

Preferred Project Report

MP 10/0205

Property:

Kanangra Drive Gwandalan
Lot 3 DP 588206

Applicant:

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1.0 introduction

Lot 3 DP 588206 is 26 hectares of land identified for residential development under both local and regional strategies. Some 16 ha of this site has been zoned under SEPP (Major Development) for low density residential development.

A major project application, MP 10-0205 for subdivision of the site was lodged in December 2010 and exhibited over December 2010, January 2011 and February 2011.

A range of submissions have been made on the project and a range of issues requiring more detail identified via assessment by NSW Department of Planning (DoP).

This Preferred Project Report (PPR):

addresses the issues raised in public submissions;

addresses the issues raised in agency submissions; and

provides further information on key issues identified by DoP.

Appendices to the PPR are:

- A Updated Statement of Commitments
- B Updated bushfire hazard assessment
- C Revised Draft DCP
- D Tree Retention Plan
- E Updated subdivision plan
- F Updated landscape plans
- G Response to public submissions
- H Response to agency submissions

2.0 key issues

This section of the PPR addresses the key issues identified by DoP in correspondence dated 11 February 2011.

2.1 Subdivision design

DoP has sought confirmation of the staging, identified in the site DCP and project Environmental Assessment (EA).

The first development stage will be site clearing and earth works over the whole site.

Following earthworks the construction staging as identified in the DCP will proceed. It may be that stages will be constructed concurrently.

2.2 Ecology

The areas to be cleared can be ascertained from the engineering bulk earth works plan, located as an appendix to the project EA.

A plan showing areas where trees are to be retained and areas where trees will be retained if possible has been included in the engineering concept plans, see Appendix D of this report.

The intended tree retention will require detailed survey and may require further design work. This may mean that there will be changes to the bulk earth works and engineering designs shown in the engineering concept plans.

2.3 Bushland reserve adjoining the State Conservation Area.

This is not intended to be a reserve in its own right but part of the road reserve which will provide an undeveloped buffer to the State Conservation Area (SCA). The area will be dedicated to Council.

2.4 Street parking

All roads in the subdivision have been designed to Wyong Council standards. The road standards incorporate parking requirements so the parking provision along the roads is thus likely to provide for local circumstances.

2.5 Landscape management plan

A landscape concept plan was provided with the Project Application, see Appendix F. Detailed landscape plans will be completed as part of the Construction Certificate(s). An updated landscape master plan plus plans showing the two park areas have been included in the appendices.

2.6 Boundary fencing

The requirements for Kanangra Drive fencing are detailed in the draft DCP, see Appendix C. The requirement for fencing will be front fences similar to the remainder of the subdivision noting that no vehicular access will be permitted from Kanangra Drive.

The school fencing is detailed in the landscape plan, see Appendix F. This is likely to be the visually permeable fencing now found on most school boundaries. The landscape master plan provides for school fencing in agreement with the school.

2.7 Access to existing dwelling on lot 3

The subdivision plans, Appendix E, have been modified to show the location of two points of access to the dwelling off Road 6. The access is also shown on the landscape plans. The access points will be subject to final design and location on construction certificate plans.

2.8 Contamination

The fuel tanks located on lot 3 are not within in the subdivision area covered by the project application. The fuel tanks are located near the existing maintenance sheds associated with the foreshore dwelling.



Location of fuel tanks (outlined in red).

2.9 draft Development Control Plan

The DoP key issues letter has requested that the draft DCP be modified to focus on built form controls.

The draft DCP has been amended by insertion of a significant range of built form controls derived from SEPP (Exempt and Complying Development Codes). The DCP provides for single dwelling residential

development on lots created by subdivision. Should other types of development be proposed or further subdivision of lots then the relevant controls contained in Wyong DCP will apply, see Appendix C of this report for an updated draft of the DCP.

2.10 Statement of commitments

A revised Statement of Commitments is provided as Appendix A of this report.

3 Submissions

The number of submissions received from the public generally, was less than twenty (20). Some of the submissions were in support of the proposal.

A table addressing the public submissions is provided as Appendix E of this report. The submissions reflect local concerns such as Kanangra Drive and access to the lake fore shore and concerns about the impact of the subdivision.

Agency submissions reflect broader NSW policy settings and objectives and while providing a framework for proposal design and assessment, they do not always reflect specific site or proposal circumstances. Local design controls do not always align with broader policy objectives. In the specific case of Gwandalan the proposal is required to address the Part 3A Director Generals Requirements (DGRs) which include the Independent Hearing and Assessment Panel (IHAP) principles for the site. The IHAP principles have led directly to the proposed subdivision layout with Wyong Council road standards and Planning for Bushfire Protection having had specific technical influence on the detail of the design. As such the proposal represents an acceptable policy outcome. The response to agency submissions is provided as Appendix F of this report. The only potentially substantial issues raised were by the Rural Fire Service. An updated Bushfire Hazard Assessment has been provided at Appendix B, the subdivision has been designed consistent with this document.

Rural Fire Service Submission

The Rural Fire Service (RFS) submission identified what could have been a potentially significant flaw in the design. The source of this was an error in the Bushfire Threat Assessment which has been corrected. An updated version of the assessment is provided at Appendix B of this report.

One issue for the RFS was the classification of vegetation to the north of the site. This issue has been re-examined and it is agreed that the RFS classification of the vegetation as Forest, is correct. The subdivision has been designed to provide APZs for Forest vegetation. The minimum APZ of 25 metres required for Forest with 0-5 degree slope has been provided. The updated bushfire report is consistent with the RFS Forest classification

The RFS submission also identified the slope to the north of the site as 5-10 degrees downslope. This has been rechecked and, consistent with previous RFS assessments of the site, the slope has been confirmed at 0-5 degrees down slope. The slope is close to 5 degrees but is within the range of 0-5 degrees.

The RFS also questioned the 6 metre width of the “road” on the northern boundary. While this is identified as a road on the subdivision plan it will both be a public pathway and a paved and gated fire trail located on a road reserve. The 6 metre width complies with Planning for Bushfire Protection.

The subdivision proposal complies with Planning for Bushfire Protection 2006.

4 Conclusion

The proposal is required to comply with the DGRs which include the IHAP principles developed specifically for the site.

The subdivision layout developed in response to the IHAP guidelines has been reproduced in the current proposal. Key planning principles for the Gwandalan site were recommended by the IHAP in April 2007 for the site, but after further consideration the Panel deleted the foreshore section of the site from consideration.

Accordingly only the area now zoned under SEPP (Major Development) can proceed to subdivision.

The relevant IHAP principles are:

“take account of the sites environmental and ecological attributes including (but not limited to):

- *existing water courses and drainage;*
- *integration with surrounding areas;*
- *location and retention of significant trees;*
- *occurrence of any endangered species;*
- *proper road design and layout; and*
- *the provision of public access to the water front.*

The only one of the principles not addressed directly is the provision of public access to the waterfront but this is because of site zonings. Access to the lake foreshore will not be available through the residue lot left by the subdivision proposal. However adequate access to the lake foreshore will be available generally through the road network.

Following consideration of the public submissions, the agency submissions and DoP assessment comments, additional information and updated plans addressing the relevant issues are provided as part of this Preferred Project Report.

The subdivision layout arising from IHAP site planning principles has been retained. The merits of the proposal are not in doubt as a result of the submissions received.

Appendix A

Statement of Commitments

PART A - GENERAL

A1. Development Control

The Proponent commits to a set of design guidelines set out in the Draft Development Control Plan. Future development is to comply with the approved DCP.

Responsibility – Proponent and Department of Planning

A2. Dedications

A plan of subdivision providing for dedication of the environmental offset lands has been previously approved and the subject land transferred to DECC.

Note

A3. Bushfire Management

Bushfire hazard will be managed consistent with Planning for Bushfire Protection Guidelines by:

- Use of fire trails.
- Installation of hydrants as appropriate APZ's implemented as required.

Asset Protection Zones managed as follows:

- On Torrens Title subdivision lots by incorporating the APZ into the individual lots with positive covenants applying management requirements;

Responsibility – Proponent and Occupants

A4. Land Contamination Investigation

To ensure the site is suitable for residential purposes additional assessment will be carried out as required. Site audits will be carried out as necessary to certify the suitability of the site for the proposed uses and according to SEPP55 Guidelines.

Responsibility – Proponent

A5. Community Consultation

A detailed programme for future community consultation will be formalised by the proponent and agreed by the Department, within three months after the determination date of the Project Application to the satisfaction of the Department.

Responsibility – Proponent

A6. Utilities

Utilities will be provided as follows:

- Provision of water and sewer services by Wyong Council;
- Collection of stormwater for open space irrigation
- Carefully managed and treated stormwater discharges.

Responsibility – Proponent and Wyong Council

A7. Traffic Management

The Proponent commits to negotiate with the bus operators and Transport NSW to discuss potential to expand the bus service into the site.

Responsibility – Proponent

A8. Submission of Subsequent Applications

Subsequent project applications for the development of the subject site will be in accordance with the approved Design Control Plan(DCP).

Responsibility – Future Applicant

A9. Developer Contributions

The Proponent will pay contributions in accordance with the Wyong Council Section 94 Plan for Northern Districts Catchment E. The total monetary contribution will be made up of dedication, monetary contribution and Works in Kind or any combination of them.

The Proponent will enter into a Deed of Agreement with Wyong Council.

Responsibility – Proponent/Department of Planning

A10. Regional Infrastructure

The Proponent proposes to make a monetary contribution or Works in Kind for the provision of regional infrastructure as determined by the state government generally in accordance with the principles set out in the Infrastructure Contributions Plan Circular PS08-017, 23rd December 2008. The Proponent has agreed to enter into a Voluntary Planning Agreement with the Minister which is currently on exhibition.

Responsibility – Proponent/Department of Planning

A11. Council Dedications and Titling Arrangements

The following items are to be dedicated to the local Council at no cost to the Council:

- All roads within the development.
- Main Reserve on the south east corner of the site
- Pocket Park at the northern central part of the site.

All other land is to be Torrens Title freehold land.

Responsibility – Proponent/Department of Planning

PART B—PRIOR TO ISSUE OF CONSTRUCTION CERTIFICATE

Design Details and Changes

B1. Landscaping and Bushfire Management

Detailed landscape plans are to be submitted to the Certifying Authority prior to the issue of a Construction Certificate. The landscape plans are to be generally in accordance with the approved plans. The plans are to show compliance with Planning for Bushfire Protection requirements for asset protection zones.

