concurred with. The listing derives from the site's historical association with educational uses and aesthetic significance of the buildings, but not for any landscaping reason.</p>	<p>Complies.</p>
	<p>Accordingly the removal of 10 trees that are causing physical damage to structures and to the potential safety of children is acceptable in heritage terms.</p>	<p>N/A</p>
		<p>N/A</p>
		<p>Complies.</p>

#### 5.1.2 Rockdale Development Control Plan 2011 (DCP 2011)

This DCP provides detailed design principles, criteria, objectives, performance requirements and preferred solutions in the Rockdale Local Government Area.

The main issues in respect of compliance with the provisions of the DCP are considered below.

#### Rockdale DCP 2011: – Relevant Clauses

Clause/Requirement	Summary of proposal	Compliance/Non Compliance
<b>4.1.1 Views and Vistas</b>		
<p><i>Objectives:</i></p> <p>To protect significant view corridors to landmarks and heritage items that contribute to a sense of place.</p>	<p>The removal of trees will have some affect on the visual amenity of the area, however the need to remove the trees is more pressing.</p>	<p>Complies.</p>
<p><i>Controls:</i></p> <p>The development must consider any significant views to, from and across the site.</p>	<p>No significant view is affected.</p>	<p>Complies.</p>



<b>4.1.2 Heritage Conservation</b>		
<p><i>Objectives:</i> To conserve heritage items, including significant fabric and their settings.</p> <p>To ensure new development does not have any adverse impact upon the heritage significance of heritage items.</p> <p><i>Controls:</i> Any proposed development must conserve the setting of the heritage item and the significant views to and from the heritage item.</p>	<p>The setting of the heritage item is not materially affected. The removal of trees will ensure that the structural stability of the site is maintained.</p> <p>The subject trees do not contribute towards the cultural significance of the site.</p> <p>No significant view is affected.</p>	<p>Complies.</p> <p>Complies.</p>
<b>4.1.7 Tree Preservation</b>		
<p><i>Objectives:</i> To ensure the existing urban forest amenity within the Rockdale City Council area is maintained and preserved.</p> <p><i>Controls:</i> Council consent is required to undertake tree work including removing of any tree if the tree is more than 3m tall.</p> <p>Existing significant trees and vegetation are incorporated into proposed landscape treatment. An arborist report may be required for a development that impacts on the health of significant trees.</p>	<p>The submitted Arborist report advises that the trees can be removed for safety and structural damage reasons.</p> <p>Noted.</p> <p>An arborist report accompanies this proposal which supports the proposal. The trees are not significant.</p>	<p>Complies.</p> <p>Complies.</p> <p>Complies.</p>
<b>4.1.8 Biodiversity</b>		
<p><i>Objectives:</i> To sustain and enhance biodiversity through the protection and conservation of locally occurring flora and fauna, the environment they live in and the way they interact.</p>	<p>The site will maintain the vast majority of its vegetation.</p> <p>The landscaped qualities of the site will not be significantly impacted.</p>	<p>Complies.</p>



4.2 Streetscape and Site Context		
<p><i>Objectives:</i> To ensure development responds to the predominant streetscape qualities.</p> <p><i>Controls:</i> Development is to respond and sensitively relate to the broader urban context including topography, block patterns and subdivision, street alignment, landscape, views and patterns of development within the area.</p>	<p>The loss of mature trees always has some impact to the streetscape. However given the safety concerns in particular the removal of the trees is warranted.</p>	<p>Complies.</p> <p>Complies.</p>
4.3.1 Open Space and Landscape Design		
<p><i>Objectives:</i> To conserve significant natural features of the site, including existing mature trees and vegetation.</p> <p>To protect and enhance indigenous wildlife populations and habitat through appropriate planting of indigenous vegetation species.</p> <p>To provide privacy and enhance environmental amenity.</p> <p>To enhance the existing streetscape and promote a space and density of planting that is appropriate to the surrounding build form.</p> <p><i>Controls:</i> Significant existing trees and natural features should be retained and incorporated into the design of the development wherever possible.</p> <p>Incorporate plant species in locations and in densities appropriate for their expected size at maturity.</p>	<p>Mature trees being removed have been proven to cause detriment to amenity.</p> <p>Noted.</p> <p>Existing levels of privacy will be retained.</p> <p>The streetscape will be affected to some extent, however the vast majority of existing vegetation is retained.</p> <p>The proposal will safeguard the majority of significant trees on the site.</p> <p>The proposal is well considered in this respect.</p>	<p>Complies.</p> <p>Complies.</p> <p>Complies.</p> <p>Complies.</p> <p>Complies. The works will safeguard the long term structural integrity of the adjoining structures.</p> <p>Complies.</p>

**5.2 S. 79C(1)(b) Impact on the Environment**

The proposed development is appropriate for the site given the relevant planning requirements and because there are no negative impacts on neighbours to the site.

