2.3 DA/846/2012 - Proposed Detached Secondary Dwelling at 6 Hillcrest Avenue, Tacoma

TRIM REFERENCE: DA/846/2012 - D03371169
MANAGER: Jamie Loader, Manager, Building Certification and Health
AUTHOR: Jason Ritson; Health and Building Surveyor

SUMMARY

An application has been received for a detached secondary dwelling located at 6 Hillcrest Avenue, Tacoma. The application has been examined having regard to the matters for consideration detailed in section 79C of the Environmental Planning and Assessment Act (EP&A Act) 1979, the State Environmental Planning Policy (SEPP) (Affordable Rental Housing) 2009 and other statutory requirements with the issues requiring attention and consideration being addressed in the report.

Applicant	Rolls and Associate Surveyors
Owner	Kubecka Investments Proprietary limited
Application No	DA/846/2012
Description of Land	Lot 87, DP 29364, 6 Hillcrest Avenue, Tacoma
Proposed Development	Detached Secondary Dwelling
Site Area	575.40 sq metres
Zoning	2(a) Residential
Existing Use	Single Residential Dwelling
Estimated Value	$85,000

RECOMMENDATION

1 That Council grant consent subject to the conditions detailed in the schedule attached to the report and having regard to the matters for consideration detailed in Section 79C of the Environmental Planning and Assessment Act and other relevant issues.

2 That Council advise those who made written submissions of its decision.

PRECIS

- An application has been received for a proposed detached secondary dwelling
- The site is zoned 2(a) Residential under the provisions of the Wyong Local Environmental Plan 1991 (WLEP).
- The secondary dwelling complies with the relevant clauses for secondary dwellings contained within the SEPP (Affordable Rental Housing) 2009.

- The proposed secondary dwelling complies with Development Control Plan (DCP) 2005, Chapter 99 Building Lines and Chapter 100 Quality Housing.

INTRODUCTION

The Site

The site currently contains a two storey brick veneer, vinyl clad and fibro dwelling with a tiled roof. The house is similar to others located within the Tacoma area. The land slopes from the north west to the south east.

The application has been referred to Council for determination solely based upon the Council resolutions of 14 November 2012 which states:

Council at its meeting of the 14 November 2012 resolved unanimously on the motion of Councillor Graham and seconded by Councillor Vincent:

1 *That Council extend the trial for a period of 6 months.*

2 *That Council levy secondary dwellings (Granny Flats) during the trial period on the basis that they are equivalent to 35% of a Development Unit for the purpose of Section 94 contributions in accordance with the applicable contributions plans.*

3 *That Council implements the trial by way of those affected development applications being reported to Council for determination.*

The approval of the secondary dwelling would not create any adverse impact on adjoining properties. As such, it is recommended that the application be approved subject to conditions.

VARIATIONS TO POLICIES

Nil

HISTORY

Council became aware of unauthorised building works carried out on the subject dwelling to enclose the ground floor of the building. Discussions with the owner of the building indicated that he intended to use this part of the building as a secondary dwelling. Following discussion with Council staff, these plans have now been abandoned in favour of constructing the detached secondary dwelling as proposed. The ground floor of the existing dwelling is currently incapable of separate habitation and compliance action is in progress to restore it to the originally approved state.

PERMISSIBILITY

The subject site is zoned 2(a) Residential under the WLEP 1991. The proposed secondary dwelling is permissible with consent and complies with the objectives of the zone as follows:

The objectives are:

(a) "to provide land primarily for detached housing generally not exceeding a height of 2 storeys and with private gardens in an environment free from commercial and other incompatible activities and buildings, and

(b) to provide for other uses, but only where they:

i. are compatible with the residential environment and afford services to residents at a local level, and

ii. are unlikely to adversely affect residential amenity or place demands on services beyond the level reasonably required for detached housing, and

(c) to provide for home-based employment where such will not:

(i) involve exposure to view from any public place of any unsightly matter, or any raw material, equipment, machinery, product or stored finished goods, or

(ii) have a material adverse impact on residents. '

The secondary dwelling is permissible under the provisions of SEPP (Affordable Rental Housing) 2009.

RELEVANT STATE/COUNCIL POLICIES AND PLANS

Council has assessed the proposal against the relevant provisions of the following environmental planning instruments, plans and policies:

- SEPP (Affordable Rental Housing) 2009
- Wyong Local Development Plan 1991 (WLEP)
- Wyong Council DCP Chapters 14 - 'Tree management'
- Wyong Council DCP Chapters 99 - 'Building Lines'
- Wyong Council DCP Chapters 100 - 'Quality Housing'

ECOLOGICALLY SUSTAINABLE PRINCIPLES

The proposal has been assessed having regard to ecologically sustainable development principles and is considered to be consistent with the principles.

The proposed development is considered to incorporate satisfactory stormwater, drainage and erosion control and the retention of vegetation where possible and is unlikely to have any significant adverse impacts on the environment and will not decrease environmental quality for future generations. The proposal does not result in the disturbance of any endangered flora or fauna habitats and is unlikely to significantly affect fluvial environments.

ASSESSMENT

Having regard for the matters for consideration detailed in Section 79C of the EP&A Act 1979 and the SEPP (Affordable Rental Housing) 2009, statutory requirements, Council's policies and Section 149 Certificate details, the assessment has identified the following key issues, which are elaborated upon for Council's information.

THE PROVISIONS OF RELEVANT INSTRUMENTS/PLANS/ POLICIES (s79C(1)(a)(i-iv):

State Environmental Planning Policy (Affordable Rental Housing) 2009

SEPP (Affordable Rental Housing) 2009 permits secondary dwellings up to a maximum floor area of 60m^2. The proposed secondary dwelling has a floor area less than 58m^2. The subject allotment also exceeds the minimum area of 450m^2.

Division 2, Clauses 20 and 22 state:

"Cl 20 'Land to which Division applies'

"This Division applies to land within any of the following land use zones or within a land use zone that is equivalent to any of those zones, but only if development for the purposes of a dwelling house is permissible on the land:

(a) Zone R1 General Residential,

(b) Zone R2 Low Density Residential,

(c) Zone R3 Medium Density Residential,

(d) Zone R4 High Density Residential,

(e) Zone R5 Large Lot Residential"

Clause 22 "Development may be carried out with consent"

"(1) Development to which this Division applies may be carried out with consent.

(2) A consent authority must not consent to development to which this Division applies if there is on the land, or if the development would result in there being on the land, any dwelling other than the principal dwelling and the secondary dwelling.

(3) consent authority must not consent to development to which this Division applies unless:

(a) the total floor area of the principal dwelling and the secondary dwelling is no more than the maximum floor area allowed for a dwelling house on the land under another environmental planning instrument, and

(b) the total floor area of the secondary dwelling is no more than 60 square metres or, if a greater floor area is permitted in respect of a secondary dwelling on the land under another environmental planning instrument, that greater floor area."

(4) A consent authority must not refuse consent to development to which this Division applies on either of the following grounds:

*(a)**site area** if:*

(i) the secondary dwelling is located within, or is attached to, the principal dwelling, or

(ii) the site area is at least 450 square metres,

*(b) **parking***

if no additional parking is to be provided on the site.

(5) A consent authority may consent to development to which this Division applies whether or not the development complies with the standards set out in subclause (4)".

The provisions of Division 2 Clause 20 and 22 of the SEPP as stated above are fully complied with. Whilst compliance with the standards set out in Schedule 1 of the SEPP for Complying Development is not a requirement with this application as it has been made as a development application, it is however fully compliant with these standards.

Under these circumstances the proposed secondary dwelling is considered justified.

Wyong Local Environmental Plan 1991

The property is zoned 2(a) Residential Zone. The dwelling is permissible under the provisions of WLEP and meets the objectives of the zone. The secondary dwelling is proposed under the provisions of SEPP (Affordable Rental Housing) 2009 which overrides any provisions contained with the WLEP.

Development Control Plan 2005 Chapter 99 – Building Lines

Clause 3.1 of Chapter 99 – Building Lines for residential dwellings and ancillary development requires a front setback of 4.5 metres and side and rear setback of 900mm to a boundary. The proposal is fully compliant with all building lines setbacks.

THE LIKELY IMPACTS OF THE DEVELOPMENT (s79C(1)(b)):

The relationship to the regional and local context and setting
The proposed secondary dwelling is consistent with the scale and character of the local area of Tacoma. The scale, bulk, height, massing and choice of materials and finishes for the proposed secondary dwelling are considered appropriate to the local context and would not detract from the scenic quality.

The access, transport and traffic management measures

The SEPP (Affordable Rental Housing) 2009 does not require additional parking or access to be provided for the secondary dwelling.
Any effect on privacy, view loss and overshadowing

An assessment of potential over viewing, privacy and view sharing has been undertaken. It is concluded that the construction of the secondary dwelling would not be detrimental to the adjoining properties or those within the nexus of the development.

The impact on utilities supply.
Existing services for the site are adequate for the proposed development.
Any impact on the conservation of water.

A BASIX certificate has been submitted with the application and the proposal involves the use of water saving fixtures and a water tank of a minimum 2500 litre capacity. Connection of the tank to the toilet, washing machine and external tap will contribute to the conservation of water.

Any effect on the conservation of soils or acid sulphate soils.

The proposal does not involve any effect on the conservation of soils or acid sulphate soils.

Any effect on the flora and fauna.

There are two trees in close proximity to the proposed secondary dwelling. These trees are not native trees and although the plans do not detail their removal, there are no issues associated with the removal of these trees.

The provision of waste facilities.
A waste management plan has been submitted with the development application and provides details of how waste will be managed during construction. The occupants of the secondary dwelling will utilise the waste collection services associated with the primary dwelling.

Whether the development will be energy efficient.
A BASIX certificate has been issued as part of the development application.

Whether the development will cause noise and vibration.
A minimal amount of noise and vibration will be created during the construction phase. A condition will be placed on the consent restricting the hours that construction work can take place.

Any risks from natural hazards (flooding, tidal inundation, bushfire, subsidence, slip etc).

The property is not flood affected, however is subject to a bushfire threat. A report has been submitted which demonstrates that the development complies with the Planning for Bushfire Protection Guidelines.

Any impacts of construction activities (construction site management, protection measures).
During the construction of the works sediment fencing will be installed and construction noise will be minimised via conditions of consent.

THE SUITABILITY OF THE SITE FOR THE DEVELOPMENT (s79C(1)(c)):

Whether the proposal fits in the locality.

The proposal meets the objectives of the zone and complies with the criteria contained within the SEPP (Affordable Rental Housing) 2009.

The development is within a residential area that contains a number of single and multiple dwelling developments. The secondary dwelling would not have any significant impact on the surrounding area and promotes an orderly and economic use of the land.

It is considered the effect on the environment would be minimal and the proposed secondary dwelling would complement the existing residential and social amenity of the locality.

Whether the site attributes are conducive to development.

The site is considered appropriate for the proposed development.

ANY SUBMISSION MADE IN ACCORDANCE WITH THIS ACT OR REGULATIONS (s79C(1)(d)):

Any submission from the public.

The application was advertised in accordance with DCP 2005 Chapter 70 - Notification of Development Proposals and two submissions have being received.

D03177580 & D03180290	
Unauthorised construction work to the existing dwelling.	The Principal dwelling has had unauthorised building works to convert it two dwellings. Originally these works formed part of this Development Application, however this component has now been deleted.This matter is now being dealt with separately through compliance action by Council.
Parking facilities	The Affordable Housing SEPP does not require any parking facilities to be provided.
Pedestrian safety/footpath infrastructure	There is no requirement for upgrade works to public pathways for secondary dwellings contained either in the Affordable Housing SEPP or Council Policy. The area is currently acceptable for pedestrian movement and the secondary dwelling would not result in any change to this situation.
Commercial gain	The Affordable Housing SEPP is to provide low cost housing alternatives. It is not restricted for use by relatives of the property owner and can be used for rental purposes.

The issues raised in these submissions have been reviewed and there are not any matters to prevent the approval of the development.

Any submission from public authorities.

There are no submissions from public authorities.

OTHER MATTERS FOR CONSIDERATION

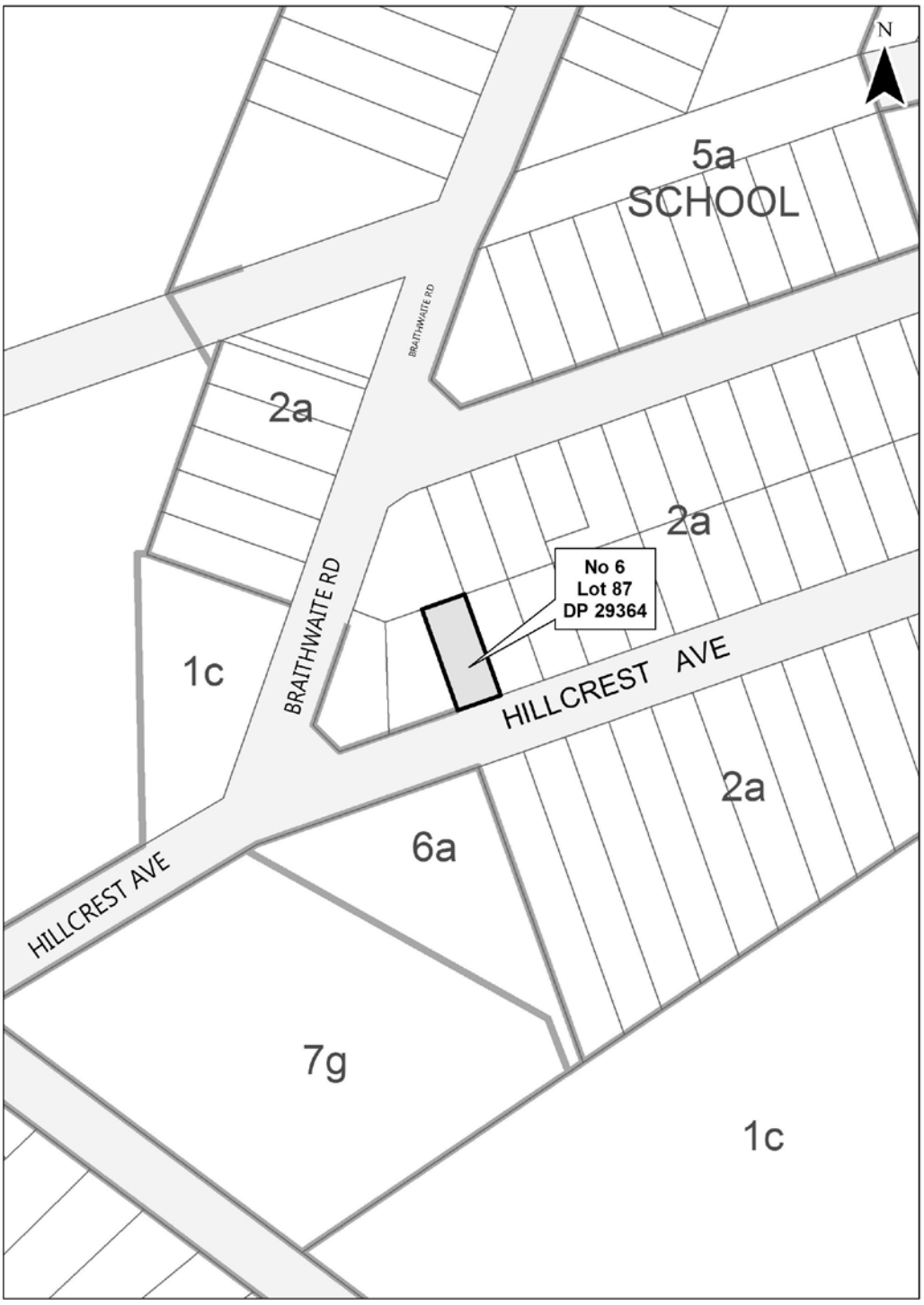
The property is within The Wyong Rural West S94 contribution plan created under the provisions of Section 94 of the EP&A Act 1979. Section 94 contributions are applicable to secondary dwellings under this plan as defined under the Affordable Housing SEPP.

Under the contribution plan the secondary dwelling would generate Section 94 contributions for a 2 bedroom dwelling at the rate of 0.75 development unit equating to $5991.30. In accordance with the Council resolution of 14th of November 2012 contributions of 35% of a development unit would reduce the contributions to $2872.60. This equates to a reduction of $3118.70.

CONCLUSION

The development application for a proposed secondary dwelling meets the standards of the relevant chapters of Council's DCP 2005 and the SEPP (Affordable Rental Housing) 2009. The application is recommended for approval subject to the attached conditions.

Locality Plan



ATTACHMENTS

1	Draft Conditions	D03371143
2	Site Plan	D03371293
3	Development Plans (A3 colour)	D03371300

PROPOSED CONDITIONS – DA 846/2012 – 6 HILLCREST AVE, TACOMA

1 The development taking place in accordance with the approved development plans reference number Proposed Granny Flat No 6 Hillcrest Avenue, Tacoma prepared by Lyndell Fortin dated 05/03/2013 except as modified by any conditions of this consent, and any amendments in red.

Prior to Release of Construction Certificate:

The following conditions must be satisfied prior to the release of the Construction Certificate. Conditions may require the submission of additional information with the Construction Certificate Application. Applicants should also familiarise themselves with conditions in subsequent sections and provide plans in accordance with any design requirements contained therein.

Certificates – Application and Approval

2 A Construction Certificate is to be issued by the Principal Certifying Authority prior to commencement of any construction works. The application for this Certificate is to satisfy all of the requirements of the Environmental Planning and Assessment Regulation 2000.

Bush Fire Requirements

3 The proposed development has been assessed against the provisions of *Planning for Bushfire Protection 2006 (NSW)* and has been determined as having a Bushfire Attack Level (BAL) of 12.5. Prior to the issue of a Construction Certificate, construction details demonstrating compliance with *AS3959-2009 – Construction in Bushfire Prone Areas* and additional measures contained in *Appendix 3 of the PBP Guidelines* for the nominated BAL must be provided for the approval of the Accredited Certifier.

Water Tank

4 Amend the site plan to include the location of the 2500 litre water tank.

Contribution Payment Requirements

5 Prior to the issue of a Construction Certificate, the payment to Council of contributions (as contained in the attached Schedule) under Section 94 of the Environmental Planning and Assessment Act 1979 and Council's Section 94 and Section 94A Contribution Plan. Council's contributions are adjusted on the first day of February, May, August and November. The amount of the contributions will be adjusted to the amount applicable at the date of payment.

Water and Sewer Services - Design Requirements

6 All water and sewer works or works impacting on water and sewer assets must be designed and constructed to the requirements of Council as the Water Supply Authority. The requirements are detailed in the Section 306 Notice of Requirements letter attached to this consent. **Note:** The Section 306 Notice contains requirements associated with the development that must be completed prior to the issue of the Construction Certificate.

Prior to Commencement of Works:

The following conditions must be satisfied prior to the commencement of site works, including any works relating to demolition, excavation or vegetation removal.

Erosion and Sediment Control Requirements

7 Prior to works associated with the development commencing, soil erosion and sediment controls measures are to be provided on the development site in accordance with Council's Policy E1 - Erosion and Sediment Control from Building Sites and Development Control Plan 2005, Chapter 67 – *Engineering Requirements for Development* and the approved development plans.

8 Prior to works associated with the development commencing, an appropriate sign to promote the awareness and importance of the maintenance of on-site sediment control techniques is to be provided on the most prominent sediment fence or erosion control device within the development site, for the duration of the project.

Home Building Act Requirements

9 Residential building work within the meaning of the Home Building Act 1989 must not be carried out unless Council, as the Principal Certifying Authority for the development to which the work relates, has been furnished with the following information:

In the case of work to be done by the holder of a contractor licence under that Act:

- the name and licence number of the contractor; and
- A copy of the Home Owner Warranty Insurance.

In the case of work to be done by the holder of an owner-builder permit under that Act:

- A copy of the Owner Builder's Permit.

If arrangements for doing the residential building work are changed while the work is in progress so that the information notified above becomes out of date, further work must not be carried out unless the Principal Certifying Authority for the development to which the work relates (not being the Council), has given the Council written notice of the updated information.

Site Requirements

10 Prior to works associated with the development commencing, the Principal Contractor (or Owner/Builder) is to erect a suitable sign in a prominent position on the development site (not attached to any tree) identifying the name, address and telephone number of the Principal Certifying Authority (PCA) for the work, the name, address and telephone number (including a number for outside of business hours) of the Principal Contractor for the work (or Owner/Builder) and stating that unauthorised entry to the site is prohibited. The required sign is to be maintained for the duration of works associated with the development. Appropriate signs can be collected from Council's Customer Service Centre, where Council is the nominated Principal Certifying Authority with respect to the development.

11 Prior to works associated with the development commencing, suitable toilet facilities must be available or be provided upon the development site, with the required toilet facility(s) maintained until development works are completed at a ratio of one (1) toilet plus one (1) additional toilet for every twenty (20) persons employed at the site. Each toilet must:

- be a standard flushing toilet connected to a public sewer system; or
- have an on-site effluent disposal system approved under the Local Government Act 1993, or be a temporary chemical closet approved under the Local Government Act 1993, supplied by a suitably licensed contractor.

12 Prior to works associated with the development commencing, a suitable metal waste skip (with self-closing lid or secure covering) or lined mesh steel cage(s) is to be provided upon the development site for the duration of the construction phase of the development in accordance with the requirements of Development Control Plan 2005, Chapter 100 – Quality Housing. The required waste receptacle is to be suitably emptied at appropriate times during the construction phase of the development.

13 Prior to works associated with the development commencing, where any excavation is proposed in proximity to existing gas and/or electricity networks, the developer is advised to notify '*Dial Before You Dig'* of the time and place of work no more than thirty (30) days before the work commences. The developer must satisfy any requirements as set by the network operators in carrying out excavation works.

During Construction Works:

The following conditions must be satisfied during construction works.

Approved Plans

14 A copy of the stamped approved plans must be kept on site for the duration of site works and be made available upon request to either the Principal Certifying Authority or an officer of the Council.

Ecology/Trees - Construction Requirements

15 All services, including water and electricity, must be located, designed and installed to minimise or prevent root damage to retained trees. Methods for the installation of services within the tree's canopy perimeter are contained within AS/NZS 4970-2009 - *Protection of Trees on Development Sites* and Development Control Plan 2005, Chapter 67 - *Engineering Requirements for Development* and include under boring and excavation by hand.

Erosion and Sediment Control - Construction Requirements

16 All sediment and erosion control devices provided with respect to the development are to be periodically cleaned and maintained in an effective state for the duration of works. On the spot fines for non-compliance with this requirement may be issued under the provisions of the *Protection of Environment Operations Act, 2000*.

Plumbing and Drainage - Construction Requirements

17 Council as the Water Supply Authority, under the provisions of the Water Management Act, or in unsewered areas where an onsite sewage management facility is to be installed, is to be notified to undertake inspections of the internal drainage lines, (prior to the pouring of the concrete slab), and external drainage lines inclusive of sewer junction connection, prior to the backfilling of the trenches. These inspections can be arranged by telephoning Council's Customer Contact Centre on (02) 4350 5555 a minimum of twenty-four (24) hours prior to the required time for the inspection. Please note that all drainage inspection fees are to be paid to Council prior to plumbing and drainage works associated with the development commencing.

Site Requirements

18 Construction or demolition works involved with the development may only be carried out between the hours of 7.00 am and 5.00 pm Monday to Saturday with no construction or demolition works associated with the development permitted to be carried out at any time on a Sunday or a public holiday.

19 During the construction phase of the development, all building materials, plant and equipment must be placed on the site of the development in order to ensure that pedestrian and vehicular access within adjoining public roads, footpaths and reserve areas, is not restricted and to prevent damage to public infrastructure.

20 During the construction phase of the development, downpipes and the associated stormwater disposal system is to be suitably connected to the site stormwater connection point immediately after the roof materials are positioned in order to prevent erosion of the site from roof water run off. The Principal Certifying Authority for the development will not issue a compliance certificate for framing unless connection of the site stormwater (or temporary system) has occurred.

Prior to Release of Occupation Certificate:

The following conditions must be satisfied prior to the release of an Occupation / Subdivision Certificate.

BASIX Requirements

21 Prior to the issue of an Occupation Certificate, pursuant to Clause 97A(3) of the Environmental Planning and Assessment Regulation 2000, it is mandatory that all the commitments listed in the BASIX Certificate applicable to the development are fulfilled.

Building Code of Australia – Compliance Requirements

22 Prior to the issue of the Occupation Certificate, the building shall be completed in accordance with the relevant provisions and requirements of the Building Code of Australia.

Bush Fire – Compliance Requirements

23 Prior to the issue of an Occupation Certificate, the building shall be completed in accordance with the provisions of *Planning for Bushfire Protection 2006 (NSW)* and requirements of AS 3959-2009 - *Construction of Buildings in Bushfire Prone Areas* and additional measures contained in *Appendix 3 of the PBP Guidelines*, for a Bushfire Attack Level of BAL 12.5.

Plumbing and Drainage - Compliance Requirements

24 Prior to the issue of an Occupation Certificate, the required rainwater tank is to be provided in the location as detailed within the approved development plans with suitable plumbing connections provided to collect rainwater from the roof area as detailed within the BASIX Certificate applicable to the development. The required rainwater tank is to be installed in accordance with the requirements of the National Plumbing and Drainage Code AS/NZS 3500 and shall be provided with first flow diversion devices fixed to all inflows and a functioning pressure pump plumbed to service all fixtures as detailed within the BASIX Certificate applicable to the development. The required tank must be controlled in order that supplemental flow from domestic mains does not take place until the capacity of the tank has been reduced to 20%.

Stormwater – Compliance Requirements

25 Prior to the issue of an Occupation Certificate, stormwater generated from roof areas of the building and any overflows from rain water tanks installed in conjunction with the development, is to be disposed of to the existing stormwater disposal system servicing the allotment.

Water and Sewer Services/Infrastructure – Compliance Requirements

26 The obtaining of a Section 307 Certificate of Compliance under the Water Management Act 2000 for water and sewer requirements for the development from Wyong Shire Council as the Water Supply Authority prior to issue of the Subdivision/Occupation Certificate. All works for the development must be approved by Council prior to the issue of a Certificate of Compliance.

Ongoing Operation:

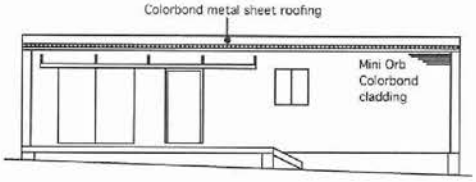
The following conditions must be satisfied during use / occupation of the development.

No Conditions

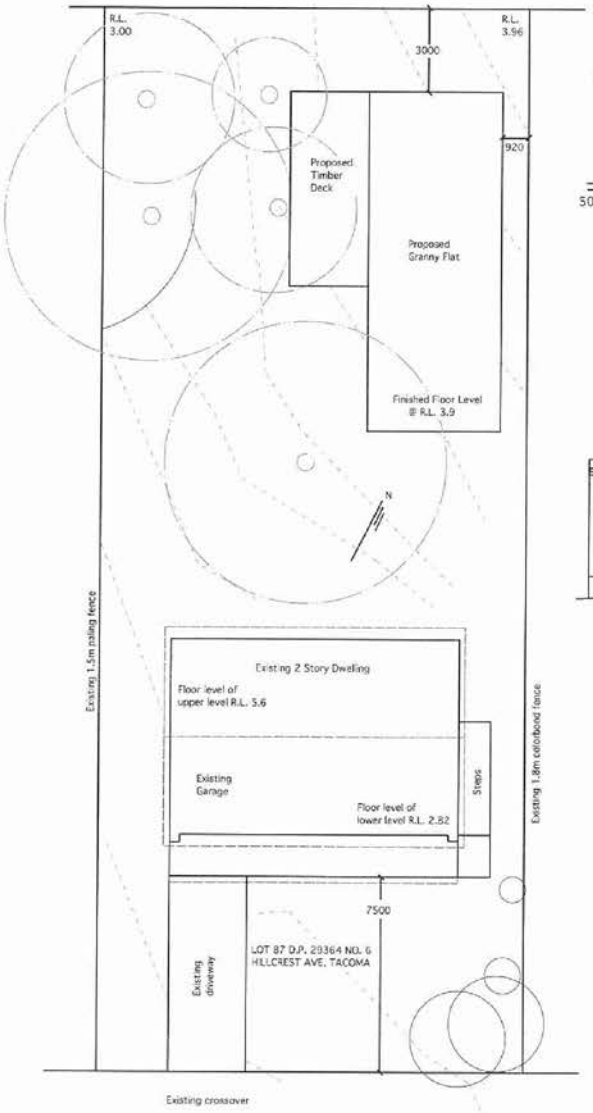
SCHEDULE OF CONTRIBUTIONS

Shire Wide Regional Open Space	$125.10
Shire Wide Performing Arts Centre & Public Art	$289.55
Shire Wide Administration	$55.55
Wyong District Community Facilities Works	$2,506.25
Wyong District Community Facilities Land	$735.85
Wyong District Open Space Works	$2,279.00

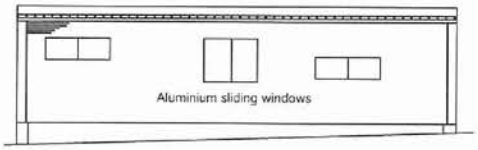
Front (Southern) Elevation



Side (Western) Elevation

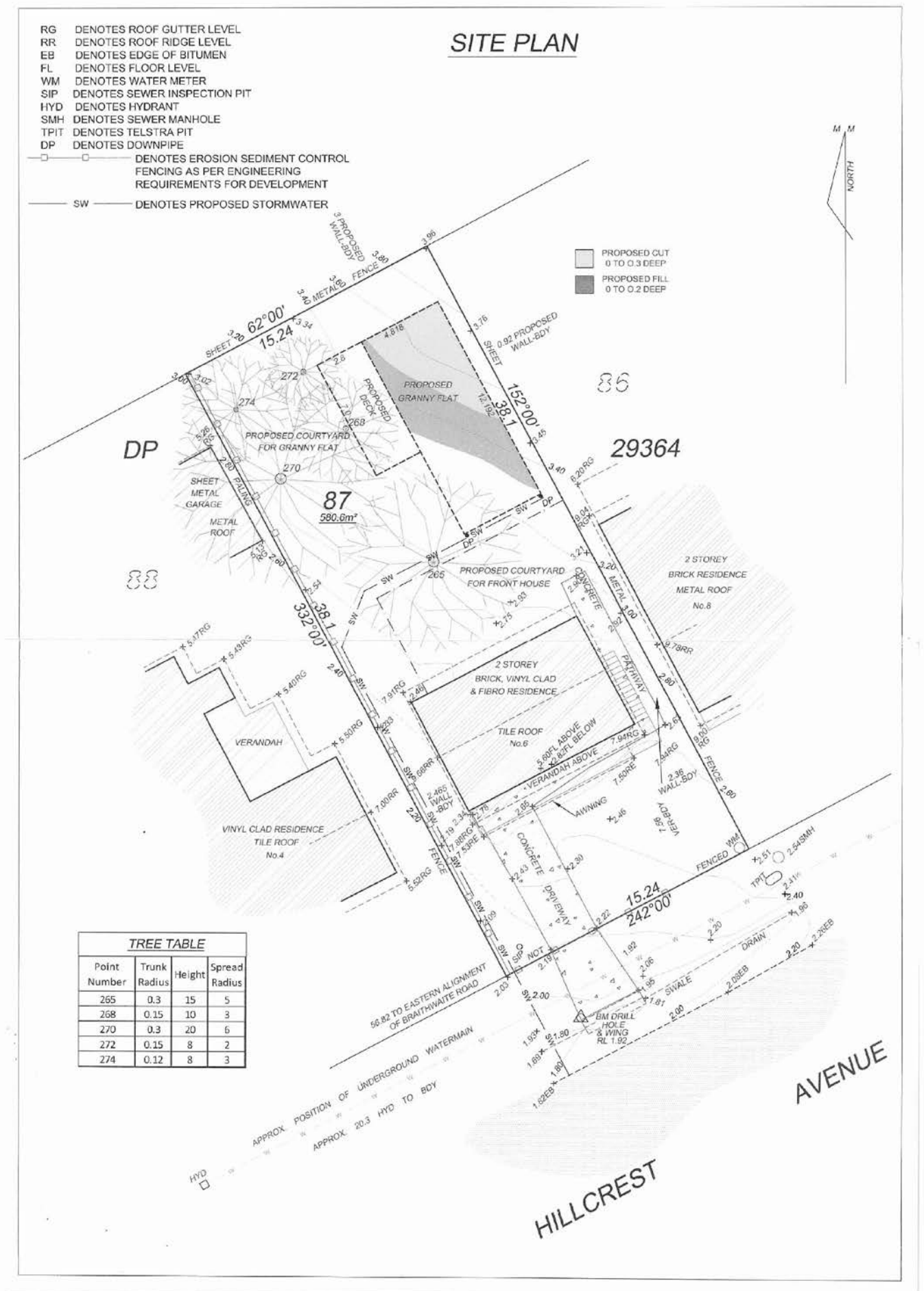


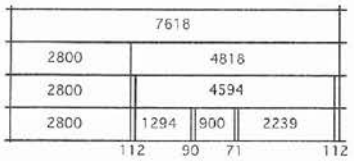
Rear (Northern) Elevation



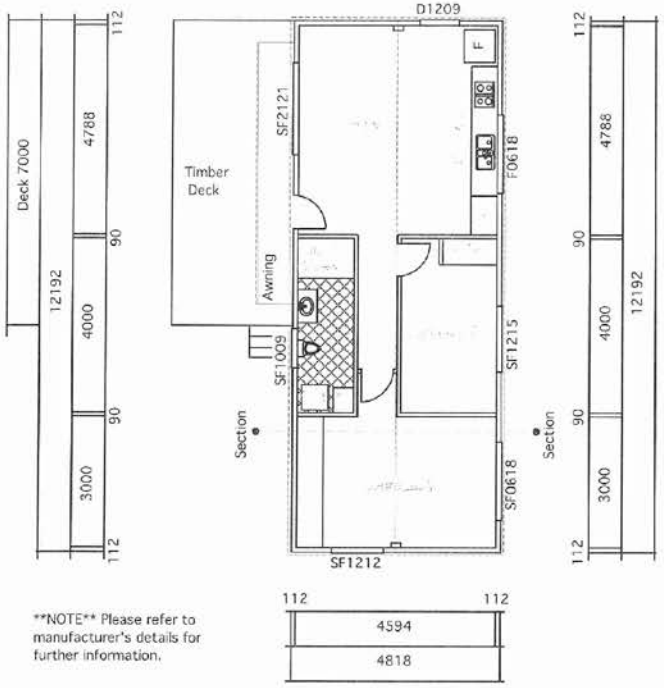
Side (Eastern) Elevation

PROPOSED GRANNY FLAT TO BE CONSTRUCTED AT LOT 87 D.P. 29364 NO. 6 HILLCREST AVE, TACOMA FOR KUBECKA INVESTMENTS PTY LTD
AREA IN SQ M: SITE AREA : 580.6 SQ M PROPOSED GRANNY FLAT: 58.74+ DECK:19.6 EXISTING DWELLING SITE COVER : 87.97 = TOTAL SITE COVER: 28.6%
DATE : 5.3.13
NOTIFICATION PLANS NOT TO SCALE

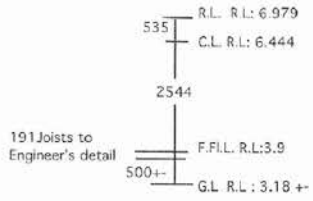

SITE PLAN
RG DENOTES ROOF GUTTER LEVEL
RR DENOTES ROOF RIDGE LEVEL
EB DENOTES EDGE OF BITUMEN
FL DENOTES FLOOR LEVEL
WM DENOTES WATER METER
SIP DENOTES SEWER INSPECTION PIT
HYD DENOTES HYDRANT
SMH DENOTES SEWER MANHOLE
TPIT DENOTES TELSTRA PIT
DP DENOTES DOWNPIPE
DENOTES EROSION SEDIMENT CONTROL FENCING AS PER ENGINEERING REQUIREMENTS FOR DEVELOPMENT
SW DENOTES PROPOSED STORMWATER
NORTH
PROPOSED CUT 0 TO 0.3 DEEP
PROPOSED FILL 0 TO 0.2 DEEP
DP 29364
87
580.6m²
PROPOSED GRANNY FLAT
PROPOSED COURTYARD FOR GRANNY FLAT
PROPOSED COURTYARD FOR FRONT HOUSE
PROPOSED DECK
SHEET METAL GARAGE
METAL ROOF
2 STOREY BRICK RESIDENCE METAL ROOF No.8
2 STOREY BRICK, VINYL CLAD & FIBRO RESIDENCE
TILE ROOF No.6
VERANDAH
VERANDAH ABOVE
AWNING
PATHWAY
CONCRETE
DRIVEWAY
VINYL CLAD RESIDENCE TILE ROOF No.4
FENCE
FENCED
WM
TPIT
SMH
SIP
DRAIN
SWALE
BM DRILL HOLE & WING RL 1.92
56.82 TO EASTERN ALIGNMENT OF BRAITHWAITE ROAD
APPROX POSITION OF UNDERGROUND WATERMAIN
APPROX 20.3 HYD TO BDY
HYD
HILLCREST AVENUE
62°00' 15.24
152°00' 38.1
332°00' 38.1
242°00' 15.24
TREE TABLE
Point Number | Trunk Radius | Height | Spread Radius
265 | 0.3 | 15 | 5
268 | 0.15 | 10 | 3
270 | 0.3 | 20 | 6
272 | 0.15 | 8 | 2
274 | 0.12 | 8 | 3

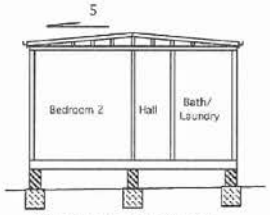


*Colorbond metal sheet roofing on trusses
@ 5 deg pitch to Manufacturer's Engineer detail
*BASIX Insulation : ceiling and roof - flat ceiling / pitched roof
ceiling: 3 (up), roof: none
unventilated; light (solar absorptance < 0.475)
Insulation specified in this Certificate must be installed in accordance with Part 3.12.1.1 of the Building Code of Australia.



NOTE Please refer to manufacturer's details for further information.