B2. Flora and Fauna Environmental Management

A Flora and Fauna Environmental Management Plan shall be submitted to the Certifying Authority in accordance with the recommendations outlined in the Ecological Assessment Report No. 24619 dated September 2010 prepared by RPS. Details are to be submitted to the satisfaction of the Certifying Authority prior to the issue of the Construction Certificate.

B3. Bushfire Management

The final design of the subdivision is to take into account the recommendations made in the Bushfire Hazard Assessment Report Version A dated 17th November 2010. Details are to be submitted to the satisfaction of the Certifying Authority prior to the issue of the Construction Certificate.

B4. Geotechnical

Provide a geotechnical report confirming classification of soil and that the footing design complies with AS2870 taking into account the recommendations made in the Geotechnical Investigation Report No.3438-003/0 prepared by RCA and the Preliminary Environmental Site Assessment Report No.N4080801 prepared by HLA. Details are to be submitted to the satisfaction of the Certifying Authority prior to the issue of the Construction Certificate.

PART C — PRIOR TO COMMENCEMENT OF WORKS

C1. Notice to be Given Prior to Excavation

The PCA and Council shall be given written notice, at least 48 hours prior to the commencement of excavation works on the site.

C2. Traffic & Pedestrian Management Plan

Prior to the commencement of any works on the site, a Traffic and Pedestrian Management Plan prepared by a suitably qualified person shall be submitted to and approved by the Certifying Authority. The Plan shall address, but not be limited to, the following matters:

- (1) ingress and egress of vehicles to the site,
- (2) loading and unloading, including construction zones,
- (3) predicted traffic volumes, types and routes,
- (4) pedestrian and traffic management methods, and

The Applicant shall submit a copy of the approved plan to the Department.

C3. Noise and Vibration Management Plan

Prior to the commencement of any works on the site, a Noise and Vibration Management Plan prepared by a suitably qualified person shall be submitted to and approved by the Director. The Plan shall address, but not be limited to, the following matters:

- (1) Identification of the specific activities that will be carried out and associated noise sources,
- (2) Identification of all potentially affected sensitive receivers including residences, schools, and properties containing noise sensitive equipment,
- (3) The construction noise objective specified in the conditions of this consent,
- (4) The construction vibration criteria specified in the conditions of this consent,
- (5) Determination of appropriate noise and vibration objectives for each identified sensitive receiver,
- (6) Noise and vibration monitoring, reporting and response procedures,
- (7) Assessment of potential noise and vibration from the proposed construction activities including noise from construction vehicles and any traffic diversions,
- (8) Description of specific mitigation treatments, management methods and procedures that will be implemented to control noise and vibration during construction
- (9) Justification of any proposed activities outside the construction hours specified in the conditions of this consent.
- (10) Construction timetabling to minimise noise impacts including time and duration restrictions, respite periods, and frequency,
- (11) Procedures for notifying residents of construction activities that are likely to affect their amenity through noise and vibration,
- (12) Contingency plans to be implemented in the event of non-compliances and/or noise complaints,

The Applicant shall submit a copy of the approved plan to The Department.

C4. Construction Noise Objective

Approved silencing measures shall be provided and maintained on all power-operated plant used in demolition, excavation, earthworks, and construction of the building, or work.

C5. Aboriginal Heritage

Prepare a brief report which includes an updated search of the AHIMS register by DECCW and if required, updated mapping advice.

PART D — PRIOR TO SUBDIVISION CERTIFICATE

D1. Subdivision of Land

This consent allows for a 189 lot land subdivision plus 1 residual lot. A subdivision certificate for complying development may be issued by an accredited private certifier under Division 3 of Part 23 of the Conveyancing Act 1919.

D2. Registration of Easements

Prior to the issue of the relevant Occupation Certificate for subsequent project applications, the applicant shall provide to the PCA evidence that all easements required by this approval and subsequent project approvals, and other relevant consents have been or will be registered on the certificates of title.

Appendix B

Updated Bushfire Hazard Assessment

BUSHFIRE HAZARD ASSESSMENT

FOR

Gwandalan

AT

KANANGRA DRIVE, GWANDALAN

NSW

FOR

LAKESIDE LIVING PTY LTD

6 December 2010

Version A

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PREFACE

Readers of this report must be aware that the bushfire mitigation recommendations described in this report will not completely remove the risk of bushfire impacting the development site. Recommendations contained herein are designed to improve the bushfire related issues for the existing development. With regard to the application the implementation of recommendations in their entirety, together with the diligent maintenance of Asset Protection Zones, will provide for a reduction of the bushfire threat and the associated risk.

This report caters specifically for the requirements of this project and the Client. No warranty is intended or implied, or responsibility undertaken by Barry Eadie Consulting Pty Ltd for its use on any other project or by any third party.

This report does not include an environmental assessment, Aboriginal heritage assessment or identify endangered species in the area.

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1 EXECUTIVE SUMMARY

The requirements under '*Planning for Bushfire Protection*' (2006) are addressed under Bush Fire Protection Measures, which include:

- Asset Protection Zones (APZ).
- Access and Egress; Public Roads, Property Access and Fire Trails.
- Services; Water, electricity and gas.
- Construction requirements for Dwellings.

The bushfire measures proposed comply with the requirements of '*Planning for Bushfire Protection*' (2006) in all respects and in particular the Bush Fire Protection Measures. The available Asset Protection Zones will require a minimum BAL 12.5 construction in accordance with AS 3959-2009 for all residential dwellings within 100 metres of unmanaged vegetation.

The landscape areas and the Managed Bush Corridors of the proposed development will comply with the requirements for landscaping and Asset Protection Zones and therefore not contribute to any bushfire hazard.

2 INTRODUCTION

2.1 Report Purpose

This report assesses the capability of the existing sites to be developed for residential purposes in accordance with the legislative requirements of *'Planning for Bushfire Protection' (2006)*. The land is 18 ha at Gwandalan controlled by Lakeside Living Pty Ltd. The report will form part of the supporting documentation for Major Project Applications to be submitted to the Minister. A Bushfire Hazard Assessment has been undertaken to determine the necessary requirements for the development in accordance with:

- NSW Rural Fire Service, Planning NSW, *'Planning for Bushfire Protection' (2006)*; and
- AS 3959-2009: *Construction of Buildings in Bush Fire Prone Areas*.

Barry Eadie Consulting Pty Ltd has been engaged by Lakeside Living Pty Ltd to prepare the Bushfire Hazard Assessment report, to be used in support of the application.

3 BUSHFIRE LEGISLATION IN NSW

The *Environmental Planning and Assessment Act 1979* and the *Rural Fires Act 1997* were amended via the *Rural Fires and Environmental Assessment Legislation Amendment Act 2002*.

The amendments to the legislation are not retrospective and consequently will not usually apply to development applications which were made, but not necessarily finally determined, before 1 August 2002.

With regard to the *Environmental Planning and Assessment Act 1979*, the amendments:

- a) Require local government councils to record on maps land identified by the Commissioner of the NSW Rural Fire Service as bushfire prone land; and
- b) Prevent development consent being granted for the carrying out of development for certain purposes on bushfire prone land unless the consent authority is satisfied that the development conforms to certain documented bushfire protection specifications and requirements (*'Planning for Bushfire Protection' (2006)* and *AS 3959 – Construction of Buildings in Bushfire-Prone Areas*) or has consulted with the Commissioner;

'Planning for Bushfire Protection' (2006), defines bushfire prone areas as an area that can support a bushfire or is likely to be subject to bushfire attack. In general, a bushfire prone area is an area containing a high, medium or low bushfire hazard, or any area within 100 m of a high or medium bushfire hazard, or within 30 m of a low bushfire hazard. Bushfire hazard areas do not include existing urban areas or water bodies (other than wetland vegetation), and are identified by bushfire hazard mapping produced under an approved Bushfire Risk Management Plan, or other such map certified by the Commissioner of the NSW Rural Fire Service for this purpose.

4 SITE ASSESSMENT - GWANDALAN

NAME: Lakeside Living Pty Ltd

SITE ADDRESS: Lot 3 DP 588206
Kanangra Drive,
Gwandalan NSW 2259

COUNCIL: Wyong Shire Council

TYPE of DEVELOPMENT: Subdivision.

Barry Eadie conducted inspections of the site at Gwandalan and the surrounding area on 8 June 2007 and 31 August 2010. The following assessment has been undertaken in accordance with the requirements of '*Planning for Bushfire Protection*' (2006). The proposal is for approval of the residential subdivision at Gwandalan.

4.1 Location

The site is 18 ha on the eastern side of Kanangra Drive, Gwandalan. Gwandalan Primary School is to the South, a reserve to the North, Lake Macquarie to the East and Kanangra Drive to the West.

4.2 Vegetation

The vegetation has been assessed over a distance of 140 m from the existing bush vegetation both on and off site in all directions in accordance with Figure A2.1 of '*Planning for Bushfire Protection*' (2006).

The vegetation that impacts upon the site is:

North: Open Forest

North-east: Woodland

North-west: Forest

South: Gwandalan Primary School

East: Existing residential development and Lake Macquarie.

West: Kanangra Drive then Low Forest beyond the roads reserve.

4.3 Slope

Based on the site inspection, the slope of the land over a distance of 100 m from the indicative building lines in all directions has been assessed. In accordance with '*Planning for Bushfire Protection*' (2006), the slope has been assessed based on the gradient that will most significantly influence the fire behaviour of the site.

The only vegetation that impacts upon the site is to the North, North-east, North-west and West, the slopes are as follows:

North: Open Forest 5⁰ Upslope
 North-east: Woodland up-slope
 North-west: Forest 5⁰ Downslope
 West: Low Forest 5⁰ Downslope beyond Kanangra Drive road reserve.

4.4 Asset Protection Zone

The Asset Protection Zone (APZ) acts as a buffer zone between the development and the hazard. The primary purpose of an APZ is to ensure that a progressive reduction of bushfire fuels occurs between the bushfire hazard and any habitable structures. The APZ consists of an Inner Protection Area (IPA) and an Outer Protection Area (OPA).