**Relationship to adjoining development**

Adjoining sites privacy, solar access and views will be largely unaffected by the proposed dwelling.

During works, noise and building impacts will be minimised through observance of the requirements of the Environmental Protection Authority and Local Authorities. All noise emissions will comply with Australian Standards.

In this regard, adverse environmental impacts on adjoining dwellings will be minimal.

**5.3 S.79C(1)(c) The suitability of the site for the proposed development**

Having regard to the characteristics of the site and its location, the proposed development is considered appropriate in that:

- It is consistent with the objectives of the Rockdale Local Environmental Plan 2011 and Development Control Plan 2011; and,
- The appearance of the site will not be adversely affected, particularly when the new trees reach maturity; and,
- The proposed development does not have any significant adverse environmental impacts in relation to adjoining properties.

As demonstrated throughout this Statement of Environmental Effects, the proposed development will not result in any significant adverse environmental impacts.

**5.4 Section 79C(1)(e) The Public Interest**

The proposed development does not have any detrimental impact on the streetscape, external appearance of the building or on the amenity of nearby residents. Consequently, the proposal is in the public interest.

## **6.0 Conclusion**

The proposed development will safeguard the structural integrity of the surrounding structures and promote the safety of school children. It is also consistent with the planning objectives for the zone.

The proposed development generally promotes and implements the planning principles, aims and objectives of:

- Rockdale Local Environmental Plan 2011; and,
- Rockdale Residential Development Control 2011.

The proposed tree removal and replacement works have the following merits:

- The works will ensure that structures are not adversely impacted by the existing tree roots. The structural integrity of the structures is maintained.
- The safety of children will be enhanced.
- There are no adverse impacts to the heritage item on the site, given the distance from the trees to the heritage item.
- Neighbours amenity is not adversely affected in terms of noise, views or outlook.

In light of the significant merits of the proposal and the absence of any adverse environmental impacts, it is recommended that Council grant consent to these works, subject to appropriate conditions of consent.

# NOTICE OF DETERMINATION

Section 96 of Environmental Planning and Assessment Act, 1979

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S96 Approval Date	
Authority	Delegated Authority – Bayside Planning Panel
Reference	DA-1997/49/F
Contact	Marta M Gonzalez-Valdes 9562 1743

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Mr T Nasralla  
7/721 Victoria Road  
RYDE NSW 2112

**Property:** 339-377 Forest Road, BEXLEY NSW 2207  
Lot 11 DP 857373

**Proposal:** *Erection of a Church and reuse of the existing building to comprise a Primary School, English Chapel, community hall and carparking*  
*[Amendment C – S96(1A) amended on 7 March 2008]*

Your application to modify Development Consent No. DA49/97 dated 26 November 1997 was considered under Section 96(1A) of the Environmental Planning and Assessment Act 1979 and is approved subject to the following conditions:

Development Application No 49097 has been approved pursuant to the provisions of Section 91AA of the Environmental Planning and Assessment Act as a **DEFERRED COMMENCEMENT** consent.

1. The Church building is to be designed and constructed to achieve a sound transmission loss of not less than 35dB(A) to ensure that noise from plant equipment and indoor activities shall not exceed the background (LA90) noise level by more than 5dB(A). Certification that the design and construction of the Church can meet this requirement is to be issued by a suitable qualified acoustic engineer which is to be submitted to Council within six (6) months of the date of consent. The acoustic engineer is also to certify that any amplified sound system installed or operated in the Church satisfies the stated criteria.