Brick piers on concrete pad footings to Engineer's detail

*Mini Orb Colorbond cladding
*Frames to manufacturer's detail (shown in manufacturer's plans)
*Plasterboard linings
*Aluminium sliding windows
*Plasterboard linings
*Fire detectors to be installed to AS3786.
BASIX: Insulation: External wall - framed (weatherboard, fibre cement, metal clad)
1.50 (or 1.90 including construction)

BASIX: Sub Floor Insulation: floor - suspended floor above open subfloor, other/undecided
1.5 (or 1.5 including construction) (down)

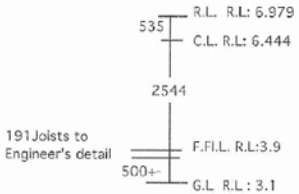
Typical Section

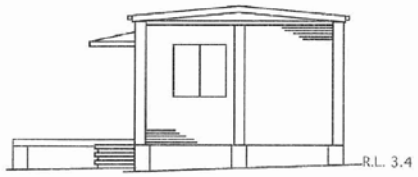
BASIX: Certificate number : 446605S_02 Dated : 5.3.13

Water Commitments:
The applicant must install showerheads with a minimum rating of 3 star (> 4.5 but <= 6 L/min) in all showers in the development.
The applicant must install a toilet flushing system with a minimum rating of 4 star in each toilet in the development.
The applicant must install taps with a minimum rating of 4 star in the kitchen in the development.
The applicant must install basin taps with a minimum rating of 4 star in each bathroom in the development.
The applicant must install a rainwater tank of at least 2500 litres on the site.
This rainwater tank must meet, and be installed in accordance with, the requirments of all applicable regulatory authorities.
The applicant must configure the rainwater tank to collect rain runoff from at least 58.74 square metres of the roof area of the development (excluding the area of the roof which drains to any stormwater tank or private dam).
The applicant must connect the rainwater tank to: • all toilets in the development
• the cold water tap that supplies each clothes washer in the development
• at least one outdoor tap in the development (Note: NSW Health does not recommend that rainwater be used for human consumption in areas with potable water supply.)
Glazing: The applicant must install the windows, glazed doors and shading devices described in the table in accordance, in accordance with the specifications listed in the table. Relevant overshadowing specifications must be satisfied for each window.
Hot water
The applicant must install the following hot water system in the development, or a system with a higher energy rating: gas instantaneous.
Cooling system
The living areas must not incorporate any cooling system, or any ducting which is designed to accommodate a cooling system.
The bedrooms must not incorporate any cooling system, or any ducting which is designed to accommodate a cooling system.
Heating system
The living areas must not incorporate any heating system, or any ducting which is designed to accommodate a heating system.
The bedrooms must not incorporate any heating system, or any ducting which is designed to accommodate a heating system.
Ventilation
The applicant must install the following exhaust systems in the development:
At least 1 Bathroom: no mechanical ventilation (ie. natural); Operation control: n/a
Kitchen: individual fan, not ducted; Operation control: manual switch on/off Laundry: natural ventilation only, or no laundry; Operation control: n/a
Artificial lighting
The applicant must ensure that the "primary type of artificial lighting" is fluorescent or light emitting diode (LED) lighting in each of the following rooms, and where the word "dedicated" appears. the fittings for those lights must only be capable of accepting fluorescent or light emitting diode (LED) lamps:
• at least 2 of the bedrooms / study; dedicated
• at least 1 of the living / dining rooms; dedicated • the kitchen; dedicated
• all bathrooms/toilets; dedicated
• the laundry; dedicated
• all hallways; dedicated
Natural lighting
The applicant must install a window and/or skylight in 1 bathroom(s)/toilet(s) in the development for natural lighting.
Other
The applicant must construct each refrigerator space in the development so that it is "well ventilated", as defined in the BASIX definitions.
The applicant must install a fixed outdoor clothes drying line as part of the development.

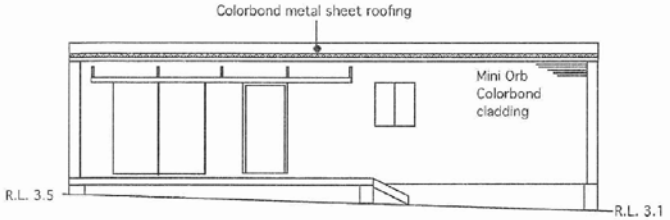
** NOTE *** PLEASE READ DIMENSIONED TEXTS IN PREFERENCE TO SCALING AS SOME DISTORTION MAY OCCUR DUE TO COPYING
***PLEASE CHECK ALL DETAILS ON SITE PRIOR TO CONSTRUCTION OR ORDERING MATERIALS
***THIS PLAN WAS BEEN PREPARED USING INFORMATION SUPPLIED BY THE OWNER AND TO OWNERS INSTRUCTIONS.

DRAWN BY L.F	PROPOSED GRANNY FLAT TO BE CONSTRUCTED AT LOT 87 D.P. 29364 NO. 6 HILLCREST AVE, TACOMA FOR KUBECKA INVESTMENTS PTY LTD		PAGE 1 OF 2 PAGE 1: FLOOR PLAN/ SECTION: SPECIFIC TO SITE PAGE 2: ELEVATIONS: SPECIFIC TO SITE
DATE : 5.3.13			
SCALE 1: 100	LYNDELL FORTIN Mob 0407655022 designanddraft.ning.com	AREA IN SQ M: SITE AREA : 580.6 SQ M PROPOSED GRANNY FLAT: 58.74+ DECK:19.6 EXISTING DWELLING SITE COVER : 87.97 = TOTAL SITE COVER: 28.6%	+ 9 PAGES OF MANUFACTURER'S PLANS ALL SITE DETAILS TO BE PREPARED BY SURVEYOR

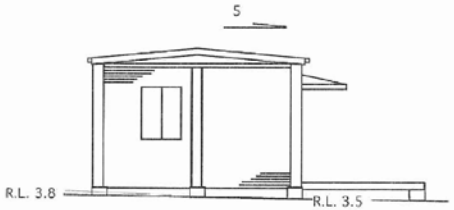




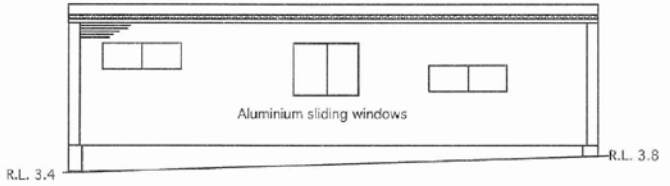
Front (Southern) Elevation



Side (Western) Elevation



Rear (Northern) Elevation



Side (Eastern) Elevation

**Levels shown are approximate and are to be confirmed by contour survey. Finished floor level is to be R.L. 3.9 which is to be verified on site by surveyor.

NOTE Please refer to manufacturer's details for further information.

** NOTE *** PLEASE READ DIMENSIONED FIGURES IN PREFERENCE TO SCALING AS SOME DISTORTION MAY OCCUR DUE TO COPYING
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2.4 DA/942/2012 Proposed Education Establishment at 48 and 54 Carters Road, Lake Munmorah

TRIM REFERENCE: DA/942/2012 - D03380010
MANAGER: Lin Armstrong, Director Development and Building
AUTHOR: Emily Goodworth; Team Coordinator, Applications

SUMMARY

A staged development application has been received under Section 83B of the *Environmental Planning and Assessment Act* (EP&A Act) 1979 for an education establishment. The construction of the school is proposed in five (5) stages. The application has been examined having regard to the matters for consideration detailed in section 79C of the EP& A Act 1979 and other statutory requirements with the issues requiring attention and consideration being addressed in the report.

Applicant	Paynter Dixon Constructions Pty Limited
Owner	The Trustees of the Roman Catholic Church for the Diocese of Broken Bay Rajeshni Raj Phillips (The Trustees have since purchased this property since lodgement)
Application No	942/2012
Description of Land	Lots 433 and 499 in DP 755266, 48 and 54 Carters Road Lake Munmorah
Proposed Development	Education Establishment
Site Area	8.166 hectares (Lot 433 = 4.083 ha and Lot 499 = 4.082)
Zoning	7(b) Scenic Protection
Existing Use	Rural residential dwelling houses
Employment Generation	10 staff (Stage 1) 35 staff upon completion of Stage 5
Estimated Value	$18,097,563

RECOMMENDATION

1 That Council receive the report on DA/942/2012 Proposed Education Establishment at 48 and 54 Carters Road, Lake Munmorah

2 That Council determine whether it wishes to make a submission to the Joint Regional Planning Panel regarding the Application.

BACKGROUND

Attached is the report being forwarded to the Hunter Central Coast JRPP's meeting to be held at Council on 20 June 2013.

ATTACHMENTS

1	Staff Assessment Report to the Joint Regional Planning Panel	D03384394
2	Proposed Conditions of Approval	D03386569
3	Plans	D03386207
4	Stage 1 Plans	D03386208
5	Integrated Approvals	D03386205
6	Other Referral Agencies	D03386206

Assessment Report and Recommendation

WYONG SHIRE COUNCIL

Development and Building

DA 942/2012 - Proposed Education Establishment (High School) on lots 433 and 499 DP 755266, 48 and 54 Carters Road, Lake Munmorah

DA No 942/2012 Author: Emily Goodworth

SUMMARY

A staged development application has been received under Section 83B of the *Environmental Planning and Assessment Act* (EP&A Act)1979 for an education establishment. The construction of the school is proposed in five (5) stages. The application has been examined having regard to the matters for consideration detailed in section 79C of the EP& A Act 1979 and other statutory requirements with the issues requiring attention and consideration being addressed in the report.

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Zoning	7(b) Scenic Protection
Existing Use	Rural residential dwelling houses and associated outbuildings
Employment Generation	10 staff (Stage 1); 35 staff upon completion of Stage 5
Estimated Value	$18,097,563

RECOMMENDATION

1 That the Joint Regional Planning Panel grant consent to DA/942/2012, subject to the conditions contained in Appendix A.

2 That those who made written submissions be advised of Council's decision.

3 That a copy of the determination be forwarded to the NSW Office of Water, NSW Rural Fire Service, Mine Subsidence Board, NSW Roads and Maritime Services and Ausgrid for information.

Referral to Hunter and Central Coast Joint Regional Planning Panel

The proposal is referred to the Hunter and Central Coast Joint Regional Planning Panel (JRPP) for determination pursuant to Part 4 of State Environmental Planning Policy (SEPP) (State and Regional Development) 2011 and Schedule 4A, Section 6 of the EP&A Act, 1979, given the development is for an education establishment and has a capital investment value (CIV) of over $5 million.

INTRODUCTION

Site and Locality

The subject site comprises two parcels of land, being Lot 433 and Lot 499 in DP 755266, known as No 48 and 54 Carters Road, Lake Munmorah. The site is rectangular in shape and has an area of 8.166 hectares with a frontage of approximately 258.46 metres to Carters Road. Lots 433 and 499 each contain single storey dwelling-houses and associated outbuildings, which are proposed to be demolished. All structures on lot 499 will be demolished as part of Stage 1.

Lake Munmorah Public High School is located immediately to the south east of the site, a 45 metre easement extends into the north western boundary of the site and runs along the fire trail which is directly adjacent to this boundary, and two (2) dwelling houses on rural residential allotments adjoin the subject site on the south and south western boundaries. Development on the eastern side of Carters Road is predominately single detached dwelling houses on rural allotments, with St Brendan's Catholic Primary School located diagonally opposite the site which adjoins an electricity substation. Other development on Carters Road includes Lake Munmorah Primary School, located on the western corner of Carters Road and the Pacific Highway, and an Early Childhood Learning Centre which is located on the site containing St Brendan's Catholic Primary School.

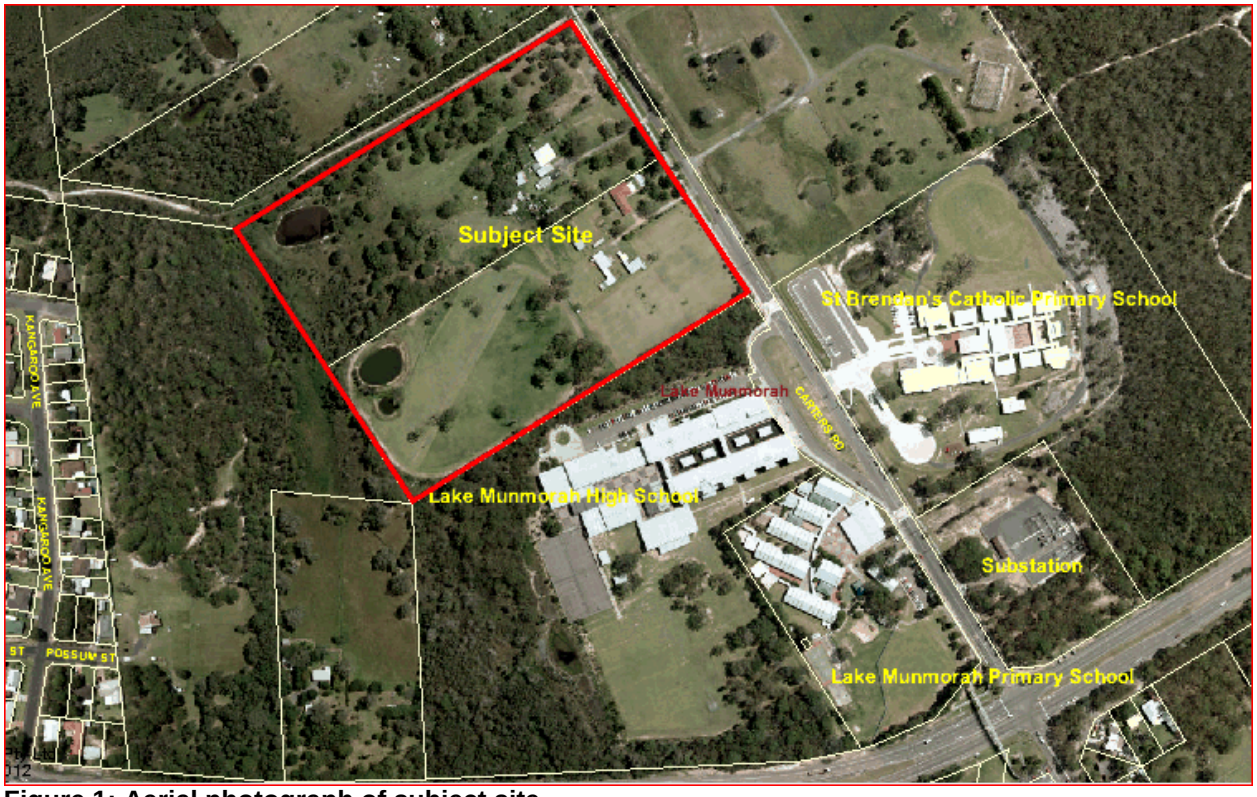


Figure 1: Aerial photograph of subject site

The site has a high point which is setback within the site approximately 100 metes from Carters Road, running parallel to the roadway in a north-south direction. From this ridgeline the site contains a fall to Carters Road, but predominantly falls southwest to the rear of the site to the existing dams.

On lot 433, the site generally falls from the middle of the site, where the two (2) metal sheds are located, to the northern corner of the site to Carters Road (ranging from RL 16.85m to 14.27m Australian Height Datum (AHD)), and from the sheds to the rear of the site (south-western corner) to the existing dam (from RL 16.85m to 9.64m AHD).

Lot 499 has a fall from the dwelling houses and shed towards Carters Road, with the lowest point in this direction being in the northern corner of the site. This portion of the site ranges from RL 15.78m to 11.39m AHD. The site also falls from the dwelling-houses and sheds to the north-western corner of the site and ranges from RL 15.78m to RL 6.90m AHD.

The site is identified as being bushfire prone land with the south, west and eastern boundaries forming part of the buffer zone. The site is bounded by the State Environmental Planning Policy (SEPP) 71 Coastal Protection zone however this zone does not extend into the property.

Figure 2: Subject site affected by Bushfire buffer zone (in red)

Lot 499 contains a significant number of trees across the subject site with concentrated dense native vegetation at the rear of the site on the western boundary. This vegetation

forms part of an Endangered Ecological Community (EEC) and contains surrounding riparian vegetation. The existing dam located in the western corner of lot 499 will be retained, along with the surrounding EEC and riparian vegetation.

Lot 433 contains scattered trees and vegetation across the site with most of the vegetation being located on the southern boundary in the middle of the site. The existing two dams in the western corner of lot 433 will be used as sediment retention basins during construction and will be filled in at the final stage of works.

Vehicular access to the site is from Carters Road. The site is located approximately 390 metres from the intersection of the Pacific Highway and Carters Road/Elizabeth Bay Drive. As discussed above, Carters Road contains three (3) other schools which all utilise this road for their access.

Project Description

The applicant has lodged a staged development application in accordance with Section 83B of the EP&A Act. This development application seeks consent for the demolition of existing dwelling-houses and ancillary outbuildings, the approval of the concept proposal and Stage 1 of the proposed education establishment. The proposed development will provide an opportunity to co-locate primary and secondary Catholic schools in Carters Road.

Concept proposal

The concept proposal (masterplan) proposes the construction of an education establishment, to be used as a high school, in five stages, allowing for the progressive addition of school buildings around a core focal point, identified as the 'town square', over time.

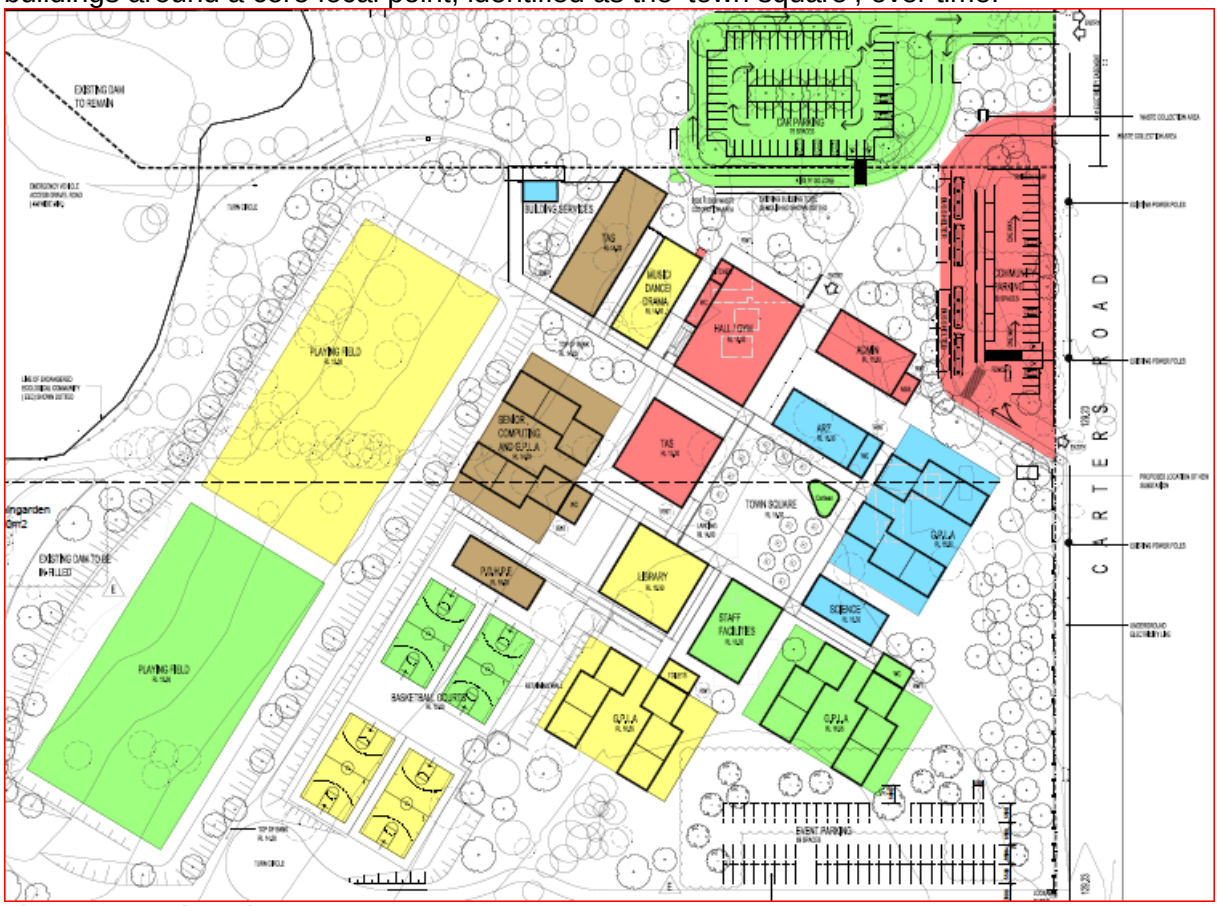


Figure 3: Staging Plan
Stage 1= Red Stage 2 =Blue Stage 3 =Green Stage 4 =Yellow Stage 5 =Brown

The concept proposal provides for specialist buldings to be used for science, staff facilities, library, art, music/dance/drama, personal development, Health and Physical Education (PDHPE) and general purpose learning areas (GPLA's).

Once completed, the high school will comprise years 7-12 with 600 students and 35 staff. It will provide two playing fields, four basketball/netball courts, 31 community parking spaces, 71 staff/student parking spaces and four (4) bus drop –off spaces with a designated area for overflow parking.

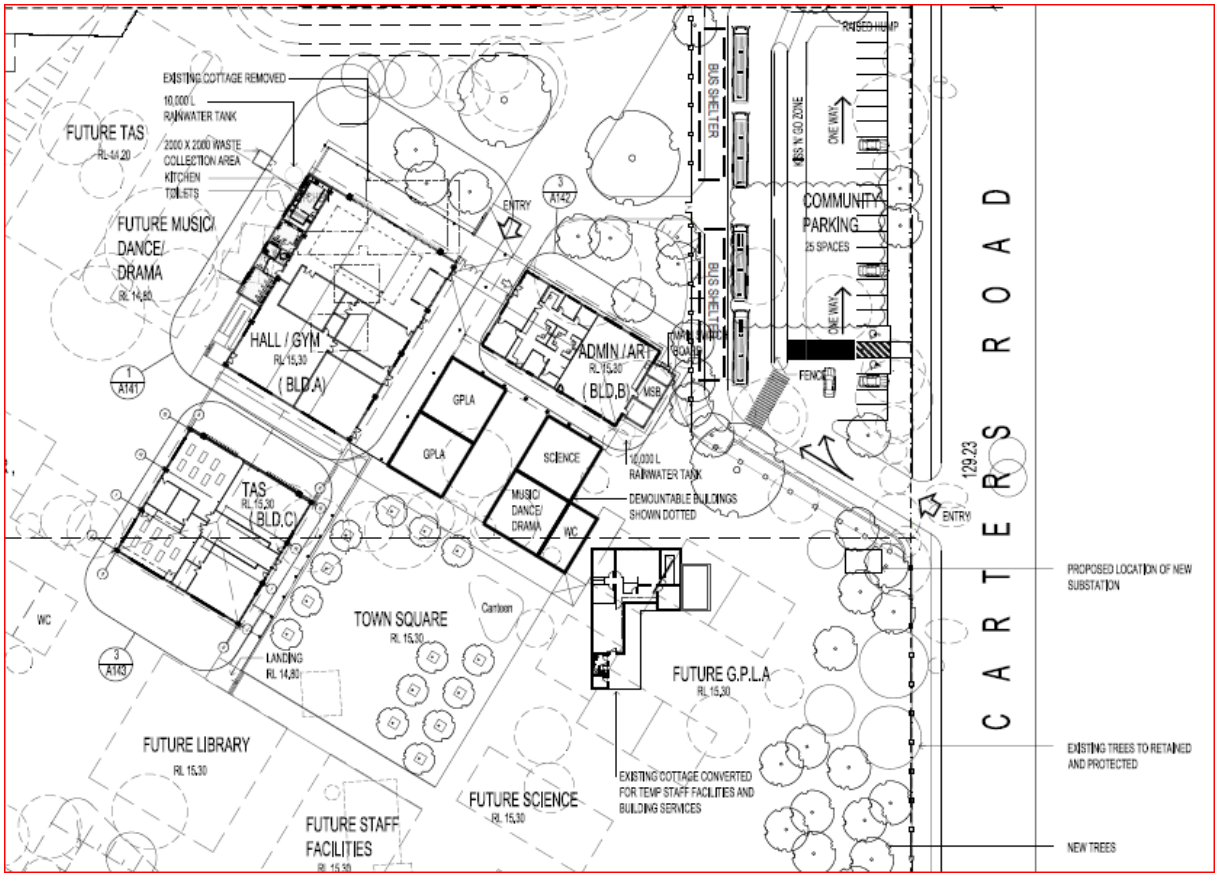
The site master plan and staging plan are included in Appendix B.

Stage 1 Development

Stage 1 involves the following:

- Demolition of the existing buildings on lot 499;
- the erection of the administration and technical/applied studies (TAS) buildings and the hall/gymnasium;
- construction of the community parking area comprising 31 car parking spaces, 4 bus drop-off spaces and a "kiss-n-go" lane;
- the installation of 4 temporary demountable buildings;
- the establishment of the 'town square' which will incorporate a basketball/netball court
- Minor alterations and additions to the existing dwelling-house on lot 433.

The hall/gymnasium building will be a multi-purpose building, incorporating facilities such as toilets, canteen, library, classroom and a hall, to service the needs of the intitial intake of 90 students and 10 staff. Staff facilities will be accommodated in the existing dwelling-house on lot 433 following some minor internal alterations and additions.



The Architectural plans and elevations are included in Appendix C.

Referrals

The development has been referred to the NSW Office of Water (NOW), the Mines Subsidence Board (MSB) and the NSW Rural Fire Service (RFS) as integrated development in accordance with Section 91 of the EP&A Act. The application was also referred to the Roads and Maritime Services (RMS) in accordance with Schedule 3 of SEPP (Infrastructure) 2007 –*Traffic Generating Development* as the proposal is for an education establishment with more than 50 students and Ausgrid as the proposed development involves development within the existing electricity easement.

Amended plans and additional information was received during the assessment process. This information was forwarded to each of the relevant agencies for comment.

The RFS granted a Bushfire Safety Authority (BSA) in accordance with Section 100B of the *Rural Fires Act* 1997. Their BSA remained unchanged unpon assessment of the amended plans and additional information.

The MSB granted their concurrence to the proposed development subject to conditions. Their recommendation remained the same upon assessment of the amended plans.

General Terms of Approval (GTA's) for the development have been granted by NOW. The GTA's were granted for the amended proposal.

The RMS has advised that they have no objection to the proposal subject to a number of conditions. A copy of the correspondence from each authority is included in Appendix C.

The application was also referred to the NSW Police under Council's Crime Risk Protocol, and Ausgrid to enable them to make comment on the encroachment of the proposed development on the electricity easement. Comments from these agencies are discussed further in the report and included in Appendix E.

The issues raised in the referral process are discussed in the report and where relevant, reflected in the conditions of consent.

Summary

Key issues that were identified as part of the assessment of the subject application included:

- Traffic impact on Carters Road
- The removal of native vegetation on the western boundary in the area identified as future car parking area
- Encroachment of the perimeter road on the Vegetated Riparian Zone (VRZ) at the rear of the site
- Omission of key threatened migratory flora and fauna species in the flora and fauna assessment report
- The extent of filling and its impact on neighbouring properties by reducing the waterway area of the watercourse.

These issues have now been satisfactorily addressed and approval of the development is recommended, subject to the conditions included in Appendix A.

VARIATIONS TO POLICIES

There are no variations to any policies proposed.

HISTORY

The subject site comprises two allotments, Lot 499 in DP 755266 and Lot 433 in DP 755266. The following history applies to these properties.

The most recent approvals relating to Lot 433 in DP 755266 is dwelling additions in 1998 and approval of a shed in 1999.

Three recent approvals have been granted to Lot 499 in DP 755266 including a garage in 1992, additions to the dwelling in 2004 and the removal of two trees in 2008.

A pre-lodgement meeting was held on 14 August 2012 to discuss the proposed development. The minutes raised a number of issues which have been considered by the applicant in the submission of the staged development application.

PERMISSIBILITY

The site is zoned 7(b) Scenic Protection pursuant to Wyong Local Environmental Plan 1991 (WLEP 1991). The proposal is defined under WLEP 1991 as an 'education establishment', which is a permissible land use in the 7(b) zone subject to development consent.

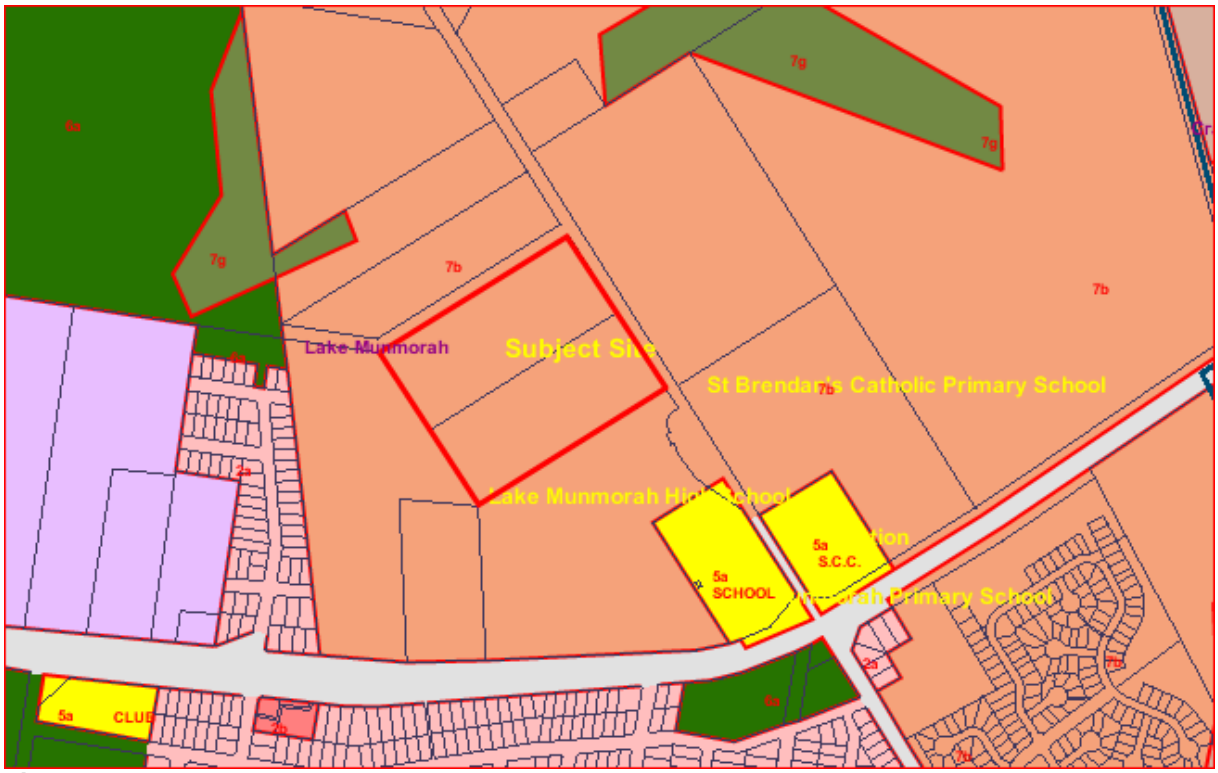


Figure 4: Zone Extract

An education establishment means *a building or place used for education (such as teaching) and includes:*

(a) a school, and

(b) a tertiary institution, being a university, college of advanced education, teachers' college, technical college or other tertiary college providing a formal education, and

(c) an art gallery or museum, not used to sell the items it displays,

whether or not it provides accommodation for staff and students and whether or not it is operated for the purpose of gain.

The proposed development is considered to meet the definition of an education establishment. Under Clause 10 of WLEP 1991, Council must not grant consent to the carrying out of development on land unless the proposed development is considered compatible with the objectives of the zone within which the development is proposed to be carried out. The objectives of the 7 (b) Scenic Protection zone are as follows:

The objective is to restrict the type and scale of development which will be carried out on land possessing scenic values to that unlikely to:

(a) prejudice the present scenic quality of the land within this zone, or

(b) generate significant additional traffic or create or increase a condition of ribbon development on any road, relative to the capacity and safety of the road, or

(c) prejudice the viability of existing commercial centres, or

(d) have an adverse impact on the region's water resources.

It is considered that the proposed education establishment meets the objectives of the zone. The proposed development will maintain and subsequently enhance the key scenic qualities of the land which occur at the rear of the site, will not prejudice the viability of existing commercial centres, and will not have an adverse impact on the regions's water resources. The traffic assessment, prepared by TPK and Associates, has demonstrated that the proposal will not generate significant additional traffic that will impact unduly on the capacity and safety of the road network.

RELEVANT STATE/COUNCIL POLICIES AND PLANS

The Council has assessed the proposal against the relevant provisions of the following environmental planning instruments, plans and policies:

- State Environmental Planning Policy (State and Regional Development) 2011
- State Environmental Planning Policy (Major Development)
- State Environmental Planning Policy 55 –Remediation of Land
- State Environmental Planning Policy (Infrastructure) 2007
- Wyong Environmental Plan 1991
- Draft Wyong Local Environmental Plan 2012
- Wyong Development Control Plan 2005
    - -Chapter 14 Tree Management
    - -Chapter 61 Parking and Access
    - -Chapter 67 –Engineering Requirements for Development
    - -Chapter 69 Controls for Site Waste Management
    - -Chapter 70 Notification of Development Proposals
    - -Chapter 99 Building Lines
- Wyong Shire Landscape Policy and Guidelines
- North Wyong Shire Structure Plan
- Central Coast Regional Strategy
- Section 94A Levy Development Contributions Plan

ECOLOGICALLY SUSTAINABLE PRINCIPLES

The proposal has been assessed having regard to ecologically sustainable development principles and is considered to be consistent with the principles.

The proposed development is considered to incorporate satisfactory stormwater, drainage and erosion control and the retention of vegetation where possible and is unlikely to have any significant adverse impacts on the environment and will not decrease environmental quality for future generations. The proposal does not result in the disturbance of any endangered flora or fauna habitats and is unlikely to significantly affect fluvial environments.

Climate Change

The potential impacts of climate change on the proposed development have been considered by Council as part of its assessment of the application. This assessment has included consideration of such matters as potential rise in sea level; potential for more intense and/or frequent extreme weather conditions including storm events, bushfires, drought, flood and coastal erosion; as well as how the proposed development may cope / combat / withstand these potential impacts. In this particular case, the following matters are considered to warrant further discussion, as provided below:

Bushfire- The subject site contains bushfire prone land with a significant portion of the site categorised as 'Buffer' zone. The layout of the proposed development has allowed for an adequate inner and outer asset protection zone (APZ) which will provide adequate asset protection zones to the buildings. The RFS have assessed the application and consider the design of the development satisfactory subject to compliance with the terms of the Bushfire Safety Authority.

ASSESSMENT

Having regard for the matters for consideration detailed in Section 79C of the EP& A Act 1979 and other statutory requirements, Council's policies and Section 149 Certificate details, the assessment has identified the following key issues, which are elaborated upon for Council's information. Any tables relating to plans or policies are provided as an attachment.

THE PROVISIONS OF RELEVANT INSTRUMENTS/PLANS/ POLICIES (s79C(1)(a)(i-iv):

(a)(i) the provisions of any environmental planning instrument

Section 83B Environmental Planning and Assessment Act 1979

Under Section 83B of the EP&A Act, a staged development application is defined as one "*that sets out concept proposals for the development of a site, and for which detailed proposals for separate parts of the site are to be the subject of subsequent development applications*". It is important to note that under s83B(3) of the Act, if consent is granted on the determination of a staged development application, the consent does not authorise the carrying out of development on any part of the site concerned unless:

(a) consent is subsequently granted to carry out development on that part of the site following a further development application in respect of that part of the site, or

(b) the staged development application also provided the requisite details of the development on that part of the site and consent is granted for that first stage of development without the need for further consent.

Under s83B(4), the terms of a consent granted on the determination of a staged development application are to reflect the operation of subsection (3). In this instance, approval is recommended for the concept proposal and Stage 1 of the proposed development. The recommended conditions of consent will reflect this.

State Environmental Planning Policy (Major Development) 2005

The *Environmental Planning and Assessment Amendment (Part 3A Repeal) Act* 2011 commenced on 1 October 2011 and classes of regional development are now set out in Schedule 4A of the EP&A Act. Schedule 4A replaces the former classes of regional development set out in Part 3 of SEPP (Major Development). Savings and transitional provisions are set out in Schedule 6A Clause 15 of the EP&A Act, although do not specifically apply to the subject development application as development for the purpose of an education facility with a CIV of more than $5 million continues to be Regional Development under the new provisions. As such, the Hunter Central Coast Joint Regional Planning Panel will remain as the determining authority.

State Environmental Planning Policy (State and Regional Development) 2011

Part 4-Regional Development is applicable to the development as an education establishment with a CIV of more than $5 million is listed within Schedule 4A of the EP&A Act.

State Environmental Planning Policy (Infrastructure) 2007

Under Clause 104 of SEPP Infrastructure, any development specified in Column 1 of the Table to Schedule 3 must be notified to the RMS. The consent authority must also take into consideration the following:

(i) any submission that the RTA provides in response to that notice within 21 days after the notice was given (unless, before the 21 days have passed, the RTA advises that it will not be making a submission), and

(ii) the accessibility of the site concerned, including:

(A) the efficiency of movement of people and freight to and from the site and the extent of multi-purpose trips, and

(B) the potential to minimise the need for travel by car and to maximise movement of freight in containers or bulk freight by rail, and

(iii) any potential traffic safety, road congestion or parking implications of the development.

Extensive consultation has occurred between Council, the RMS, the applicant and the consulting traffic engineer from TPK & Associates in relation to the potential impact of the proposed education establishment on the Pacific Highway and Carters Road/Elizabeth Bay Drive intersection, having particular regard for the addition of another education establishment utilising this road and intersection. The relevant traffic modelling and assessment has been undertaken and the RMS raises no objection to the proposal subject to the inclusion of their requirements in the conditions of consent.

State Environmental Planning Policy No 55 – Remediation of Land

Clause 7 of SEPP 55 specifically relates to the consideration of contamination and remediation prior to a consent authority granting consent to the carrying out of any development. Specifically, subclause (1) states that:

A consent authority must not consent to the carrying out of any development on land unless:

(a) it has considered whether the land is contaminated, and

(b) if the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose for which the development is proposed to be carried out, and

(c) if the land requires remediation to be made suitable for the purpose for which the development is proposed to be carried out, it is satisfied that the land will be remediated before the land is used for that purpose.