North: Open Forest 5⁰ Upslope APZ 20m
 North-east: Woodland up-slope APZ 10m
 North-west: Forest 5⁰ Downslope APZ 25m
 West: Low Forest 5⁰ Downslope beyond Kanangra Drive road reserve. APZ 25m

ASPECT	VEGETATION	SLOPE	Minimum APZ required	APZ Reqd for BAL 40	APZ Reqd for BAL 29	APZ Reqd for BAL 19	APZ Reqd for BAL 12.5
North	Forest	Up-slope	20m	19m	25m	35m	48m
North-east	Woodland	Up-slope	10m	12m	16m	24m	33m
North-west	Forest	5 ⁰ Downslope	25m	24m	32m	43m	57m
South	Existing school	N/A	N/A	N/A	N/A	N/A	N/A
East	Existing residential Development	N/A	N/A	N/A	N/A	N/A	N/A
West	Kanangra Drive then Forest	5 ⁰ Downslope	25m	24m	32m	43m	57m

4.5 Level of Construction

Table 2.4.2 of AS 3959-2009: *Construction of Buildings in Bushfire-Prone Areas* determines the construction requirements based upon vegetation classification and slope.

NOTE: *Construction requirements are detailed in AS 3959-2009 and Appendix 3 of Planning for Bush Fire Protection 2006.*

All residential dwellings within 100 metres of unmanaged vegetation will be required to be constructed to a Level of construction in accordance with the Table in section 5.4 above based upon the available Asset Protection Zone.

4.6 Fire Fighting Personnel Access

4.6.1 Public Road Access

Access is provided from Kanangra Drive in three separate locations, Kanangra Drive is capable of supporting fully loaded fire fighting vehicles.

4.6.2 Property Access

Property Access is available from Kanangra Drive and all roads within the subdivision will be capable of supporting a fully loaded fire fighting vehicle.

The proposed subdivision will not incorporate perimeter roads or firetrails. Planning for Bushfire Protection states that perimeter roads are the preferred interface for urban development and bushland. The adjoining land is to be managed by NSW NPWS for conservation purposes. In view of this need to manage the adjoining land for conservation purposes and restrict public access to this land, the APZs and building standards prescribed by this report will provide an appropriate level of bushfire protection for new development. Access from the proposed street network will provide for an acceptable level of fire fighting access without perimeter roads or fire trails. Prospective residents of perimeter lots in the proposed subdivision will be made fully aware of their responsibilities to maintain the APZs and an advanced state of fire hazard readiness on their land.

4.7 Electricity Supply

It is proposed that transmission lines providing power to the proposed development should be installed underground.

4.8 Gas

Reticulated or bottled gas shall be installed and maintained in accordance with AS/NZS 1596-2002: *Storage and Handling of LP Gas* and the requirements of the relevant authorities. If gas cylinders are to be kept close to buildings, the release valve must be directed away from the building and

away from any hazardous materials such as firewood, so that it does not act as a catalyst to combustion.

4.9 Water Supply

Town reticulated water supply will be available to the development. Hydrants will be located throughout the development.

4.10 Recommendations

Based on Barry Eadie's site inspection and assessment, the following recommendations would be required for future development of dwellings on the lots:

- (a) The APZ's be provided in accordance with section 5.4 of this report:
- (b) If any trees are to be located within the envisaged APZs, this is considered acceptable, providing the following conditions are met:
 - (i) Canopies are a minimum of 2-5 metres apart and from buildings.
 - (ii) Canopies should not overhang buildings. Vegetation is not to touch or overhang dwellings (canopy vegetation must not be within 5 metres of any building / dwelling);
 - (iii) Vegetation is not species that retain dead material or deposit excessive quantities of ground fuel in a short period or in a danger period; and
 - (iv) Vegetation is located far enough away from dwellings so that it will not ignite the dwelling by direct flame contact or radiant heat emission.
- (c) Bushfire Risk Management Plan be prepared, to the Satisfaction of the Director General and be compatible with the existing Bushfire Risk Management Plan for the whole site.
- (d) Woodpiles, combustible material storage sheds, large areas/quantities of garden mulch and stacked flammable building materials should not be located within IPA of dwellings;
- (e) Reticulated or bottled gas shall be installed and maintained in accordance with AS/NZS 1596-2002: *Storage and Handling of LP Gas* and the requirements of the relevant authorities.

5 CONCLUSIONS

Barry Eadie has conducted a site inspection and assessment of the existing site. The assessment has been undertaken in accordance with *'Planning for Bushfire Protection' (2006)* and AS 3959-1999: *Construction of Buildings in Bush Fire Prone Areas*.

Provided the recommendations stated above are implemented in full, Barry Eadie Consulting Pty Ltd is of the opinion that the proposed development achieves the intent of the relevant legislation and in particular the requirements as set out in *'Planning for Bushfire Protection' (2006)*.

6 REPORT BASIS INFORMATION

The report is based on the following:

- (i) Site inspections carried out on 8 June 2007 and 31 August 2010 by Barry Eadie;
- (ii) Site Plan

7 REFERENCES

- NSW Rural Fire Service, Planning NSW, *'Planning for Bushfire Protection' (2006)*.
- AS 3959-2009: *Construction of Buildings in Bush Fire Prone Areas*.

APPENDIX A – PROPOSED DEVELOPMENT PLAN

Appendix C

Revised draft DCP

DRAFT

Development Control Plan

Gwandalan

2011

NSW Department of Planning

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This Development Control Plan (DCP) may be amended from time to time. Proposed amendments are required to be advertised and exhibited in draft form and any submission received must be considered before the amendment plan is adopted. People using this DCP should ensure that they have the current copy of the plan, including any amendments.

Adopted date:	
Effective:	
Certified in accordance with the Environmental Planning and Assessment Act 1979 and Regulations	Director General Department of Planning
	Dated:

1 Advisory

1.1 What is this Plan Called?

This Plan is called “Gwandalan Development Control Plan 2011”.

1.2 Where does this Plan Apply?

This plan applies to the land at Gwandalan being that part of lot 3 DP 588206 within the South Wallarah Peninsula State Significant Site.

1.3 What is the Purpose of this Plan?

The purpose of this plan is to provide requirements for quality development and environmental outcomes on the site.

1.4 What are the Aims of this Plan?

The aims of this plan are:

- To identify the expectations and requirements for development within the site;
- To identify approaches and techniques which promote quality development outcomes on the development site; and
- To ensure that development of the site respects the values of adjoining lands and provides quality environmental outcomes.

1.5 What Types of Development does this Plan Cover?

The plan applies to all development on the Gwandalan State Significant Site.

1.6 How does this Plan Relate to Other Plans?

This plan has been prepared in accordance with Division 6 of the Environmental Planning and Assessment Act, 1979 and Part 3 of the Environmental Planning and Assessment Regulation, 2000.

The plan is generally consistent with the provisions of SEPP (Major Development) 2005 as amended.

1.7 What does this Plan Contain?

The content of this plan is prescribed by SEPP (Major Development) 2005, Schedule 3, Part 14, Clause 29. The subject land is part of the South Wallarah Peninsula State Significant Site. Clause 29 is reproduced below.

29 Development Control Plan

(1) The objective of this clause is to ensure that development on land within Zone R2 Low Density Residential occurs in a logical and cost-effective manner, in accordance with a staging plan and only after a development control plan that includes specific controls has been prepared for the land.

(2) Development consent must not be granted for development on land within Zone R2 Low Density Residential unless a development control plan that provides for the matters specified in subclause (3) has been prepared for the land.

(3) The development control plan must provide for all of the following:

(a) a staging plan for the timely and efficient release of urban land making provision for necessary infrastructure and sequencing,

(b) an overall transport movement hierarchy showing the major circulation routes and connections to achieve a simple and safe movement system for private vehicles, public transport, pedestrians and cyclists,

(c) an overall landscaping strategy for the protection and enhancement of riparian areas and remnant vegetation, including visually prominent locations, and detailed landscaping requirements for both the public and private domain,

(d) a network of passive and active recreational areas,

(e) stormwater and water quality management controls,

(f) amelioration of natural and environmental hazards, including bushfire, flooding and site contamination and, in relation to natural hazards, the safe occupation of, and the evacuation from, any land so affected,

(g) detailed urban design controls for significant development sites,

(h) measures to accommodate and control appropriate neighbourhood commercial and retail uses,

(i) suitably located public facilities and services, including provision for appropriate traffic management facilities and parking.

Matters not addressed by this Plan.

Not all of the above matters listed under Clause 29 are relevant for the Gwandalan site. The scope of the provisions is designed to cater for all sites included in the South Wallarah Peninsula State Significant Site.

Accordingly, the matters listed as (d), (g), (h) & (i) are not addressed in this Development Control Plan (DCP).

2 Site Planning and Statutory Arrangements

The Environmental Planning Instrument for the site is SEPP (Major Developments) 2005.