## GENERAL CONDITIONS

The consent, pursuant to Section 91 of the Environmental Planning and Assessment Act, be subject to the following conditions:

1. The term of this consent is limited to a period of **two** (2) years from the date of the original approval. The consent will lapse if the development does not commence within this time.
2. The development must be implemented in accordance with the plans numbered DA-01 to DA-11 received by Council on 24 February 1997, amended by Plans numbered DA-03 and DA-13 dated 7 August 1997, amended by plans numbered SK-27(P01), SK-28(P01), SK-30(P01) dated 23 April 1998, amended by works shown in colour on



plans numbered A-31(B01, A-39(B01) and A-37(B01 dated 12 October 1998, the application form and on any supporting information received with the application and by the following conditions.

[S96(1) - Amended 6 July 1998]

[S96(2) amended on 3 September 1999]

3. The occupation of each stage of the proposed development is prohibited until all works associated with that stage have been certified as being in accordance with Council approval
  - **Stage 1** – Primary School, associated playground and 50 car parking spaces for both staff parking and parents dropping off and picking up children.
  - **Stage 2** – New Church, English Chapel, Community Hall, completion of all 100 car parking space, associated landscaping and roadworks.
  - **Stage 3** – Community facilities, Priest's residence, bookshop, toilet facilities and kitchen associated with Community Hall."

*[S96(1) amended on 10 December 1998]*

4. All of the works required to be carried out under the conditions of this Consent being maintained at all times in, good order and repair and to the satisfaction of Council.
5. All activity being conducted so 'that it causes no interference to the existing and future amenity of the adjoining occupations and the neighbourhood in general by the emission of noise, smoke, dust, fumes, grit, vibration, smell, vapour, steam, soot, ash., waste water, waste products, oil., electrical interference or otherwise.
6. All loading and unloading in relation to the use of the premises taking place wholly within, the property.
7. 100 off-street parking spaces are to be provided in accordance with the details submitted on Drawing No. 13 as revised on 7 August 1997 and received by Council on 12 August 1997. These spaces are to be linemarked and made freely available to all staff, parishioners and visitors to the premises.
8. Other than for Christmas, the Epiphany, New Year's Eve, Good Friday, Joy Saturday, Eastern Sunday, and the Feast Days of St Mary, St Mina and Pope Kyrolos, the gate of the vehicular entrance in front of the Church's entrance is to be locked between 5pm and 7am.

*[Amendment B – S96(1A) amended on 7 July 2006]*

9. 58 stacked parking spaces are to be provided on site in. accordance with the details submitted on Drawing No. 13 as revised pa 7 August 1997 and. received by Council on 12 August 1997.. These spaces are to be used during peak. attendance- feast days as set out in the Management Plan and on other occasions when demand for parking exceeds 140 spaces.
10. There is to be no external amplification equipment installed or used, on church grounds.
11. Any overflow congregation is to be catered for by closed circuit television installed in either the community hall and/or the classrooms of the school.

12. No Alcohol is to be sold or consumed within the community hall or within the parish grounds.
13. Noise sources within the community hall shall not exceed the background noise level (LA90) by more than 15dB(A) when measured outside any bedroom window.
14. The use of the Site and its building will be carried out in accordance with the Draft Site Management Plan as submitted, subject to the following additional provisions:
  - The Church's complaints register is to be kept up to date at all times. It shall be submitted to Council upon request or every 12 Months, whichever is greater.
  - All complainants will be notified by the church of the action taken to address their complaints within fourteen, (1-4)-days of the date of the complaint.
  - The parking arrangements for special events are to be reviewed annually in conjunction with Council. In the event that the peak parking demand cannot be met as outlined in the Management Plan, additional and for alternative parking areas will be identified. Such parking areas may necessitate the Church providing buses to ferry people to and from services.
15. The Community Hall is to be mechanically ventilated to limit noise transmission.
16. All windows and doors of the Community Hall are to be kept closed when the centre\_ is used after 6:00p.m. in the evening to limit noise transmission.
17. All doors of the existing single storey building are to be fitted with self-closing doors fitted with seals to limit noise transmission.  
[Amendment C – S96(1A) amended on 7 March 2008]
18. The Church is to be provided with mechanical ventilation and all window openings in the-northern, eastern and Western facades are to be kept closed while the Church is in .use to minimise breakout noise.
19. All entry/exit doors are to be designed to provide a sound lock.
20. No external bells, chimes or the like are permitted.
21. During feast days when all parishioners cannot be contained in the Church and English Chapel, closed circuit television is to be provided with the classrooms of the school and/or the community hall.
22. The Church is not to be used between midnight and 7:00a.m, except on the following occasions:
  - i. Christmas;
  - ii. Good Friday;
  - iii. Joy Saturday;
  - iv. New Year's Eve;
  - v. Epiphany
  - vi. Easter Mass;
  - vii. A maximum of 10 celebrations a year by visiting Bishops.
23. The 5.30 am Friday Vespers are to be held in the Chapel, not the Church.
24. Details of any external lighting shall be submitted with the Building Application. Such lighting shall be designed to protect the amenity of surrounding properties.