Subclause (2) requires the consideration of a report by the consent authority for any change of use on any land specified in subclause (4) which identifies land for educational purposes.

The report must specify the findings of a preliminary investigation of the land and should be carried out in accordance with the contaminated land planning guidelines.

Subclause (3) is not applicable to the subject development application as the Phase 1 Environmental Report, prepared by Consulting Earth Scientists, concluded the following:

…"*CES conclude that the site in its present condition is likely to satisfy the relevant Site Assessment Criteria for a proposed Education Establishment Development subject to the recommendations of the Hazardous Materials Assessment (HMA) and Acid Sulfate Soil (ASS) Assessment Reports. We do not believe any further investigations such as soil sampling or testing for contamination is warranted at the site of the proposed redevelopment. Any disturbance of soils within the majority of the development area is unlikely to expose workers and site users to contamination. CES consider that should filled areas require excavation; suitable observation and, if required, testing and management of uncontrolled fill may be required during the redevelopment works. However, considering the age of the filled areas, as identified by aerial photography, it is considered unlikely that any excavation would require further management excluding observation. The potential asbsestos contamination detected within the site buildings will need to be remediated and/or suitably managed to remove or suitably reduce the risk to workers and site users."*

Therefore, CES concur with the HMA recommendation that all asbestos should be removed by a WorkCover NSW licensed asbestos removalist.

Council is satisfied with the findings of the Phase 1 Environmental Desk Study Report prepared by Consutlting Earth Scientists dated 26 October 2012. The appropriate demolition of buildings/structures can be conditioned accordingly.

Wyong Local Environmental Plan 1991

Clause 15 – Development of land containing acid sulphate soils

The LEP requires special assessment to be given to certain development on land being subject to actual or potential acid sulphate soils. The site is identified as Class 3 and 5 on the Acid Sulphate Soils Planning Map. For class 3 land, any works 1 metre below ground level or works by which the watertable is likely to be lowered to any point beyond 1 metre below the natural ground surface, requires the submission of a preliminary assessment. A preliminary assessment report and investigation has been prepared as part of the application which confirmed that neither Actual Acid Sulphate Soils or Potential Acid Sulphate Soils were encountered on the site due to the depth of the proposed excavation.

Clause 19 – Development near lakes, rivers and creeks

A watercourse is identified as running through the rear of the site as such, Council must take the following into consideration:

(a) the impact of that development on water quality and quantity, existing vegetation, fish, aquatic life and the location of the water body or watercourse, and
(b) any effects of the development on water supply, and
(c) whether the development is likely to cause detrimental effects on a watercourse or water body through erosion, sedimentation or the emission of pollutants, and
(d) whether the development incorporates best practice water sensitive urban design techniques.

The proposal is considered acceptable in terms of the matters listed above. The proposal was referred to the NOW for their concurrence and GTA's have been issued for the proposed development.

Clause 28 – Tree Management

Clause 28 of WLEP 1991 requires development consent for the removal of trees and states that Council shall not grant such consent unless:

(a) such works are ancillary to or necessary to undertake a use permitted on the land, and

(b) the Council has made an assessment of the importance of the vegetation in relation to:

(i) soil stability and prevention of land degradation, and
(ii) water quality and associated ecosystems, such as streams, estuaries and wetlands, and
(iii) scenic or environmental amenity, and
(iv) vegetation systems and natural wildlife habitats.

There are approximately 270 trees present on site. The following is a break down of the types of species found on site:

- 118 *Angophora costata* (Smooth-barked Apple)
- 58 *Eucalyptus haemastoma* (Scribbly Gum)
- 42 *Corymbia gummifera* (Red Bloodwood)
- 21 *Melaleuca quinquenervia* (Broad-leaved paperbark
- 10 *Eucalyptus resinifera* (Red Mahogony)
- The remaining 21 are a variety of exotic and native trees, mostly around the existing dwelling houses and Carters Road frontage.

Whilst the design of the proposed development was undertaken having regard to tree retention, the nature of the development has necessitated extensive re-grading for buildings, car parks and playing fields which will result in the removal of 194 of the existing trees on site with the remaining 76 trees to be retained.The tree removal is ancillary to the proposed construction of the education establishment and is therefore permissible with development consent.

It is unlikely that the removal of these trees will have a significant impact on soil stability, water quality or scenic or environmental amenity and the removal of the trees is unlikely to impact on vegetation systems and natural wildlife habitats. As such, consent is able to be granted for the removal of the trees, should the application be supported.

Clause 29 - Services

This clause requires all new development to have adequate water supply and facilities for the removal or disposal of sewage and drainage. The developer will be required to locate the existing 150mm water main that terminates outside the adjacent high school and extend this main as a 200mm water main up to their development, and along the full extent of their frontage. Development Servicing Plan (DSP) No 10 -Lake Munmorah shows a future duplication of the existing 150mm main from the highway, connecting to a new 200mm main that will link into the existing main at Scaysbrook Avenue. Council will undertake the 150mm duplication and extension of the 200mm main at a later date.
As the construction of the 200mm water main is nominated in DSP 10, the Developer will be credited $192.33/m of 200mm water main constructed, subject to a Works in Kind agreement, and this will offset the water contributions payable for the current and future stages of the development.

Council Sewage Pump Station (SPS) MP10 has capacity to accept the load from the proposed development. This is Council's preferred point of connection. There are existing private pump stations and private rising mains connecting the adjacent school sites to the sewerage network connected to SPS MP10.

The applicant has proposed to construct a private pump station and rising main line from the site to traverse under Carters Road connecting to the existing private pump station (PPS12) within St Brendan's Catholic Primary School. This approach is considered acceptable, as St Brendan's and the proposed education establishment are owned by the same property owner-The Trustees of the Roman Catholic Church.

The applicant will be required to provide calculations to demonstrate that the existing private pump station (PPS 12) within St Brendan's Catholic Primary School has sufficient capacity to accept the combined flows from the new High School.

(a)(ii) the provisions of any draft environmental planning instrument

Draft Wyong Local Environmental Plan 2012

The Draft Wyong Local Environmental Plan (WLEP) 2012 was considered by Council at its meeting of 8 May 2013. At this meeting, the Council resolved, in part:

"599/13 That Council resolve to submit draft Wyong Local Environmental Plan 2012, as amended in accordance with the matters raised in this report and within Enclosures 1 and 2, and also include the additional amendments set out in Annexure 3 now attached, to the Director-General of the Department of Planning and Infrastructure, in accordance with Section 68 of the Environmental Planning and Assessment Act 1979.

600/13 That Council request the Director-General of the Department of Planning and Infrastructure to submit a report under the provisions of Section 69 of the Environmental Planning and Assessment Act 1979 recommending that the Minister for Planning and Infrastructure make the draft Wyong Local Environmental Plan 2012. "

The current zoning of the subject site is proposed to be converted to E3 (Environmental Management) under the Draft WLEP with an education establishment being a prohibited land use in the zone. Despite the fact the proposed use would be prohibited under WLEP 2012, the merits of the proposal, which is currently permissible under WLEP 1991, are considered satisfactory and warrant approval under the current LEP.

(a)(iii) any development control plans

Wyong Development Control Plan 2005

Chapter 14 –Tree Management

Under clause 2.4 of Chapter 14, a description of existing trees and vegetation is required to be shown on a site plan and should include species type and details of height, canopy spread, trunk diameter etc and provide information on landscape treatments for the proposed development. The application has included an Arboricultural Impact Assessment Report, Tree Assessment Schedule, Landscape plan and Tree Protection and Removal Plan. These documents were reviewed by Council's Arborist and Landscape Design Assessment Officer and considered satisfactory.

Chapter 99 –Building Lines

There are no specific building lines mandated under Chapter 99 for education establishments proposed in a rural residential zone. Notwithstanding this, the proposed development has provided adequate setbacks from the buildings to the adjoining property boundaries. These setbacks are as follows:

- 15 metre setback from Carters Road;
- 30 metre setback from Lake Munmorah High School to the south east;
- 136 metre setback from the rear property boundary;
- 45 metre setback from the northern boundary which is adjacent to the existing fire trail and electricity easement.

Chapter 69 – Waste Management

A Waste Management Plan for the construction and ongoing use of stage 1 of the development has been submitted in accordance with Chapter 69 and considered satisfactory. A waste management plan will be submitted for subsequent stages lodged under separate development applications.

Chapter 67 – Engineering Requirements for Development

Should consent be granted, all necessary civil works would need to be undertaken in accordance with Council's DCP 2005 Chapter 67. Compliance with relevant standards can be addressed through conditions of consent.

Chapter 61-Parking and Access

Upon completion of all five (5) stages, there will be a total of 35 staff and 600 students (approximately 100 students of driving age). Table 1 contained within Clause 3.2 of Chapter 61 outlines the 'Parking Requirements for Specific Land Uses'. Table 1 (below) refers to the car parking rates that apply to an education establishment and identifies the parking rates being provided by the development.

Parking requirements per Chapter 61	Required	Proposed	Complies?
1 space per 1.5 staff plus 1 space per 100 students for visitors	23 spaces 6 spaces	The development will provide a total of 105 spaces.	Yes
Minimum of 2 spaces for disabled students to be provided on site	2 disabled spaces	4 spaces	Yes
In addition, for High Schools / Education establishments, 1 space per 8 senior/adult students	13 spaces	Incorporated in the 105 spaces provided on site.	Yes

Parking requirements per Chapter 61	Required	Proposed	Complies?
for student parking Bus standing areas, parent drop-off and set-down are to be provided subject to a Transport Management Plan based on anticipated mode split Adequate 'Kiss and Ride' facility is to be provided at all education establishments and is to be addressed in the TMP Provision of an easily accessible overflow carpark for special occasions on site (1 space per 5 students) *Service Requirements:* 1 space per 2,000m² GFA		Full bus bay provided Extensive off-street "kiss and ride" lanes provided. Overflow parking for 69 vehicles has been provided. The car parking area located adjacent to the Administration building, incorporating the Bus lanes and Kiss & Ride lane, are expected to provided adequate carparking for delivery vehicles which are expected to service the development during school hours but after peak periods.	Yes Yes Yes Yes

Table 1: Parking rates for the proposed education establishment

Stage 1 of the proposal involves the initial intake of 90 students and 10 staff. A bus and parking zone, adjacent to Carters Road, comprising 31 car spaces, four (4) bus drop off spaces and a 'kiss-n-go' lane will be constructed as part of Stage 1. The number of car parking spaces being provided in stage 1 is considered satisfactory having regard for staff and student numbers.

(a)(iiia) any planning agreement that has been entered into or any draft planning agreement that the developer has offered to enter into

There are no planning agreements applicable to the application.

(a)(iv) any matters prescribed by the Regulations

The Regulations require consideration of the following:

- The Government Coastal Policy, being *NSW Coastal Policy 1997: A Sustainable Future for the New South Wales Coast*; and
- In the case of a development application for the demolition of a building, the provisions of AS 2601.

As included in the Regulations, Wyong Local Government Area is only affected by the seaward part of the Government Coastal Policy, being the area extending 3 nautical miles seaward from the open coast high water mark. As such, it is not applicable to the proposed development.

The development proposes demolition of two existing dwelling houses and ancillary outbuildings. Demolition can be addressed through conditions of consent.

(a)(v) any coastal zone management plan

Section 79C(1)(a)(v) of the EP&A Act requires consideration of any Coastal Zone Management Plan (within the meaning of the Coastal Protection Act 1979). The Wyong Coastal Management Plan (CMP) has been publically exhibited and adopted by Council, although has not been gazetted. In accordance with the CMP, the site is not affected by coastal hazards.

THE LIKELY IMPACTS OF THE DEVELOPMENT (s79C(1)(b)):

The relationship to the regional and local context and setting.

The proposed education establishment is consistent with the existing character and amenity of Carters Road and is compatible with the education establishments which currently exist along Carters Road. The scale, form, density and design of the development is considered satisfactory for the locality and will provide additional schooling choice for residents of the Central Coast.

The access, transport and traffic management measures.

Roads, Access and Traffic (External)

The NSW Roads and Maritime Services (RMS) have provided comments in relation to the development and the impacts on the existing signalised intersection with the Pacific Highway. The existing lane configuration in Carters Road on the approach to the Pacific Highway/Carters Road intersection will be altered to provide a 120m left only lane and a combined right/through lane.This will require minor modification to the traffic control signal operation and pavement marking providing improved road safety and traffic flow during staggered peak school periods.

On-street parking will be removed on the northern side of Carters Road on the approach to the Pacific Highway/Carters Road intersection from the intersection to the western driveway access of the recently constructed off-street car park provided by Ausgrid. That is, all on-street parking is to be removed between the eastern pedestrian crossing and the Pacific Highway. This lane shall be marked as a left only lane and "No Stopping" signs erected.

Carters Road is currently classified as a Category C road and has been identified for upgrade to a Category B with anticipated future development.

The scale of the development will require the provision of road upgrade works along Carters Road to a standard acceptable to Council. Kerb and gutter and half road construction is to be provided along the western side of Carters Road for the full length of the subject site (i.e. approximately 260 metres).The design of the kerb and gutter is to compliment the existing 2.5 metre wide shared path.

A recommended condition of consent is the provision of a plan showing all regulatory signage and linemarking including provision for the extension of the existing school zone and flashing lights for the development on public road. This plan will be required to be submitted and approved by Council and the Local Traffic Committee.

Roads, Access and Traffic (Internal)

A bus and parking zone off Carters Road is proposed to be established during Stage 1 works to meet the needs of staff and visitors as well as a "kiss-n-ride" lane. A plan showing all regulatory signage and linemarking is recommended to be submitted and approved by Council and the Local Traffic Committee. The plan is to include suitable swept paths of the largest vehicle expected to use the facility.

The private internal access road to the events/overflow parking area along the southern boundary is to be an all-weather access standard in accordance with Council's DCP 2005 Chapter 67 - "Civil Works Design Guidelines". All internal roads shall comply with section 4.2.7 of "Planning for Bush Fire Protection 2006".

Carparking

A bus and parking zone off Carters Road is proposed to be established during Stage 1 to meet the initial needs of staff and visitors as well as a "kiss & ride" lane.

A separate off-street car park and "kiss-n-ride" will be created at the northern end of the site as part of stage 3 to meet increased parking demand as development progresses. Ausgrid have provided comments in regard to the positioning of the carpark within their 45 metre wide electricity easement. Specific requirements have been imposed by Ausgrid for the design and construction of the carpark.

An event/overflow parking area will also be provided along the southern boundary to accommodate additional parking spaces for special events. The proposed stage whereby this carpark will be constructed has not been nominated on the plans however, it is anticipated that this will be determined with subsequent development applications for the development as it is not a requirement for Stage 1.

The impact on the public domain (recreation, public open space, pedestrian links).

The proposed development will be providing pedestrian links to the other existing schools in Carters Road. Furthermore, if the school facilties, such as the gymnasium/hall, are made available to the public for other uses outside school hours, then this will increase public recreational opportunities in the locality.

The impact on utilities supply.

The development can be serviced for water and sewer, subject to the extension and upgrade of the existing water main in Carters Road and the provision of a private pump station and private rising main which will connect to Council's Sewage Pump Station MP10.

The effect on heritage significance.

An Aboriginal Heritage Impact Assessment dated 25 November 2012, was prepared by Abel Archaelogy. This assessment involved input from four Aboriginal parties who participated in site assessment/inspection, review and finalisation of the assessment. These groups were the Awabakal Descendents Traditional Owners Aboriginal Corporation (ADTOAC), the Awabakal Traditional Owners Aboriginal Corporation (ATOAC), the Darkinjung Local Aboriginal Land Council (DLALC) and the Guringai Tribal Link Aboriginal Corporation (GTLAC). Potential for the existence of cultural/ archaeological material was identified by the Aboriginal groups in the vicinity of, and beneath, the farm buildings that currently exist across the eastern half of both lots 433 and 499, as such the four Aboriginal groups wish to monitor ground disturbance at these locations at the time of demolition and at the time of initial vegetation removal/clear-and-grade earthworks.

The following recommendations were made in the assessment:

- "*All Aboriginal groups wish to monitor ground disturbance on both lots at the time of demolition and initial vegetation removal/clear-and-grade earthworks. 30 days notice is to be given to each group prior to the commencement of these works.*

- *All topsoil removed during initial vegetation removal/clear-and-grade earthworks is to be kept within the confines of the development footprint and not taken off-site, due to the potential for archaeological/cultural material to be contained within the spoil.*

- *If archaeological/cultural materials are disturbed, application must be made to the Office of Environment and Heritage (OEH) for an Aboriginal Heritage Impact Permit (AHIP) before earthworks can restart.*

- *Cultural heritage awareness training shall be incorporated into the induction process for all staff involved on-site, including contractors and sub-contractors."*

The above recommendations have been included in a recommended condition of consent.

There are no known European heritage items on or within the vicinity of the subject site.

Any effect on other land resources.

The site is not known to contain any valuable land resources.

Any impact on the conservation of water.

Stormwater Management

Road drainage infrastructure will be required to convey road surface water to the existing low point draining towards the northern boundary on the western side of Carters Road. The existing 375mm diameter pipe and outlet under Carters Road is to be upgraded in conjunction with the required road works. Piped discharges from the proposed staff and community car parks are to be directly connected to stormwater pits provided as part of the road drainage infrastructure.

Flow Conveyance DRAINS

A review of the submitted DRAINS file has adequately demonstrated that flows discharging to Carters Road can be attenuated to at least pre-developed flow rates prior to discharge to the public road system, without the need of providing on-site detention measures. All roof water from buildings is proposed to be collected and piped to the existing dam at the rear of the site where it will be treated prior to discharging to the downstream watercourse.

For Stage 1 drainage works the proposed Gross Pollutant Trap (GPT) Ecosol in-line GPT system is to be installed and the discharge point is to be to the existing dam at the rear of the property. A detailed Stormwater Management Plan is recommended as a condition of consent and will be required to be generally in accordance with the revised plans prepared by Demlakian Engineering.

Wetland Hydrology/Water Balance

A review of the water balance model submitted adequately demonstrates that the proposed strategy generally mimics the pre-development conditions and will not significantly alter wetland hydrology.

There have been a number of assumptions made in regard to initial dam and rainwater tank storage, initial infiltration losses from paved and unpaved surfaces and reuse volumes which are considered reasonable. The detention/retention and re-use scheme adopted will closely preserve/mimic existing wetland hydrology.

Water Quality/MUSIC

A review of the applicants MUSIC model demonstrates that the adopted treatment train (i.e. Rainwater tanks/Bio-retention) effectively reduces pollutants to within acceptable limits prior to discharge downstream.

Any effect on the conservation of soils or acid sulphate soils.

The preliminary assessment report and investigation that has been prepared as part of the application confirmed that neither Actual Acid Sulphate Soils or Potential Acid Sulphate Soils were encountered on the site to the depth of the proposed excavation.

Any effect on quality of air and microclimate conditions*.*

The proposed Education Establishment is not expected to have a detrimental impact on the existing air quality or microclimatic conditions.

Any effect on the flora and fauna.

The existing dam located in the western corner of No. 54 will be retained, along with the surrounding EEC and riparian vegetation. The existing two dams in the western corner of No. 48 will be used as sediment retention basins during construction and filled in at the final stage of works (according to the Sediment and Erosion Control Plan). According to the Bulk Earthworks Plan, the dams will be drained prior to construction to confirm levels. The Flora and Fauna Report also recommends that the dams be drained prior to being in-filled, to enable the rescue and relocation of fauna such as turtles and frogs.

A number of trees, including hollow-bearing trees and stags, will be removed. Those proposed for removal and retention are shown within the Arboricultural report.

Approval for the clearing of native vegetation associated with the proposed development may be required under the *Native Vegetation Act 2003* (NSW) due to the site's non-urban zoning. As this requirement is not integrated with the development assessment process, Council has advised the applicant to contact the Hunter-Central Rivers Catchment Management Authority for further information.

The proposed development is within 40m of waterfront land. As such, the proposal was referred to NOW who have issued GTA's. The plans and Arboricultural report were subsequently updated to incorporate a 10 m wide Vegetated Riparian Zone adjoining the EEC in accordance with the GTA's issued by NOW.

The letter from Ausgrid provides consent to the proposed development within and nearby their transmission easement subject to a number of conditions. One of the conditions includes:

"*The planting of trees and shrubs is allowed within the easement area providing they are of a species which will not grow to a height exceeding 4 metres and do not restrict access along the easement*".

The updated Stage 1 Landscape Planting Plan shows seven proposed tree plantings within the transmission easement (where the northern carpark is proposed) comprised of three species which can exceed 4 m in height and the updated Landscape Master Plan shows an additional 20+ proposed trees (species unknown) within the transmission easement for future stages. Having regard for Ausgrid's requirements, the *Stage 1 Landscape Planting Plan L1-SD-02 Rev B* (Arterra Design Pty Ltd, 29 April 2013) has been amended so that species *Jacaranda mimosifolia*, *Eucalyptus haemastoma* and *Waterhousia floribunda* 'Green Avenue' are replaced with *Banksia spinulosa* and *Leptospermum laevigatum*.

In addition to the retention and protection of the EEC and vegetated riparian corridor, the proposal includes the planting of a number of suitable native species (including Keystone species) in greater numbers than those proposed for removal. As such, Council is satisfied with the biodiversity outcomes/offsets for this proposal.

The provision of waste facilities.

A waste management plan was submitted with the application and considered satisfactory having regard for waste minimisation during the demolition and construction stage and the ongoing management of waste for Stage 1 of the development.

Whether the development will be energy efficient.

The design of the development will need to comply with Part J of the Building Code of Australia in relation to energy efficiency.

Whether the development will cause noise and vibration.

Noise and vibration will occur during construction of the proposed development however, the ongoing use of the site as an education establishment will be commensurate with the noise associated with the other three schools in Carters Road.

An Operational Noise Emission Assessment was prepared by Acoustic Dynamics (dated 30 October 2012). This assessment advised that the impact of the proposed education establishment upon the surrounding environment would be minimal. Council's Environmental Protection Officer has concurred with these findings.

Any risks from natural hazards (flooding, tidal inundation, bushfire, subsidence, slip etc).

Flooding

A Flood Assessment Report prepared by consultants Mott MacDonald has been undertaken in response to concerns that filling may have an affect on the natural flow regime of the watercourse causing localised flooding of neighbouring upstream properties.

A review of the model, calculations and overall methodology employed by the consultant revealed that it is unlikely that the development and associated filling activities will have any significant impact on the adjacent watercourse. An appropriate method of analysis has been undertaken demonstrating that the proposed extent of filling will have negligible affect on any potential flooding as a result of the proposed activity.

Bushfire

As the proposed development of an education establishment is identified as a Special Fire Protection Purpose (SFPP), a Bushfire Hazard Assessment was submitted and referred to the NSW Rural Fire Service (RFS) for the purposes of integrated development. The RFS has provided advice and have recommended conditions relating to water and utilities supply, access, the implementation of an evacuation and emergency management plan, design and construction requirements and landscaping maintenance.

Subsidence

The proposed development is located in a mine subsidence district. The Mine Subsidence Board (MSB) have found the proposal to be satisfactory and have granted a conditional approval.

Any risks from technological hazards.

Lot 499 (northern most lot) is burdened by a 45 metre wide electricity easement, owned by Ausgrid, which is located on the northern boundary. The development proposes stage 3 car parking and a small portion of stage 1 car parking within the easement, with the nearest building to the easement being the TAS building, to be developed as part of future stage 5, located on the easement boundary.

Due to the proximity of the proposed education establishment to the existing overhead electricity network assets and the proposed works within the easement, Council referred the proposed development to Ausgrid for comment. Concern was raised by Ausgrid in relation to the compatibility of the proposed education establishment with existing Ausgrid's infrastructure particularly in relation to risks of electrocution, fire risks, Electric and Magnetic Fields (EMFs), noise, visual amenity and other matters that may impact on Ausgrid or the development.

The applicant engaged consultant Mott MacDonald, Electrical Engineers, and an Electrical Testing company to attend the site and take a number of EMF site readings at various points on the site, within the easement and off the site. Mott MacDonald concluded that the readings taken on site by the Electrical Testing Company were well below the safe Milligaus levels set by the National Health and Medical Research Council (NHMRC) and Australia Protection and Nuclear Safety Agency (APNSA).

The letter from Mott MacDonald dated 2 May 2013, and test report No. 23147, dated 22 April 2013, were referred to Ausgrid for their comment. Ausgrid carried out a study of the proposed development in relation to potential hazards as a result of induced and transferred voltages from the adjacent Ausgrid infrastructure under normal operating and fault conditions. Ausgrid has granted consent to the proposed development within and nearby Ausgrid's Transmission easement subject to the application of hazard mitigation.

Compliance with the report prepared by Ausgrid (NET 13-022-011) dated May 2013 and the additional requirements stated in their letter dated 13 May 2013, have been recommended as a condition of consent. The test report and correspondence from Ausgrid has been included in Appendix E.

Whether the development provides safety, security and crime prevention.

The applicant has submitted a Crime Prevention Report, prepared by Harris Crime Prevention Services, which focussed on:

- ensuring compliance with state planning instruments, Section 79C of the EP&A Act 1979 and the principles of Crime Prevention Through Environmental Design (CPTED);

- assessing the local and neighbouring environments in terms of anti-social behaviour, criminal activity or potential crime risks and their likely impact on educational and community participation goals of the developer and associated stakeholders;

- identifying vulnerable aspects of design requiring specific security input aimed at reducing the likelihood of crime and preventing opportunities to commit crime on any part of the proposed campus;

- affirming appropriate *security design* strategies,and/or recommending possible security design inclusions into design development, documentation, likely to enhance the project's security objectives.

The application was referred to the NSW Police Tuggerah Lakes Local Area Command (TLLAC) for comment. The result of the Safer By Design Crime Risk Evaluation identified the development as having an overall crime risk rating of MODERATE and TLLAC advised that the proposed education establishment did have the potential to introduce new (potential) victims, crime opportunities and offenders to the development site and its surroundings.

The response from TLLAC raised no objections to the proposed development and agreed that it would compliment the existing uses within Lake Munmorah. The response also incorporated a number of recommendations in relation to surveillance, lighting, territorial re-enforcement, environmental maintenance, space/activity management and access control. Specific recommendations that could be included as conditions of consent, should consent be granted, include:

- The provision of surveillance equipment in the administration and TAS buildings, the Hall/gym and carparks that is vandal resistant.

- The provision of a monitored intruder alarm system.

- Lighting should comply with ASNZ 1158 and be designed as overhead or down light luminaries that allows 15 metre facial recognition test.

- Directional signage is to be provided around the school.

- The development of a maintenance policy which includes rapid removal of graffiti, rapid repair of vandalism, maintenance of landscaping and fencing and the removal of rubbish and the like from school grounds.

- Secured garbage storage area.

Any social impact in the locality.

There is a significant benefit to the community with the development of an additional education establishment that will provide additional choice for secondary schooling opportunities for Central Coast children.

Any economic impact in the locality.

The proposed development is unlikely to have an economic impact in the locality.

Any impact of site design and internal design.

The design of the development was amended during the assessment process to relocate the future car parking area (event parking) from the northern boundary, within the electricity easement, to the southern boundary where there was minimal vegetation. This was to provide for the retention of significant vegetation within the easement.

The plans and arboricultural report were also updated to incorporate a 10m wide Vegetated Riparian Zone adjoining the EEC in accordance with the GTA's issued by NOW.

It is considered that the site and internal design is satisfactory having regard for the site constraints which currently exist on the subject land and the use of the site for the purposes of an education establishment.

Any impacts of construction activities (construction site management, protection measures).

All construction access will be from Carters Road and a traffic management plan will be required to demonstrate how construction traffic would be managed to minimise delays and interference with the road network, particularly the Pacific Highway. Conditions have been recommended in relation to the provision of construction site management.

***Any cumulative impacts**.*

Concern was raised by the community, Council, RMS and NSW Police relating to the cumulative impact of four schools along Carters Road having regard for traffic and safety in particular. The traffic impacts can be managed in a manner to mitigate potential congestion and safety concerns. Mitigating measures include provision of pedestrian facilities, additional lengthening of left hand turning lane, off-street drop off/collection bus and vehicular facilities and staggered starting and finishing times.

THE SUITABILITY OF THE SITE FOR THE DEVELOPMENT (s79C(1)(c)):

Whether the proposal fits in the locality/ Whether the site attributes are conducive to development.

The design of the proposed development has satisfactorily addressed potential site constraints including the watercourse and EEC at the rear of the site, bushfire hazard, vehicular access from the Pacific Highway and on Carters Road, and the proximity of the site to Ausgrid's electricity network assets. The site is located within an area that has three existing schools and is considered to provide additional schooling choice for residents of the Central Coast. Overall, the site is considered suitable for the proposed development.

ANY SUBMISSION MADE IN ACCORDANCE WITH THIS ACT OR REGULATIONS (s79C(1)(d)):

Any submission from the public.

The application was advertised in accordance with DCP 2005 Chapter 70-Notification of Development Proposals with two (2) submissions received objecting to the proposal and seven (7) submissions received in support of the proopsal. The issues raised in the submissions have been addressed in the assessment of the application pursuant to the heads of consideration contained within Section 79C of the *Environmental Planning and Assessment Act* 1979. A summary of the submissions is detailed in the table below.

Doc. No	Summary of Issues	Response
D003230371	Access to and from Carters Road is a major concern.	The proposal has been reviewed by RMS and Council Transport Engineers and Development Engineer and found to be satisfactory having regard for the Traffic Assessment prepared by TPK & Associates and the recommended conditions of consent for new signage and upgrade works along Carters Road.

Doc. No	Summary of Issues	Response
D03199153	No consideration of solar aspect, landscape overviews or opportunity for a noble architectural statement. Passive solar orientation must be a primary element to the design of all new buildings especially those of public function.	It is considered that there is adequate separation between the proposed buildings to receive adequate solar access to the buildings, 'town square' and surrounding open space.
	LM Catholic High will have above ground power lines along its whole northern boundary. It is ironic that existing schools have benefited from public concern in this regard while this new school (unforeseen at the time) should have to deal with a situation that was indeed forseen as a risk to the wider community.	Tests have been carried out in relation to the existing electricity network assets and the EMF readings were found to be satisfactory. Ausgrid have granted their consent to the construction of the development within the existing electricity easement and in close proximity to the lines. A recommended condition of consent is compliance with Ausgrid requirements.
	On any given school day there are presently more than two thousand people in and out of Carters Road at the Pacific Highway. In four years this new school will add, with increases at the existing schools, perhaps another thousand people. For the most elemental safety precautions, there must be another access into Carters Road. This is easily achievable from Kangaroo Avenue, Lake Munmorah, via the fire trail into Carters Road.	The proposal has been reviewed by RMS and Council Transport Engineers and Development Engineer and found to be satisfactory having regard for the Traffic Assessment prepared by TPK & Associates, safety issues associated with the co-location of 4 schools and the recommended conditions of consent for new signage and upgrade works along Carters Road. The traffic assessment included traffic counts at the intersection of the Pacific Highway and Carters Road. There was no requirement to explore alternative access arrangements given the proposed access from the Pacific Highway was considered satisfactory.
	Security. Why there is never a resident caretaker at schools is an ongoing mystery. The millions of dollars spent on vandalism to schools could be largely saved were there vigilant presence permanently on site.	Whilst it is acknowledged that the presence of a resident school caretaker would reduce the risk of crime, this is a decision that the developer would have to consider.
	It would be nice, as a gesture of urban civility, if the Town Square were a circle, atop the highest point of the property, perhaps with an elevated area to reveals the rather wonderful view.	The location of the 'town square' is considered satisfactory having regard for its functionality.
	As a once-zealous runner, I'd like to suggest the Emergency vehicle gravel road be extended in function to form a running track, possibly connecting with the existing footpath/cycleway on Carters Road.	This is an option available to the school and could be implemented at a later date if they wish.
	Architecture. The Catholic Church	It is considered that the design of the

Doc. No	Summary of Issues	Response
D03207581 D03208552 D03211204	Definite need for another Catholic High School.	Noted.
D03209047 D03210509 D03206931 D03208018	The proposed plans blend in with other functional buildings in the street without detracting from the scenic, rural aspect of the surrounding properties.	Agreed.
	Opportunity for resource sharing in the future and adds to the "educational precinct" that already works so well in Carters Road.	Noted.
	The proposal seeks to meet and exceed the needs of the area in terms of parking, vehicle movement and emergency access. This proposal has incorporated and addressed many of the concerns that the community have put forward.	Agreed.
	Additional activity in the area means that at any one time there is increased likelihood of staff being present across any of the school sites out of school hours. This can only limit the prospect of anti-social behaviour such as vandalism.	Noted.
	The proximity of the school to the Catholic feeder primary school enhances the educational prospects for the students making such a transition. The reduced stress, lower travelling times and familiar environment can only enhance the student's social and educational outcomes for the future.	Noted.
	The school design is environmentally friendly.	The proposed design is considered satisfactory.
	The school has attempted to provide generous off street parking.	Agreed.
	An Education Facility for our children is a must and important to the growth and well being of the community.	Noted.
	I have been driving my children to and from school in Carters Road for the last 5 years. As the current Schools in Carters Road all have different start and finish times I have never had a problem with traffic congestion. As the new school will have it's own bus	Noted.

Any submission from public authorities.

NSW Office of Water

The application was referred to the NSW Office of Water (NOW) for their concurrence. General Terms of Approval were issued on 4 April 2013. A copy of the GTA's issued by the NOW are included in Appendix D

NSW Roads and Maritime Services

The RMS has confirmed that they have no current proposals affecting or requiring any part the property.The RMS also confirmed that their concurrence is required for works, structures, and disturbances to, in, on, under or over classified roads under section 138 of the Roads Act 1993 and recommended a number of conditions of consent which have been incorporated into the draft conditions. A copy of RMS comments are included in Appendix D.

NSW Rural Fire Service

The application was referred to the NSW RFS who issued a Bushfire Safety Authority (BSA) on 10 December 2012. The amended plans were reviewed by the RFS who advised, via letter dated 27 March 2013, that there was no change to the previously issued BSA. A copy of the BSA is included in Appendix D.

Mine Subsidence Board

The proposal was referred to the Mine Subsidence Board as the proposal is within a Mine Subsidence District. The MSB granted their approval to Stage 1 on 5 March 2013. A copy of their conditions are included in Appendix D.

Ausgrid

The proposal was referred to Ausgrid for comment as the proposal involves works within the existing electricity easement and is within close proximity to the existing electricity assets network. Ausgrid have granted their consent to the proposed works within the electricity easement and have provided recommendations should development consent be granted. A copy of this information is provided in Appendix E.

THE PUBLIC INTEREST (s79C(1)(e)):

Any Federal, State and Local Government interests and community interests.

North Wyong Structure Plan

Under the North Wyong Structure Plan, the site is identified as proposed residential area within Development Precinct 16 and has not been identified for any other use. The proposal is therefore not consistent with the North Wyong Structure Plan being for an education establishment and no residential development. However, the proposal will be co-located with three other schools and it is considered that the use of the site for the purposes of an education establishment will be complimentary to existing land use and better suited to Carters Road than additional residential development. The subject site comprises two rural residential allotments which will not prejudice the supply of other residentially zoned land in the precinct. The proposed development is providing an opportunity to co-locate primary and secondary catholic schools in Carters Road and will offer greater choice of educational opportunities within the northern part of the Wyong Local Government Area.

Central Coast Regional Strategy

The Central Coast Regional Strategy 2008, identifies Lake Munmorah as a village centre which has small to medium sized concentrations of retail, health and other services integrated with medium density residential living. One of the key opportunities identified for the region in section 5 *Economy and employment* is "*growth in education services, with a corresponding increase in the associated employment sector. New schools, vocational education and higher education infrastructure will be required to support a growing population with increased participation in education and skills training*". The proposed education establishment will be co-located with existing education establishments and will eventually provide employment for 35 staff and secondary school education opportunities for 600 Central Coast students.

OTHER MATTERS FOR CONSIDERATION

Section 94 Contributions

Section 94A Contributions are applicable to the development and have been levied accordingly.

Water and Sewer Contributions

The proposal falls within Development Servicing Plan (DSP) No.10 Lake Munmorah Area and the contribution charges for water supply and sewerage will be applicable and included within the Section 306 notice of requirements issued under the Water Management Act 2000.

CONCLUSION

The proposed development of an education establishment, in five stages, is considered to be compatible with the other three education establishments along Carters Road and will contribute to the provision of additional secondary Catholic education in the locality. The development is considered to be consistent with Council's LEP and other DCP requirements. No significant issues are raised in accordance with Section 79C of the *Environmental Planning and Assessment Act* 1979, as such, the proposed education establishment is recommended for approval.

PROPOSED CONDITIONS

1 The development is to be undertaken in accordance with the approved development plans and specifications listed below except as modified by any conditions of consent and any amendments in red made to the approved plans:

Title	Drawing No.	Revision	Date	Drawn By
Project No DBB 2301 Site Master Plan	A001	G	9/4/2013	MK
Project No DBB 2301 Staging Plan	A004	F	15/4/2013	MK
Project No DBB 2301 Stage 1 – Site Plan	A005	G	15/4/2013	MK
Project No DBB 2301 Stage 1 Ground Floor	A140	B	1/11/2012	Author
Project No DBB 2301 Building Floor Plan	A141	B	1/11/2012	MK
Project No DBB 2301 Building B Floor Plan	A142	B	1/11/2012	MK
Project No DBB 2301 Building C Floor Plan	A143	B	1/11/2012	MK
Project No DBB 2301 Elevations	A200	B	1/11/2012	MK
Project No DBB 2301 Sections	A300	B	1/11/2012	MK
Tree Protection and Removal Plan	T-02	C	29/05/13	Arterra Landscape Architects
Landscape Master Plan	L-MP-01	C	29/04/13	Arterra Landscape Architects
Stage 1 Landscape Concept Plan	L1-SD-01	C	29/04/13	Arterra Landscape Architects
Stage 1 Landscape Planting Plan	L1-SD-02	B	29/04/13	Arterra Landscape Architects

Note: The site Master Plan and landscape Master Plan is for concept approval only for all stages.