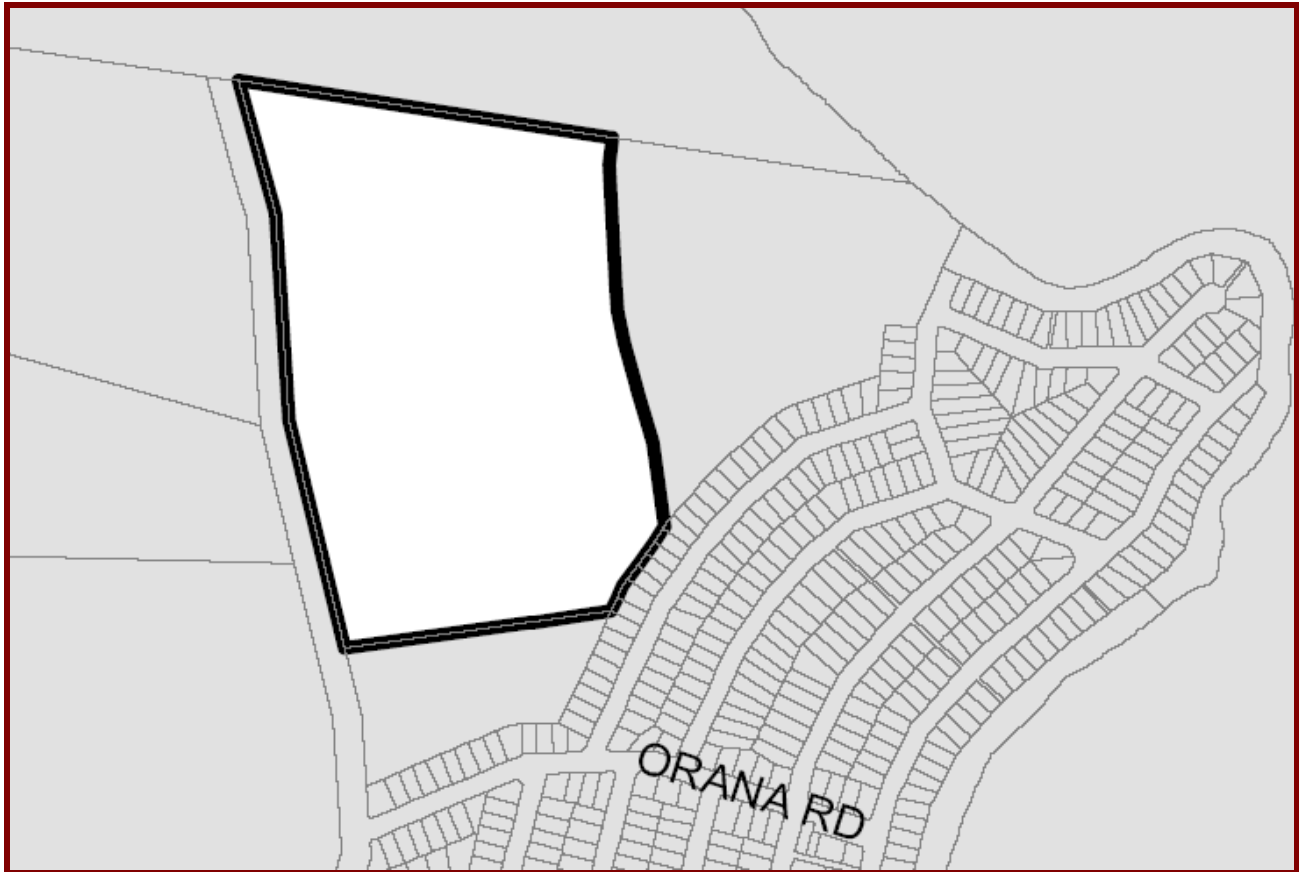


Figure 1 The Gwandalan section of the South Wallarah Peninsula State Significant Site

The site is zoned R2 Low Density Residential and E2 Environmental Conservation under the SEPP.

Adjoining land is zoned under Wyong LEP 1991 as 2(a) Residential, 5(a) School, 6(a) Open Space and 7(b) Scenic Protection.

All SEPPs apply to the site except SEPP 1 and SEPP 71.

The purpose of the DCP is to provide additional detail for development on the site that ensures future subdivision and building development is consistent with the values of the site and locality.

Under SEPP (Major Developments) 2005 the initial subdivision of the R2 zoned land will be a 3A project. Subsequent residential development will be Part 4 development with Wyong Council being the relevant consent authority.

SEPP (Exempt and Complying Development Codes) 2009 will provide basic planning controls for future residential development on the site.

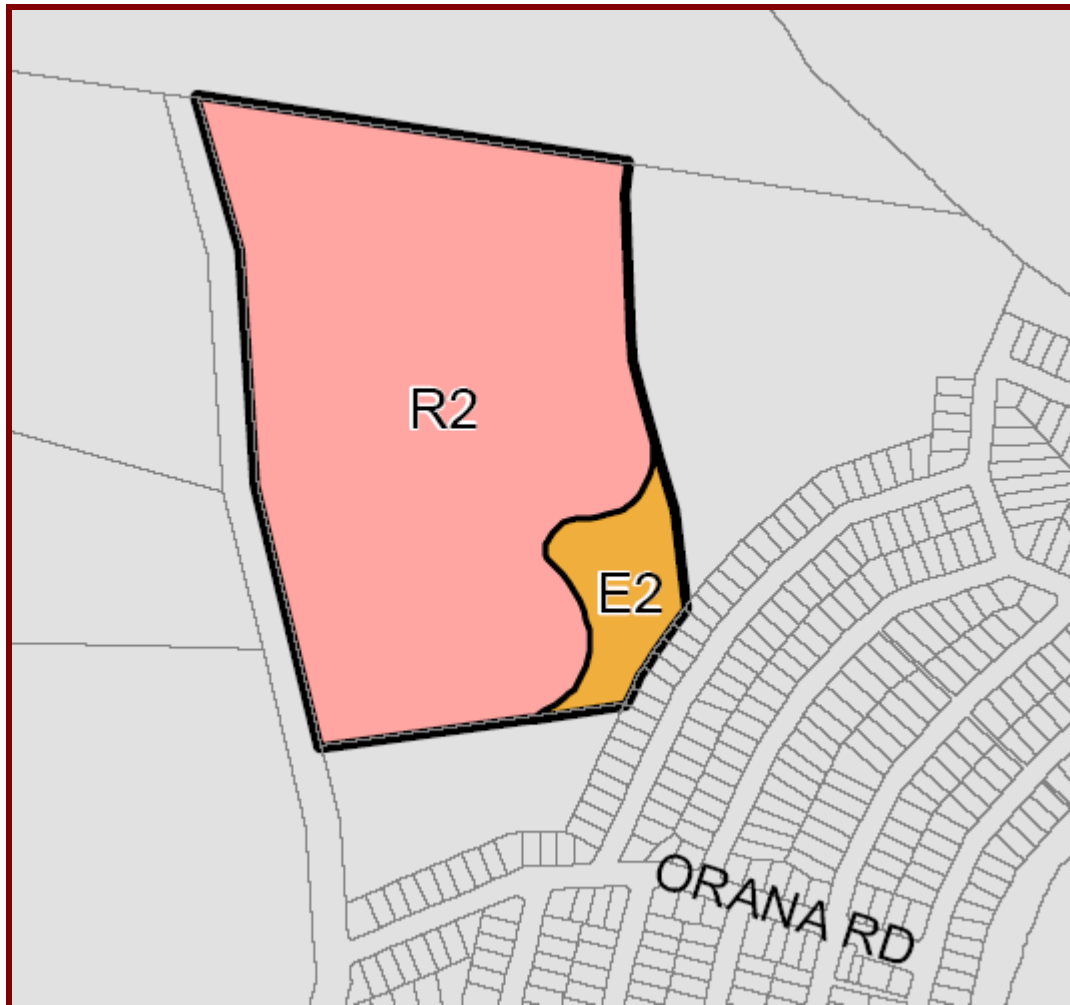


Figure 2 Zones applying to the site

Wyong DCP

Where necessary Wyong DCP controls are referenced by this DCP and will apply to development on the site.

Where this DCP is silent on a relevant matter any relevant provisions of Wyong DCP are to be considered.

It is intended that Wyong DCP Chapter 100 - Quality Housing Controls provide built form controls for future development of dwelling houses on the lots created by subdivision of the Gwandalan site.

3 Site Requirements

Based on the characteristics of the site a range of matters need to be addressed in future approvals over the site.

3.1 Existing Development

The site is approximately 16 ha in total area and is zoned R2 Low Density Residential with some 2 ha of E2 Environmental Conservation.

Gwandalan public school is located to the south of the site.

Large areas of the site have been cleared for access, paddocks, an orchard and landscaping.

East of the school and on the site boundary are developed residential lots.

On the sites northern boundary is the Point Wollstoncroft Recreation camp. This is part of the Lake Macquarie State Conservation Area.

- ***Adjoining development must be adequately addressed in subdivision design.***
- ***The subdivision pattern is to be consistent with existing Gwandalan development.***

3.2 Topography and Drainage

Site drainage is through a pond and small harbour to Lake Macquarie.

Uncontrolled drainage from the adjoining school site is creating an erosion scour. The site has a number of very small catchments and no permanent natural drainage lines.

Significant alteration of drainage has resulted from the construction of dams and ponds. Drainage channels have been created on the lower areas of the site.

- ***Site drainage controls are required to protect Lake Macquarie.***

3.3 Flooding and Climate Change

The adjoining land to the east is flood prone and subject to sea level rise considerations.

Lake Macquarie City Council has identified a 100 year climate change planning level of 2.85 metres AHD for development on land adjoining Lake Macquarie. The Lake Macquarie current flood planning level is 1.88 metres AHD.

- ***New development must be in accordance with relevant flooding and climate change requirements.***

- ***Minimum floor and site levels should apply to new residential development.***

3.4 Soils

There is an area of fill outside the site where the drainage controls are to be located. There are also potential acid sulphate soils in this area.

The soil types on the upper areas of the site have a high erosion hazard.

- ***Site development and proposed drainage controls are required to address erosion and sedimentation issues.***
- ***An acid sulphate management plan will be required for any excavations in areas of potential acid sulphate soils.***

3.5 Vegetation and Habitat

Approximately 70% of the site remains under native vegetation. Vegetation will need to be removed to achieve residential development in accordance with the zonings.

The 2 main vegetation types on the site are Narrabeen Scribbly Gum forest and Narrabeen Sheltered Peppermint Apple forest. A small area of Endangered Ecological Community lies on the northern boundary of the site close to the Lake but is outside the development footprint.

Extensive surveys have found that no threatened animal species are dependent on the site. The site supports a large number of clumps of the threatened plant species *Tetratheca juncea*.

Offsets for the loss of vegetation have been established through prior dedications of land. There is a current Commonwealth EPBC approval that covers clearing of the site.

The site is identified as bushfire prone land on Council mapping with bushfire hazard to the north and west.

- ***Subject to Asset Protection Zone (APZ) and safety requirements, native trees are to be retained on lots with a boundary to the Lake Macquarie Conservation Area.***

3.6 Climate and Orientation

The site is open to summer north easterly breezes across the Lake. Sloping generally to the east it is protected from colder southerly and westerly winds.

The shape of the site is conducive to a north south grid pattern of streets that provides for subdivision lots with good solar orientation.

- ***Subdivision and dwelling design is to be in accordance with solar access principles.***

3.7 Adjoining Land Use

To the east is a private residence and Lake Macquarie. Residential development and the school adjoin the southern boundary.

The land to the north is owned by NPWS but is operated as a recreation camp by the NSW Department of Sport and Recreation. Access to the camp and adjoining land is limited by child protection requirements.

There are views into the site from Lake Macquarie but other than this, views into and across the site are limited. The site does not form a major part of any local views.

To the south is the Gwandalan Public School which addresses Kanangra Drive. The school drains to the subject site.