25. The-applicant shall give at least three (3) weeks' written notice of services which would involve congregations in excess of five hundred and fifty (550) persons to Council and to the Police. The applicant shall conduct its services and regulate traffic and parking related to the services on these occasions in accordance with the requirements of Council and the Police
26. A display notice shall be erected at the front of the church near the street alignment behind a protective transparent cover setting out the following information in English and another community language: The times and duration of any service where the congregation is expected to be in excess of five hundred and fifty (550) persons.  
The details of these services shall be displayed on the notice board at least two (2) weeks prior to the services.
27. The pruning of the existing Lophosteom Confertus (Brush Box) trees is to preserve the screening affect of the trees to adjoining residential properties.
28. The existing garden adjacent to Bayview Street, between proposed parking spaces 44 and 46 is to be retained.
29. Prior to earthworks bitumen is to be removed from the dripline of trees by band, this is essential due to the shallow nature of the root zone, as machinery could adversely affect the root zone. Trees No. 6, 7, 8, 9, 10, 18, 57,58 and 59 will require this procedure.
30. Prior to fencing, remedial works will have to be carded out to improve the oxygen levels in. the soil, to tree Nos 3, 4, 5, 6, 7, 8, 9, 10, 57, 58 and 59.
31. Trees Nos. 3, 4,5, 6, 7 and 8 are to be fenced off in a safe zone area to a minimum of 3m from the trunk of each tree, the entire dripline zone is to be mulched with 75mm depth of wood and leaf chip mulch the remainder of the dripline outside of the safe zone area is to be a raised planked area for temporary construction zone access. At the edge of this zone hay bays are to be erected to prevent excess water flows or building Washes from entering the root zones.
32. Exclusion zone fencing and signs are to be erected to all trees previously mentioned prior to works commencing.
33. The total area fenced is to be mulched with leaf and wood chip to a depth of 75mm, this depth of mulch is to be maintained for the duration of the project, the mulch ie to be kept 'clear of the trunk Of the tree for approximately 1.00mm, mulch is to be free of weeds and contaminates and should consist of 70% leaf and 30% hardwood chip no greater than 50mm diameter.
34. No materials are to be stock-piled within the driplines of any tree. Trees to be removed are to be sectionally dropped and any stumps that are located within the dripline of trees to be retained, are to be removed by a stump grinding machine.
35. Construction personnel, including subcontractors, are to be make aware of the requirements to rigorously protect site trees.
36. Service trenches are to be excavated outside of the root zone, however, where this is not feasible and there appears to be a conflict with any lateral structural support roots of the tree, all care is to be taken to Manually excavate around or under such roots and position the trench with the minimum of root disturbance, All roots to be cut are to be cut cleanly. Shattered or damaged roots are to be excavated by hand to the nearest undamaged root section and cut cleanly and soil back-filled.
37. Soil levels are not be raised or compacted over root zones.