Compliance with the Integrated Approvals issued by the following Authorities:

Bushfire Safety Authority – NSW Rural Fire Service	10 December 2012
General Terms of Approval – Mine Subsidence Board	5 March 2013
General Terms of Approval – NSW Office of Water	4 April 2013

Development Application for subsequent stages

2 Consent is given for the concept development and Stage 1 only in accordance with Section 83B of the *Environmental Planning and Assessment Act* 1979. In accordance with Section 80(5) of the Act, the following stages must be the subject of subsequent development applications:

- Stage 2 Buildings D, E, F, R
- Stage 3 Buildings G, H, J

- Stage 4 Buildings K, L, M
- Stage 5 Buildings N, P, Q

All applications for development under Section 80(5) of the Act (listed above) must be consistent with the Site Master plan, Project No DBB 2301, plan number A001, Revision G dated 9 April 2013.

Certificates – Application and Approval

3 A Construction Certificate is to be issued by the Principal Certifying Authority prior to commencement of any construction works. The application for this Certificate is to satisfy all of the requirements of the Environmental Planning and Assessment Regulation 2000.

4 Prior to the occupation or use of the building/structure, an application for an Occupation Certificate for the development must be submitted to and approved by the Principal Certifying Authority.

General

5 The proposed development shall comply with the requirements of Ausgrid as outlined in their letter dated 13 May 2013 and the recommendations for hazard mitigation as specified in the report titled *Proposed Secondary High School, 48-54 Carters Road, Munmorah, Adjacent to Ausgrid Powerlines,* NET 130-022-001, dated April 2013, prepared by Ausgrid.

6 The proposed development shall comply with the requirements of NSW Road and Maritime Services as outlined in their letter dated 19 February 2013.

7 Compliance with the requirements of the Crime Prevention Report, dated November 2012, prepared by Harris Crime Prevention Services.

8 Tree removal and tree protection zones are to be carried out in accordance with the report prepared by Arterra Consulting Arboriculture (AIA – 01 Revision C, - dated 29 April 2013.

9 The planting of the “Carters Road Buffer” as identified on the Stage 1 Landscape Planting Plan, L1-SD-02, Revision B, dated 29 April 2013, is to be undertaken before all other landscape works in Stage 1.

10 All landscape stock supplied must comply with NATSPEC Specifications.

11 The developer is to engage a qualified bush regenerator to collect seed (provenance stock) from the indigenous species that are growing on site in order to grow the required native species from local provenance.

12 Car parking for Stage 2 shall be commensurate with the parking requirements for education establishments outlined in Development Control Plan 2005, Chapter 61-*Parking and Access* having regard for anticipated numbers of students and staff under that stage.

13 Thirty (30) days notice shall be given to the four (4) Aboriginal groups, Awabakal Descendants Traditional Owners Aboriginal Corporation, Awabakal Traditional Owners Aboriginal Corporation, Darkinjung Local Aboriginal Land Council and Guringai Tribal Link Aboriginal Corporation who were involved in the Aboriginal Heritage Impact Assessment, prior to demolition of all structures on site.

14 All recommendations specified in the "Operational Noise Emission Assessment by Acoustic Dynamics dated 30 October 2012 project ref: 3159 are to be implemented at the relevant stages of the development consent.

STAGE 1

Prior to Release of Construction Certificate:

The following conditions must be satisfied prior to the release of the Construction Certificate. Conditions may require the submission of additional information with the Construction Certificate Application. Applicants should also familiarise themselves with conditions in subsequent sections and provide plans in accordance with any design requirements contained therein.

Dust Control Requirements

15 Prior to the issue of a Construction Certificate, suitable details must be provided for the approval of the Accredited Certifier of an appropriate system to control dust emissions from the site during construction works. The approved method of controlling dust emissions from the site is to be implemented and be maintained for the duration of construction works on the site.

Ecology/Tree Requirements

16 Prior to the issue of any Construction Certificate, trees and native vegetation proposed for retention and those approved for removal must be clearly identified on all the final engineering and landscaping plans. All fenced tree protection areas must be clearly marked as "No Go Area" on all plans. The location of any threatened species, endangered populations or ecological communities must also be marked on all plans.

17 Prior to the issue of any Construction Certificate/Commencement of Works (which ever occurs first) the applicant is to prepare and submit to the Principal Certifying Authority for approval a Vegetation Management Plan (VMP) for the protection and rehabilitation of the EEC and riparian corridor, and protection and enhancement of retained trees. The VMP is to be prepared by a suitably qualified and experienced ecologist and/or bush regenerator. The VMP must integrate with the Landscape Plan and the Sediment and Erosion Control Plan. Implementation of the VMP must commence immediately following issue of the Construction Certificate or Commencement of Works, which ever occurs first. In preparing the VMP the applicant is to have due regard to the following specific and required components of the VMP:

a) A suitably qualified and experienced professional bush regeneration contractor is to be engaged to carry out any revegetation planting, restoration and maintenance weed control specified in the Vegetation Management Plan. The minimum qualifications and experience required for the bush regeneration contractor are a TAFE Certificate 2 in Bushland Regeneration and two years demonstrated experience (for site supervisor) and a TAFE Certificate 2 in Bushland Regeneration and one year demonstrated experience (for other personnel). In addition the site supervisor is to be eligible for full professional membership of the Australian Association of Bush Regenerators (AABR).

b) A site plan clearly showing the area to which the VMP applies, existing vegetation, management zones and extent of dominant weed infestations.

c) A schedule of works detailing the sequence and duration of works necessary for the protection, rehabilitation, revegetation and maintenance for each management zone. All primary weed control must be undertaken in the first year following commencement of the VMP, with follow-up weed control undertaken in the second and third year following commencement of the VMP.

d) The location and type of fencing to restrict unauthorised access or encroachment into the areas to which the VMP applies.

e) The mulch/tubgrindings generated from the removal and thinning of native trees associated with the development is/are to be re-used in restoring the habitat protection areas as required.

f) Clearing of native vegetation or trees is to be carried out in accordance with the clearing protocol outlined in the Squirrel Glider Conservation Management Plan (Smith 2002).

g) Any natural hollows removed by the development are to be placed wherever possible as ground hollows within retained bushland under the supervision of the consulting Ecologist.

h) Restoration areas are to be maintained for a minimum of three (3) years. Reports are to be submitted to the Principal Certifying Authority detailing the progress of the bush regeneration works twice per year, with a final report certifying the completion of the VMP works at the end of the three year period.

i) Any plant stock used in revegetation will be supplied from provenance specific seed/material collected from within the Tuggerah Lakes catchment area. Non-provenance specific material is prohibited.

18 The Principal Certifying Authority should not issue a Construction Certificate over any part of the site requiring a Controlled Activity Approval until a copy of the Approval from NOW has been provided to the Principal Certifying Authority.

Erosion and Sediment Control – Design Requirements

19 Prior to the issue of a Construction Certificate, design drawings for the control of soil erosion on the site and the prevention of silt discharge into drainage systems and waterways must be provided for the approval of the Accredited Certifier. Required design drawings must include all major stages of construction and sequences of work together with treatments necessary at each of these stages. The design drawings must be prepared in accordance with the Landcom publication '*Soils and Construction – Managing Urban Stormwater*' *(Blue Book)*.

Liquid Trade Waste Requirements

20 Prior to the issue of the Construction Certificate, the developer must submit a trade waste application for approval to Council as the Water and Sewer Authority in order to discharge liquid trade waste into the sewerage system.

Roadworks - Design Requirements

21 Where conditions of this consent require approval from Council as the Roads Authority, a Subdivision Construction Certificate application must be lodged with Council and be accompanied by detailed design drawings and supporting information. Upon submission to Council, fees and charges will calculated in accordance with Council's Management Plan. The fees and charges must be paid prior to Council commencing the design assessment.

22 All internal access roads shall be in accordance with the requirements for access by fire fighting vehicles in section 4.2.7 of "Planning for Bushfire Protection 2006" guidelines. Design details to be submitted to Council prior to the issue of the Construction Certificate.

23 The submission to Council of Civil Works design drawings and specifications for Stage 1 works detailing the following design requirements:

- Kerb and guttering for the full street frontage of the development.
- Full half road pavement construction adjoining the proposed kerb and guttering.
- Street stormwater drainage systems including the upgrade of the existing 275mm diameter pipe and outlet under Carters Road.
- Concrete shared footpath 2.5 metres wide for the full street frontage of the development.
- Street lighting in accordance with AS/NZS 1158.
- Pavement marking & signage.
- Pavement design catering for 3.3×10^6 equivalent standard axles for a local street with buses.

- Vehicle access crossing(s).
- The restoration of any vehicle access rendered redundant by the development, to standard kerb and footpath formation.
- Any associated works to ensure satisfactory transitions to existing infrastructure
- Appropriate pedestrian facilities are to provide connectivity between St Brendan's Primary School and the proposed development.
- Provision is to be made for a new U-turn facility on Carters Road immediately west of the proposed development site.

Required design drawings are to be prepared in accordance with Council's Development Control Plan 2005, Chapter 67 - *Engineering Requirements for Development* and must be approved by Council as the Roads Authority prior to the issue of a Construction Certificate.

24 The submission of a comprehensive road signage and pavement marking design drawings for Stage 1 works identifying parking restrictions, accesses and traffic management facilities to Council for approval by the Local Traffic Committee prior to issue of the Construction Certificate.

25 Prior to the commencement of detailed design works within any public road, contact should be made with the National Community Service *"Dial before you Dig"* on 1100 regarding the location of underground services in order to prevent injury, personal liability and even death. Enquiries should provide the property details and the nearest cross street/road.

26 The submission to the Council as the Roads Authority of a 'Stage 3' Road Safety Audit for Stage 1 road works prepared by a Level 3 Road Safety Auditor recognised on the NSW Register of Road Safety Auditors. Any deficiencies identified within the audit must be resolved in consultation with Council prior to the approval of design drawings. .

Stormwater Drainage - Design Requirements

27 The submission to the Accredited Certifier of a detailed stormwater management plan generally in accordance with the preliminary stormwater management plans prepared by Demlakian Engineering (Project No. 212145, Drawing SW1, Revision D) featuring:

- Stormwater disposal to the existing storage dam servicing the allotment for all building roof water and tank overflows for Stage 1 works. Stormwater disposal from all carpark areas are to be directed to Carters road frontage.
- Suitably sized galvanised box section across the footpath area to connect to the existing kerb and guttering.
- Drainage pit at the boundary line for all discharge points from the development fronting Carters Road.

- The provision of stormwater quality control facilities to treat stormwater in accordance with the Engineers Australia publication *Australian Runoff Quality – A Guide to Water Sensitive Urban Design* prior to entering Council's stormwater drainage system. The proposed Ecosol GPT is to be installed during Stage 1 works as indicated on the plans and certification provided by the manufacturer or suitably qualified consultant for the installation and operation

- An emergency overland flow path catering for the 100 year ARI design flows.

- Outlets to Bio-Retention areas and existing dams are to be designed to disperse flows and prevent scouring.

The plans must be prepared in accordance with *AS/NZS3500.3:2004* and Council's Development Control Plan 2005, Chapter 67 - *Engineering Requirements for Development*, and be approved by the Accredited Certifier prior to issue of the Construction Certificate.

28 Stormwater drainage works external to the site and discharging into a public system or public land requires approval from Council under Section 68 of the Local Government Act 1993. Detailed design drawings prepared in accordance with Council's Development Control Plan 2005, Chapter 67 - *Engineering Requirements for Development* must be approved by Council prior to the issue of a Construction Certificate. All other stormwater management works must be approved by the Accredited Certifier.

29 Prior to the issue of a Construction Certificate, suitable detailed design drawings for all retaining wall structures on the site are to be provided for the approval of the Accredited Certifier. Such design drawings are to be prepared by a suitably qualified Registered Structural Engineer in accordance with the requirements of AS 4678-2002 - *Earth Retaining Structures*. All retaining walls must be contained wholly within the property and designed so as to accommodate possible surcharge loading from vehicles or structural improvements within the adjoining property.

Vehicle Access and Parking - Design Requirements

30 The submission to the Accredited Certifier of a detailed car parking design for Stage 1 works. The design shall include:

- Pavement marking, appropriate signage and physical controls detailed for the carpark, access driveway and circulation roads.

- Pavement design able to withstand anticipated vehicle loading.

- Wheel stops for all parking spaces fronting designated Bio-Retention Areas 2 and 3.

- Amendment to parking spaces to achieve geometric compliance with the parking for people with disabilities.

- Unsealed hardstand pavement area design catering for anticipated vehicle loading and containing at least 2% cement (by volume) stabilisation to limit scouring and siltation runoff.

The design drawings shall be prepared in accordance with the requirements of AS/NZS 2890 – Parts 1, 2 and 6, and be approved by the Accredited Certifier prior to the issue of a Construction Certificate.

31 The submission to the Accredited Certifier of lighting design drawings for the carpark and public places. The design shall be prepared in accordance with the requirements of AS/NZS 1158 and AS 4282-1997, including the provision of current best practice energy efficient lighting and be approved by the Accredited Certifier prior to issue of a Construction Certificate.

Water and Sewer Services - Design Requirements

32 All water and sewer works or works impacting on water and sewer assets must be designed and constructed to the requirements of Council as the Water Supply Authority. The requirements are detailed in the Section 306 Notice of Requirements letter attached to this consent. **Note:** The Section 306 Notice contains requirements associated with the development that must be completed prior to the issue of the Construction Certificate.

Remediation

33 An appropriately qualified consultant shall be engaged to carry out remediation and validation of all areas that contain asbestos prior to construction of the proposed development. The Accredited Certifier is to certify that this requirement has been complied with prior to a Construction Certificate being issued.

Prior to Commencement of Works:

The following conditions must be satisfied prior to the commencement of site works, including any works relating to demolition, excavation or vegetation removal.

Demolition Requirements

34 Prior to the demolition of existing structures on site, all existing site services are to be disconnected, sealed and made safe. The sewer and water service is to be disconnected by a licensed plumber and drainer with a Start Work Docket submitted to Council's Plumbing and Drainage Inspector certifying that the works have been undertaken to the satisfaction of Council as the Water and Sewer Authority. Thiess Service's Customer Service Centre are also to be contacted on telephone number 1300 126 278 to arrange for the collection of the garbage bins.

35 Work involving bonded asbestos removal work (of an area of more than 10 square metres) or friable asbestos removal work, must be undertaken by a person who carries on a business of such removal work in accordance with a licence issued under the provisions of Clause 318 of the *Occupational Health and Safety Regulation 2001.*

- The person having the benefit of the consent must provide the Principal Certifying Authority with a copy of a signed contract before any development pursuant to the consent commences.

- Any such contract must indicate whether any bonded asbestos material or friable asbestos material will be removed and if so, must specify the landfill site (that may lawfully receive asbestos) to which the material is to be delivered for disposal.

Aboriginal Heritage

36 Cultural heritage awareness training shall be incorporated into the induction process for all staff involved on-site, including contractors and sub-contractors.

Ecology/Trees Requirements

37 Prior to works associated with the development commencing, the applicant is to engage a qualified and experienced Ecologist, AQF5 Arborist and Soil Erosion Professional to supervise the vegetation clearing and construction of each stage of the development and to ensure and certify to Council's Development Ecologist that the trees and vegetation proposed for retention are adequately protected during construction. Evidence of this engagement is to be forwarded to Council prior to the commencement of works. The Ecologist and Arborist are to provide reports to Council's Development Ecologist for review, certifying how the proposal is meeting tree retention and protection requirements, within 10 working days following completion of the following stages of the development:

- Erection of tree protection measures

- Following the marking of all habitat trees, marking of trees to be retained and erection of required tree protection fencing (prior to the commencement of works)

- Following induction of each civil contractor and subcontractor (prior to the commencement of works)

- Following initial clearing, removal of habitat trees and excavation/filling of the site

- Following provision of roads and services

- Following completion of each construction phase (and prior to the issue of a Subdivision Certificate/Occupation Certificate/Final Certificate/Practical Completion).

38 According to the Bulk Earthworks Plan, the dams on Lot 433 (No. 48) will be drained prior to construction to confirm levels. A qualified and licensed consulting Ecologist must be present to rescue and relocate fauna during the draining process.

39 To compensate for the loss of four hollow-bearing trees, nest boxes are to be installed at a 1:1 ratio within retained trees under the direct supervision of the consulting Ecologist. Nest boxes are to be installed (and certified to the Principal Certifying Authority) prior to any vegetation removal.

40 The 76 trees nominated for retention in the Arboricultural Impact Assessment Report undertaken by Arterra Consulting Arboriculture (AIA – 01 Revision C, - dated 29 April 2013) shall be protected. It is recommended that all setbacks be implemented as per the tree protection plan implemented by Arterra (Drawing No T-02 – Revision C). All trees on site shall be retained and protected by the erection of 1.8 metre-high chain wire interlocking fencing as per the engaged Arborist's direction, AS 4970-2009 - *Protection of Trees on Development Sites* and Development Control Plan 2005, Chapter 67 - *Engineering Requirements for Development*. It is recommended that all tree protection measures be put in place for the duration of the works and remain until the release of the Occupation Certificate.

41 All fenced tree protection areas are to be clearly marked as "No Go Area" on the fencing itself.

42 No clearing of vegetation or storage of vehicles or machinery, waste, fill or materials or unauthorised access is to occur within the fenced tree protection areas/zones.

43 The management protocols and requirements within these conditions relating to tree and vegetation retention, protection and rehabilitation are to be included in all contract documentation, plans and specifications used by each civil contractor and sub-contractors.

44 All pruning works if necessary are to be established before commencement of construction works. The extent and the amount of pruning works for all trees on site are to be nominated and submitted back to the consent authority for determination. All pruning works that may be required are to be undertaken in accordance with AS 4373 – 2007.

Erosion and Sediment Control Requirements

45 Prior to works associated with the development commencing, soil erosion and sediment control measures are to be provided on the development site in accordance with Council's Policy E1 - Erosion and Sediment Control from Building Sites and Development Control Plan 2005, Chapter 67 – *Engineering Requirements for Development* and the approved development plans.

46 Prior to works associated with the development commencing, a single all-weather hardstand access, extending from the kerb and gutter/edge of bitumen to the building under construction, is to be installed in order to provide appropriate access to the site during periods of inclement weather.

47 Prior to works associated with the development commencing, suitable sediment control kerb inlet trap devices are to be provided downstream of the development site adjoining locations such as kerb inlet drainage pits, in order to prevent any silt that may have left the site from entering the drainage system. The build up of silt and debris behind the required kerb inlet trap devices is to be removed from the site on a daily basis.

48 Prior to works associated with the development commencing, an appropriate sign to promote the awareness and importance of the maintenance of on-site sediment control techniques is to be provided on the most prominent sediment fence or erosion control device within the development site, for the duration of the project.

Roads - Preconstruction Requirements

49 Prior to works associated with development commencing, a dilapidation report must be prepared and submitted to Council as the Roads Authority. The required dilapidation report must document and provide photographs that clearly depict any existing damage to the road, kerb, gutter, footpath, driveways, water supply, sewer works, street trees, street signs or any other Council assets in the vicinity of the development. **Note:** The report will be used by Council to determine the extent of damage arising from site and construction works.

Filling and Haulage Requirements

50 Prior to works associated with the development commencing, details for the disposal of any spoil gained from the site and/or details of the source of fill materials to be imported to the site, are to be provided and approved by the Principal Certifying Authority.

Roads - Preconstruction Requirements

51 Prior to commencing any works upon public roads the developer and their contractor will be required to:

- Obtain a copy of the Council approved Civil Works plans and pavement design (if applicable).
- Obtain a copy of Development Control Plan 2005, Chapter 67 – *Engineering Requirements for Development*. This is Council's Specification for Civil Works and is available on Council's web site.
- Arrange a meeting on-site with Council's Principal Development Construction Engineer on (02) 4350 5479.

52 Prior to works associated with Stage 1 of the development commencing, a Plan of Management is to be submitted to and approved by Council as the Roads Authority for any works or deliveries that impact on any public roads or public land as a result of the construction of the development. The plan must include a Traffic Control Plan prepared by a person holding Roads and Maritime Services (RMS) accreditation for selecting and modifying traffic control plans. Fees and charges are applicable to the review and approval of the required management plan in accordance with Council's Plan of Management.

Site Requirements

53 Prior to works associated with the development commencing, the Principal Contractor (or Owner/Builder) is to erect a suitable sign in a prominent position on the development site (not attached to any tree) identifying the name, address and telephone number of the Principal Certifying Authority (PCA) for the work, the name, address and telephone number (including a number for outside of business hours) of the Principal Contractor for the work (or Owner/Builder) and stating that unauthorised entry to the site is prohibited. The required sign is to be maintained for the duration of works associated with the development. Appropriate signs can be collected from Council's Customer Service Centre, where Council is the nominated Principal Certifying Authority with respect to the development.

54 Prior to works associated with the development commencing, suitable toilet facilities must be available or be provided upon the development site, with the required toilet facility(s) maintained until development works are completed at a ratio of one (1) toilet plus one (1) additional toilet for every twenty (20) persons employed at the site. Each toilet must:

- be a standard flushing toilet connected to a public sewer system; or
- have an on-site effluent disposal system approved under the Local Government Act 1993, or be a temporary chemical closet approved under the Local Government Act 1993, supplied by a suitably licensed contractor.

55 Prior to works associated with the development commencing, a suitable metal waste skip (with self-closing lid or secure covering) or lined mesh steel cage(s) is to be provided upon the development site for the duration of the construction phase of the development. The required waste receptacle is to be suitably emptied at appropriate times during the construction phase of the development.

56 Prior to works associated with the development commencing, fencing is to be installed in accordance with AS 4970-2009 to include 1.8 metre chain wire interlocking fencing between the work site, vegetated areas and the public place. The fencing shall also comply with Work Cover Authority requirements. This shall include appropriate fencing along the southern boundary adjacent to Lake Munmorah High School. The required hoarding/fencing is to remain in place during the construction phase of the development. Should the hoarding/fencing be required to be provided within the road reserve area, approval from Council under the Roads Act as the Roads Authority is required to be obtained prior to its erection.

57 Prior to works associated with the development commencing, it is the builder's responsibility to confirm the location and depth of the sewer main and connection point in relation to the floor level, to ensure that appropriate connection to the sewer can be achieved.

58 Prior to works associated with the development commencing, where any excavation is proposed in proximity to existing gas and/or electricity networks, the developer is advised to notify '*Dial Before You Dig'* of the time and place of work no more than thirty (30) days before the work commences. The developer must satisfy any requirements as set by the network operators in carrying out excavation works.

59 The disposal of any asbestos materials in accordance with the requirements of Workcover NSW and AS 2601 - 2001 - The Demolition of Structures.

During Construction Works:

The following conditions must be satisfied during construction works.

Approved Plans

60 A copy of the stamped approved plans must be kept on site for the duration of site works and be made available upon request to either the Principal Certifying Authority or an officer of the Council.

Aboriginal Heritage

61 If archaeological/cultural materials are unearthed/ disturbed during construction, all work is to cease immediately and the Office of Environment and Heritage must be notified. An Aboriginal Heritage Impact Permit will be required prior to the recommencement of any works on site.

62 All topsoil removed during initial vegetation removal/clear-and-grade earthworks is to be kept within the confines of the development footprint and not taken off-site due to the potential for archaeological/cultural material to be contained within the spoil.

Demolition - Compliance Requirements

63 Any demolition work carried out with respect to the development is to be carried out in accordance with the requirements of AS 2601-2001 – *The Demolition of Structures*.

64 The disposal of any asbestos materials must be in accordance with the requirements of WorkCover NSW and AS 2601-2001 – *The Demolition of Structures*. The asbestos materials are to be disposed of at an approved waste management facility in accordance with the procedures the facility has for the disposal of asbestos. Upon completion of these works, the Principal Certifying Authority is to be supplied with disposal receipts within seven (7) days to verify that this requirement has been complied with.

Dust Control Requirements

65 Suitable dust suppression measures shall be implemented and maintained by the developer during demolition, excavation and construction works associated with the development. Such measures are required to minimise the emission of dust and other impurities into the surrounding environment.

Ecology/Trees - Construction Requirements

66 No tree (or other vegetation) other than those specifically identified on the approved plan(s) 'to be removed' shall be felled, lopped, topped, ring-barked, uprooted, or otherwise wilfully destroyed or removed, without the further written consent of the Consent Authority.

67 To maintain genetic diversity, any plant stock used in landscaping must be supplied from provenance specific seed/material collected from within the Tuggerah Lakes catchment area. Non-provenance specific material is prohibited. The Landscape Plan is to integrate with the required Vegetation Management Plan.

68 Any approved excavation or filling within a retained tree's canopy perimeter shall be in accordance with AS/NZS 4970-2009 - *Protection of Trees on Development Sites* and Development Control Plan 2005, Chapter 67 - *Engineering Requirements for Development*, as excavation or filling can lead to tree instability or death.

69 Native fauna must be appropriately managed during clearing and construction phases of the approved works. In this regard, an appropriately licensed Fauna Ecologist is to be engaged to advise and supervise the clearing of trees. Where, in spite of precautions, wildlife is injured, the Fauna Ecologist is to take the necessary action to treat the animal, which may include veterinary treatment or transfer of the animal to a volunteer wildlife carer group such as WIRES or Wildlife Arc.

70 Clearing of native vegetation or trees is to be carried out in accordance with the clearing protocol outlined in the Squirrel Glider Conservation Management Plan (Smith, 2002).

71 Clearing must commence with the most distance vegetation from secure habitat and progressively work towards the retained EEC vegetation.

72 No clearing of vegetation or storage of vehicles or machinery, waste, fill or materials or unauthorised access is to occur within the fenced tree protection areas/zones.

73 Works are to be conducted in accordance with the Vegetation Management Plan and Landscape Plan.

74 If canopy thinning is required to achieve Bushfire Asset Protection Zone then it shall be conducted selectively. Those trees with poor health shall be removed prior to those of with good health. Selective removal shall also consider maintenance of species diversity. No hollow-bearing trees may be removed to achieve Bushfire Asset Protection Zones. An appropriately qualified Arborist or Ecologist and Bushfire Manager are to be engaged to flag and clearly identify those trees best removed to achieve bushfire asset protection requirements. Trees must be removed in such a manner so as to prevent damage to surrounding trees to be retained.

75 Prior to the dams being in-filled, they are to be drained in the presence of a qualified and licensed consulting Ecologist to rescue and relocate fauna as required.

76 Native vegetation approved for removal should be wood chipped (except tree hollows) and re-used on site in the final landscape works for soil stabilisation, improvements and rehabilitation (except in the EEC unless specified in the VMP).

Erosion and Sediment Control - Construction Requirements

77 Sand and other materials associated with the construction of the development that could potentially be washed off the site during rain periods, are to be stored behind a suitable sediment control barrier.

78 All sediment and erosion control devices provided with respect to the development are to be periodically cleaned and maintained in an effective state for the duration of works. On the spot fines for non-compliance with this requirement may be issued under the provisions of the *Protection of Environment Operations Act, 2000*.

Plumbing and Drainage - Construction Requirements

79 Council as the Water Supply Authority, under the provisions of the Water Management Act, or in unsewered areas where an onsite sewage management facility is to be installed, is to be notified to undertake inspections of the internal drainage lines, (prior to the pouring of the concrete slab), and external drainage lines inclusive of sewer junction connection, prior to the backfilling of the trenches. These inspections can be arranged by telephoning Council's Customer Contact Centre on (02) 4350 5555 a minimum of twenty-four (24) hours prior to the required time for the inspection. Please note that all drainage inspection fees are to be paid to Council prior to plumbing and drainage works associated with the development commencing.

Services/Utility Requirements

80 The developer is solely responsible for any costs relating to alterations and extensions of existing roads, drainage, water and sewer infrastructure and other utilities for the proposed development.

Site Requirements

81 Construction or demolition works involved with the development may only be carried out between the hours of 7.00 am and 5.00 pm Monday to Saturday with no construction or demolition works associated with the development permitted to be carried out at any time on a Sunday or a public holiday.

82 During the construction phase of the development, all building materials, plant and equipment must be placed on the site of the development in order to ensure that pedestrian and vehicular access within adjoining public roads, footpaths and reserve areas, is not restricted and to prevent damage to public infrastructure.

83 During the construction phase of the development, downpipes and the associated stormwater disposal system is to be suitably connected to the site stormwater connection point immediately after the roof materials are positioned in order to prevent erosion of the site from roof water run off. The Principal Certifying Authority for the development will not issue a compliance certificate for framing unless connection of the site stormwater (or temporary system) has occurred.

Prior to Release of Occupation Certificate:

The following conditions must be satisfied prior to the release of an Occupation Certificate.

Trees

84 Prior to the issue of an Occupation Certificate, to ensure landscaping works are properly completed, the landscape designer must provide certification to the Principal Certifying Authority certifying that landscaping has been implemented in accordance with the approved landscape plan as amended by any conditions of this consent.

85 Prior to the issue of an Occupation Certificate, a detailed maintenance schedule for all landscaping areas associated with the development is to be provided to and approved by the Principal Certifying Authority.

Building Code of Australia – Compliance Requirements

86 Prior to the issue of the Occupation Certificate, the building shall be completed in accordance with the relevant provisions and requirements of the Building Code of Australia.

Dilapidation Rectification Requirements

87 Prior to the issue of an Occupation Certificate, any damage not shown in the Dilapidation Report submitted to and approved by the Principal Certifying Authority prior to site works commencing, will be assumed to have been caused as a result of the site works undertaken with respect to the development and must be rectified at the applicant's expense.

Ecology/Tree Requirements

88 The outer edge of the retained EEC/riparian vegetation is to be permanently delineated (as per the NSW Office of Water requirements) to restrict unauthorised access or accidental encroachment during APZ maintenance works.

89 All external lighting is to be of a type that minimises overspill into retained vegetated areas.

Filling and Haulage- Completion Requirements

90 All filled areas are to be compacted in accordance with the requirements of AS 3798-1996. The submission of test results and appropriate documentation attesting to this requirement having been achieved is to be provided for the approval of the Accredited Certifier prior to issue of the Occupation Certificate.

Liquid Trade Waste – Requirements

91 Where the proposed use of the development discharges waste other than domestic sewage, then the submission of a liquid trade waste application and subsequent approval by Council as the Water and Sewer Authority, to discharge liquid trade waste into the sewerage system is required prior to issue of the Occupation Certificate.

92 After the trade waste facility has been constructed, an *"Application for final inspection of a new Liquid Trade Waste Facility"* must be submitted to Council as the Water and Sewer Authority. Council's final approval for the liquid trade waste facility is required prior to the issue of the Occupation Certificate.

Plumbing and Drainage - Compliance Requirements

93 Prior to the issue of an Occupation Certificate, the provision of rainwater tanks, of at least 10,000 litre capacity, in accordance with the requirements the National Plumbing and Drainage Code AS/NZS 3500. The rainwater tanks must be located in such a position as to maximise rainwater collection and shall include, but not be limited to, the retention of water on-site incorporating first flow diversion devices fixed to all inflows, provided with a functioning pressure pump, and plumbed to service all toilets and at least one outdoor tap for each stage of the development. The tank must be controlled such that supplemental flows from domestic mains do not take place until the tank is at least 80% empty.

94 Prior to the issue of an Occupation Certificate, the required On Site Sewage Management Facility associated with the development, is to be inspected and finalised by Council as the Water and Sewer Authority under the provisions of the Water Management Act.

Roads – Compliance Requirements

95 All road signage and pavement marking works must be completed in accordance with the plans approved by the Local Traffic Committee and approved by Council as the Roads Authority prior to the issue of any Occupation Certificate.

96 The provision of any additional civil works required to ensure satisfactory transitions to existing work as a result of work conditioned for the development works are to be approved by Council as the Roads Authority prior to issue of the Occupation Certificate.

97 All works within the public road must be completed in accordance with the approved Civil Works design drawings and Development Control Plan 2005, Chapter 67 - *Engineering Requirements for Development* and be approved by Council as the Roads Authority prior to the issue of any Occupation Certificate.

98 Any road works and or traffic control facilities within a state road must be completed in accordance with the approved Civil Works design drawings and RMS Works Authorisation Deed, and be jointly approved by Council as the Roads Authority and the RMS prior to the issue of any Occupation Certificate.

99 All works relating to bus servicing facilities throughout the development must be completed in accordance with the approved Civil Works design drawings and approved by Council as the Roads Authority prior to issue of the Occupation Certificate.

100 The submission to the Council as the Roads Authority of a 'pre-opening stage' Road Safety Audit for 'Stage 3' prepared by a Level 3 Road Safety Auditor recognised on the NSW Register of Road Safety Auditors. Any deficiencies identified within the audit must be resolved in consultation with Council prior to the approval of the works.

Statutory Certificate Requirements

101 Prior to the Issue of an Occupation Certificate, a Final Fire Safety Certificate, as required by Clause 153 of the Environmental Planning and Assessment Regulation, 2000, certifying that all the Fire Safety Measures within the building have been designed and installed in accordance with the relevant standard of performance as nominated by the Fire Safety Schedule issued with the Construction Certificate, is to be supplied for the approval of the Principal Certifying Authority. Such Final Fire Safety Certificate is also to be displayed within a prominent location within the building such as the main entry.

Stormwater – Compliance Requirements

102 The construction of the stormwater management system in accordance with the approved Stormwater Management Plan and AS/NZS 3500.3-2004. Certification of the construction by a suitably qualified consultant shall be provided to the Principal Certifying Authority prior to issue of the Occupation Certificate.

103 The construction of stormwater drainage works external to the site and discharging into a public system or public land in accordance with the approved Stormwater Management Plan and Development Control Plan 2005, Chapter 67 - *Engineering Requirements for Development*. All works must be approved by Council under Section 68 of the Local Government Act 1993 prior to issue of the Occupation Certificate. All other stormwater management works must be approved by the Principal Certifying Authority.

104 Prior to the issue of an Occupation Certificate, stormwater generated from roof areas of the building and any overflows from rain water tanks installed in conjunction with Stage 1 of the development, is to be disposed of to the existing storage dam servicing the allotment.

105 Prior to the issue of the final Occupation Certificate, a 'Restriction on the Use of Land' shall be created on the title of the land restricting any alteration to the on-site stormwater detention system. The terms of the Restriction are to be prepared to Council's standard requirements. Wyong Shire Council shall be nominated as the party to release, vary or modify the restriction.

106 Prior to the issue of the final Occupation Certificate, a 'Positive Covenant' shall be created on the title of the land requiring the registered proprietor to ensure the continued maintenance and performance of the on-site stormwater detention structure. The terms of the positive covenant are to be prepared to Council's standard requirements. Wyong Shire Council shall be nominated as the party to release, vary or modify the restriction.

Subdivision– Compliance Requirements

107 The consolidation of Lot 433 DP 755266 and Lot 499 DP 755266 into one lot by registered subdivision prior to the issue of an Occupation Certificate. Documentary evidence of the Consolidation Plan registration with the Land and Property Management Authority must be submitted to the Accredited Certifier prior to the issue of the Construction Certificate.

Vehicle Access and Parking – Compliance Requirements

108 The construction of the carpark and accesses in accordance with AS/NZS 2890 - Parts 1 and 6. Certification of the construction of the carpark and associated accesses by a suitably qualified consultant shall be provided to the Principal Certifying Authority prior to issue of the Occupation Certificate.

Water and Sewer Services/Infrastructure – Compliance Requirements

109 The obtaining of a Section 307 Certificate of Compliance under the Water Management Act 2000 for water and sewer requirements for the development from Wyong Shire Council as the Water Supply Authority prior to issue of the Subdivision/Occupation Certificate. All works for the development must be approved by Council prior to the issue of a Certificate of Compliance.

Work as Executed Requirements

110 Prior to the issue of an Occupation Certificate, Works as Executed information for the development as identified in Council's Development Control Plan 2005, Chapter 67 - *Engineering Requirements for Development* is to be submitted to and approved by Council. The required Works as Executed information is to be submitted in hard copy and in electronic format in accordance with Council's *'CADCHECK'* requirements.

Ongoing Operation:

The following conditions must be satisfied during use / occupation of the development.

Noise Control Requirements

111 To ensure reasonable acoustic amenity for surrounding properties is maintained, all recommendations made in the acoustic report prepared by Acoustic Dynamics Pty Ltd dated 30/10/2012 accompanying the application must be complied with.

Site Appearance, Maintenance and Security Requirements

112 All security/front/perimeter fencing is to be maintained for the life of the development in its approved location.

113 The owner/operator(s) of the site must maintain the external finishes of the building(s), structures, walls and fences for the life of the development and any graffiti must be removed in a timely manner. **Note:** amend "owner/operator(s)" and "building(s), structures, walls and fences" to suit the application to which you are applying the condition.

114 The owner/operator(s) of the site must maintain the required CCTV for the life of the development so that at all times the CCTV provides high-quality images of all public areas within the site.

115 Any security alarm installed on the premises must be fitted with a 'cut-off' device limiting any sounding of the alarm to a maximum duration of ten (10) minutes, with no repeat sounding until manually reset; and or 'silently wired' to a security firm.

116 Maintenance of all buildings, surrounds and parking areas within the site shall be carried out in such a manner to render the site to be neat, tidy and clean at all times.

117 The provision of surveillance equipment in the Administration and TAS buildings, the hall/gym and carparks. This equipment should be vandal resistant.

118 Lighting should comply with ASNZ1158 and be designed as overhead or down light luminaries that allow 15 metres facial recognition test.

119 Directional signage is to be provided around the school.

120 The development of a maintenance policy which includes rapid removal of graffiti, rapid repair of vandalism, maintenance of landscaping and fencing and the removal of rubbish and the like from school grounds.

Stormwater – Ongoing Maintenance Requirements

121 All stormwater treatment devices (including drainage systems, sumps and traps) must be regularly maintained in order to remain effective.

Vehicle Access and Parking – Ongoing Requirements

122 All on-site vehicle parking areas, markings, driveways and manoeuvring areas are to be maintained for the life of the development.

Food Act Requirements

123 No food handling, (as defined by the NSW Food Act 2003), is permitted in the food premises prior to the issue of the Occupation Certificate.

124 All liquid trade waste is required to pass through a basket arrestor with fixed screens, fitted to all floor wastes and sinks, before being discharged into the sewerage system.

125 Compliance with the requirements of the New South Wales Food Act 2003, the Food Regulation 2004, and AS4674–2004 – Design, Construction and Fitout of Food Premises, and AS1668, Part 11 – Mechanical Ventilation, for all food preparation and food storage areas, including liquor areas.

126 The installation of hand wash facilities with a minimum dimension of 500mm x 400mm providing warm running water through a common mixing spout with hands–free tap operation (consisting of elbow or wrist operated tap levers, foot or hip operated tap levers, or electronic sensor tap operation).