- ***The access requirements of the school are to be considered in subdivision design.***

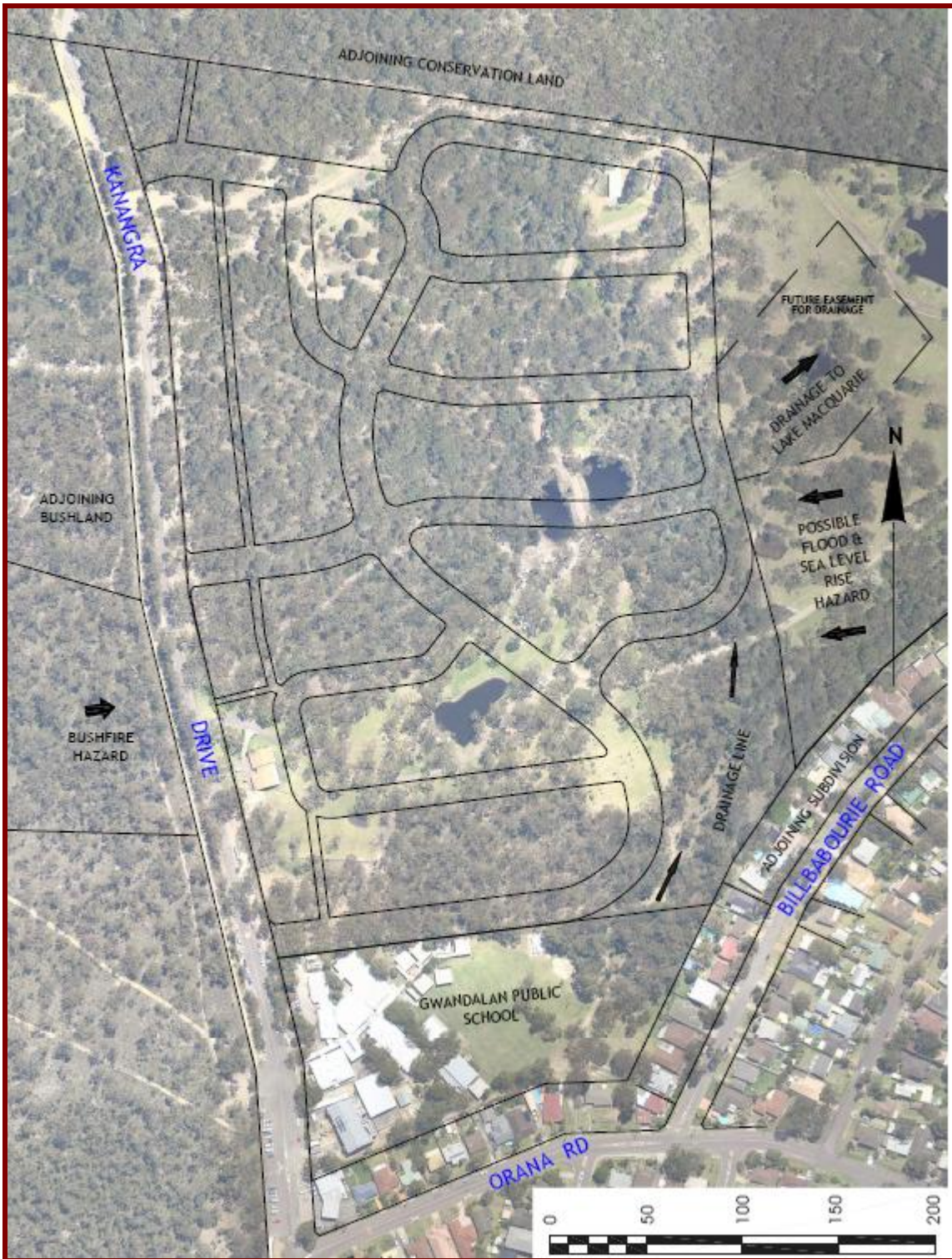


Figure 3 Site features and surrounding land use

4 Site Planning Objectives

The overall site planning objectives are to protect existing values while allowing sensitive development of the Gwandalan site.

The main objective is to achieve a high standard of residential development allowing for achievement of the density of 12 dwellings per hectare identified in the Wyong Residential Development Strategy.

In realising this overall objective, development on the site will need to achieve:

- ***Consistency with the existing urban form of Gwandalan;***
- ***A hierarchy of streets including a bus route and internal streets which are sized and landscaped to reflect residential amenity including walking and cycling;***
- ***High residential amenity/streetscape; and***
- ***Provision of adequate services.***

Specific considerations for new development are:

- ***Ensuring drainage does not adversely affect Lake Macquarie;***
- ***Minimising edge effects on adjoining conservation lands;***
- ***Providing high amenity living and standards of urban design;***
- ***Roads provided to Wyong Shire Council standards; and***
- ***Walkable subdivision.***

5 Development Principles

The GWANDALAN site can be divided into a number of discrete areas for planning and design purposes being:

- State Conservation Area frontage on the northern boundary
- Kanangra Drive frontage on the western boundary
- The School frontage
- The drainage line leading from the school
- Central areas of site

The development principles for each area are:

State Conservation Area frontage

- ***Ensure that lots can be managed in accordance with bushfire and conservation requirements.***

Kanangra Drive frontage

- ***Provide lot sizes that allow for adequate bushfire protection***
- ***Houses to address Kanangra Drive (rear access from within the site)***
- ***Adequate provision made for drainage off Kanangra Drive***

School frontage

- ***Provide access to school***
- ***No residential development along the school boundary***

Drainage line

- ***Retain as open space***

Central areas of site

- ***Provide high amenity residential development and street scaping to Wyong Shire Council standards***

Overall principles

- ***Limit / restrict access to Conservation Area***
- ***Protect Lake Macquarie***
- ***Reinforce the character of Gwandalan***

Principles to be applied to subdivision design are:

- ***Integration with existing Gwandalan subdivision allowing varied housing designs and lot sizes***
- ***Protection of the environment and environmental sustainability***
- ***Minimising environmental impact***
- ***Use of Water Sensitive Urban Design principles in stormwater design***
- ***Protection of the water quality of Lake Macquarie***
- ***Water and energy efficiency***
- ***Maximisation of solar access***
- ***Use of rain water tanks***
- ***Housing choice***
- ***Variation in lot sizes to achieve a mix of housing designs and opportunities***

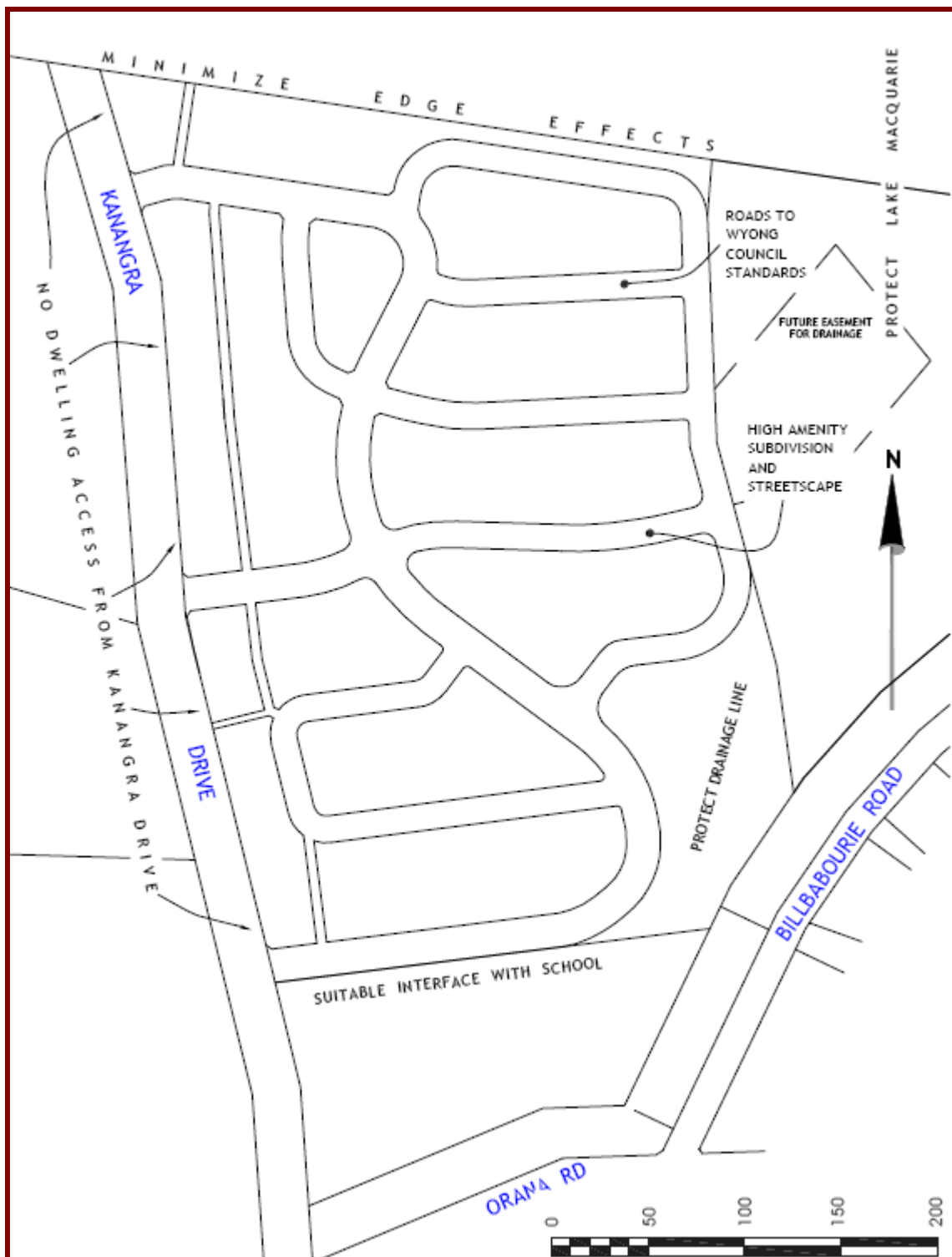


Figure 4 Summary of development principles

6 Conservation and Interface issues

The Gwandalan site is adjoined by land that is State Conservation Area.

The NPWS has guidelines for development on adjoining land. The guidelines have the purpose of ensuring that development has minimal impact on conservation values.

The main problems are edge effects caused by development which brings changes to vegetation, microclimate and hydrology and introduces pressures from weeds, rubbish domestic pets and increased recreational use of natural areas.

A Commonwealth Environment Protection and Biodiversity Conservation (EPBC) Act approval has been obtained for residential development of the site. Major environmental offsets have been provided as a requirement of the EPBC approval. The offset is the dedication of high conservation value bush land addressing like for like and the maintain and improve principles. This land also includes some 1.8 km of Lake Macquarie foreshore.

The EPBC approval requires a range of matters be addressed and approved by the Commonwealth prior to works commencing on the site.