38. All trees are to be watered during dry spells i.e. two to three weeks without adequate rainfall. The root zone should be thoroughly watered and left to drain.
39. All fertilising is to be carried out by a qualified arboriculturist/horticulturist. Consideration should be given to the application of fertilisers to the dripline of trees.
40. Pruning and the removal of dead wood is to be carried out by a suitably qualified arborist, to the satisfaction of Council's Tree Officer.
41. The paining of any branches and roots shall be conducted using correct arboricultural practices. Roots will be cut cleanly to minimise stress and to encourage callus development and regrowth, during this procedure plant growth regulator which stimulates root growth such as Rootex "R" or similar may be used, according to manufacturer's application rates.
42. Tree climbing spikes are not to be used on trees which require pruning.
43. Where the dripline exists over proposed hard standing areas, excavation is to be kept to a minimum with light grading to minimise equipment weight on soil.
44. A qualified practicing Arborist must be present during initial remedial works, mulching and protection fencing installation.
45. The Arborist is required to coordinate meetings with Council's Tree Officer and be present during excavations for footings trenches and associated works.
46. The Arborist is required to make fortnightly visits to the site to assess the ongoing maintenance requirements necessary to monitor the trees progress and rectify any problems that may occur or vary any treatment, especially during the construction stage.
47. Paved areas are to be provided under the driplines of significant trees as detailed in the Landscape Proposal dated 17 December, 1997 and amendment 12 August 1997, in addition to paving also being provided for parking spaces 29, 30, 43, 44, 48, 93, 86, 87, 78 and 79.
48. A detailed landscape plan being prepared by a qualified landscape architect or an approved consultant for submission to and approval of Council prior to commencement of building operations. The landscaping of the site being carried out in accordance with the approved landscape plan, such landscaping being maintained at all times to the Council's satisfactions.
49. An investigation of the location of any footings, if any, of any previous known structures on-site. An archaeologist accredited by the Heritage Council of New South Wales should be present during initial site works to establish whether further investigations may be necessary.
50. The two (2) existing Phoenix Palm trees are to be retained.
51. The property boundary fence is to be an open simple metal fence, without decorative elements and painted a recessive colour. The fence is to continue past the acoustic walls with the landscaping strip to be located between the acoustic wall and boundary fence.
52. The existing single storey building is to be retained, however, accretions are to be removed. Details of which will be required to be submitted with the Building Application.
53. The gable form of the proposed community hall is to be kept as a distinct form, from the chapel and residence structure.

54. The wall and roof materials and the roof pitch of the additions to the existing single storey building are to match the existing. In addition, the proportions of the window openings are to match the existing. Details of which are to be submitted with the Building Application.
55. The detailing of the gable on the existing single storey building are to be reinstated by the removal of the cladding. Details of which are to be submitted with the Building Application.
56. The exterior brickwork and sandstone of the existing single storey building is to be cleansed of paint. Details of which are to be submitted with the Building Application.
57. The exterior trims of the existing single storey building are to be painted. Colours of which are to be submitted and approved by Council's Heritage Adviser prior to approval of the Building Application.
58. All new gutters -to be erected on the single storey building are to be of 'ogee' profile, with all downpipes to be circular. Details of which are to be submitted with the Building Application.
59. The glass to be placed behind the altar in the English chapel is to be coloured to Match the existing. Details of which are to be submitted with the Building Application.
60. All interior detailing of both the existing single storey and two-storey buildings are to be investigated before modification takes place.
61. The brickwork of the ground floor of the existing two-storey is not to be painted.
62. The first floor stucco and chimney are to be painted. Colours of which are to be submitted to and approved by Council's Heritage Adviser prior to approval of the Building Application.
63. All windows and doors are to be retained. Details of which are to be submitted with the Building Application.
64. The axis of transept of the church building is to line up with the wing of the 'Federation' style building (existing 2-storey building).
65. The colours and materials of the exterior of the Church building are to be submitted to and approved by Council's Heritage Adviser prior to approval of the Building Application. The colours and materials chosen are to be sympathetic to the existing buildings but expressive of the new building.
66. The submissions of a Building Application, together with plans and specifications, Complying with the requirements of the Building Code of Australia for a building of type C construction, classification 9b.
67. Excavation, filling of the site, or retaining wall construction shall not take place without the prior written approval of Council.
68. Compliance with the requirements of Council's Access Policy.
69. The building not being occupied until a final inspection has been carried out by Council's Building Surveyor and a Certificate of Classification has been issued.
70. The entrances on the western side of the Church, Which face the adjoining residential properties are to provide emergency access only. These door's are to remain dosed at all other times in order to limit disturbance front noise.
71. An appropriately qualified person or professional organisation is to certify that the school classrooms do not have any lead based paint or contain other building

materials which are deemed to be detrimental to the health of children or staff.