Ecology/Tree Requirements

127 Completion of VMP works including restoration areas to be maintained for a minimum of three (3) years. Reports are to be submitted to the Principal Certifying Authority detailing the progress of the bush regeneration works twice per year, with a final report certifying the completion of the VMP works at the end of the three year period.

128 Following completion of Stage 1 works, the installed nest boxes are to be monitored at least annually by a qualified consulting Ecologist for a period of three (3) years. Nest box monitoring is to include a visual inspection inside of each nest box. Any required maintenance should also be carried out within this period. An annual monitoring report is to be submitted to the Principal Certifying Authority.

129 No works other than habitat/vegetation restoration and enhancement as outlined within the required VMP and approved Landscape Plan, general weed maintenance, and low-impact educational initiatives (e.g. educational signage), are permitted within the retained EEC/riparian vegetation.

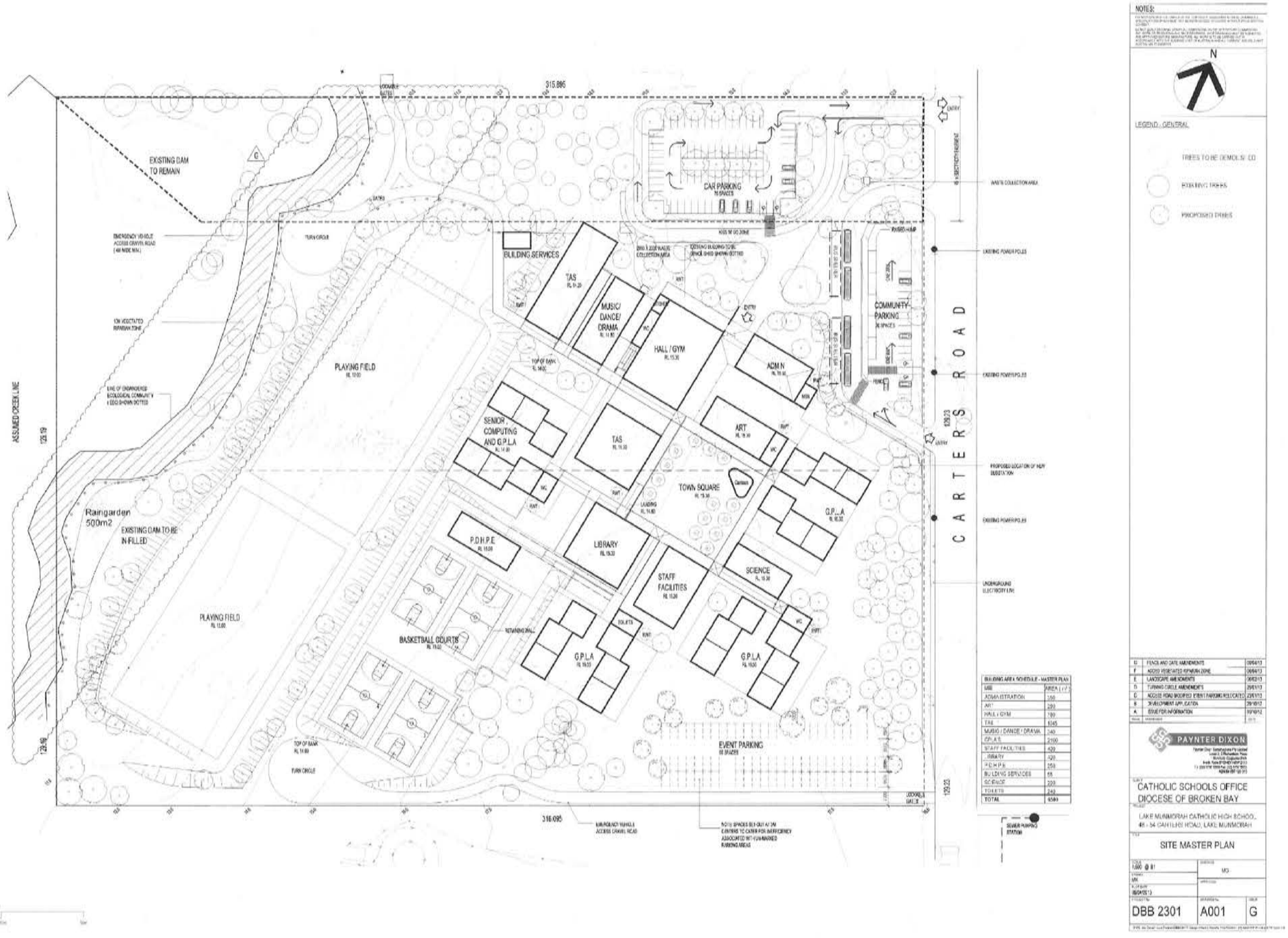
130 All external lighting is to be of a type that minimises overspill into retained vegetated areas.

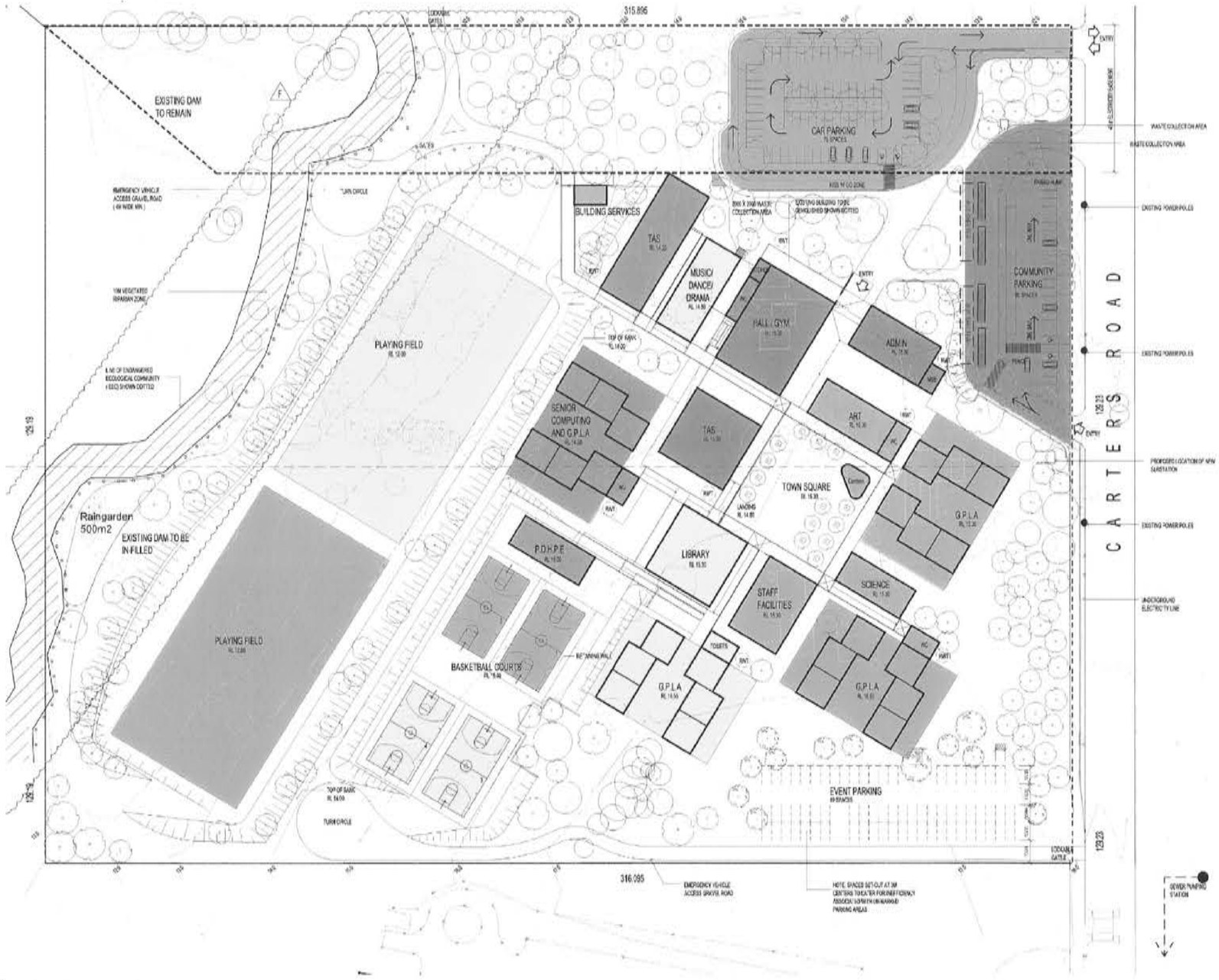
All site landscaping is to be maintained for the life of the development in accordance with the approved Landscape Plan.

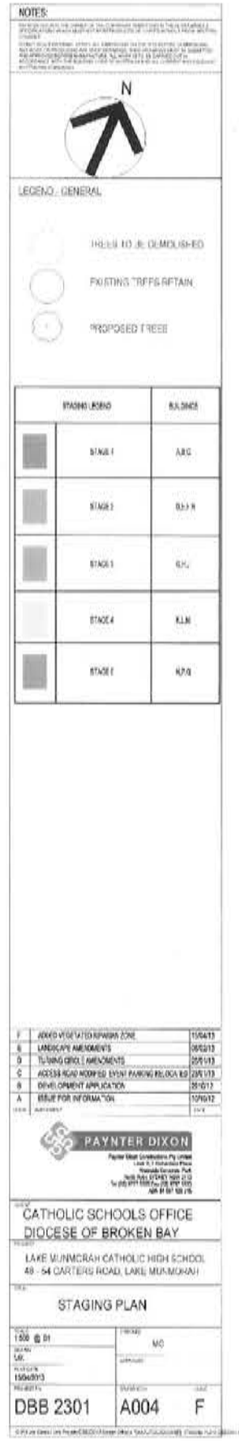
132 The consultant will submit a report 6 months after the satisfactory completion of the landscape works to assess the maintenance and recommend any remedial work required.

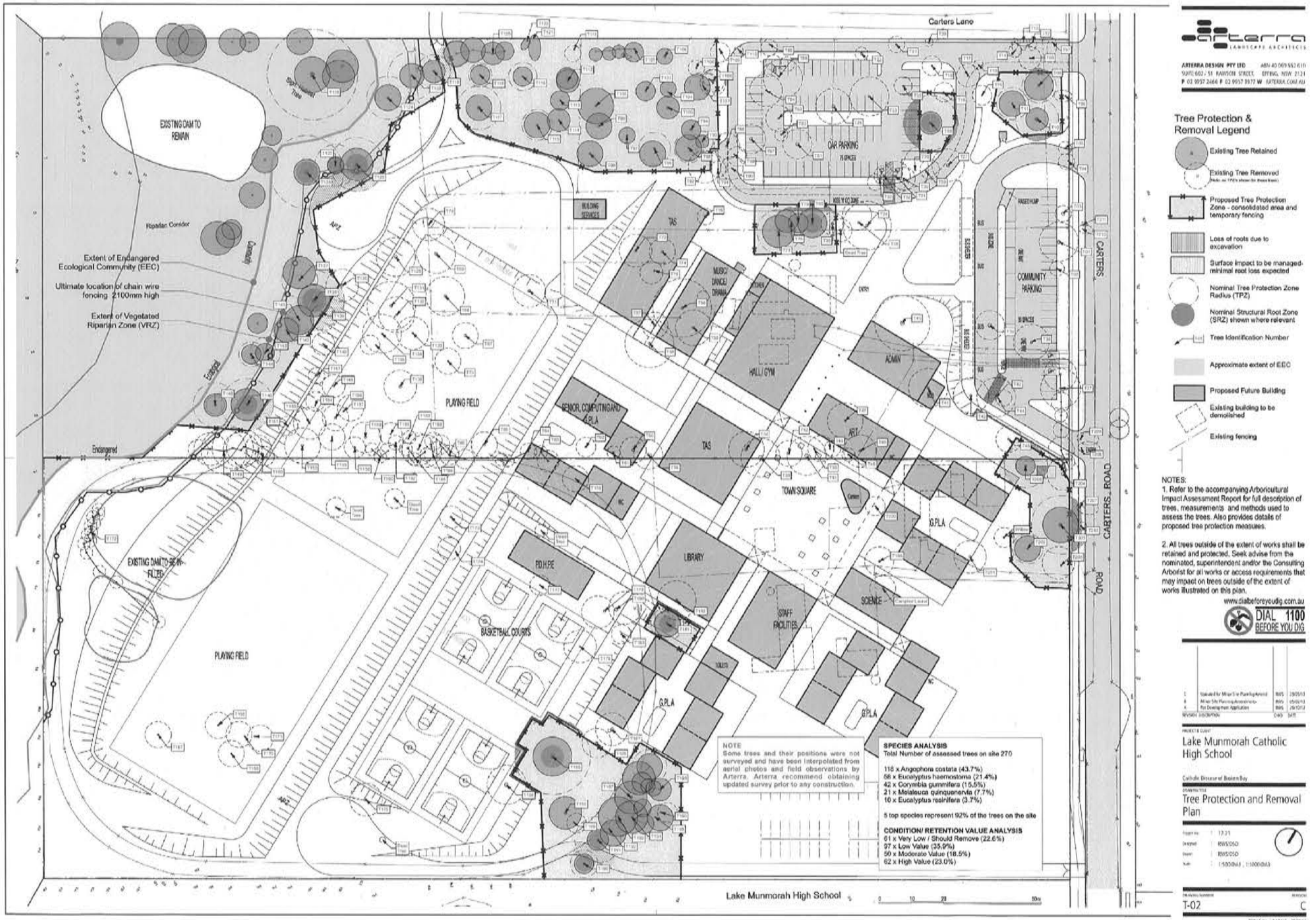
SCHEDULE OF CONTRIBUTIONS

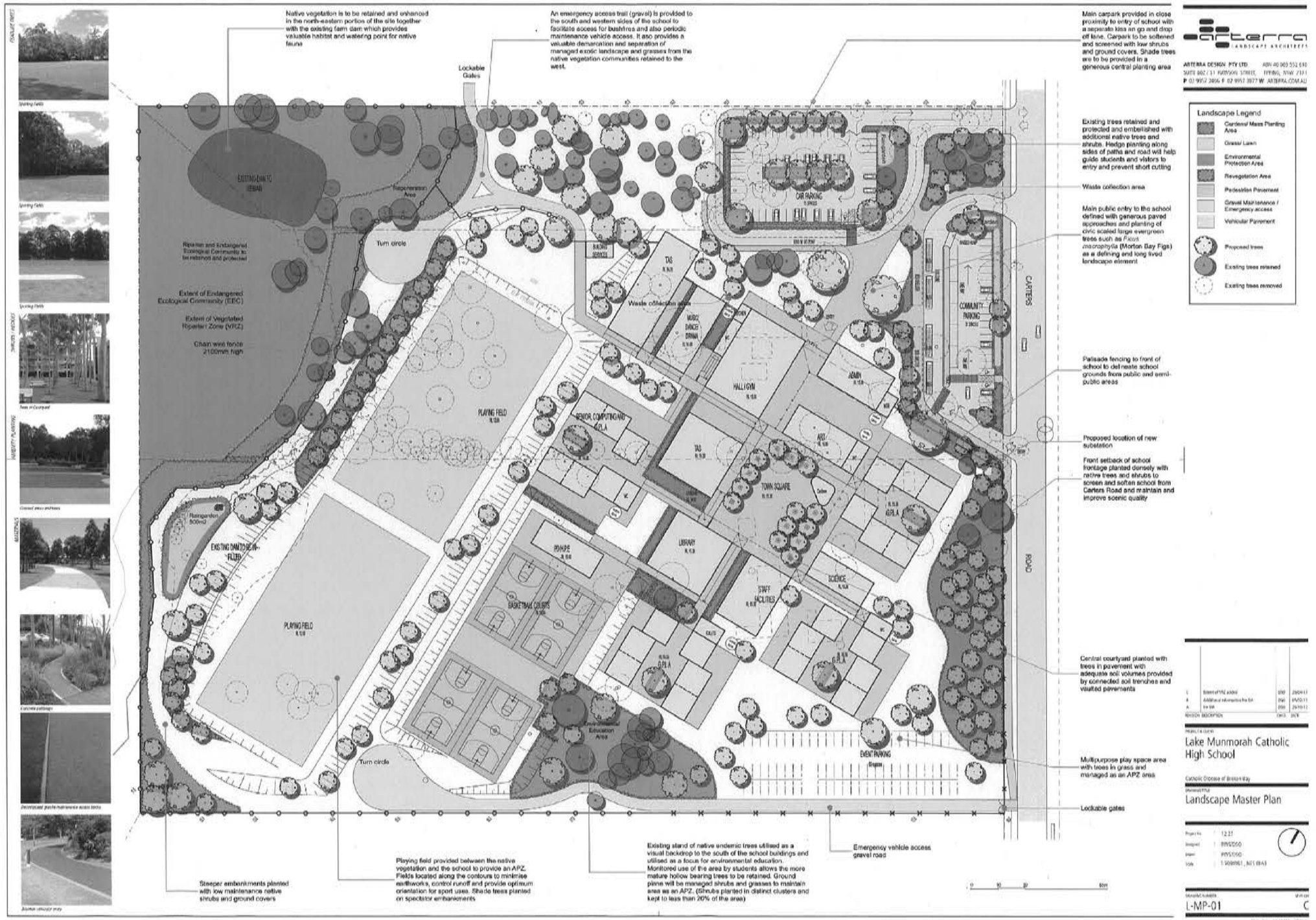
Section 94A Levy $180,975.65

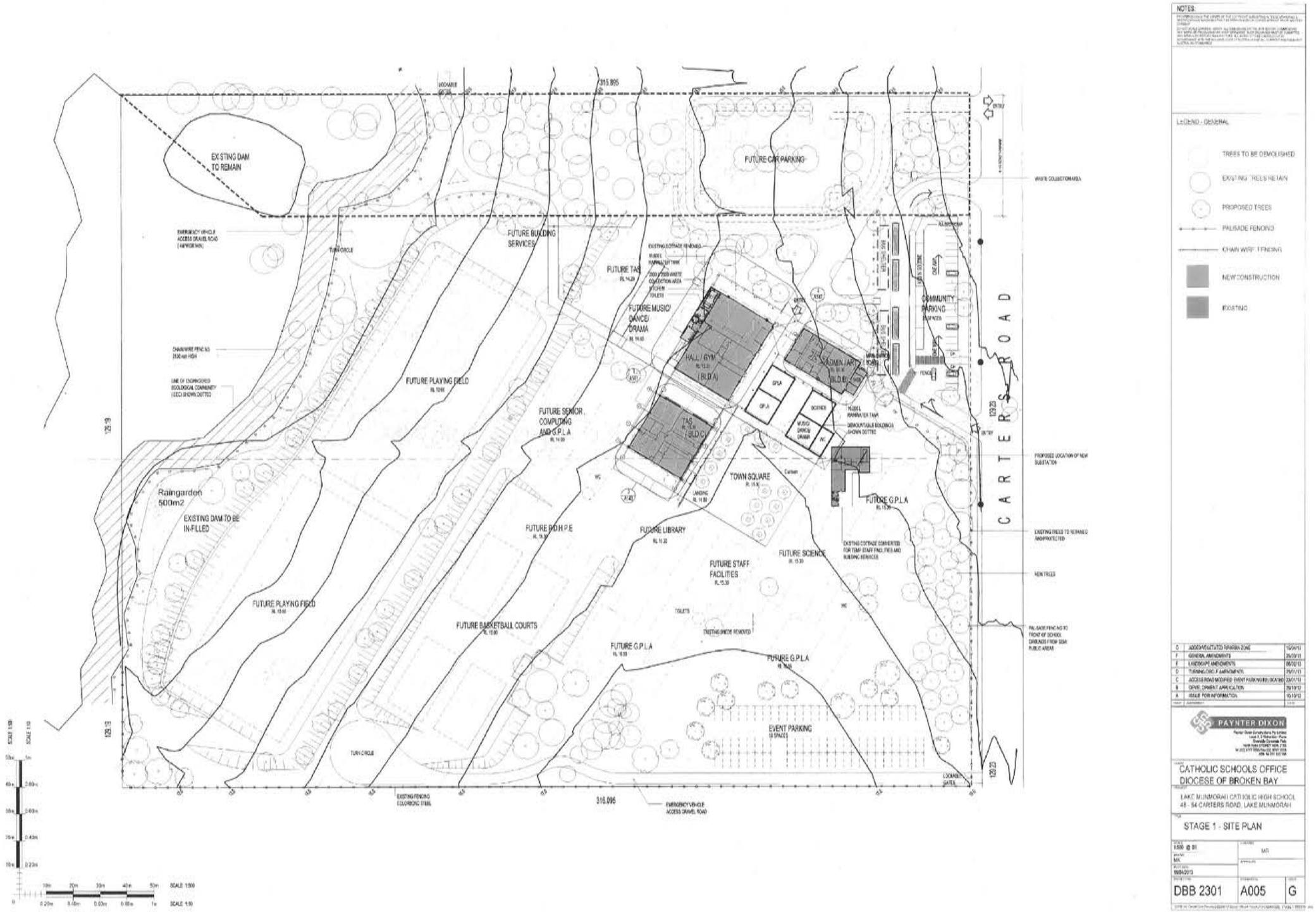

315.895
EXISTING DAM TO REMAIN
EMERGENCY VEHICLE ACCESS GRAVEL ROAD (4M WIDE MIN.)
TURN CIRCLE
ON VEGETATED BUFFER ZONE
LINE OF ENDANGERED ECOLOGICAL COMMUNITY (SEE) SHOWN DOTTED
ASSUMED OPEN LINE
125.19
Raingarden 500m2
EXISTING DAM TO BE IN-FILLED
PLAYING FIELD
TOP OF BANK RL 11.60
TURN CIRCLE
129.46
316.095
BUILDING SERVICES
TAS
MUSIC/ DANCE/ DRAMA
HALL / GYM
CAR PARKING 76 SPACES
KISS 'N' GO ZONE
8M X 2.5M WASTE COLLECTION AREA
EXISTING BUILDING TO BE DEMOLISHED (SHED SHOWN DOTTED)
COMMUNITY PARKING 36 SPACES
ADMIN
SENIOR, COMPUTING AND G.P.L.A
TAS
ART
TOWN SQUARE
G.P...A
P.D.H.P.E
LIBRARY
STAFF FACILITIES
SCIENCE
G.P.L.A
G.P.L.A
BASKETBALL COURTS
PLAYING FIELD
EVENT PARKING 68 SPACES
LOCKABLE GATE
EMERGENCY VEHICLE ACCESS GRAVEL ROAD
NOTE: SPACES SET OUT AT 2M CENTRES TO CATER FOR EMERGENCY ASSOCIATED WITH UNMARKED PARKING AREAS
C A R T E R S R O A D
639.23
WASTE COLLECTION AREA
EXISTING POWER POLES
EXISTING POWER POLES
PROPOSED LOCATION OF NEW SUBSTATION
EXISTING POWER POLES
UNDERGROUND ELECTRICITY LINE
SEWER PUMPING STATION
N
LEGEND - GENERAL
TREES TO BE DEMOLISHED
EXISTING TREES
PROPOSED TREES
BUILDING AREA SCHEDULE - MASTER PLAN
USE
AREA (m²)
ADMINISTRATION 350
ART 280
HALL / GYM 780
TAS 1045
MUSIC / DANCE / DRAMA 340
GP.L.A'S 2200
STAFF FACILITIES 420
LIBRARY 520
P.D.H.P.E 250
BUILDING SERVICES 55
SCIENCE 220
TOILETS 240
TOTAL 6560
G FENCE AND GATE AMENDMENTS 09/04/13
F ACCESS VEGETATED BUFFER ZONE 09/04/13
E LANDSCAPE AMENDMENTS 08/02/13
D TURNING CIRCLE AMENDMENTS 25/01/13
C ACCESS ROAD MODIFIED EVENT PARKING RELOCATED 23/01/13
B DEVELOPMENT APPLICATION 29/10/12
A ISSUE FOR INFORMATION 19/10/12
PAYNTER DIXON
CATHOLIC SCHOOLS OFFICE DIOCESE OF BROKEN BAY
LAKE MUNMORAH CATHOLIC HIGH SCHOOL, 48 - 54 CANTELEI ROAD, LAKE MUNMORAH
SITE MASTER PLAN
1:500 @ A1
MS
DBB 2301
A001
G


315.895
EXISTING DAM TO REMAIN
CAR PARKING
BUILDING SERVICES
TAS
MUSIC/ DANCE/ DRAMA
HALL / GYM
ADMIN
COMMUNITY PARKING
PLAYING FIELD
SENIOR COMPUTING AND G.P.L.A
TA5
ART
TOWN SQUARE
G.P.L.A
Raingarden 500m2
EXISTING DAM TO BE IN-FILLED
P.D.H.P.E
LIBRARY
STAFF FACILITIES
SCIENCE
PLAYING FIELD
BASKETBALL COURTS
G.P.L.A
G.P.L.A
EVENT PARKING
316.095
CARTERS ROAD
EXISTING POWER POLES
UNDERGROUND ELECTRICITY LINE
SEWER PUMPING STATION


NOTES:
N
LEGEND: GENERAL
TREES TO BE DEMOLISHED
EXISTING TREES RETAIN
PROPOSED TREES
STAGING LEGEND
STAGE 1
STAGE 2
STAGE 3
STAGE 4
STAGE 5
F ADDED VEGETATED BUFFERS ZONE 11/04/13
E LANDSCAPE AMENDMENTS 08/03/13
D TURNING CIRCLE AMENDMENTS 20/01/13
C ACCESS ROAD ADDED EVENT PARKING RELOCA ED 20/12/13
B DEVELOPMENT APPLICATION 20/12/13
A ISSUE FOR INFORMATION 12/10/12
PAYNTER DIXON
CATHOLIC SCHOOLS OFFICE
DIOCESE OF BROKEN BAY
LAKE MUNMORAH CATHOLIC HIGH SCHOOL
49 - 54 CARTERS ROAD, LAKE MUNMORAH
STAGING PLAN
1:500 @ A1
MD
DBB 2301
A004
F


Carters Lane
EXISTING DAM TO REMAIN
Riparian Corridor
Extent of Endangered Ecological Community (EEC)
Ultimate location of chain wire fencing 2100mm high
Extent of Vegetated Riparian Zone (VRZ)
Endangered
PLAYING FIELD
EXISTING DAM TO BE RE-FILLED
BASKETBALL COURTS
CAR PARKING
75 SPACES
BUILDING SERVICES
TAS
MUSIC DANCE DRAMA
HALL/ GYM
ADMIN
COMMUNITY PARKING
30 SPACES
CARTERS ROAD
SENIOR COMPUTING AND A.P.L.A
TOWN SQUARE
G.P.L.A
LIBRARY
STAFF FACILITIES
SCIENCE
P.D.H.P.E
NOTE
Some trees and their positions were not surveyed and have been interpolated from aerial photos and field observations by Arterra. Arterra recommend obtaining updated survey prior to any construction.
SPECIES ANALYSIS
Total Number of assessed trees on site 270
116 x Angophora costata (43.7%)
58 x Eucalyptus haemostoma (21.4%)
42 x Corymbia gummifera (15.5%)
21 x Melaleuca quinquenervia (7.7%)
10 x Eucalyptus resinifera (3.7%)
5 top species represent 92% of the trees on the site
CONDITION/ RETENTION VALUE ANALYSIS
61 x Very Low / Should Remove (22.6%)
97 x Low Value (35.9%)
50 x Moderate Value (18.5%)
62 x High Value (23.0%)
Lake Munmorah High School
0 10 20 50m
ARTERRA DESIGN PTY LTD
SUITE 602 / 51 RAWSON STREET, EPPING, NSW 2121
P 02 9937 2466 F 02 9937 3977 W ARTERRA.COM.AU
Tree Protection & Removal Legend
Existing Tree Retained
Existing Tree Removed
Proposed Tree Protection Zone - consolidated area and temporary fencing
Loss of roots due to excavation
Surface impact to be managed- minimal root loss expected
Nominal Tree Protection Zone Radius (TPZ)
Nominal Structural Root Zone (SRZ) shown where relevant
Tree Identification Number
Approximate extent of EEC
Proposed Future Building
Existing building to be demolished
Existing fencing
NOTES:
1. Refer to the accompanying Arboricultural Impact Assessment Report for full description of trees, measurements and methods used to assess the trees. Also provides details of proposed tree protection measures.
2. All trees outside of the extent of works shall be retained and protected. Seek advise from the nominated, superintendent and/or the Consulting Arborist for all works or access requirements that may impact on trees outside of the extent of works illustrated on this plan.
www.diabeforeyoudig.com.au
DIAL 1100 BEFORE YOU DIG
Lake Munmorah Catholic High School
Catholic Diocese of Broken Bay
Tree Protection and Removal Plan
T-02
C


Native vegetation is to be retained and enhanced in the north-eastern portion of the site together with the existing farm dam which provides valuable habitat and watering point for native fauna
An emergency access trail (gravel) is provided to the south and western sides of the school to facilitate access for bushfires and also periodic maintenance vehicle access. It also provides a valuable demarcation and separation of managed exotic landscape and grasses from the native vegetation communities retained to the west.
Main carpark provided in close proximity to entry of school with a separate kiss an go and drop off lane. Carpark to be softened and screened with low shrubs and ground covers. Shade trees are to be provided in a generous central planting area
Lockable Gates
Existing trees retained and protected and embellished with additional native trees and shrubs. Hedge planting along sides of paths and road will help guide students and visitors to entry and prevent short cutting
Waste collection area
Main public entry to the school defined with generous paved approaches and planting of civic scaled large evergreen trees such as Ficus macrophylla (Morton Bay Figs) as a defining and long lived landscape element
Palisade fencing to front of school to delineate school grounds from public and semi-public areas
Proposed location of new substation
Front setback of school frontage planted densely with native trees and shrubs to screen and soften school from Carters Road and maintain and improve scenic quality
Central courtyard planted with trees in pavement with adequate soil volumes provided by connected soil trenches and vaulted pavements
Multipurpose play space area with trees in grass and managed as an APZ area
Lockable gates
Emergency vehicle access gravel road
Existing stand of native endemic trees utilised as a visual backdrop to the south of the school buildings and utilised as a focus for environmental education. Monitored use of the area by students allows the more mature hollow bearing trees to be retained. Ground plane will be managed shrubs and grasses to maintain area as an APZ. (Shrubs planted in distinct clusters and kept to less than 20% of the area)
Playing field provided between the native vegetation and the school to provide an APZ. Fields located along the contours to minimise earthworks, control runoff and provide optimum orientation for sport uses. Shade trees planted on spectator embankments
Steeper embankments planted with low maintenance native shrubs and ground covers
Turn circle
EXISTING DAM TO BE IN-FILLED
Regeneration Area
Riparian and Endangered Ecological Community to be retained and protected
Extent of Endangered Ecological Community (EEC)
Extent of Vegetated Riparian Zone (VRZ)
Chain wire fence 2100mm high
CAR PARKING
COMMUNITY PARKING
Waste collection area
MUSIC DANCE DRAMA
HALL/GYM
ADMIN
SENIOR COMPUTING AND GPLA
TAS
ART
TOWN SQUARE
GPLA
LIBRARY
PDHPE
SCIENCE
STAFF FACILITIES
BASKETBALL COURTS
COURTS
GPLA
Environmental Education Area
EVENT PARKING
CARTERS
ROAD
PLAYING FIELD
Raingarden 500m2
Turn circle
arterra
LANDSCAPE ARCHITECTS
ARTERRA DESIGN PTY LTD ABN 40 969 552 610
SUITE 602 / 31 RAWSON STREET, EPPING, NSW 2121
P 02 9952 2466 F 02 9953 3977 W ARTERRA.COM.AU
Landscape Legend
Gardens/ Mass Planting Area
Grass/ Lawn
Environmental Protection Area
Revegetation Area
Pedestrian Pavement
Gravel Maintenance / Emergency access
Vehicular Pavement
Proposed trees
Existing trees retained
Existing trees removed
Lake Munmorah Catholic High School
Catholic Diocese of Broken Bay
Landscape Master Plan
L-MP-01



NOTES:

LEGEND - GENERAL

- TREES TO BE DEMOLISHED
- EXISTING TREES RETAIN
- PROPOSED TREES
- PALISADE FENCING
- CHAIN WIRE FENCING
- NEW CONSTRUCTION
- EXISTING

G	ADDED VEGETATED RIPARIAN ZONE	15/04/13
F	GENERAL AMENDMENTS	26/03/13
E	LANDSCAPE AMENDMENTS	06/02/13
D	TURNING CIRCLE AMENDMENTS	29/01/13
C	ACCESS ROAD MODIFIED, EVENT PARKING RELOCATED	23/01/13
B	DEVELOPMENT APPLICATION	29/10/12
A	ISSUE FOR INFORMATION	10/10/12