- ***An environmental management plan stormwater management plan complying with condition 4 of the EPBC approval 2007/3411 must be prepared and submitted to DEWHA prior to commencement of works.***
- ***A management and monitoring plan complying with condition 5 of the EPBC approval 2007/3411 must be prepared and submitted to DEWHA prior to commencement of works.***
- ***A stormwater management plan complying with condition 6 of the EPBC approval 2007/3411 must be prepared and submitted to DEWHA prior to commencement of works.***

7 Landscape and Open Space

7.1 Landscape Vision

The proposed subdivision will house a new residential community near the shores of Lake Macquarie, surrounded by existing bushland. New and existing tree plantings on the proposed lots, roadside settings, parklands and perimeter buffer zones will create a distinctive 'Gwandalan' character and integrate the development with the surrounding dry sclerophyll bushland.

Key landscape features of the development will include the following:

- Retention of better quality trees in the proposed park to the south east of the site adjacent to the school grounds.
- A local park forming a green nucleus in the northern portion of the subdivision
- Native landscape buffers to Kanangra Drive, Gwandalan Public School and Point Wolstoncroft Sport and Recreation Centre, retaining existing trees and fencing where appropriate
- Primary circulation route highlighted as a 'Green Link' to provide a continuous canopy and habitat corridor.
- A safe and permeable public domain enhanced with indigenous trees.
- WSUD initiatives in managing run-off with (bio-retention swales to perimeter road).
- A bushfire management plan incorporating 'managed' zones and retained canopy species.

7.2 Landscape Principles

The landscape principles for the site will be as follows:

- Create a landscape setting that will enhance the development and integrate with the bushland setting.
- Retain as many trees as possible in the open spaces, buffer zones, streetscapes and proposed lots.
- Retain a project arborist to review and advise on the protection and safety of existing trees.
- Create a contiguous, safe and permeable public domain.
- Avoid 'formal' landscapes to maintain the relaxed 'bushland' character.
- Use indigenous species throughout the public domain areas to link the development with the adjacent woodland and open space surrounds.
- Public and private landscape areas will meet with Wyong Council's landscapes standards and controls.

7.3 Streetscape

PRIMARY STREET

The Primary Street will be lined with informal copses of indigenous trees. (refer street tree planting schedule) The street will incorporate a drainage bio-retention swale alongside the open space with

1.2m wide footpaths on both sides. The 4.5m wide verges and footpath zone will be planted with low native shrubs and street trees and grassed with non invasive species such as buffalo turf to create a shaded environment for pedestrians.



Figure 5 – Overall landscape concept

LOCAL STREETS

Local streets will have a distinctive informal character created by wide landscaped verges containing existing and planted native trees. The verges will be 4.5m in width with a footpath on one side of the street.

Driveways to house lots will be paired to maximise opportunities for street tree planting and greater landscape continuity on the landscaped verges. Each local street will be distinguished by a different palette of native street trees (refer to indicative tree list).

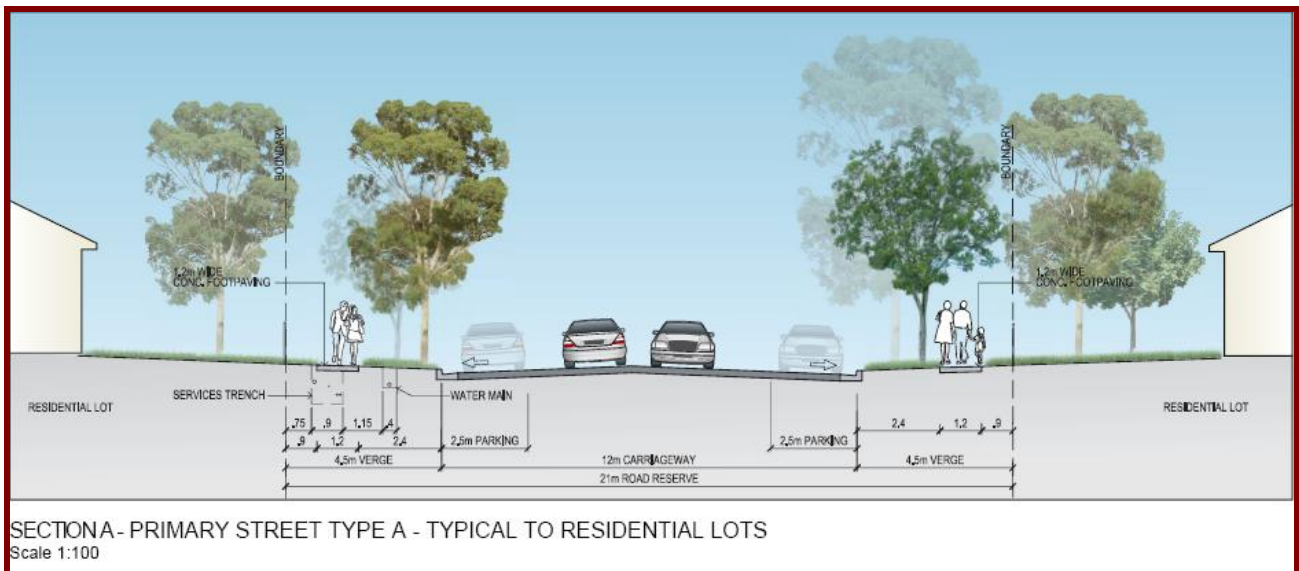


Figure 6 - Typical streetscape section

7.4 Open Spaces

SOUTH EAST PARK

This open space located near the slopes of the former orchard will be enhanced as an informal parkland for passive recreation. The park will incorporate existing stands of better quality indigenous trees in turf surrounds. Park seats and an interpretive play area created out of logs from the site could be installed to improve the amenity of the open space.

A bio-retention swale will be installed along the roadside park perimeter to filter runoff. Timber cross-overs will be provided at key locations to allow pedestrian access across the swales into the park

NORTHERN LOCAL PARK

This pocket park will incorporate a group of existing native trees, to create an informal landscape for passive recreation. This simple park will include a play area, new turf and seating adjacent to the trees.

7.5 Landscape Management Plan

A Landscape Management Plan is to be prepared for the development, addressing the retention of existing trees, bushfire protection and ongoing maintenance of the natural and built open spaces.

8 Access, Parking and Circulation

The site circulation pattern is to provide for buses, private vehicles, bicycles and walking.

The aims of the circulation pattern are:

- Linkage to the existing bus route, particularly as associated with the school;
- Avoidance of additional traffic through existing residential areas;
- Adequate provision for private access and transport in the new development;
- Adequate infrastructure services provision;
- Emergency and service vehicle access;
- Provided for cycling on the local roads; and
- Provide walking opportunities through a pedestrian pathway network.

Road Construction and Design Standards

The following requirements apply:

- ***The street network is to be configured to complement the existing Gwandalan street network.***
- ***Internal roads are to be designed to Wyong Council subdivision standards for bus routes and access streets.***
- ***Public transport is to be addressed by provision of a bus route and provision for school buses adjoining the school.***
- ***Pedestrian and cycle movement is to be facilitated by the links to the existing Gwandalan network along Kanangra Drive.***
- ***Footpaths are to be provided to Council standards.***

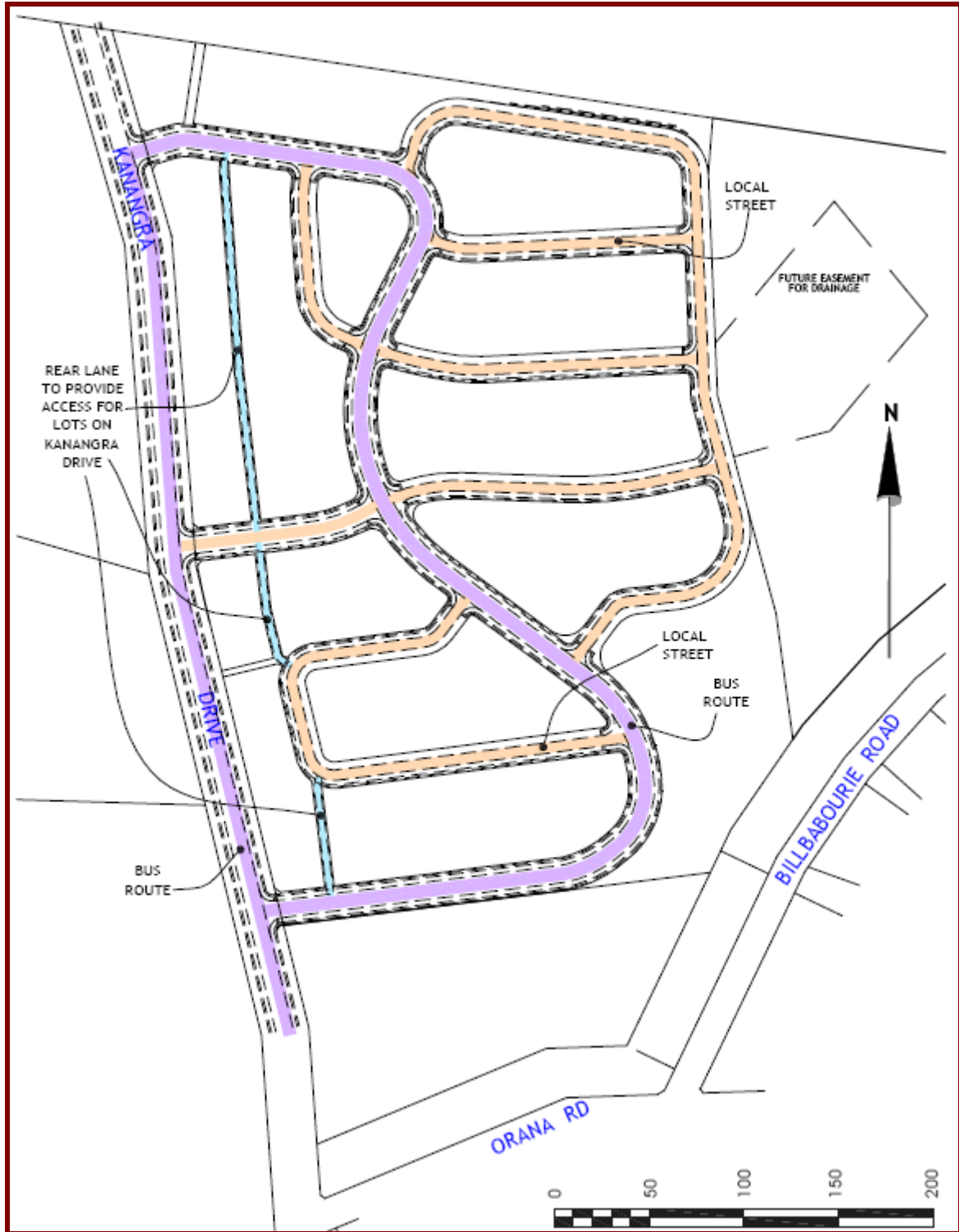


Figure 7 Access and circulation

9 Infrastructure

Development of the site has been anticipated in local infrastructure planning.