[Amendment C – S96(1A) amended on 7 March 2008]

72. Approval is to be obtained from the Federal Airports Corporation for the operation of construction cranes. Information to be contained in the application is to include:
  - the maximum operating height of the crane;
  - the minimum resting height of the crane;
  - the desired operating hours;
  - the duration of the work;
  - the crane site
73. The copper dome of the Church is to be chemically treated to accelerate the oxidisation of the surface to minimise potential hazard to aircraft.
74. The following works Will be required to be undertaken at the applicant's expense: construction of a concrete footpath along the frontage of the development site; construction of a new fully constructed concrete vehicular entrance/s; removal of the existing concrete vehicular entrances, and/or kerb laybacks which will no longer be required; reconstruction of selected areas of the existing concrete footpath/vehicular entrances and/or kerb and gutter; removal-of redundant paving. The extent and dimensions of the works will be determined as required by the Director Engineering Services or his representative. An estimate of the cost to have these works constructed by Council may be obtained by contacting Council's overseer on 9562-1670. The cost of undertaking 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 on completion of the work. Alternatively, the applicant may arrange to have the works constructed by a private contractor subject to Council, approval, and payment of inspection fees by the applicant.
75. Following completion. of concrete works in the footpath reserve area, the applicant is required to turf or landscape the balance of the area between the fence and the kerb over the full frontage of the proposed development. If landscaping is, proposed rather than turfing, details are to be submitted to the Property and Community Services Department for approval.
76. The northern vehicular entry in Bayview Street to be clearly marked and signposted 'entry' from the street and 'no exit' internally.
77. The driveway areas and entries to the car spaces are to be designed to match the 85th percentile Australian Standard Sweep Paths. Reference may be made to Council's "Parking and Loading Code".
78. The applicant is to confer with Energy Australia to determine if an electricity distribution substation is required. If so, it will be necessary for the final film survey plan to be endorsed with an area having dimensions 5m x 4m over the location of the proposed electricity distribution substation to be dedicated to Council as public roadway, or as otherwise agreed with Energy Australia. A copy of Energy Australia's written requirements are to be forwarded to Council, prior to release of the building plans.
79. Where stormwater is required to be directed to the Council stormwater system the applicant is to pay to Council a redevelopment drainage levy of \$5,300 prior to the release of the building plans: This payment is to be applied exclusively to the



construction of pollution control works within the Bardwell Creek Drainage Catchment. If payment is made after 30th June, 1997 the amount to be adjusted in accordance with Council's adopted fees and charges.

80. The applicant is to construct a 375 mm diameter pipeline from the existing Council drainage pit in Broad ford Street to a new pit to be constructed outside the development property. Details to be submitted prior to release of the building plans.
81. The draft Site Management Plan is to be amended to the satisfaction of the Director Town Planning Service and the Director - Engineering Services to incorporate changes required by conditions of this consent.
82. The Church is to utilise its three (3) existing mini-buses for the collection and return of parishioners to mitigate parking demands generated by the Church's Operations. These buses are to be used for all Sunday services, New Year's Eve, Christmas, the Epiphany, Good Friday, Joy Saturday and the Feast Days of St Mary St Mina and Pope Kyrolos and at any other times where the Church anticipate the demand for greater than 140 car parking spaces.
83. The applicant shall use all best endeavours to secure a community use agreement with Bexley Public School for thirty (30) car parking spaces in the school grounds noting that this agreement with be renewed yearly. Evidence that the agreement is in place is to be submitted to Council annually.
84. Any buses visiting the church are required to drop off and pick up passengers from within the church grounds.
85. That no Church Parish services are to be conducted in any of the existing buildings on site until all Stage 2 works are complete including all on-site parking.”  
[S96(1) amended on 10 December 1998]
- 85A. The Brushbox tree identified as Tree No. 5 in the Arboriculture Impact Assessment Report dated 14 November 2011 and prepared by Redgum Horticultural and located adjacent to the north western corner of the Cathedral may be removed. No other trees within the site may be removed. Tree protection measures as detailed in Section 5.15 of the Arboriculture Impact Assessment Report dated 1 November 2011 and prepared by Redgum Horticultural shall be implemented during the removal of the nominated Brushbox tree.  
[Amendment D – S96(2) inserted on 6 June 2012]
- 85B. *Notwithstanding condition 85A above, the Southern Blue Gum tree (Tree No. 3), located adjacent to Bayview Street and the Camphor Laurel tree (Tree No. 4) located adjacent to Broadford Street as identified in the Tree Risk Assessment Report dated 29 May 2016 and prepared by Urban Tree Management may be removed. During the removal of Tree No. 3 all care is to be taken to prevent any damage to Tree No. 2. No other site trees within the site may be removed. At least two(2) x 75 litre locally indigenous replacement trees shall be planted within the site on the Bayview Street and Forest Road boundaries following removal of the trees.*  
[Amendment F – S96(1A) inserted on .....]
- 85C. *The Southern Blue Gum trees identified as Trees No. 1 and 2 in the Tree Risk Assessment Report dated 29 May 2016 and prepared by Urban Tree Management located adjacent to Bayview Street shall be retained.*