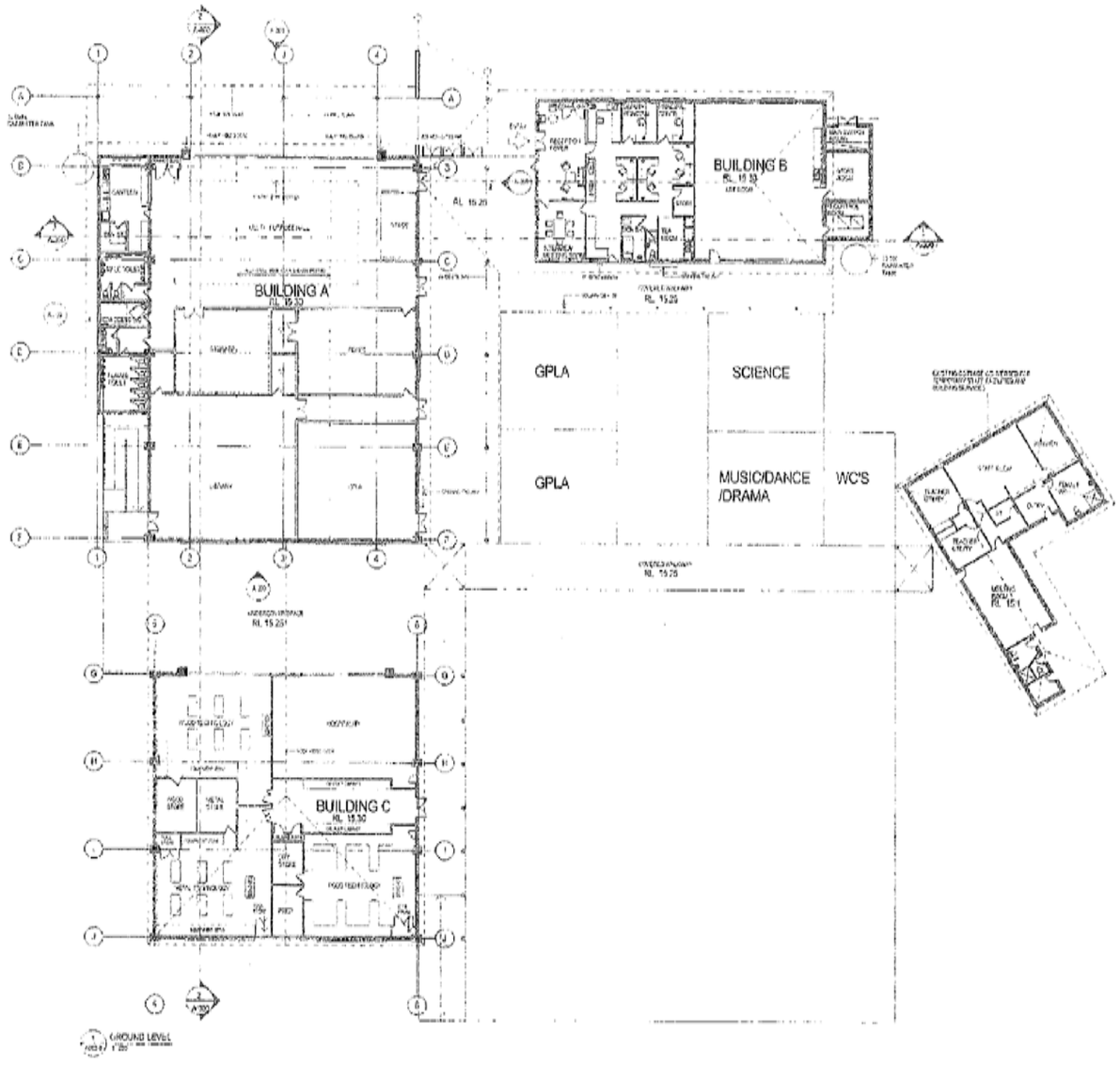
PAYNTER DIXON

CATHOLIC SCHOOLS OFFICE
DIOCESE OF BROKEN BAY

LAKE MUNMORAH CATHOLIC HIGH SCHOOL
48 - 54 CARTERS ROAD, LAKE MUNMORAH

STAGE 1 - SITE PLAN

1:500 @ 01	MR	
MA		
18/04/2013		
DBB 2301	A005	G



Notes

Legend

N

LAKE MUNMORAH CATHOLIC HIGH SCHOOL
46 - 54 CARTERS ROAD, LAKE MUNMORAH

DIOCESE OF BROKEN BAY

STAGE 1 GROUND FLOOR

1 : 200@A1

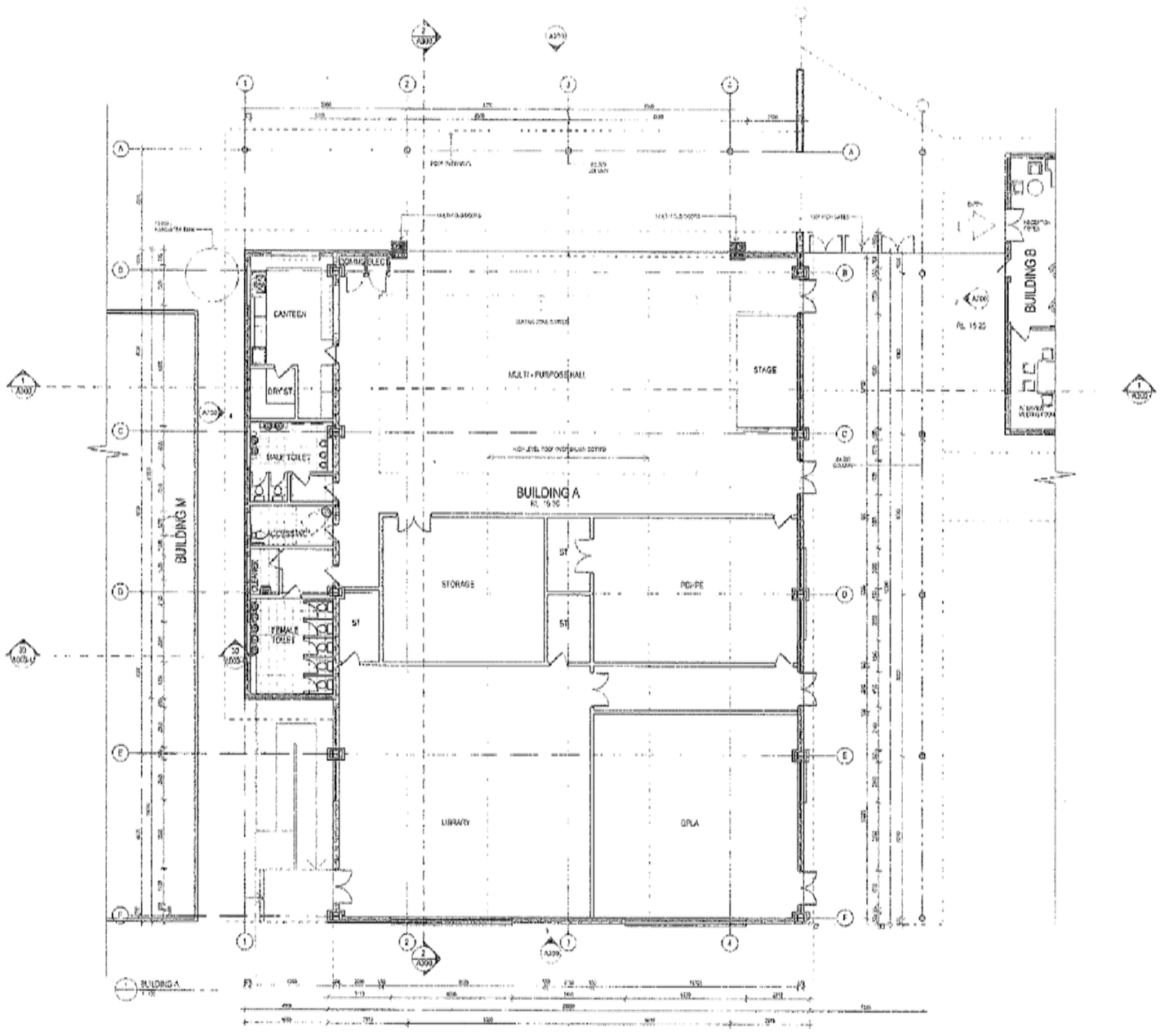
Author

5/11/2012 1:39:28 PM

DBB2301

A140

B

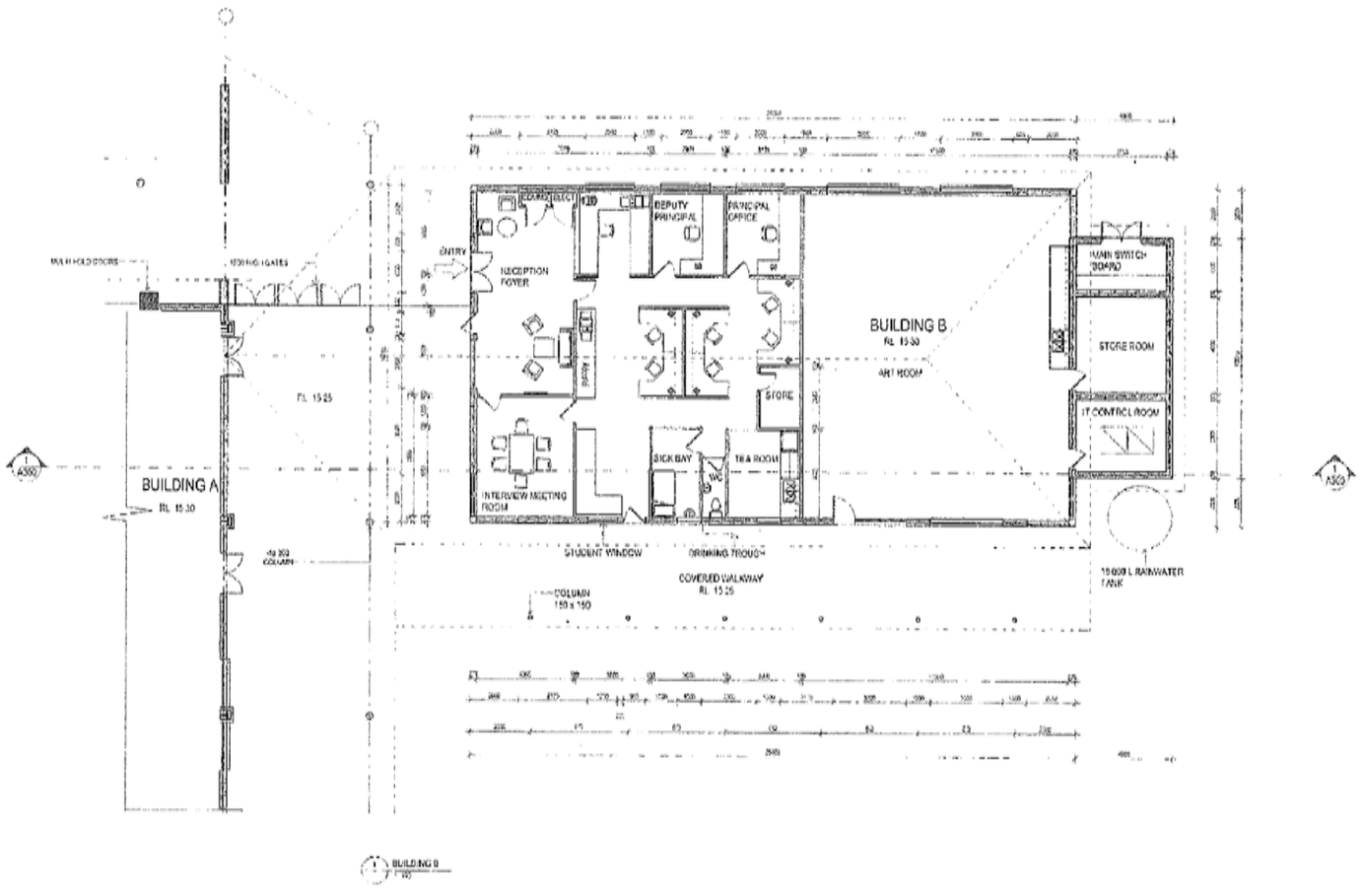


LAKE MUMMORAH CATHOLIC HIGH SCHOOL
48 - 54 CARTERS ROAD LAKE MUMMORAH

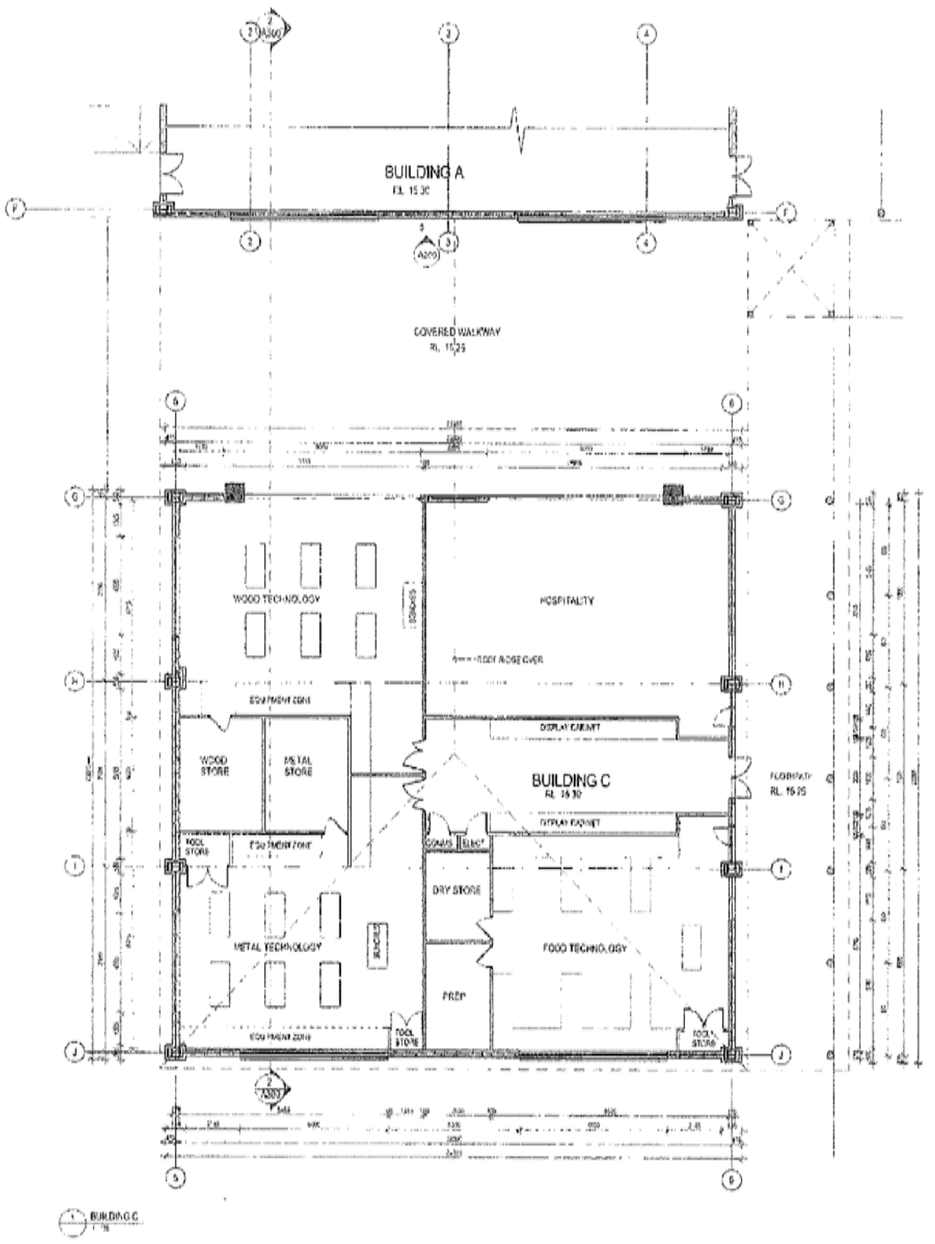
DIOCESE OF BROKEN BAY

BUILDING A FLOOR PLAN

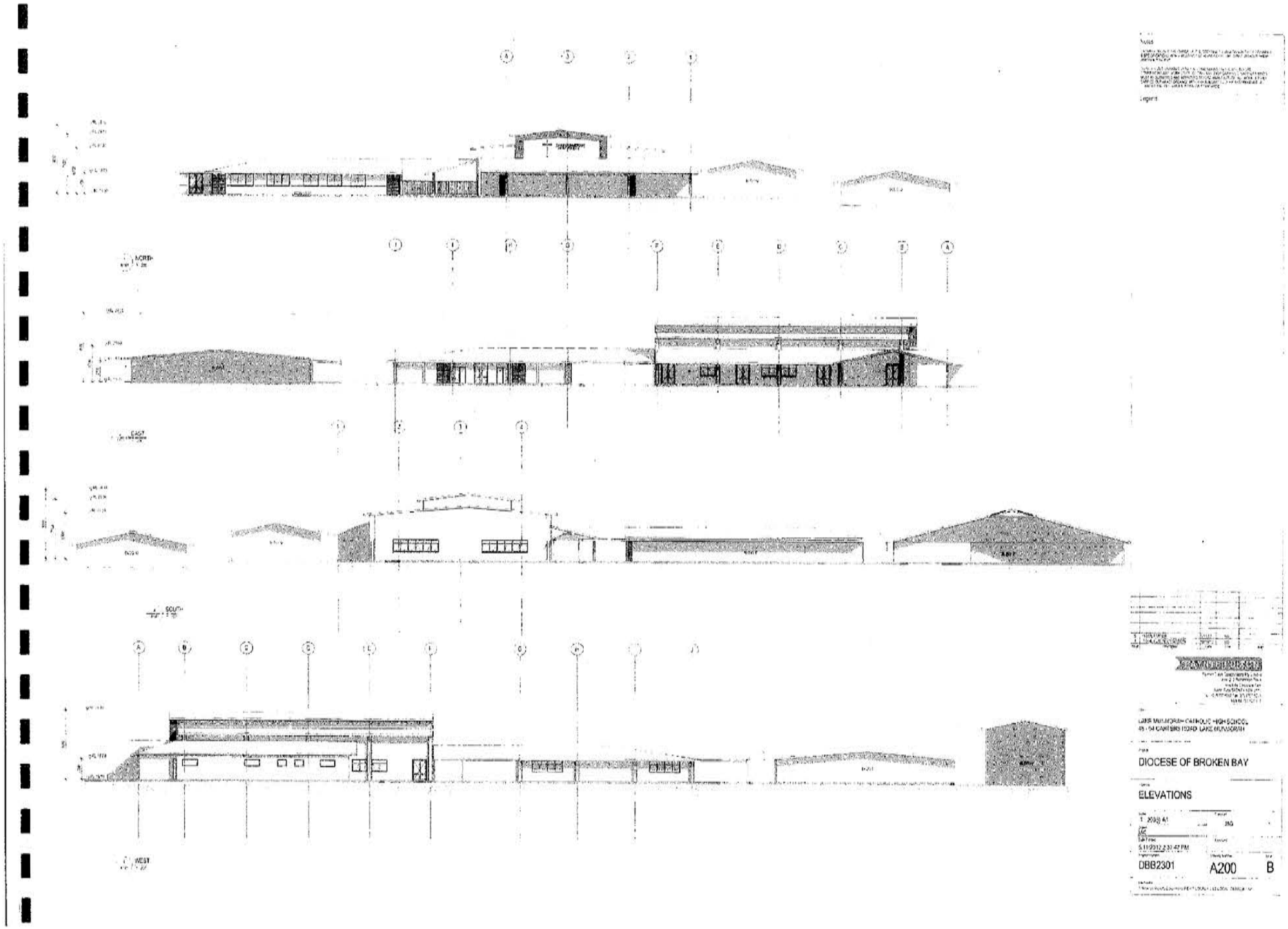
DBB2301 A141 B

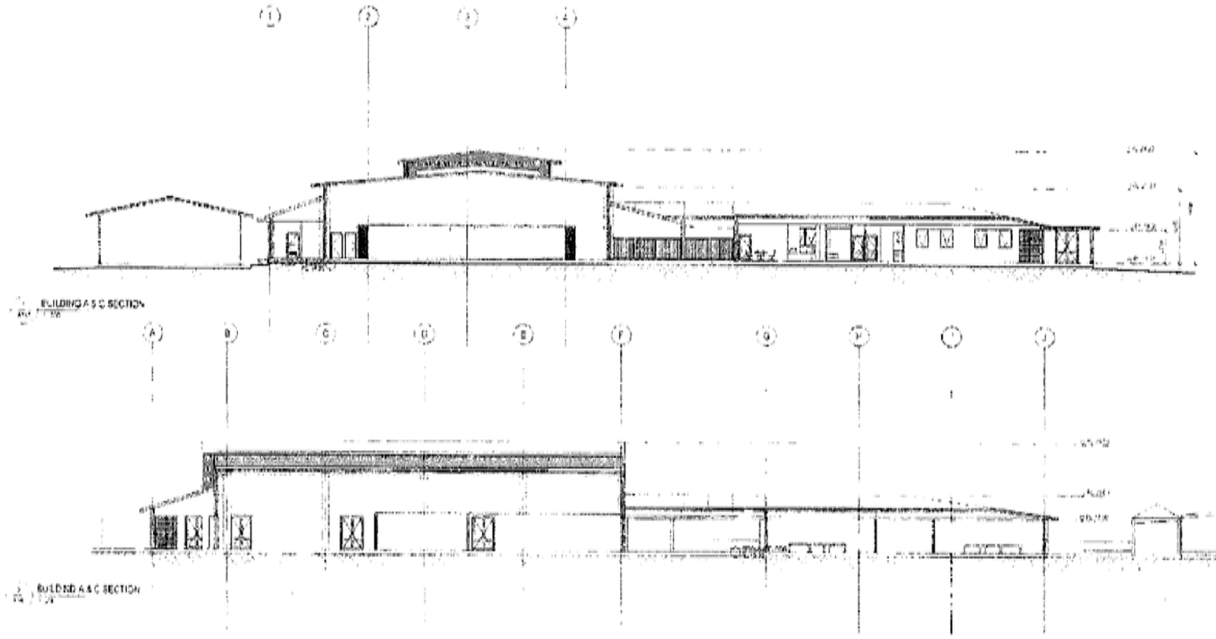

BUILDING A
RL 15.30
BUILDING B
RL 15.30
RECEPTION FOYER
ENTRY
DEPUTY PRINCIPAL
PRINCIPAL OFFICE
MAIN SWITCH BOARD
STORE ROOM
IT CONTROL ROOM
ART ROOM
STORE
SICK BAY
TEA ROOM
INTERVIEW MEETING ROOM
STUDENT WINDOW
DRINKING TROUGH
COVERED WALKWAY
RL 15.25
COLUMN 150 x 150
10 000 L RAINWATER TANK
A350
A350
BUILDING B


Notes
Legend
N
LAKE MUNMORAH CATHOLIC HIGH SCHOOL
DIOCESE OF BROKEN BAY
BUILDING B FLOOR PLAN
MG
DBB2301
A142
B


BUILDING A
COVERED WALKWAY
WOOD TECHNOLOGY
HOSPITALITY
EQUIPMENT CORE
DISPLAY CABINET
WOOD STORE
METAL STORE
BUILDING C
TOOL STORE
DRY STORE
METAL TECHNOLOGY
FOOD TECHNOLOGY
PREP
BUILDING C


Notes
Legend
N
LAKE MUNMORAH CATHOLIC HIGH SCHOOL
49 - 54 CANTERBURY ROAD, LAKE MUNMORAH
DIOCESE OF BROKEN BAY
BUILDING C FLOOR PLAN
DBB2301
A143
B


NORTH
EAST
SOUTH
WEST
Notes
Legend
LAKE MUMMORAH CATHOLIC HIGH SCHOOL
45 - 54 CANTERS ROAD LAKE MUMMORAH
DIOCESE OF BROKEN BAY
ELEVATIONS
DBB2301
A200
B



Notes

Legend

JOHN PRESTON

CAKE MUMORAH CATHOLIC HIGH SCHOOL
49 - 51 CARTERS ROAD LAKE MUMMORAH

DIOCESE OF BROKEN BAY

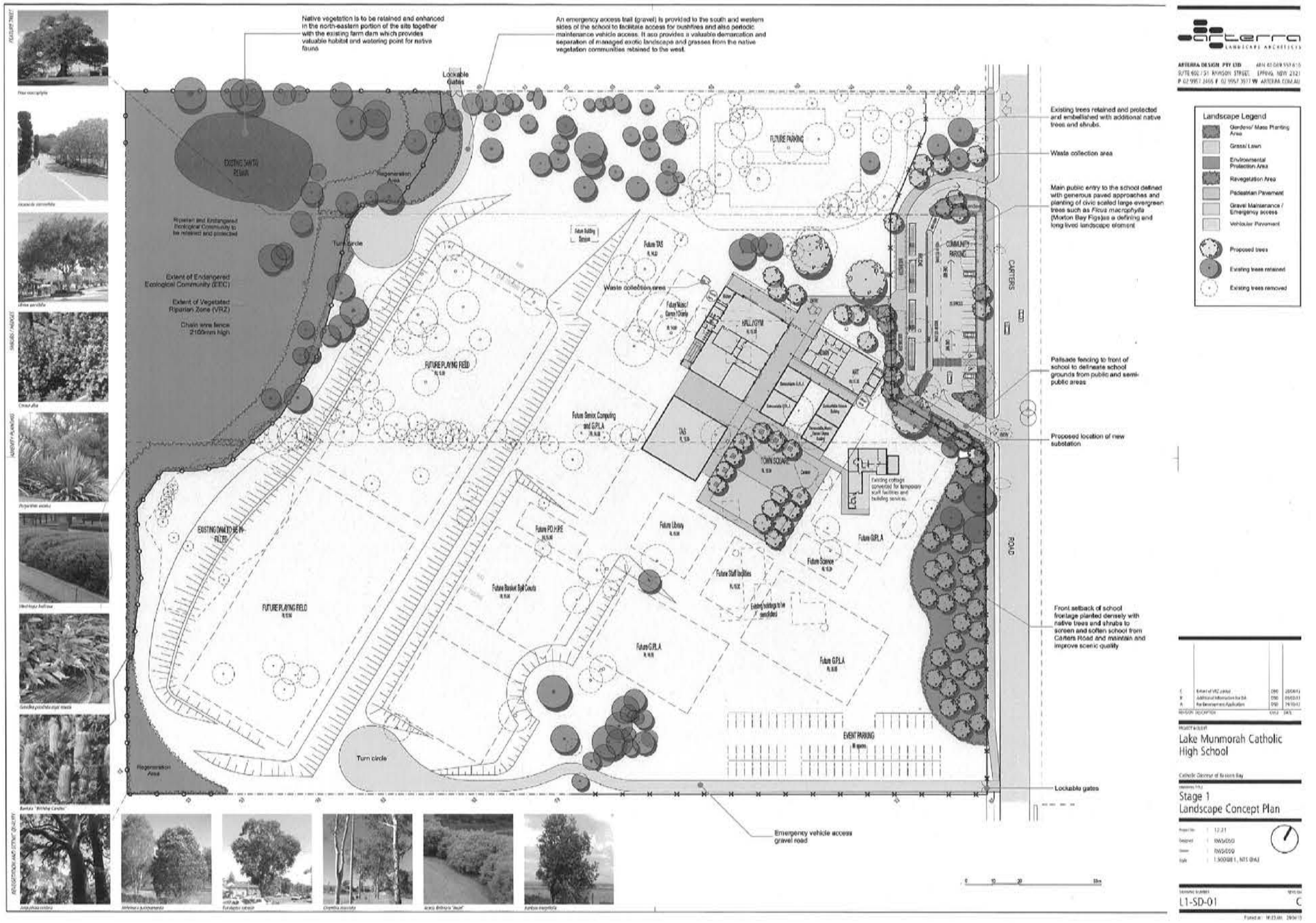
SECTIONS

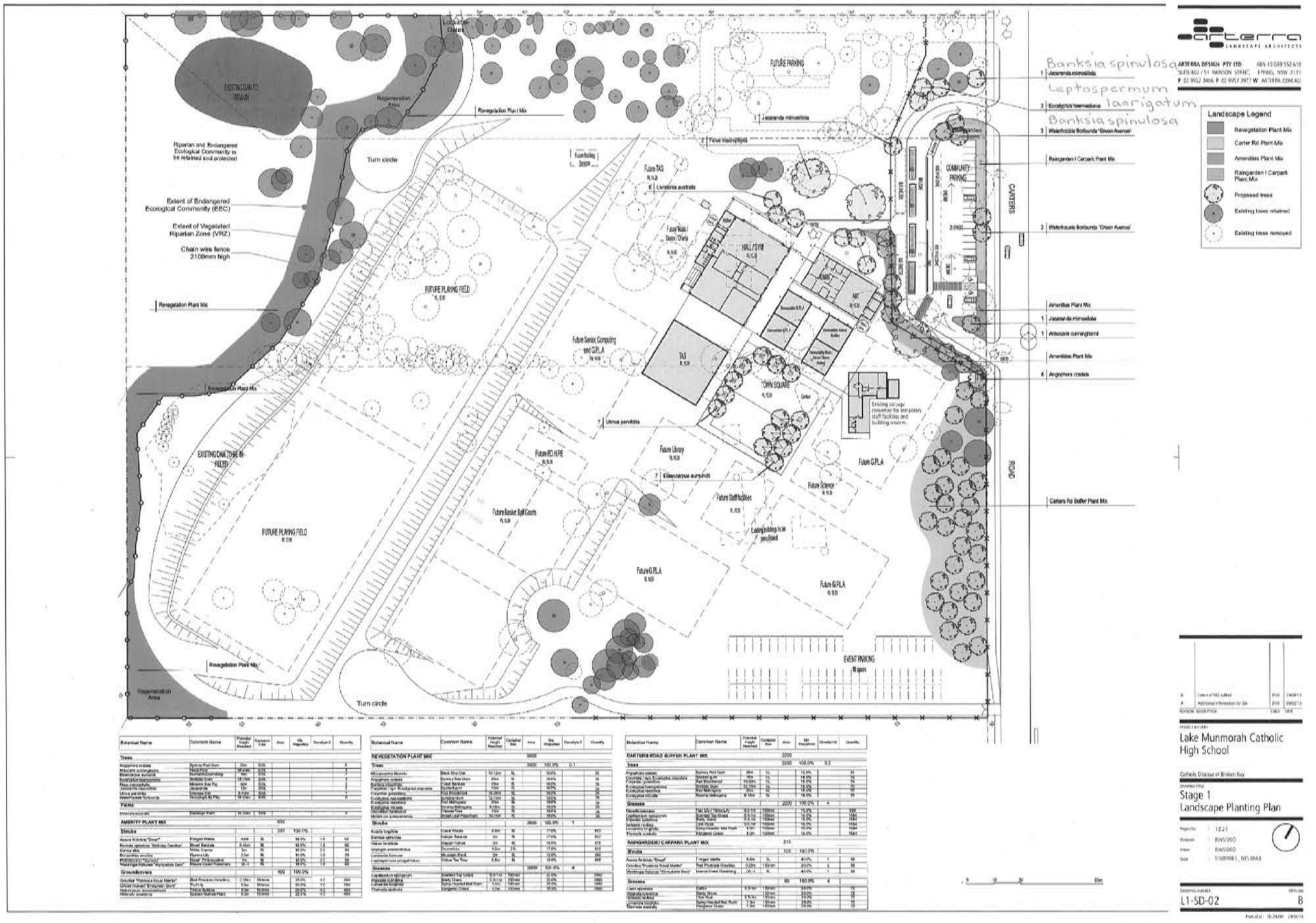
1 : 200@A1 MB

MK

9/11/2012 2:34:23 PM

DBB2301 A300 B


Native vegetation is to be retained and enhanced in the north-eastern portion of the site together with the existing farm dam which provides valuable habitat and watering point for native fauna
An emergency access trail (gravel) is provided to the south and western sides of the school to facilitate access for bushfires and also periodic maintenance vehicle access. It also provides a valuable demarcation and separation of managed exotic landscape and grasses from the native vegetation communities retained to the west.
Lockable Gates
EXISTING DAM TO REMAIN
Regeneration Area
Riparian and Endangered Ecological Community to be retained and protected
Extent of Endangered Ecological Community (EEC)
Extent of Vegetated Riparian Zone (VRZ)
Chain wire fence 2100mm high
Turn circle
Future TAS
Waste collection area
Future Music/ Dance/ Drama
FUTURE PLAYING FIELD
Future Senior Computing and G.P.L.A
HALL/GYM
TAS
TOWN SQUARE
ART
COMMUNITY PARKING
CARTERS ROAD
FUTURE PARKING
Existing cottage converted for temporary staff facilities and building services.
Future G.P.L.A
Future Science
Future Staff facilities
Future P.D.H.P.E
Future Library
Future Basket Ball Courts
Existing buildings to be demolished
EXISTING DAM TO BE PART FILLED
FUTURE PLAYING FIELD
Future G.P.L.A
Future G.P.L.A
Turn circle
Regeneration Area
EVENT PARKING
ROAD
Existing trees retained and protected and embellished with additional native trees and shrubs.
Waste collection area
Main public entry to the school defined with generous paved approaches and planting of civic scaled large evergreen trees such as Ficus macrophylla (Morton Bay Figs)as a defining and long lived landscape element
Palisade fencing to front of school to delineate school grounds from public and semi-public areas
Proposed location of new substation
Front setback of school frontage planted densely with native trees and shrubs to screen and soften school from Carters Road and maintain and improve scenic quality
Lockable gates
Emergency vehicle access gravel road
Landscape Legend
Gardens/ Mass Planting Area
Grass/ Lawn
Environmental Protection Area
Revegetation Area
Pedestrian Pavement
Gravel Maintenance / Emergency access
Vehicular Pavement
Proposed trees
Existing trees retained
Existing trees removed
arterra LANDSCAPE ARCHITECTS
ARTERRA DESIGN PTY LTD
SUITE 602 / 51 RAWSON STREET, EPPING NSW 2121
P 02 9957 3466 F 02 9957 3977 W ARTERRA.COM.AU
Lake Munmorah Catholic High School
Stage 1
Landscape Concept Plan
L1-SD-01


Banksia spinulosa
Leptospermum laerigatum
Banksia spinulosa
Landscape Legend
Revegetation Plant Mix
Carter Rd Plant Mix
Amenities Plant Mix
Raingarden / Carpark Plant Mix
Proposed trees
Existing trees retained
Existing trees removed
ARTERRA DESIGN PTY LTD
LANDSCAPE ARCHITECTS
Lake Munmorah Catholic High School
Catholic Diocese of Broken Bay
Stage 1
Landscape Planting Plan
L1-SD-02
B
FUTURE PLAYING FIELD
Turn circle
Regeneration Area
Revegetation Plant Mix
Riparian and Endangered Ecological Community to be retained and protected
Extent of Endangered Ecological Community (EEC)
Extent of Vegetated Riparian Zone (VRZ)
Chain wire fence 2100mm high
EXISTING DAM TO BE IN-FILLED
Future TAS
Future Senior Computing and GPLA
Future Library
Future RO / PE
Future Basket Ball Courts
Future GPLA
Future Staff facilities
Future Science
HALL / GYM
TAS
ART
TOWN SQUARE
COMMUNITY PARKING
EVENT PARKING
80 spaces
CARTERS
ROAD
Carters Rd Buffer Plant Mix
Existing building to be demolished
Existing canopy converted for temporary staff facilities and building services.

MINE SUBSIDENCE BOARD

In reply please send to: Head Office

Our reference: FN72-03501WO

Your reference:

Contact: Peter Evans (02) 4908 4391

5 March 2013

Mr Jim Conomos
°/₀ Paynter Dixon Constructions Pty Limited
Level 2, 2 Richardson Place
NORTH RYDE NSW 2113

NEWCASTLE
Ground Floor
NSW Government Offices
117 Bull Street
Newcastle West 2302
PO Box 488G Newcastle 2300
Telephone: (02) 4908 4300
Facsimile: (02) 4929 1032
DX 4322 Newcastle West

PICTON
100 Argyle Street
Picton 2571
PO Box 40 Picton 2571
Telephone: (02) 4677 1967
Facsimile: (02) 4677 2040
DX 26053 Picton

SINGLETON
The Central Business Centre
Unit 6, 1 Pitt Street
Singleton 2330
PO Box 524 Singleton 2330
Telephone: (02) 6572 4344
Facsimile: (02) 6572 4504

WYONG
Suite 3 Feldwin Court
30 Hely Street
Wyong 2259
PO Box 157 Wyong 2259
Telephone: (02) 4352 1646
Facsimile: (02) 4352 1757
DX 7317 Wyong

HEAD OFFICE
PO Box 488G
Newcastle 2300
Telephone: (02) 4908 4395
Facsimile: (02) 4929 1032

Quality Endorsed Company
ISO 9001:2008
Lic 12871
Standards Australia

Email
mail@minesub.nsw.gov.au

Web
www.minesub.nsw.gov.au

24 Hour
Emergency Service
Free Call 1800 248 083

Dear Mr Conomos,

CATHOLIC HIGH SCOOL DA/ 942/2012
Lot 433 DP 755266 / Lot 499 DP 755266
Buildings A, B, & C

The Members of the Mine Subsidence Board have approved the proposed development for Buildings A, B and C only, subject to the following conditions;

1. The final drawings to be submitted prior to commencement of construction, contain a certification by a qualified structural engineer, to the effect that any improvement constructed to meet the specifications of such final drawings will be safe, serviceable and repairable taking into account the following mine subsidence parameters:
   a) Maximum ground strains of ± 3 mm/m
   b) Maximum tilt of 4 mm/m
2. Structural separation of all unit blocks from breezeway/walk ways.
3. All brick walls to be fully articulated to meet mine subsidence design, geotechnical conditions of the site and the requirements of the Building Code of Australia. The location of articulation joints are to be clearly shown on plans and elevations. It is recommended that full height openings be incorporated in the design.
4. Attention is to be given to internal finishes to ensure they have been installed in accordance to relevant codes and standards. Particular attention is to be given to tiled areas. Avoid the use of brittle materials liable to damage from mine subsidence.
5. Drainage/sewer design needs to provide for mine subsidence effects determined in the geotechnical report. This may necessitate the use of flexible joints, shorter lengths, or additional downpipes and drainage points. Underground services shall be located to facilitate ease of repair or replacement. Services located under the building are minimised.
6. Roads and driveways are to be constructed in bitumen or flexible pavement. If concrete areas are required, specific design is to be provided to demonstrate that any damage will be of a slight classification. Concrete design would need to include full articulation and separation/sacrificial sections where appropriate.
7. Upon completion of construction, work as executed certification by a qualified structural engineer is to be forwarded to the Board confirming construction was in accordance with the plans submitted.

This approval is current for two (2) years.

PUTTING SERVICE AND THE NEEDS OF PEOPLE FIRST

Please note that this conditional approval excludes buildings D to R as the applicant is currently unable to provide preliminary design information to satisfy the Board's requirements.

If you have any queries concerning this matter please contact me.

Yours faithfully

Peter Evans
Subsidence Risk Engineer

cc: Ms Heidi Cox
Wyong Shire Council
PO Box 20
WYONG NSW 2259

All communications to be addressed to:

Headquarters
15 Carter Street
Lidcombe NSW 2141

Telephone: 1300 NSW RFS
e-mail: csc@rfs.nsw.gov.au

Headquarters
Locked Bag 17
Granville NSW 2142

Facsimile: 8741 5433

The General Manager
Wyong Shire Council
PO Box 20
WYONG NSW 2259

Your Ref: DA/942/2012
Our Ref: D12/2620
DA12112185589 MH

ATTENTION: Emily Goodworth

27 March 2013

Dear Sir/Madam

Integrated Development for 433 & 499//755266 48-54 Carters Road Lake Munmorah NSW 2259

I refer to your letter dated 4 March 2013 seeking general terms of approval for the above Integrated Development in accordance with Section 91 of the 'Environmental Planning and Assessment Act 1979'.

The Service has reviewed the submitted amendments and raises no objections subject to compliance with our previous terms of approval dated 10 December 2012.

For any queries regarding this correspondence please contact Mark Hawkins on 1300 NSW RFS.

Yours sincerely

Wayne Sketchley
A/Team Leader - Development Assessment

The RFS has made getting information easier. For general information on 'Planning for Bush Fire Protection, 2006' , visit the RFS web page at www.rfs.nsw.gov.au and search under 'Planning for Bush Fire Protection, 2006'.

ID:85589/80350/5

Page 1 of 1

All communications to be addressed to:

Headquarters
15 Carter Street
Lidcombe NSW 2141

Telephone: 1300 NSW RFS
e-mail: csc@rfs.nsw.gov.au

Headquarters
Locked Bag 17
Granville NSW 2142

Facsimile: 8741 5433

The General Manager
Wyong Shire Council
PO Box 20
WYONG NSW 2259

Your Ref: DA/942/2012
Our Ref: D12/2620
DA12112185589 MH

ATTENTION: Emily Goodworth

10 December 2012

Dear Sir/Madam

Integrated Development for 433 & 499//755266 48-54 Carters Road Lake Munmorah NSW 2259

I refer to your letter dated 20 November 2012 seeking general terms of approval for the above Integrated Development in accordance with Section 91 of the 'Environmental Planning and Assessment Act 1979'.

This response is to be deemed a bush fire safety authority as required under section 100B of the 'Rural Fires Act 1997' and is issued subject to the following numbered conditions:

Asset Protection Zones

The intent of measures is to provide sufficient space for fire fighters and other emergency services personnel, ensuring radiant heat levels permit operations under critical conditions of radiant heat, smoke and embers, while supporting or evacuating occupants. To achieve this, the following conditions shall apply:

1. At the commencement of building works and in perpetuity the entire property not including the area denoted as an Ecological Endangered Community on the Site Analysis Plan numbered DBB2301 and dated 29-12-2012 shall be managed as an inner protection area (IPA) as outlined within section 4.1.3 and Appendix 5 of 'Planning for Bush Fire Protection 2006' and the NSW Rural Fire Service's document 'Standards for asset protection zones'.

Water and Utilities

The intent of measures is to provide adequate services of water for the protection of buildings during and after the passage of a bush fire, and to locate gas and electricity so as not to contribute to the risk of fire to a building. To achieve this, the following conditions shall apply:

2. Water, electricity and gas are to comply with sections 4.1.3 and 4.2.7 of 'Planning for Bush Fire Protection 2006'.

Access

The intent of measures for internal roads is to provide safe operational access for emergency services personnel in suppressing a bush fire, while residents are accessing or egressing an area. To achieve this, the following conditions shall apply:

3. Internal roads shall comply with section 4.2.7 of 'Planning for Bush Fire Protection 2006'.

Evacuation and Emergency Management

The intent of measures is to provide suitable emergency and evacuation (and relocation) arrangements for occupants of special fire protection purpose developments. To achieve this, the following conditions shall apply:

4. Arrangements for emergency and evacuation are to comply with section 4.2.7 of 'Planning for Bush Fire Protection 2006'.

Design and Construction

The intent of measures is that buildings are designed and constructed to withstand the potential impacts of bush fire attack. To achieve this, the following conditions shall apply:

5. New construction shall comply with Sections 3 and 5 (BAL 12.5) Australian Standard AS3959-2009 'Construction of buildings in bush fire-prone areas' and section A3.7 Addendum Appendix 3 of 'Planning for Bush Fire Protection'.

Landscaping

6. Landscaping to the site is to comply with the principles of Appendix 5 of 'Planning for Bush Fire Protection 2006'.

For any queries regarding this correspondence please contact Mark Hawkins on 1300 NSW RFS.

Yours sincerely

Michelle Streater
A/Team Leader - Development Assessment

The RFS has made getting information easier. For general information on 'Planning for Bush Fire Protection, 2006' , visit the RFS web page at www.rfs.nsw.gov.au and search under 'Planning for Bush Fire Protection, 2006'.