Provision is made for servicing of the site in accordance with existing development servicing plans.

Any application for development of the site is to demonstrate:

- ***Adequate consultation with service and infrastructure providers***
- ***Any proposed staging of the works relative to infrastructure provision thresholds***

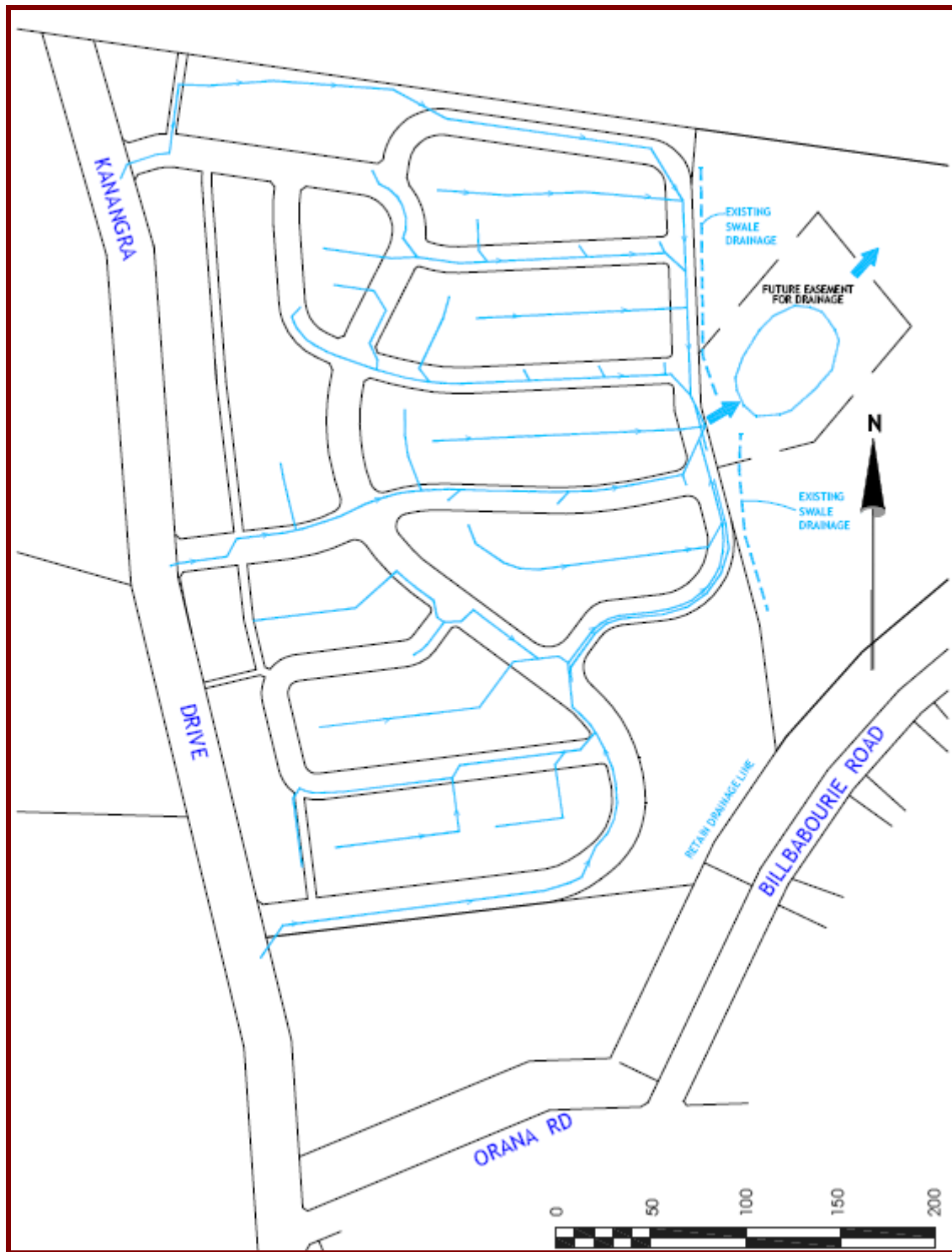


Figure 8 Stormwater drainage

10 Subdivision & Staging

The land has a subdivision potential of approximately 200 lots. Given this potential yield, release of lots is likely to be staged.

Any subdivision proposal will need to identify works and lot release staging.

Any application for subdivision of the site will need to address the following site issues:

- ***Stormwater and drainage management***
- ***Road hierarchy, location of footpaths and cycleways***
- ***Landscape/streetscape details and concept plan***

Subdivision works requirements:

- ***Subdivision works are to be subject to a Construction Environmental Management Plan for the site including:***
 - ***Erosion and sediment control***
 - ***Traffic management including particular attention to the adjoining school site***
 - ***An Acid Sulphate Soils management plan if required***

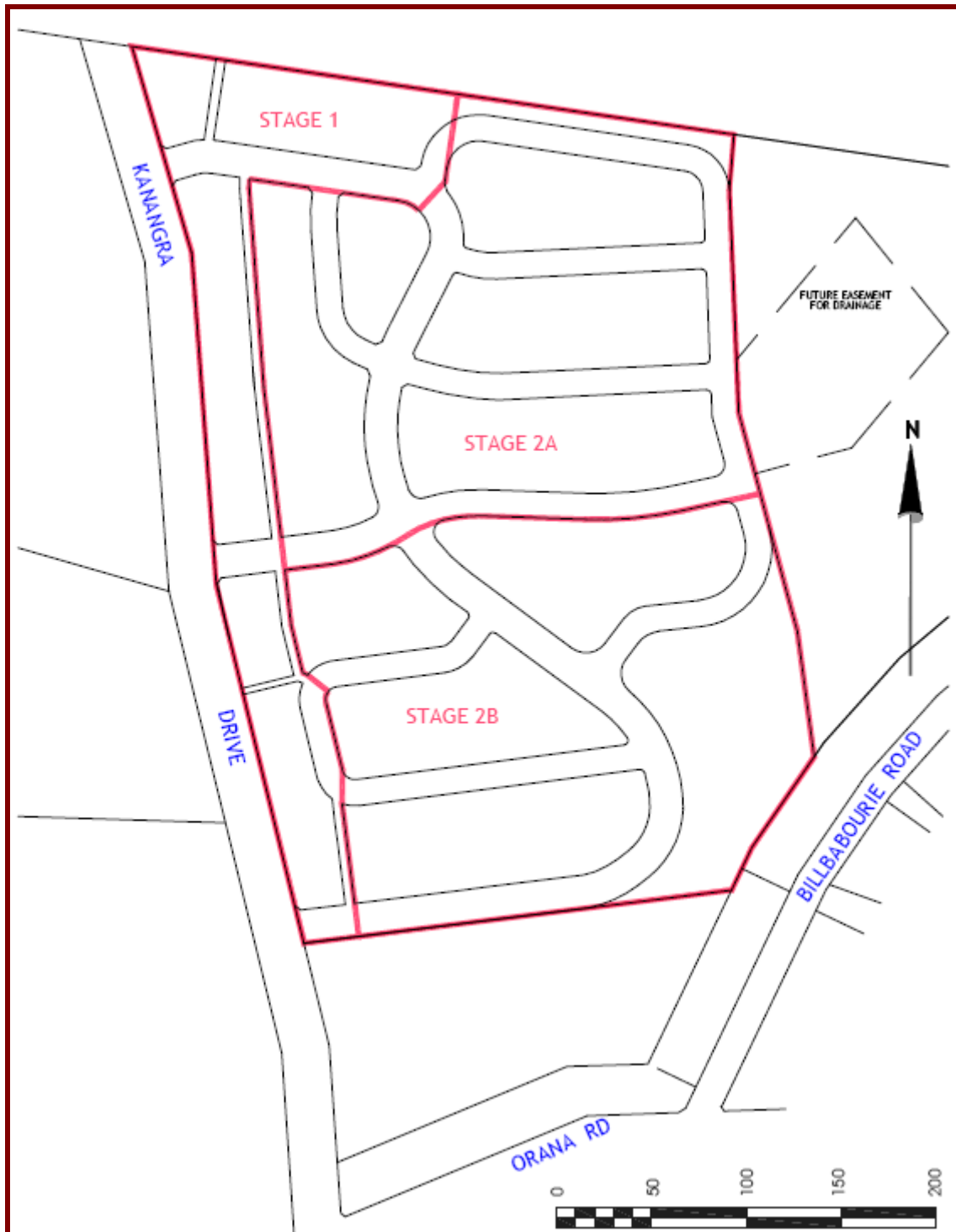


Figure 9 Subdivision staging

11 Community Facilities

The amount of contributions to be paid by the proponents will at least be equal to the amounts required by the Gwandalan Section 94 Contributions Plan as administered by Wyong Shire Council.

It is expected that a Voluntary Planning Agreement (VPA) will be negotiated with Council and NSW Department of Planning to provide for the increase in demand for community facilities created by the development.

12 Built Form Controls

The built form controls for the subdivision are set out in the sections below. All dwellings are to comply with the controls.

12.1 Subdivision Design

Objectives

- (1) To establish a clear urban structure that maximizes the 'sense of neighbourhood' and encourages walking and cycling over private car use.
- (2) To establish a subdivision layout that utilizes the residential development areas efficiently, maximizes the natural attributes of the site and clearly defines and reinforces the public domain.
- (3) To ensure that all residential lots are afforded a high level of amenity in terms of solar access and outlook.

Controls

- (1) Subdivision layout is to create permeable street hierarchy that responds to the natural site topography, the location of existing significant trees and solar design principles.
- (2) Pedestrian connectivity is to be provided between the residential areas and public open space areas, public transport nodes, and community/recreation facilities.
- (3) A range of lot types and frontages should be provided,
- (4) Residential lots should be orthogonal in geometry with the number of battle-axe lots minimized.
- (5) Battle axe lots must have a minimum access width of 3 m and have a minimum measurement of 12 m by 12 m excluding the access.
- (6) The minimum lot size for single detached housing is 450m². The minimum depth of a lot is 20m.