*Within three (3) months of the issuing of this consent, remedial pruning of Trees No. 1 and 2 shall be undertaken to remove deadwood and branch stubs. The pruning shall be carried out by an experienced tree contractor with minimum AQF Level 3 qualifications in Arboriculture and be a Registered Practicing Arborist member of Arboriculture Australia or similar Arboriculture organisation. Options are to be explored for alternative fence treatment in lieu of brickwork to replace the damaged brick fence. The replacement fence materials must not damage the trees or their roots. Built up soil and debris behind the existing brickwork adjacent to the two trees shall be removed by hand to relieve pressure on the replacement fence.*

*[Amendment F – S96(1A) inserted on .....]*

*Reason for additional conditions 85B & 85C is:*

- *To ensure the protection of existing trees and minimise impacts on the streetscape and the amenity of the area.*
86. No material or equipment of any description shall be stored in the area beneath the drip lines of the trees located adjacent to the north western boundary of the property.  
[Amendment D – S96(2) inserted on 6 June 2012]
87. Pruning of trees may be undertaken to reduce the branches which are overhanging or encroaching on the neighbouring dwelling at No. 5 Broadford Street. The pruning shall be limited to removing outer secondary lateral branches to reduce the overhang, plus the removal of deadwood. The pruning shall be carried out by an experienced Arborist with minimum AQF Level 3 Qualifications in Arboriculture and shall be carried out in accordance with the relevant sections of AS 4373.

*[Amendment D – S96(2) inserted on 6 June 2012]*

## ADVICE TO APPLICANT

- a. The payment to Council of a Footpath Reserve Restoration Deposit of \$55,000 prior to the release of the building plans. 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 is to be provided on Council's Bank Guarantee Form. If payment is to be made after 30th June, 1997, this amount is to be adjusted in accordance with Council's adopted fees and charges.
- b. Drainage details are to be approved prior to release of the building plans for the discharge of all roof and surface runoff to the requirements of Council's Stormwater Design Code.
- c. Stormwater runoff from the property is to be directed to Council's drainage pits.
- d. This application be advised of proposed changes to traffic conditions (Forest/Broadford, Forest/Bayview).
- e. Shall be submitted prior to commencement of work and/or occupation.
- f. Submission with the Building Application of existing and approved finished ground levels and proposed floor levels in relation to the level of the-footpath at the kerb.

- g. Submissions of a -geotechnical report prepared by a qualified Geotechnical Engineer is to be submitted to Council in conjunction with the structural details, This report must clearly indicate the soil classification for the given site together with any relevant recommendations.
- h. All materials, linings, surface finishes, fittings and fixtures must comply with Specification C1.10 of the building Code of Australia, "Early Fire Hazard Indices". Details to be submitted with the Building Application.
- i. The means of egress from the entire building complying with Part DI and 1)2 of the Building Code of Australia.
- j. The gradient of the ramp/pathway providing access for disabled persons not to be less than 1 in 14.
- k. Provision of permanently illuminated exit signs on Or near exit doors and directional signs in corridors, stairways and the like indicating such exits in accordance with E4.5 of the Building Code of Australia. Details of the location being submitted with the Building Application.
- l. A system of emergency lighting being provided within The building and installed in accordance with E4,2 of the Building Code of Australia. Details of the locations being submitted with the Building Application.
- m. Provision of hydrants in accordance with E1.3 of the Building Code of Australia. Details of the location being submitted With the Building Application or alternatively a Letter of Compliance from the NSW Fire Brigade certifying that the existing street hydrants are adequate for the coverage of the building.  
  
Note: Required hydrants shall .not be installed in any building and/or on. any site until after the Council has been furnished with a satisfactory report issued by the NSW Fire Brigades.
- n. E1.4 Provision of hose reels in accordance with of the Building Code of Australia.

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Should you have any further queries please contact Marta M Gonzalez-Valdes on 9562 1743.