Department of Primary Industries
Office of Water

Contact: Algis Sutas
Phone: 02 4348 5014
Fax:
Email: algis.sutas@water.nsw.gov.au
Our ref: 20 ERM2013/0015
Our file:
Your ref: 942/2012

The General Manager
Wyong Shire Council
PO Box 20
Wyong NSW 2259

4 April 2013

Attention: Emily Goodworth

Dear Ms Goodworth,

Re: **Integrated Development Referral – General Terms of Approval**
DA 942/2012 – Lake Munmorah Catholic High School - filling and earthworks on waterfront land.
48 - 54 Carters Road LAKE MUNMORAH (Lot 433 DP 755266 & Lot 499 DP 755266).

I refer to your original referral dated 28 November 2012 and additional information dated 6 March 2013 regarding the above integrated Development Application (DA). Attached, please find the Office of Water's General Terms of Approval (GTA) for works requiring a controlled activity approval under the *Water Management Act 2000* (WM Act), as detailed in the subject DA.

Please note Council's statutory obligations under section 91A (3) of the *Environmental Planning and Assessment Act 1979* (EPA Act) which requires a consent, granted by a consent authority, to be consistent with the general terms of any approval proposed to be granted by the approval body.

If the proposed development is approved by Council, the Office of Water requests that these GTA be included (in their entirety) in Council's development consent. Please also note the following:

- The Office of Water should be notified if any plans or documents are amended and these amendments significantly change the proposed development or result in additional works on waterfront land (which includes (i) the bed of any river together with any land within 40 metres inland of the highest bank of the river, or (ii) the bed of any lake, together with any land within 40 metres of the shore of the lake, or (iii) the bed of any estuary, together with any land within 40 metres inland of the mean high water mark of the estuary).

- Once notified, the Office of Water will ascertain if the amended plans require review or variation/s to the GTA. This requirement applies even if the proposed works are part of Council's proposed consent conditions and do not appear in the original documentation.

- The Office of Water should be notified if Council receives an application to modify the development consent and the modifications change any activities on waterfront land.

- The Office of Water requests notification of any legal challenge to the consent.

Department of Primary Industries
Office of Water

The definition of waterfront land under the WM Act includes wetlands. The Swamp Sclerophyll Forest on Coastal Floodplains Endangered Ecological Community is considered a wetland, and thereby is defined as waterfront land.

As the controlled activity to be carried out on waterfront land cannot commence before the applicant applies for and obtains a controlled activity approval, the Office of Water recommends the following condition be included in the development consent:

> "The Construction Certificate will not be issued over any part of the site requiring a controlled activity approval until a copy of the approval has been provided to Council".

The attached GTA are not the controlled activity approval. The applicant must apply (to the Office of Water) for a controlled activity approval **after consent** has been issued by Council **and before** the commencement of any work or activity on waterfront land.

Finalisation of a controlled activity approval can take up to eight (8) weeks from the date the Office of Water receives all documentation (to its satisfaction). Applicants must complete and submit (to the undersigned) an application form for a controlled activity approval together with any required plans, documents, the appropriate fee and security deposit or bank guarantee (if required by the Office or Water) and proof of Council's development consent.

Application forms for the controlled activity approval are available from the undersigned or from the Office of Water's website:
www.water.nsw.gov.au Water licensing › Approvals › Controlled activities

The Office of Water requests that Council provide a copy of this letter to the applicant.

The Office of Water also requests that Council provides the Office of Water with a copy of the determination for this development application as required under section 91A (6) of the EPA Act.

Yours Sincerely

Algis Sutas
Senior Water Regulatory Officer
Office of Water

www.water.nsw.gov.au
3/107 Mann Street, GOSFORD | PO Box 340, GOSFORD NSW 2250 | Tel (02) 4348 5014

Department of Primary Industries
Office of Water

General Terms of Approval

for work requiring a controlled activity approval under s91 of the Water Management Act 2000

Our Reference:	20 ERM2013/0015	**File No:**
Site Address:	48 - 54 Carters Road LAKE MUNMORAH NSW (Lot 433 DP 755266 & Lot 499 DP 755266).	
DA Number:	942/2012	
LGA:	Wyong Shire Council	

Number	Condition
Plans, standards and guidelines	
1	These General Terms of Approval (GTA) only apply to the controlled activities described in the plans and associated documentation relating to 942/2012 and provided by Council to NSW Office of Water. Any amendments or modifications to the proposed controlled activities may render these GTA invalid. If the proposed controlled activities are amended or modified the NSW Office of Water must be notified to determine if any variations to these GTA will be required.
2	Prior to the commencement of any controlled activity (works) on waterfront land, the consent holder must obtain a Controlled Activity Approval (CAA) under the Water Management Act from the NSW Office of Water. Waterfront land for the purposes of this DA is land and material in or within 40 metres of the top of the bank or shore of the lake (including wetlands) identified.
3	The consent holder must prepare or commission the preparation of: (i) Vegetation Management Plan providing for restoration of the Swamp Sclerophyll Forest on Coastal Floodplain Endangered Ecological Community and a 10m Vegetated Riparian Zone. (ii) Works Schedule (iii) Erosion and Sediment Control Plan (iv) Soil and Water Management Plan (v) Amendments to Site Master Plan to incorporate a 10m Vegetated Riparian Zone adjacent to the Swamp Sclerophyll Forest on Coastal Floodplain Endangered Ecological Community to be restored. (vi) Amendments to Bushfire Hazard Assessment Report to provide for a 10m Vegetated Riparian Zone adjacent to the Swamp Sclerophyll Forest on Coastal Floodplain Endangered Ecological Community to be restored.
4	All plans must be prepared by a suitably qualified person and submitted to the NSW Office of Water for approval prior to any controlled activity commencing. All plans and documents must be prepared in accordance with the NSW Office of Water's guidelines located at www.water.nsw.gov.au/Water-Licensing/Approvals/default.aspx (i) Vegetation Management Plans (ii) Laying pipes and cables in watercourses (iii) Riparian Corridors

www.water.nsw.gov.au
3/107 Mann Street, GOSFORD | PO Box 340, GOSFORD NSW 2250 | Tel (02) 4348 5014

Department of Primary Industries
Office of Water

File No:

Our Reference: 20 ERM2013/0015

Site Address: 48 - 54 Carters Road LAKE MUNMORAH NSW (Lot 433 DP 755266 & Lot 499 DP 755266).

DA Number: 942/2012

LGA: Wyong Shire Council

Number	Condition
	(iv) In-stream works (v) Outlet structures (vi) Watercourse crossings
5	The consent holder must (i) carry out any controlled activity in accordance with approved plans and (ii) construct and/or implement any controlled activity by or under the direct supervision of a suitably qualified professional and (iii) when required, provide a certificate of completion to the NSW Office of Water.
Rehabilitation and maintenance	
6	The consent holder must carry out a maintenance period of two (2) years after practical completion of all controlled activities, rehabilitation and vegetation management in accordance with a plan approved by the NSW Office of Water.
7	The consent holder must reinstate waterfront land affected by the carrying out of any controlled activity in accordance with a plan or design approved by the NSW Office of Water.
Reporting requirements	
8	The consent holder must use a suitably qualified person to monitor the progress, completion, performance of works, rehabilitation and maintenance and report to the NSW Office of Water as required.
Security deposits	
9	The consent holder must provide a security deposit (bank guarantee or cash bond) - equal to the sum of the cost of complying with the obligations under any approval - to the NSW Office of Water as and when required.
Access-ways	
10	N/A
11	The consent holder must not locate ramps, stairs, access ways, cycle paths, pedestrian paths or any other non-vehicular form of access way in a riparian corridor other than in accordance with a plan approved by the NSW Office of Water.
Bridge, causeway, culverts, and crossing	
12	N/A
13	N/A
Disposal	
14	N/A
Drainage and Stormwater	

www.water.nsw.gov.au
3/107 Mann Street, GOSFORD | PO Box 340, GOSFORD NSW 2250 | Tel (02) 4348 5014

Department of Primary Industries
Office of Water

Our Reference:	20 ERM2013/0015	**File No:**
Site Address:	48 - 54 Carters Road LAKE MUNMORAH NSW (Lot 433 DP 755266 & Lot 499 DP 755266).	
DA Number:	942/2012	
LGA:	Wyong Shire Council	

Number.	Condition
15	The consent holder is to ensure that all drainage works (i) capture and convey runoffs, discharges and flood flows to low flow water level in accordance with a plan approved by the NSW Office of Water; and (ii) do not obstruct the flow of water other than in accordance with a plan approved by the NSW Office of Water.
16	The consent holder must stabilise drain discharge points to prevent erosion in accordance with a plan approved by the NSW Office of Water.
Erosion control	
17	The consent holder must establish all erosion and sediment control works and water diversion structures in accordance with a plan approved by the NSW Office of Water. These works and structures must be inspected and maintained throughout the working period and must not be removed until the site has been fully stabilised.
Excavation	
18	The consent holder must ensure that no excavation is undertaken on waterfront land other than in accordance with a plan approved by the NSW Office of Water.
19	N/A
Maintaining river	
20	N/A
21	N/A
River bed and bank protection	
22	The consent holder must clearly mark (by installation of appropriate fencing and interpretive signage), protect and maintain a riparian corridor with a width of 10 metres measured horizontally landward from for the length of the site directly affected by the controlled activity in accordance with a plan approved by the NSW Office of Water.
23	The consent holder must establish a riparian corridor along the defined edge of the Swamp Sclerophyll Forest on Coastal Floodplains Endangered Ecological Community in accordance with a plan approved by the NSW Office of Water.
Plans, standards and guidelines	
24	N/A
25	N/A
26	N/A
27	N/A
END OF CONDITIONS	

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NSW Police Force

Tuggerah Lakes Local Area Command

Crime Prevention Office

Wyong Police Station
22 Hely Street, Wyong

Ph: (02) 4356 6236
Fax: (02) 4356 6211

January 2013

Application Coordinator
Wyong Shire Council
PO Box 20
Wyong NSW 2259

To whom it may concern,

RE: Education Establishment for Catholic High School, 48-54 Carters Road, Lake Munmorah NSW 2259

Thank you for your letter dated 16th November 2012 Tuggerah Lakes Local Area Command of the above mentioned development proposal.

In line with the Crime Prevention Guidelines of the New South Wales Environmental Planning and Assessment Act, 1979, Section 79C, Tuggerah Lakes Local Area Command has conducted a *Safer by Design Crime Risk Evaluation* as requested by Wyong Shire Council, Hely Street, Wyong on the Education Establishment for Catholic High School, 48-54 Carters Road, Lake Munmorah, NSW, 2259.

The result of this Safer by Design Crime Risk Evaluation for this development has identified an overall crime risk rating as MODERATE, on a sliding scale of low, moderate, high crime risk. The evaluation was conducted on Education Establishment for Catholic High School, 48-54 Carters Road, Lake Munmorah that was provided by Wyong Shire Council.

The proposed Catholic High School could introduce new (potential) victims, crime opportunities and offenders to the development site and its surroundings.

Traffic is always a concern for new developments and the possible impact the school may have on Carter Road. Due to the staged nature of the development, there will only be 90 students and 10 staff, until future development into Stage two. There will be sufficient off street parking and pick-up/set down facilities to ensure there is no necessity for increased parking on Carters Road.

Tuggerah Lakes Police have no objections to the development and the school will compliment the existing businesses and structure within Lake Munmorah.

Safer by Design Crime Risk Evaluation- DA/942/2012 Catholic Secondary School.

Crime Prevention through Environmental Design (CPTED) treatment options should be considered for the proposed development in order to reduce opportunities for crime if the development is approved. See attached CPTED recommendations.

Yours sincerely,

Bethany Gaudin

Crime Prevention Officer

1. Disclaimer.

NSW Police Force has a vital interest in ensuring the safety of members of the community and their property. By using recommendations contained within this document, any person who does so acknowledges that:

- It is not possible to make areas evaluated by NSW Police Force absolutely safe for the community and their property.
- Recommendations are based upon information provided to, and observations made by NSW Police Force at the time the document was prepared.
- The evaluation/report is a confidential document and is for use by the person/organisation referred to on page one.
- The contents of this evaluation/report are not be copied or circulated otherwise than for the purposes of the person/organisation referred to at the start of the Assessment.

NSW Police Force hopes that by using the recommendations contained with this document, criminal activity will be reduced and the safety of members of the community and their property will be increased. However, it does guarantee that all risks have been identified, or that the area evaluated will be free from criminal activity if its recommendations are followed.

2. Executive Summary.

On 16th November 2012, Wyong Shire Council requested NSW Police Force to conduct a Safer by Design crime risk assessment of a proposed Education Establishment for Catholic High School, 48-54 Carters Road, Lake Munmorah, NSW, 2259.

Information used during the evaluation was provided by, or obtained from:

- Wyong Shire Council.
- Tuggerah Lakes Local Area Command.

Development/site specific documentation included:

- Development Application Form – Local Development (Statement of Environmental Effects)
- Development Application Form – Integrated Development.

3. Site Description

The proposed development application is described as Lots 433 and 499 Deposited Plan (DP), Nos 48 and 54 Carters Road, Lake Munmorah, and is located within the Wyong Shire Local Government Area (LGA). The site is located approximately 350 metres from the intersection of the Pacific Highway and Carters Road/Elizabeth Bay Drive and is accessible from Carters Road. The site comprises of a total area of 8.166 hectare, is square in shape and has a 258.46 metre frontage to Carters Road. Located to the North, is predominantly rural residential developments, to the South, Lake Munmorah Public School and Primary School, to the East, St Brendans Catholic School and to the West, rural residential development.

4. Introduction.

Section 79c of the Environmental Planning and Assessment Act and Crime Prevention.

In April, 2001, the NSW Minister for Planning introduced Crime Prevention Guidelines to S79C of the Environmental Planning and Assessment Act, 1979. These guidelines require consent authorities to ensure that development provides safety and security to users and the community. 'If a development presents a crime risk, the guidelines can be used to justify modification of the development to minimise crime risk, or, refusal of the development on the grounds that crime risk cannot be appropriately minimised.

The Guideline contains two parts. 'Part A details the need for a formal crime risk assessment (Safer by Design Evaluation) to be done in conjunction with trained police, and Part B outlines basic Crime Prevention through Environment Design (CPTED) principals and strategies that can by used by consent authorities to justify the modification of proposals to minimise risk'.

Site Risk Rating

The NSW Police Safer by Design Evaluation process is based upon Australia and New Zealand Risk Management Standard ANZS4360:1999. It is a contextually flexible, transparent process that identifies and quantifies crime hazards and location risk. Evaluation measures include crime likelihood (statistical probability), consequence (crime outcome), distributions of reported crime (hotspot analysis), socio-economic conditions (relative disadvantage), situational hazards and crime opportunity.

After conducting this process the rating for this development has been identified as,
Moderate crime risk.

With this in mind the following Crime Prevention Through Environmental Design (CPTED) treatments should be considered for the development in order to reduce opportunities for crime.

- *Natural*
- *Organised (low)*
- *Technical/Mechanical (low)*
- *Technical/Mechanical (high)*

5. Crime Prevention through Environmental Design.

Crime Prevention through Environmental Design (CPTED) is a crime prevention strategy that focuses on the planning, design and structure of cities and neighbourhoods. It reduces opportunities for crime by using design and place management principals that reduce the likelihood of essential crime ingredients from intersecting in time and space.

Predatory offenders often make cost-benefit assessments of potential victims and locations before committing crime. CPTED aims to create the reality (or perception) that the costs of committing the crime are greater than the likely benefits. This is achieved by creating social and environmental conditions that:

- Maximise risk to offenders (increasing the likelihood of detection, challenge and apprehension).
- Maximise the effort required to commit crime (increasing the time, energy and resources required to commit crime).
- Minimise the actual and perceived benefits of crime (removing, minimising or concealing crime attractors and rewards),
- Minimise excuse-making opportunities (removing conditions that encourage/facilitate rationalisation of inappropriate behaviour).

CPTED employs four key strategies. These are Surveillance, Access Control, Territorial Reinforcement and Space/Activity Management.

Crime Reduction Opportunity and Recommendations:

Surveillance

Natural surveillance is achieved when normal space users can see and be seen by others. This highlights the importance of building layout, orientation and location; the strategic use of design; landscaping and lighting. *Natural surveillance* is a by-product of well-planned,

well-designed and well-used space. *Technical/mechanical Surveillance* is achieved through mechanical/electronic measures such as CCTV, help points and mirrored building panels. *Technical/mechanical surveillance* is commonly used as a 'patch' to supervise isolated, higher risk locations. *Formal (or Organised) Surveillance* is achieved through the tactical positioning of guardians. An example would be the use of on-site supervisors at higher risk locations.

General Comments in Design for Surveillance:

- Surveillance equipment can enhance the physical security of the school throughout the complex including the Administration, computer rooms, canteen, library and car parks'. This can assist in the identification of people involved in anti-social or criminal behaviour. Cameras should be installed both within and around the school to maximize surveillance opportunities.

- Sightlines throughout the school need to be kept as simple as possible. Maintain clear sightlines between corridors, neighbouring properties and any buildings as to reduce any concealment opportunities. Ensure all shared paths are clearly identified and sign posted as to there use, as to avoid any confusion. Suggestions to colour sections of the paths or crossings to allow easier identification of use.

- Buildings facing 'outward' towards public and semi public areas provide natural surveillance and informal supervision (eyes on the street).

- Laminated glass walls and windows facilitate supervision of common entry areas.

- Digital technology should be used and ensure that the requirements of the Surveillance and Privacy Act are adhered to.

- For CCTV to be effective it must be vandal resistant and able to clearly identify and record faces, shapes and colours.

- TV monitors should enable staff to monitor activities on the camera.

- Recording equipment should be installed away from the counter area to avoid tampering.

- To enhance the security of the school, a monitored intruder alarm system is recommended. Consider incorporating a duress facility into the system to enable staff to activate the system manually in the event of an emergency, such as a robbery.

Lighting

There is a proven correlation between poor lighting, fear of crime, the avoidance of public places and crime opportunity (Painter, 1997). Good lighting can assist in increasing the usage of an area. There is no information with the plans, which were reviewed to indicate the lighting proposals for the development.

General Comments in Design for Lighting:

- Adequate, uniform lighting should cover the entire property. The emphasis should be on installing low glare/high uniformity lighting levels in line with Australian/ New Zealand standards 1158.

- It is the experience of the Dept. of Education and Training School Security Unit that external lighting is only effective if the illuminated area has good surveillance from others. Therefore, all external lights should be turned off in areas that are not visible to local residents. In areas that are illuminated with little or no casual surveillance, intruders are given the impression that criminal activity will go unnoticed. Timers, sensor lighting and override switches could be utilised to overcome any WH&S concerns with the cleaners or staff members working after hours.

- All luminaries (light covers) should be designed to reduce opportunities of malicious damage (vandalism). A lighting maintenance policy needs to be established for the development. Ideally, lighting that allows 15 metre facial recognition test should be installed.

- It is recommended that further information be obtained in regards to the use of lighting, both internally and externally to ensure lighting meets required standards to enhance surveillance opportunities during hours of darkness and the safety of staff and residents both inside the school and on the footpaths.

Territorial Re-enforcement

Criminals rarely commit crime in areas where the risk of detection and challenge are high. People who have guardianship or ownership of areas are more likely to provide effective supervision and to intervene in crime than passing strangers. Effective guardians are often ordinary people who are spatially 'connected' to a place and feel an association with, or responsibility for it.

Territorial Re-enforcement uses actual and symbolic boundary markers, spatial legibility and environmental cues to 'connect' people with space, to encourage communal responsibility for public areas and facilities, and to communicate to people where they should/shouldn't be and what activities are appropriate.

General Comments in Design for Territorial Re-enforcement:

- There is no information to indicate signage, which might be used in and around the development. Confusion resulting from vague entry design can legitimise exploration, trespassing and excuse making by opportunistic criminals. Entries should be legible and inviting.

- The schools name should be predominantly displayed at the front of the school to comply with the Local Government Act 1993 Section 124 (8). It is important that signs do not provide places for persons to hide behind. Signs need to be well lit in front with care taken to eliminate unnecessary side shadows. The ground behind can be bermed up to prevent people from standing behind it. An alternative is to raise the sign high enough off the ground, that a person's feet would be visible if they were behind it.

- Warning signs should be strategically posted around the school to warn intruders of what security treatments have been implemented to reduce opportunities for crime. 'Warning: Trespassers will be prosecuted', 'Warning: No large amounts of money kept of premises', 'Warning: these premises are under electronic surveillance'.

- Effective signage and/or directional signs should be considered to provide directional guidance to visitors to reception & classroom areas. Signs can also assist in controlling activities and movements throughout the school grounds.

- Directional signage should be posted a decision making points (eg. Entry/Egress, reception/main office) to provide guidance to visitors, including to areas of medical assistance. This can also assist in access control and reduce excuse making opportunities by intruders.

- A current fire safety statement must be predominately displayed within the school to comply with Environmental Planning & Assessment Regulations (1994) Clause 80GB.

- Park Smarter signage should be considered in all car parks to assist in educating all vehicle owners to lock their cars and secure their valuables. Parking lots should be located close to classrooms and administration areas. Classrooms should be provided with sufficient windows to allow view of the parking lot, since each classroom represents 20 or 30 sets of eyes. Anyone intent on stealing or vandalising a car in the car park, must worry that he or she may be being watched.

Environmental Maintenance

All space, even well planned and well-designed areas need to be effectively used and maintained to maximize community safety. Places that are infrequently used are commonly abused. There is a high correlation between urban decay, fear of crime and avoidance behaviour.

General Comments in Design for Environmental Maintenance:

- There is no information within the plans which indicate what maintenance policies will be included within this development. A maintenance policy needs to be established.

  Vandalism and graffiti is a major problem within this local area command and it is very important that porous building surfaces are not used. Easily damaged building materials may be less expensive to purchase, but their susceptibility to vandalism can make them a costly resource in the long term, particularly in at-risk areas.

  Many graffiti artists favour porous building surfaces, as their "tags" are difficult to remove and often a ghost image will remain even after cleaning. Therefore it is important to consider the type of external building materials for all blank walls including retaining walls such as stainless steel, gloss ceramic tiles or the use of anti-graffiti coatings and silicone based paints. As these surfaces are comparably easy to clean and help reduce the expense of cleaning.

As malicious damage (graffiti) is often an offence caused to such developments strong consideration must be given to the use of graffiti resistant materials, particularly on the ground floor and areas which are accessible by other structures to reduce such attacks or assist in the quick removal of such attacks.

A graffiti management plan needs to be incorporated into the maintenance plan for the development. Research has shown that the most effective strategy for reducing graffiti attacks is the quick removal of such material generally with a forty-eight hour period.

- Ensure all amenities, ramps etc have deterrent bars on them to restrict the use of skateboarders using the area inappropriately.

Space/Activity Management

Space/Activity management strategies are an important way to develop and maintain *natural* community control. Space management involves the formal supervision, control and care of the development. All space, even well planned and well-designed areas need to be effectively used and maintained to maximize community safety. Places that are infrequently used are commonly abused. There is a high correlation between urban decay, fear of crime and avoidance behaviour.

General Comments in Space/ Activity Management:

- The placement of public telephones can increase crime opportunity at those sites. Problem facilities are often poorly supported by internal/external lighting; positioned in isolated areas, or placed close to structures that facilitate loitering, concealment and possible entrapment.

- Dumpsters should be secured and enclosed to prevent children from climbing into them. They should be surrounded on three sides by an eight foot screen wall. The base of the wall should be surrounded by a hedge to discourage climbing.

- Bicycle racks should be located in a highly visible area near the main entry or parking: maintaining a separation between bicycle and vehicular traffic with landscaping and bike paths. A low hedge or wall around the racks would visibly screen bicycles, but not persons attempting to steal or vandalism.

- To reduce hiding places and possible injury, water coolers, vending machines, trash containers, and lockers should be either low profile or flush with the wall. Avoid creating alcoves, nooks and other small spaces along corridors that create criminal activity. Any freestanding objects such as stand alone lockers or vending machines should be mounted to the wall to avoid injury if they should fall over.

- Blind bends and corners should be avoided in building corridors and walkways whenever possible. Where they are present or cannot be avoided in proposed developments, surveillance can be enhanced through the use of vandal resistant mirrors, windows (where applicable), and bright, evenly distributed lighting.

Much of the design of school corridors is dictated by the safety requirement which ensure that hallways are wide enough to allow students to evacuate the building quickly. Regardless, as a general rule, hallways should be avoided. The corners allow people to hide and cause others to run into each other.

Access Control

Access control treatments restrict, channel and encourage people and vehicles into, out of and around the development. Way-finding, desire-lines and formal/informal routes are important crime prevention considerations. Access control is used to increase the time and effort required to commit crime and to increase the risk to criminals.

Natural access control includes the tactical use of landforms and waterways features, design measures including building configuration; formal and informal pathways, landscaping, fencing and gardens.

Technical/Mechanical access control includes the employment of security hardware and *Formal (or Organised) access control* includes on-site guardians such as employed security officers.

General Comments in Access Control:

- Research shows that vegetation is commonly used to aid concealment of criminals, therefore it is important that landscaping/vegetation be applied effectively. Vegetation closest to pedestrian pathways and cycle ways require close consideration. Species must be selected for different locations on the basis of their height/bulk and shape. Low garden shrubs (<600mm), with vegetation stepped back in height to maximise sightlines.

  Additionally, ensure that high branching trees are not planted next to street lights, as in the future, trees will grow and develop and if the wrong species is planted, visibility is decreased, fear increases and pedestrians street usage is decreased. Ensure there are no natural ladders, wether that be, natural or man made to enable access to the roof tops of buildings.

- Green-screens are wall-hugging plants that cannot be hidden behind. Comprised of shrubs, creepers or vines, green-screens protect walls and other susceptible structures from graffiti and vandalism. Green-screens should not cover windows or other vantage points. While the *sensible* maintenance of vegetation is encouraged, the objectives of safety, aesthetics and horticulture need to be balanced. Conflict can arise when high-branching trees pass through dense, bushy stages of growth. Care should be taken with young plants as inappropriate trimming can cause plant disease and long-term damage.

- Landscaping can also be used as a method of access control. Like wall and fencing, a tightly spaced row of tress incorporated with love level plants, can define a edge that leads to an opening or entrance. Large trees, such as oaks and sable palms, lining side walks and driveways will deter potential motorists from driving onto the school and damaging lawns and recreational fields.

- Trees and shrubs should be trimmed to reduce concealment opportunities and increase visibility to and from the school.
- Remove obstacles & rubbish from school boundaries, footpaths, driveways, car parks and buildings to restrict concealment & preventing offenders scaling your school.
- Maintain clear sightlines between street, neighbouring properties and the buildings.
- Fencing – Install quality security fences around the perimeter of your school to clearly define the property boundaries and restrict access, preferably open-style fencing and gates of similar construction to prevent an offender from using the fence for concealment.
- Entry points for burglary are most often located at the side and rear of buildings. Studies among active burglars also show that access to the side or rear of buildings is an important consideration in target choice. Side gates and fences increase the effort required by criminals to access *favoured* areas. All classrooms should have proper security screens and windows, especially those facing the bushland or entry/exit areas.
- A safe designed and installed to the Australian Standards can provide additional security to money and other valuables.

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- The report is a confidential document and is for use by the organization referred to on page one.
- The contents of this report are not to be copied or circulated otherwise than for the purposes of the organization referred to.

NSW Police Force hopes that by using the recommendations contained within this document, criminal activity will be reduced and the safety of members of the community and their property will be increased. However, it does not guarantee that all risks have been identified, or that the area evaluated will be free from criminal activity if its recommendations are followed.

If you require any further information, please don't hesitate to contact the Crime Prevention Office on 43566236.

Regards,

Bethany GAUDIN
Senior Constable
Crime Prevention Officer
Tuggerah Lakes LAC

Transport Roads & Maritime Services

19 February 2013

SF 2012/049224
CR 2012/011220
MJ

General Manager
Wyong Shire Council
DX 7306
WYONG

Attention: Heidi Cox

PACIFIC HIGHWAY (HW10): LOTS 433 AND 499 DP 755266, NO.48-54 CARTERS ROAD, LAKE MUNMORAH EDUCATIONAL ESTABLISHMENT FOR CATHOLIC HIGH SCHOOL (DA 942/2012)

Dear Ms Cox,

I refer to your letter dated 15 November 2012 regarding the subject development application forwarded to Roads and Maritime Services (RMS) for consideration. I apologise for the delay in responding.

RMS Responsibilities and Obligations

Transport for NSW and RMS primary interests are in the road network, traffic and broader transport issues. In particular, the efficiency and safety of the classified road network, the security of property assets and the integration of land use and transport.

In accordance with the *Roads Act 1993*, RMS has powers in relation to road works, traffic control facilities, connections to roads and other works on the classified road network. The Pacific Highway is a classified (State) road and Carters Road is an unclassified local road. RMS concurrence is required for works, structures, and disturbances to, in, on, under or over classified roads, under section 138 of the Act, with Council consent. RMS consent is required for traffic control signals under section 87 of the Act. Council is the roads authority for these roads and all other public roads in the area. Should works be required on a classified (State) road, RMS would exercise the function of roads authority under section 64 & 71 of the Act.

Additionally, RMS has powers under Section 104 of the Roads Act 1993 to direct the removal of any works deemed by to be a traffic hazard.

RMS Response and Requirements

RMS has reviewed the information provided and has no objections to the proposed development provided the following matters are addressed and included in Council's conditions of development consent:

Roads & Maritime Services

Level 1, 59 Darby Street Newcastle NSW 2300 | Locked Bag 30 Newcastle NSW 2300
T 02 4924 0688 | **F** 02 4924 0342 | **E** David.N.Young@rms.nsw.gov.au **www.rmservices.nsw.gov.au | 13 22 13**

Vehicular Access and Parking

- The lane configuration in Carters Road on the approach to the Pacific Highway / Carters Road intersection shall be altered to provide a left only lane and a combined right / through lane to RMS requirements.

  Comment: This will require a minor modification to the traffic control signal operation and pavement marking.

- All on-street parking shall be removed on the northern side of Carters Road on the approach to the Pacific Highway / Carters Road intersection from the intersection to the western driveway access of the recently constructed off-street car park provided by Ausgrid. That is, all on-street parking is to be removed between the eastern pedestrian crossing and the highway. This shall be marked as a left only lane and 'no stopping' signs erected to Council / RMS requirements.

  Comment: The provision of a 120 metre long left lane will improve road safety / traffic flow in Carters Road and overall performance (reduced delays) at the Pacific Highway / Carters Road traffic control signals during peak school periods. It is considered that the loss of on-street car parking is offset by the gains in the Ausgrid car park facility and the road safety / traffic flow benefits on Carters Road. Council should consult with the schools to enable this change to be implemented.

- The swept path of the largest vehicles entering and exiting the proposed development, internal accesses and all parking facilities on site are to be designed and constructed in accordance with Wyong Shire Council DCP No. 61 "Car parking" and AS/NZS 2890.1:2004 Part 1: "Off-Street Car Parking", to Council requirements.

- On site vehicular turning facilities shall be provided to enable all vehicles to enter and exit the site in a forward direction.

- The existing school zone and flashing lights shall be extended past the subject site, to RMS requirements.

- Appropriate site works shall comply with the minimum sight distance requirements and minimum sight lines for pedestrian safety set out in the RMS publication "Guide to Traffic Generating Developments" (1993) and AS/NZS 2890.1:2004 Part 1: "Off-street car parking".

- A Construction Traffic Management Plan (CTMP) shall be prepared and include a Vehicle Movement Plan and Traffic Control Plan. It shall be prepared with the intention of causing minimal impact to the operation of the Pacific Highway and Carters Road during construction, especially during peak school periods. Restrictions on construction vehicle movements may be required during these peak periods. The CTMP shall be submitted to the RMS and Council for review and approval prior to any construction activities occurring onsite.

- As road works are required on a State road, and traffic control signals, RMS will require the developer to enter into a Works Authorisation Deed (WAD) with RMS. RMS will exercise its powers under Section 87 of the *Roads Act 1993* (the Act) and the functions of the roads authority, to undertake road works in accordance with Sections 64, 71, 72 and 73 of the Act, as applicable, for all works under the WAD.

  Comment: Further advice regarding the WAD process is provided in Attachment A

- Prior to issuing a construction certificate for the proposed development, the developer shall enter into a WAD with RMS for any adjustments to the Pacific Highway / Carters Road intersection traffic control signals.

- Prior to issuing an occupation certificate (interim or final) certificate for the proposed development the developer shall complete the traffic control signal works under the WAD to practical completion, as determined by RMS.

- All works shall be carried out at full cost to the developer and at no cost to RMS or Council.

Advice to Council

- RMS has no proposal that requires any part of the subject property.

- Council should undertake monitoring / enforcement of the traffic conditions in Carters Road during the peak school periods to ensure that vehicular traffic is operating in a safe, efficient and legal manner. Further removal of parking on the southern side of Carters Road between the Pacific Highway and the car park entry to the Lake Munmorah Primary School may be required to prevent vehicles queuing back onto the Pacific Highway during the peak periods.

- Carters Road should be upgraded across the frontage of the proposed development site to a similar standard as provided east of the site to the Pacific Highway to Council requirements.

- Council should ensure that the proponent provides appropriate pedestrian facilities (footpaths, crossings, etc.) between the proposed development (Catholic High School) and the existing Catholic Primary School.

- Council should formalise the angle parking on the grassed area adjoining the Lake Munmorah High School bus pick up / set down lane.

- Council should ensure that the proponent makes provision for a new u-turn facility on Carters Road immediately west of the proposed development site, to enable u-turn manoeuvres in a location which will not impact on the designated pick up / set down areas and clear of pedestrian movements.

- It is noted that the provision of one bus standing area per 200 students satisfies the requirements of Wyong Council DCP No. 61 "Car parking". Council should ensure the available area for the bus standing area will satisfy the requirements for the full development of the site. That is, including years 7 to 12.

- Reversing vehicles in the car park adjacent to the bus pick up / set down area may impact on pedestrians using the adjacent pedestrian crossing. This matter should be addressed to Council's satisfaction.

- The plans provided indicate that there is a gap in the pedestrian fencing separating the car park and the bus pick up / set down area. This gap should be removed to prevent pedestrian movements at this location. All pedestrian movements should be via the crossings provided.

- Council should ensure that adequate provisions for cyclists are identified and implemented as part of this development.

  Comment: RMS has noted that no designated on or off street cycle lane / paths have been provided in the Carter Road precinct.

Notwithstanding the above, all matters relating to the local road network, car parking and traffic / cyclist / pedestrian management in the immediate vicinity of the subject development are matters for Council's determination.

Noise Considerations

- Council should ensure that the applicant is aware of the potential for road traffic noise to impact on development on the site. In this regard, the developer, not RMS is responsible for providing noise attenuation measures in accordance with the Office of Environment and Heritage *NSW Road Noise Policy 2011*, should the applicant seek assistance at a later date.

  Where the Office of Environment and Heritage external noise criteria would not feasibly or reasonably be met RMS recommends that Council apply internal noise objectives for all habitable rooms under ventilated conditions that comply with the Building Code of Australia.

On Council's determination of this matter, it would be appreciated if a copy of the Notice of Determination is forwarded to the RMS for record and / or action purposes.

Please contact me on 4924 0688 if you require further advice.

Yours sincerely

Dave Young
Manager Land Use
Hunter Region

Attachment A: Preliminary WAD Advice to Consent Authority and Developer

Advice to the Consent Authority

- On Council's determination a copy of the Notice of Determination should be forwarded to RMS within the appellant period for advice / consideration and action where required.

- Conditions of development consent do not guarantee RMS' consent to the specific road works, traffic control signals and / or other structures or works for which it is responsible. The developer must obtain RMS' authorisation in writing prior to the commencement of any road works and traffic control signals, including traffic management, temporary or permanent road works associated with the proposed development.

Advice to the Developer

- Following development consent, early discussion with RMS' Project Manager is recommended. RMS will initiate the WAD process by sending out a letter and information pack on receipt of the Notice of Determination, including the name and contact details of the Project Manager.

- As the WAD process, including acceptance of design documentation and construction can take considerable time, you should allow sufficient lead time within the project development program to ensure that all documentation and works are completed in advance of occupation. RMS will not consider granting concurrence to occupation until it is satisfied all documentation and works under the WAD have been completed.

- Authorisation to commence construction will only be granted when RMS is satisfied that all requirements under the WAD have been met by the developer, including RMS' fees and charges, an unconditional bank guarantee for the full value of the works, detailed design documentation, environmental assessment, road occupancy license, among other matters. RMS will issue a letter to the developer advising of this authorisation.

- Any property acquisition / dedication required to accommodate the State road works / traffic control signals associated with the proposed development shall be at full cost to the developer, including all legal and survey costs. This land shall be dedicated by the developer as public road reserve in favour of the Council, as the owner.

- Part of the developers' timeline should make provision for RMS to satisfy its obligations under the *Environmental Planning and Assessment Act 1979* (EP&A Act) to assess the environmental impacts of the works within the road reserve. Further investigation and assessment to that undertaken for the development consent may be required to the satisfaction of RMS, under Part 5 of the EP&A Act.

- It is recommended that the developer use design consultants with the experience and knowledge of RMS' design requirements, in particular the Austroads *Guide to Road Design 2009* (with RMS supplements) and relevant Australian Standards.

- A factsheet providing further information on the WAD process can be obtained from the RMS Private Developments Website at:

  http://www.rta.nsw.gov.au/roadprojects/community_environment/private_developments.html

- Construction on a State road and / or traffic control signals requires the engagement of an RMS pre-qualified contractor. A list of pre-qualified contractors can be found on the RMS website below.

  http://www.rta.nsw.gov.au/doingbusinesswithus/tenderscontracts/prequalifiedcontractors.html

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WYONG SHIRE COUNCIL

13th May 2013

To whom it may concern,

Proposed Development at Carters Road, Lake Munmorah - Development Application No. DA 942/2012

I refer to site master plan Project No. DBB 2301 Drawing No. A001 Issue G which has been provided to Ausgrid for comment on the development and consent to development within Ausgrid's transmission easement.

Purpose of easement

The purpose of the easement is to enable construction and then protect electricity assets and to provide adequate working space along the route of the assets for future construction and maintenance work. The easement is also to ensure that no work or activity is undertaken near to the electricity assets which could either by accident or otherwise create an unsafe situation for persons or reduce the security of the electricity network.

Encroachment over easement site

No building or any other structure may be constructed on the easement site without Ausgrid's consent.

Ausgrid has carried out a study of the proposed development in relation to potential hazards as a result of induced and transferred voltages from the adjacent Ausgrid infrastructure under normal operating and fault conditions. Analysis indicates mitigation will be required.

Ausgrid consents to the proposed development within and nearby Ausgrid's Transmission easement subject to application of hazard mitigation specified in the attached report (NET13-022-001). In addition to the requirements of the attached report Ausgrid wishes to comment on the proposed easement encroachment as follows:

1. Ausgrid is to be indemnified from and against all actions, suits, claims and demands of whatsoever nature, which Ausgrid may incur as a result of the encroachment.
2. The acceptance by Ausgrid of the encroachment within the easement does not in any way limit Ausgrid's legal rights to utilise the easement within the current terms of the easement for lot 499 DP755266.
3. The proposed car park must be capable of supporting the size and weight of Ausgrid plant and machinery expected to infrequently traffic this route (approx. 25 tons).
4. Ausgrid structures are to be adequately protected from accidental damage from any private vehicles, plant or equipment that may be operated within the easement.
5. No obstructions are to be placed within 5m of any power poles, equipment or support wire.
6. The existing ground levels should be maintained. The overhead powerline has been designed to achieve a statutory clearance for the conductors over the ground and this clearance shall not be reduced without further consultation with Ausgrid.

7. The planting of trees and shrubs is allowed within the easement area providing they are of a species which will not grow to a height exceeding 4 metres and do not restrict access along the easement.
8. Clearances detailed in Work Cover Code of Practice 'Working near Overhead Powerlines' should be maintained during any construction work and future maintenance.

For further clarification on any of the above mentioned points please contact Jordan Holliday on (02) 4399 8104.

Regards,

Jordan Holliday

Engineering Officer
Customer Supply Planning and Reliability-Central Coast

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NET13-022-0001
Proposed Secondary High School
48-54 Carter Rd, Lake Munmorah
Adjacent to Ausgrid Feeders

Proposed Secondary High School 48-54 Carter Road, Munmorah Adjacent to Ausgrid Powerlines

April 2013

Ausgrid

Author: Mike Acton - Engineer
Network Earthing

Reviewed By: Cameron Shortland – Senior Engineer
Network Earthing

Document Number: NET13-022-001
May 2013

Revision	Revision Date	Details	Authorised	
			Name / Position	Signature
0	9/5/2013	Initial issue	Cameron Shortland Senior Engineer - Network Earthing	C. Shortland

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1. Executive Summary

Ausgrid has been notified of the proposed development of an Educational Establishment for Catholic Secondary High School at 48-54 Carters Road, Lake Munmorah. The Network Earthing section of Ausgrid has been asked to assess the electrical earthing safety compliance of proposed school with regards to induced and transferred voltages from Ausgrid assets under normal operating and fault conditions. Analysis indicates that mitigation will be required if conductive infrastructure, such as fences, are built within the separation distances specified in this report or are continuous for more than 100m.

2. Site Location

The proposed location of the Catholic Secondary High School is 48-54 Carters Road, Lake Munmorah which is shown below in Figure 1. Along the proposed north western boundary is an Ausgrid easement with a 132kV and 11kV overhead power lines. There are several concrete poles which the proposed fence will be built near to. Overhead low voltage and 11kV services exist along Carters Road.

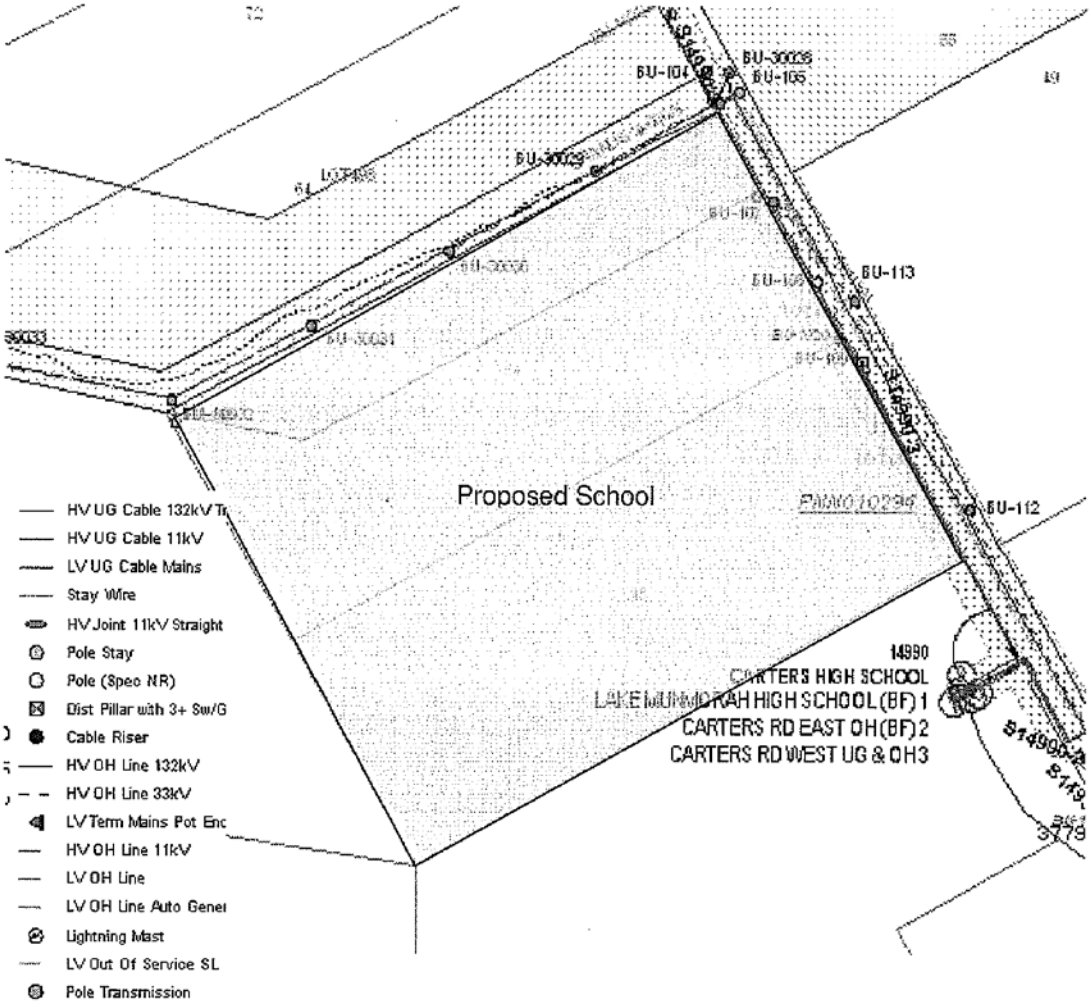

Figure 1: Site Location

3. Electrical Shock Hazards

Electric shocks may occur when people are exposed to a voltage across any part of their body. Faults can occur on electrical power lines for a number of reasons such as when lightning strikes the line, if an insulator should break down, or in rare cases, where a conductor drops to the ground. When a fault occurs, part of the electrical current flows through the ground along the easement, and this can in certain situations cause voltages to occur in the ground for a short period of time until the fault is cleared by protection devices (e.g. circuit breakers) at the substations. This phenomenon is known as an earth potential rise or EPR.

A fault can occur at any time, but are more likely during severe weather such as during strong winds, thunderstorms, or bushfires. The closer a metallic object such as a fence, water pipe, or low voltage equipment is to a tower or pole, the greater the risk, since the electrical current normally enters the ground at these locations.

The flow of electrical current in a conductor and the associated electromagnetic waveform that radiates out from the conductor will induce a voltage in the surrounding conductive structures. This phenomenon is known as Low Frequency Induction or LFI. The following description of LFI is taken from AS/NZS 4853:2012 Electrical Hazards on Metallic Pipelines, and may be more generally applied to any long metallic structure located nearby electrical powerlines.

Alternating current on a high voltage power line can induce a voltage on an adjacent pipeline. This induction results in a voltage over the exposure length due to the electromagnetic field from the current. The induction is caused by the alternating magnetic field intersecting the pipeline, causing the pipeline to act as the secondary of an air core transformer. The voltage is proportional to the length exposed to the magnetic field. The effect applies to both buried and above ground pipelines.

3.1. Safety Criteria

For a given current path through the human body, the hazard to persons depends mainly on the magnitude, duration and path of the current flow, as well as presence of any series resistance (e.g. footwear). AS/NZS 60479:2002 Effects of Current on Human Beings and Livestock establishes the electrical safety requirements for Australia and is a reproduction of an International Standard IEC 60479.

The performance of the earthing system of the electrical power line will be assessed to comply with guidelines and standards AS/NZ 7000 (ENA EG-0), AS/NZ 3835, AS/NZ 4853, ENA EG-1 and AS/NZ 1768 as applicable for the primary clearing time.

3.1.1. Soil Resistance

The soil resistivity in the area surrounding the proposed school has been characterised by number of soil resistance tests performed by Network Earthing, Ausgrid, over the previous six years. The results of some of these tests are shown in Figure 2.

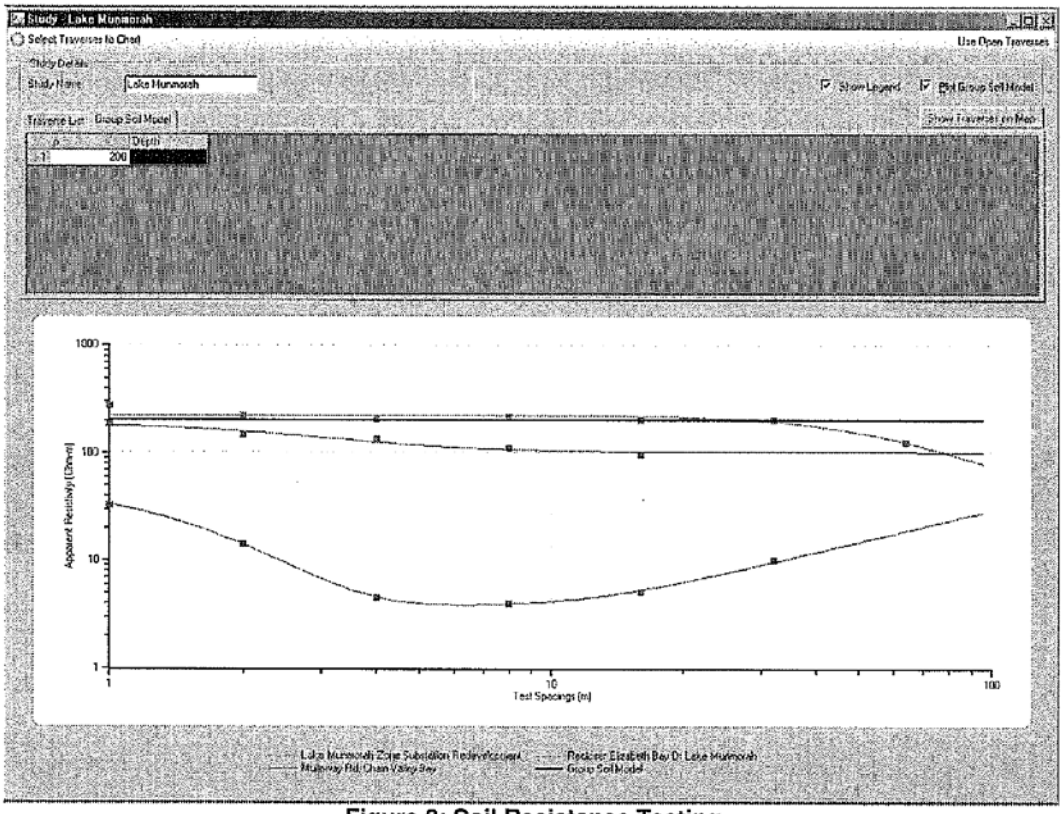

Figure 2: Soil Resistance Testing

From this data a conservative average soil model of 200Ω.m has been chosen. For wet soil the surface layer resistivity is expected to drop to half this value. Therefore safety criteria have been chosen assuming a surface impedance of 100Ω.m.

3.1.2. Normal operating conditions

At normal operating currents, LFI will cause an induced voltage in parallel conductive infrastructure adjacent to power lines.

The magnitude of the inducted voltage is dependent on both the magnitude of the load current as well as the relative distances between each of the phases and the exposed infrastructure. Since the high voltage power line load current can be considered predominantly as a balanced set of currents in the three-phases, in which case their vector sum is zero, the LFI at design load conditions is always much less than the LFI during fault conditions.

The allowable touch voltage limit for continuous voltage is 50Vac.

3.1.3. Fault conditions

AS/NZ 7000:2010 Overhead Line Design Section 10.5 (in conjunction with the ENA EG-0:2010 Power System Earthing Guide – Part 1) recommends using a probabilistic risk based approach to calculate the tolerable voltage criteria during earth faults.

The Argon safety assessment tool is the companion software to ENA EG-0 and is available from the SAI Global website. It is used for the calculation of the tolerable voltage for a given fault duration and frequency and contact duration and frequency. Figure 3 has the relevant information for Ausgrid's electrical assets near proposed school.

Voltage	Fault Current (Amps)	Fault Frequency (per year)	Fault Duration (seconds)	Soil Resistance (ohm.m)
132kV	10,000	0.1	0.2	100
11kV	3,000	2	0.7	100

Figure 3: Feeder Information

Figure 4 and Figure 5 show the Argon assessment for the 132kV and 11kV fault scenarios for Lake Munmorah ZS for TDMEN contact scenario. Typically metal infrastructure under the influence of power system assets is assessed against the TDB assessment criterion that assumes fewer and shorter contacts. However it is assumed that school children will have a contact profile to metal fences more in line with that specified by the TDMEN criteria, hence the tolerable voltages have been calculated using this. As discussed above a conservative lower soil resistivity than the group model was chosen for the calculation of the tolerable voltage criteria to account for wet conditions. This has the effect of reducing the serial impedance in the shock circuit and hence reduces the tolerable voltage.

The tolerable voltage limits chosen for the different contact scenarios is given in Figure 6.

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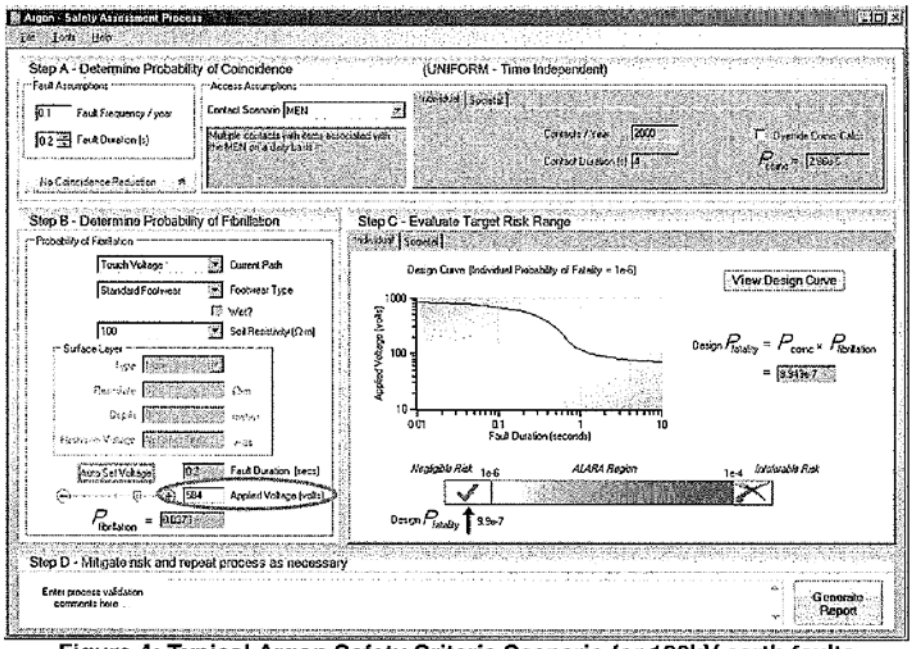

Figure 4: Typical Argon Safety Criteria Scenario for 132kV earth faults

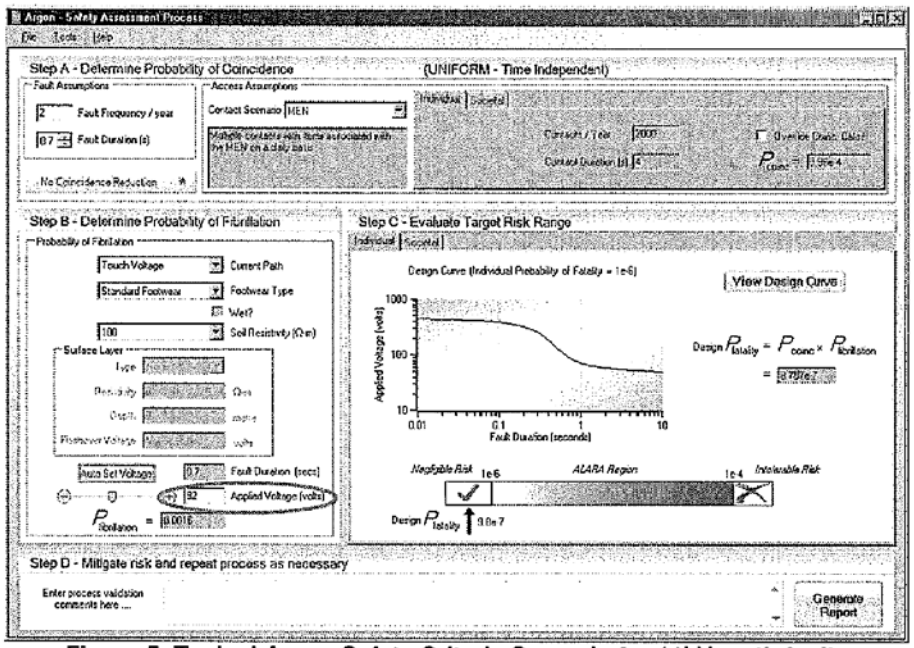

Figure 5: Typical Argon Safety Criteria Scenario for 11kV earth faults

Items	Relevant Guideline or Standard	Category		Clearing Time / type of hazards	Allowable Voltage (V)
Conductive objects under the influence of power system assets	AS7000 (ENA EG-0)	Contact with MEN connected metal work (around house) where MEN or soil is affected by transmission assets.		TDMEN - 100Ω.m 0.2 sec	584
		Contact with MEN connected metal work (around house) where MEN or soil is affected by distribution assets.		TDMEN - 100Ω.m 0.7 sec	92
Pipelines and ancillaries	AS4853	Public	Regulator metallic pit lids	Step	≤1700
			Scour or air valve	Touch	≤120
			Air valve in playgrounds, sporting fields etc	Touch	≤50
		Pipeline operators	Gas valve operation	Touch	≤70
			Water valve operation	Touch	≤58
			CP test point inspection	Touch	≤75
		Construction workers	New gas pipeline	Touch	≤110
			Tee-off from long exposed pipe	Touch	≤110
		Maintenance workers	Leak repair on water pipe	Touch	≤95
			Leak repair on gas pipe	Touch	No voltage limit
Telecommunications assets (conductive & inductive hazards)	AS3835	Category A: 132kV feeder HV line structure > 100kV, ≤ 200kV with continuous earthwire		Any	1000
		Category C: 11kV feeder HV line structure ≤ 100kV		Any	430

Figure 6: Safety Criteria

3.2. Determination of Hazardous Voltages

3.2.1. Normal operation LFI

Following the LFI example from Appendix B of the Pipeline Standard AS/NZ 4853:2012, the induced voltage during peak loading conditions has been calculated to be 5V for an insulated wire for the entire 300m boundary length. This is well below the continuous tolerable voltage limit of 50V.

3.2.2. 132kV Fault Scenario LFI

Inducted voltages on the proposed boundary fence will occur during an earth fault on the 132kV network supplying Lake Munmorah ZS. The Pipeline Standard AS/NZ 4853:2012 provides a conservative method to calculate the inducted voltage. This method is for a parallel conductor insulated from ground. This is shown below in Figure 7.

The induced voltage for the exposure will be derived from—

$$E = C \times I \times L \times k \quad \ldots C9$$

where

E = the pipeline induced voltage (V)

C = the coupling factor (from the chart in Figure C3)

I = the fault current (from the current profile in Figure 4.2)

L = the length, in km, of the exposure.

k = shielding factor.

Figure 7: Induced Voltage Formula from the Pipeline Standard

The average separation distance between the feeder and the infrastructure has been chosen to be 15m for this scenario. Fault currents have been taken from Figure 3.

The group soil resistance from Figure 2 will be used for the calculation of the LFI.

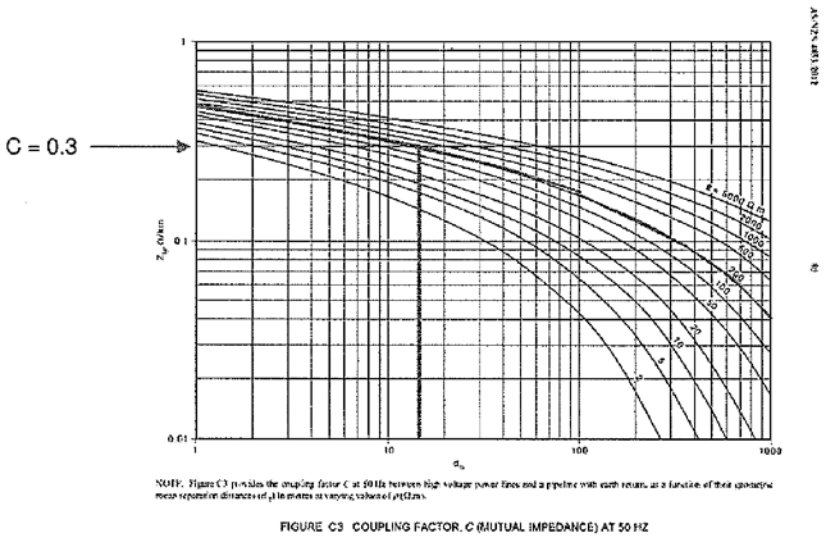

FIGURE C3 COUPLING FACTOR, C (MUTUAL IMPEDANCE) AT 50 HZ

Figure 8: Coupling Factor, C at 50 HZ from the Pipeline Standard

The coupling factor between the OHEW/ECC and the phase conductors for 95T was measured to be over 40%. The shielding factor is equal to 1 – coupling factor.

The induced voltage in the fence can be calculated using equation C9 from the Pipeline Standard:

C = 0.3 Ω/km (from figure 8)
I = 10,000A
L = 0.3km (length of fence)
k = 1 – 0.4

E = 0.3 x 10,000 x 0.3 x (1 - 0.4)
= 540V

This conservative estimate is below the tolerable voltage criteria calculated in Section 2 for conductive objects under the influence of power system assets (i.e. metal fences), but exceeds those set for Pipelines and ancillaries. Refer to Section 4 for mitigation options. Infrastructure such as metal fences typically have earthed footings approximately every 3-5metres which will have the effect of reducing the calculated induced voltage from that of the case of an insulated conductor as given above.

3.2.3. 11kV Fault Scenario LFI

The 11kV fault scenario case can be analysed in the same manner as Section 3.2.2. The 11kV feeder along the easement will have some shielding from the 132kV OHEW and the feeder along Carters Rd will receive some shielding from the LV neutral. A conservation

coupling factor of 10% will be used. The induced voltage in the fence can be calculated from Equation C9 from the Pipeline Standard:

E = 0.3 x 3,000 x 0.3 x (1 - 0.1)
= 243V

This conservative estimate is above the tolerable voltage criteria calculated in Section 2. The options to limit the voltage rise of the conductive infrastructure include increasing the separation distance between infrastructure and the powerline and/or reducing the exposure length. More detailed modelling of the assets would provide more accurate induced voltages.

As the calculated induced voltage is approximately three times the tolerable voltage, the coupling factor from Figure 7 would have to be reduced by three, resulting in a separation distance of 300m.

A more feasible option would be to reduce the exposure length by three. This mitigation method would require a fence isolation section to be installed every 100m. Refer to Section 4 for more details on fence isolation sections.

3.2.4. 132kV Fault Scenario EPR

Transmission earthing modelling software TDS was used to simulate the worst case 132kV fault scenarios along the transmission feeders. The model was fine tuned using test results from the recent injection tests on both 95T and 97E as part of the commissioning test for the new Lake Munmorah Zone Substation. The highest measured EPRs of the concrete poles were measured to be between 1,000-1,300V.

The simulation results indicated that the worst case was for an earth fault to a concrete pole, resulting in an EPR at the poles close to the proposed school of approximately 2,800V. This however, this is a very unlikely event.

In order to ensure that the transferred voltage from an EPR at a concrete pole to any surrounding metallic infrastructure via the soil does not exceed the tolerable voltages from Section 3.1 it is recommended that a minimum separation distance of 12m between the assets be maintained. If this can not be achieved, additional mitigation requirements must be implemented, as discussed in Section 4

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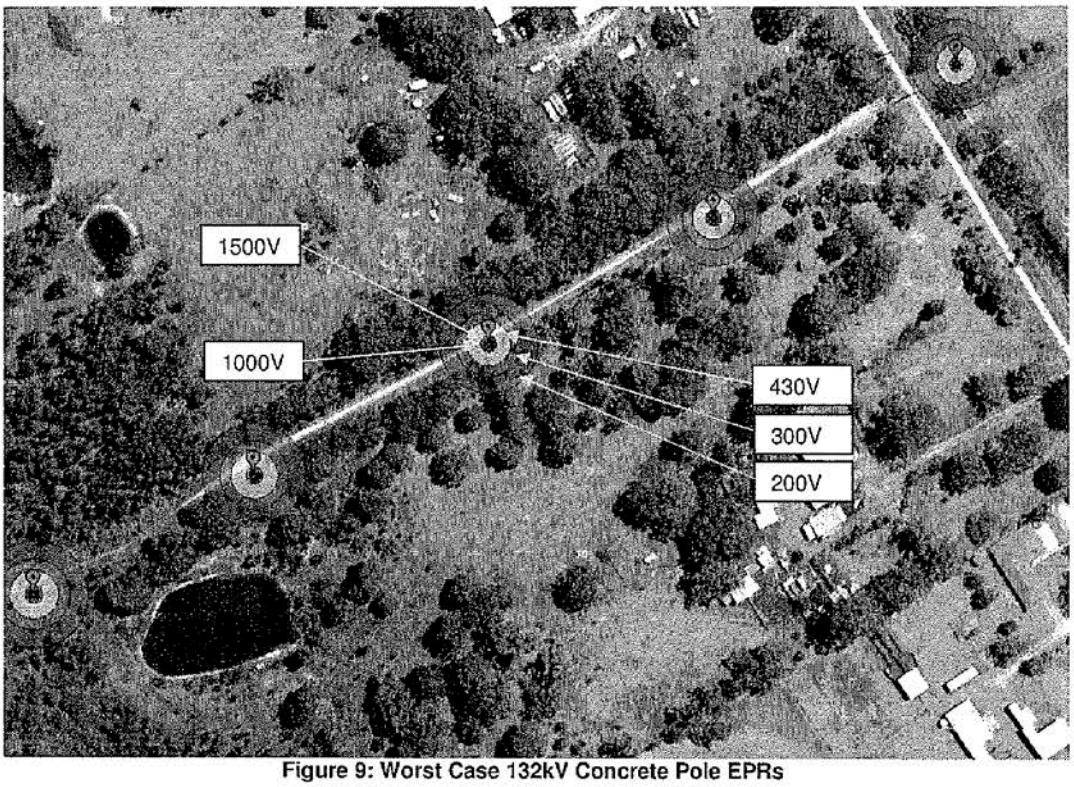

Figure 9: Worst Case 132kV Concrete Pole EPRs

3.2.5. 11kV Fault Scenario EPR

Distribution earthing modelling software NEOn was used to simulate a number of 11kV fault scenarios which could create a hazard to the proposed school infrastructure. Analysis indicated that the fault current returning from a fault at the 11kV UGOH in the easement or at 11kV equipment downstream of the proposed school was very unlikely to create a hazard due to the solid bonded 11kV cable sheaths and the interconnection to the 132kV OHEW.

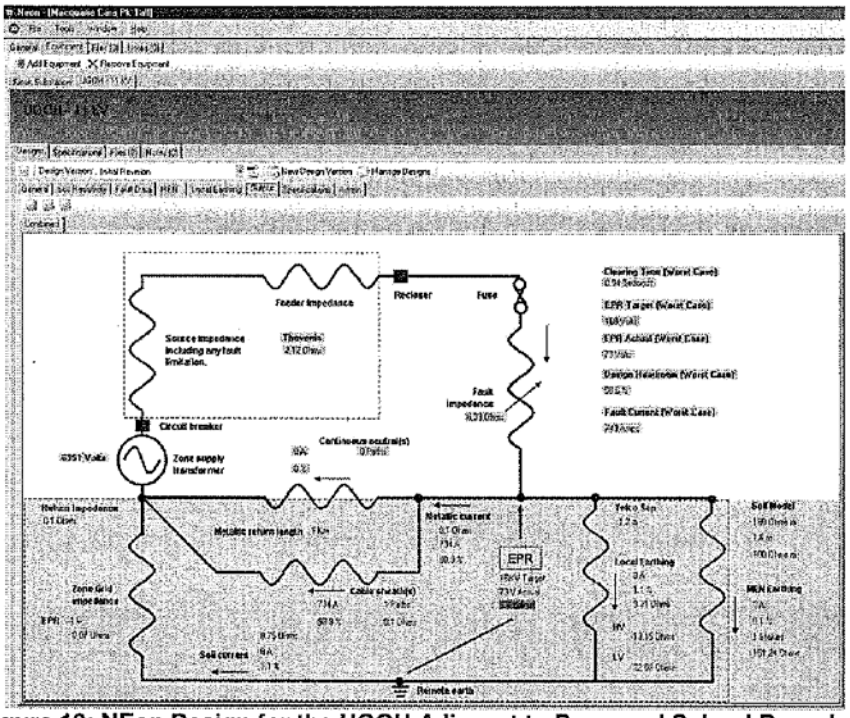

Figure 10: NEon Design for the UGOH Adjacent to Proposed School Boundary

4. Mitigation Options

To ensure that the induced voltages in conductive infrastructures do not exceed the tolerable voltages, the maximum continuous length of exposure must be not exceed 100m. Additionally to prevent the transferred voltage from a concrete 132kV pole to any surrounding metallic infrastructure via the soil exceeding the tolerable voltage criteria, it is recommended that a minimum separation distance of 12m be maintained between the existing concrete poles and any proposed metallic structures such as fences, gates, water pipes, telecommunication hardware & taps and any LV services.

It is recommended that conductive infrastructure with a high contact rate, such as gates, be isolated from long sections of conductive fencing with timber separators such as that shown in detail EB7 in Figure 13.

In summary, the following separation distances shall be maintained between the concrete poles and other third party assets:

Third Party Assets	Required Separation Distance (m)
MEN-connected metalwork / metallic school fencing	12
Telecommunications	8

Figure 11: Required Separation Distances

If the required separation distance cannot be maintained between the poles and any metallic structures, then it is necessary to implement the following mitigation measures.

- The metallic fences within 12m of the concrete poles shall have timber isolation sections installed every three (3) metres. Refer to attachment drawing number 127869 in Figure 13.
- The fence shall not be bonded to the MEN or connected to any other metalwork which is in contact with the MEN such as lighting circuits.
- Any taps or other metallic objects within 2m of the fence along the easement must have an isolating (PVC) section of at least 3m installed.
- No LV electrical wiring or appliances within 2m of the easement fence.
- No telecommunications pits or pillars within 8m of the concrete poles.
- Timber isolating sections separating gates from long metallic lengths of fence

Possible locations of the isolation sections are shown in Figure 12.

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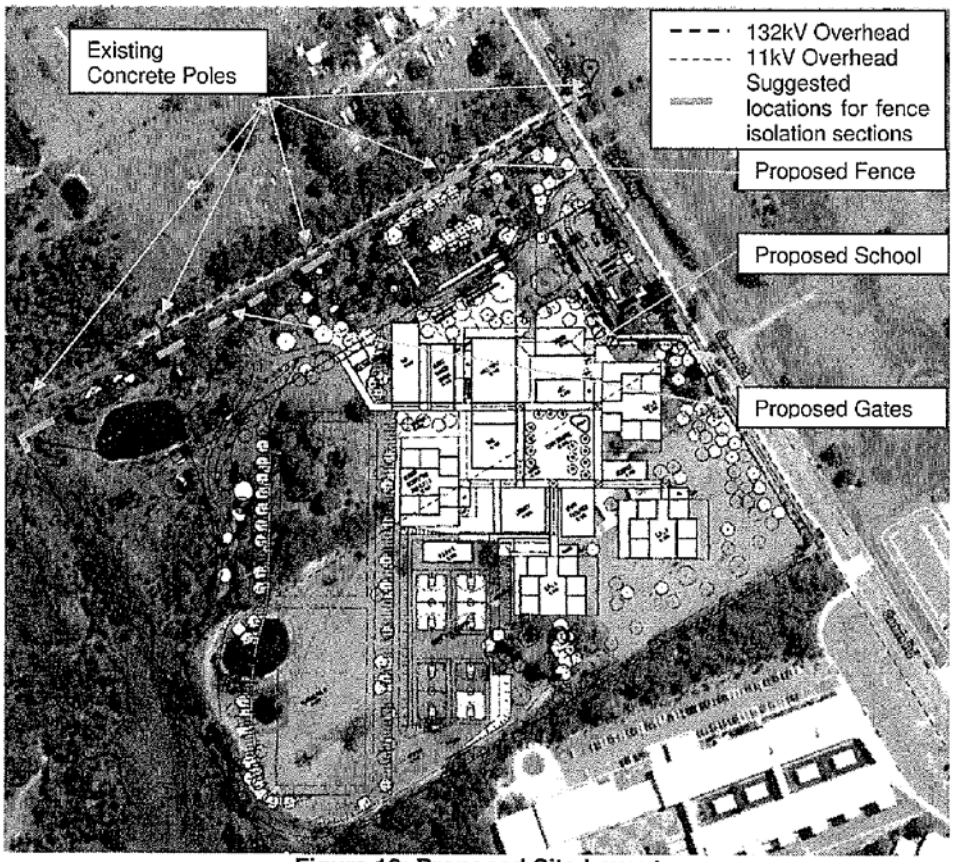

Figure 12: Proposed Site Layout

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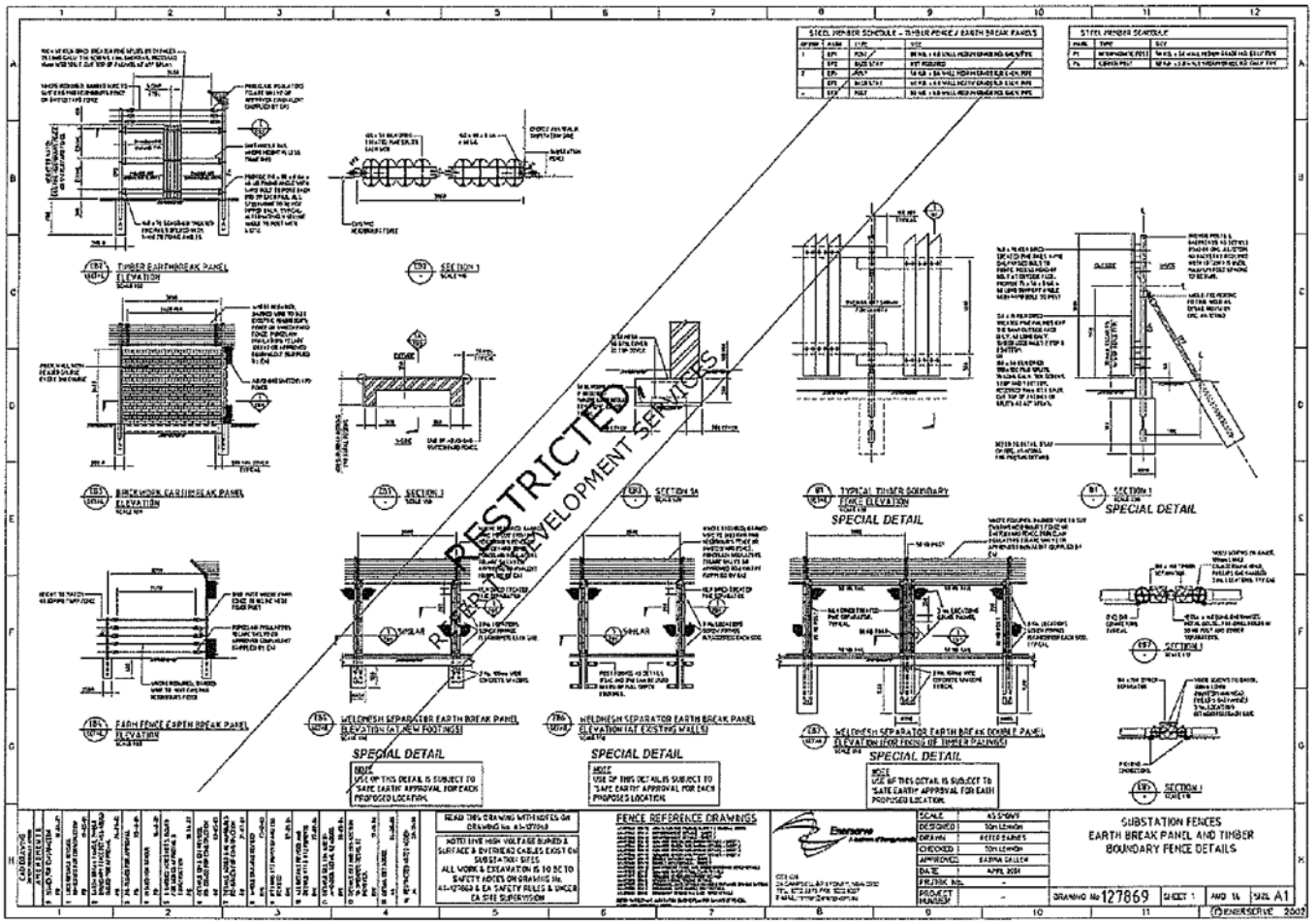

Figure 13: Example Earth Break Panel Fence Drawing

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5. Conclusion

The analysis presented in this report identifies that there is a risk of electric shock if conductive infrastructure is installed nearby the Ausgrid concrete poles. Mitigation will be required if conductive infrastructure is to be installed within the separation distances specified in Figure 11. Mitigation will also be required if a continuous section of conductive infrastructure such as a fence is to be longer than 100m.