12.2 Streetscape and Architectural Design

Objectives

- (1) To ensure that buildings are design to promote the desired built form and character of the neighbourhood by allowing designs that blend with surroundings.
- (2) To encourage a diversity of house types within residential streets.
- (3) Clearly define private and public space and to encourage surveillance of the street.
- (4) To create an attractive and cohesive streetscape through the provision of simple and articulated building and roof forms.

Controls

- (1) The primary street façade of a dwelling must incorporate at least two of the following design features:
 - Entry feature or portico,
 - Awnings or other features over windows,
 - Balcony or window box treatment to any first floor element,
 - Recessing or projecting architectural elements,
 - A variation in scale to adjoining properties,
 - Open verandah,

- Mixture of building materials,
 - Bay windows or similar features, or
 - Verandahs, pergolas or similar features above garage doors.
- (2) The secondary street façade for a dwelling on a corner lot must incorporate at least two of the following design features:
- verandah,
 - gable,
 - vertical architectural elements to reduce the horizontal emphasis of the façade,
 - entry feature or portico,
 - balcony/window boxes or similar elements, or
 - landscaping / fencing compatible with the status of the surrounding streetscape.
- (3) Eaves are to provide sun shading and protect windows and doors and provide aesthetic interest. Eaves should have a minimum of 450mm overhang (measured to the fascia board) and be provided to a minimum of 70% of the dwelling. Alternative solutions to eaves may be considered as long as they provide appropriate sun shading to windows and display a high level of architectural merit.
- (4) Dwelling colours, materials and finishes are to be from a predominantly neutral palette of colours. Bright and highly reflective colours are to be avoided except for architectural features. Multicoloured roof tiles are not permitted.
- (5) Garage doors are to be designed to recede from the front façade so as not to dominate the dwelling and the streetscape.
- (6) Complex roof forms should be avoided. The pitch of hipped and gable roof forms should be between 22.5 degrees and 34 degrees
- (7) Porticos and entry features are to be in proportion with the scale of the dwelling.
- (8) All main entries to dwellings are to be to the front / primary street only and not to side streets or lanes.

12.3 Front Setbacks

Objectives

- (1) To provide streetscapes that reflect the character of Gwandalan.
- (2) To encourage the use of simple and articulated building forms.
- (3) To reduce the dominance of garages on the streetscape.
- (4) To encourage the use of eaves, verandahs, balconies and feature elements on the front facades of dwellings.

Controls

- (1) Dwellings are to be consistent with the front setback controls and at Table 1.
- (2) The 'Articulation zones' consists of architectural elements which address the street frontage. Elements permitted in the articulation zone include the following.
 - entry feature or portico,
 - awnings or other features over windows,
 - eaves and sun shading,
 - balcony or window box treatment to any first floor element,
 - recessing or projecting architectural elements,
 - open verandahs,
 - bay windows or similar features,
 - verandahs, pergolas or similar features above garage doors.

- (3) The garage line is to be set back a minimum 5.5m and minimum 1m behind the Building line.

Table 1 : Front Setbacks

Setback requirement	Control
Front setback to Kanangra Dive	A 6m minimum from boundary for the Building line
Front setback to primary road other than Kanangra drive	A 4.5m minimum building line applies from the street
Side setback to secondary road frontage	A 3.0m minimum building line applies
Articulation zone	2.5m maximum forward of the building line to the primary road frontage only
Garage Line	1m minimum behind the building line

12.4 Side and Rear Setbacks

Objectives

- (1) To assist in providing an attractive and cohesive streetscape,
- (2) To minimize the impacts of development on neighbouring properties
- (3) To encourage the efficient use of land.

Controls

- (1) Dwellings are to be consistent with the side and rear setback controls at Table 2 whichever is the greater. Projections permitted into side and rear setback areas include eaves, sun hoods, gutters, down pipes flues, light fittings and electricity or gas meters, rainwater tanks and hot water units.
- (2) Walls along boundary setbacks shall be staggered / indented to avoid the appearance of unduly long walls.

Table: 2 Side and Rear Setbacks

Setback	Control
Side boundary Non –road frontage	0.9m minimum
Rear boundary (excludes garages)	4m minimum

12.5 Corner Lots

Objectives

- (1) To ensure corner sites maintain sight lines for the safety of pedestrians and vehicles.

Controls

- (1) Sight lines are to be protected in accordance with the diagram below.
- (2) The façade of a dwelling on a corner lot is to address both streets and be appropriately articulated. Garages on corner lots are encouraged to be accessed from the secondary street.

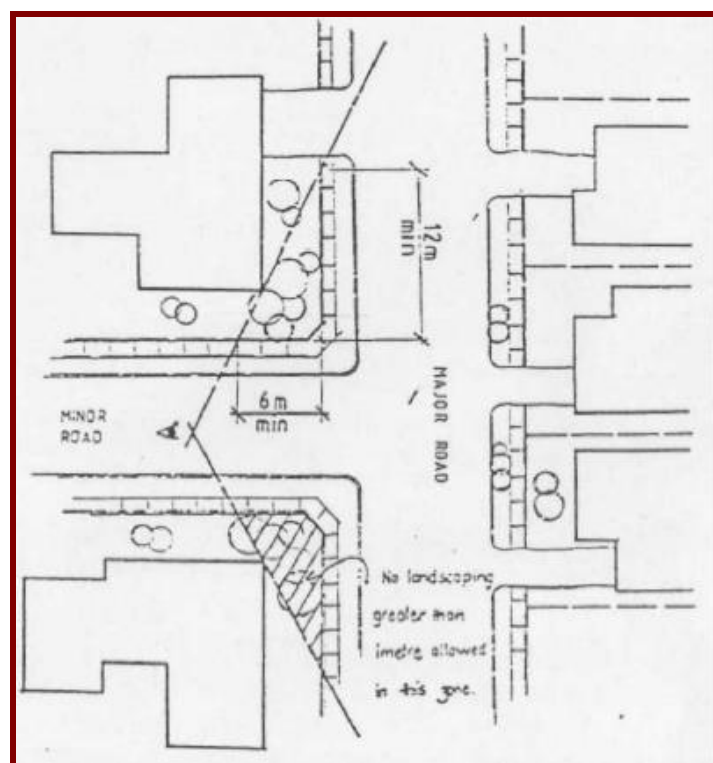


Figure 10 Protecting sight lines on corner lots (source: Wyong DCP Chapter 99)

12.6 Dwelling Height

A building height limit of 9.0 metres is applied to the site by the SEPP (Major Development).

Objectives

- (1) To ensure development is appropriately scaled to suit the dwelling's context and its scale.
- (2) To ensure building heights achieve built form outcomes that reinforce quality urban and building design.
- (3) To protect residential amenity.

Controls

- (1) Single dwelling housing is to be generally a maximum of 2 storeys in height and 9.0 m maximum in accordance with SEPP (Major Development).

12.7 Private Open Space

Objectives

- (1) To provide a high level of residential amenity
- (2) Provide useable private open space.
- (3) To facilitate solar access
- (4) To ensure that dwellings minimize overshadowing of adjacent properties

Controls

- (1) Each dwelling is required include private open space in accordance with Table 3.
- (2) The location of Principal Private Open Space (PPOS) is to be determined having regard to dwelling design, allotment orientation, adjoining dwellings, landscape features and , topography
- (3) 50% of the area of the required PPOS (of both the proposed development and the adjoining properties) should receive at least 3 hours of sunlight between 9am and 3pm at the winter solstice (21 June).
- (4) The PPOS is required to be readily accessible from the main living area of a dwelling or room other than a bedroom and have a maximum gradient of 1:50. Where the PPOS is a semi-private patio or balcony it must be provided with a fence or landscaped screen at least 1m in height, and be directly accessible from a living area.

Table 3 : Private Open Space

	Control
Private Open Space generally - lots 600 m ² or less	Min. 20% of the allotment area Min. dimension 2.5m
Private Open Space	Min 25% of allotment area

generally - lots larger than 600 m2	
Principal private open space	24m ² with a min. dimension of 4m behind the building line

12.8 Site Cover and Landscaped Area

Objectives

- (1) To provide sufficient areas for landscaping
- (2) To contribute to effective stormwater management and energy efficiency

Controls

- (1) Dwelling development is to comply with the maximum site cover and minimum landscaped requirements (as a percentage of the allotment area) at Table 4. The landscaped area is any part of a site, at ground level, that is permeable and consists of soft landscaping, turf or planted areas and the like.

Table 4 : Site cover and Landscaping Area

Site Cover (Maximum)		Single storey dwellings: 50% Two Storey dwellings:50% at ground floor and 40% at upper floor
Landscape Area (Minimum)		30%

12.9 Maximum floor areas of buildings

Objectives

- (1) To ensure buildings are of an appropriate size and scale

Controls

- (1) The maximum floor area of a dwelling house on a lot under 600 m2 is 330m2
- (2) The maximum floor area of dwelling house on a lot 600 m2 or greater is 380 m2
- (3) The maximum floor area of an outbuilding is 60 m2.

12.10 Garages, Site Access and Parking

Objectives

- 1) To provide adequate onsite parking for residents and visitors.
- 2) To control the visual impact of garages, carports and parking areas on the streetscape and improve dwelling presentation.
- 3) To ensure the design of garages do not dominate the frontage of the house.

Controls

- (1) Where a carport or garage entry forms part of the front façade of a dwelling, the carport or garage is to be set back a minimum of 6.5m from the front boundary to enable a car to be parked in the driveway. A carport or garage is to be setback at least 1m behind the front building line.
- (2) The location of driveways is to be determined with regard to dwelling design and orientation, street gully pits and tree bays and is to maximize the available on street parking.
- (3) Carports and garages are to be treated as an important element of the dwelling façade and interface with the public domain. Garage doors are to be visually recessed through use of materials, colours, and overhangs. When facing the street, the maximum total width of a garage door is to be 50% of the building façade length.
- (4) The maximum width of a driveway at the property boundary to the primary road frontage is to be 4.5m.
- (5) No vehicle access or driveways to lots will be allowed from Kanangra Drive
- (6) Freestanding garages to secondary street frontage are to be 1m behind the building line
- (7) Garages on service lanes are to be set back a minimum of 1m
- (8) Freestanding garages are to have roof pitches consistent with the dwelling

12.11 Fencing and retaining walls

Objectives

- (1) To ensure boundary fencing is of a high quality and does not detract from the streetscape.
- (2) To ensure that retaining walls are adequately constructed and have minimum effect on neighbourhood amenity

Controls

- (1) Front fencing is to be consistent in design and style with its dwelling and a maximum of 1m high. Separate application is to be made for fences higher than 1m and for courtyard walls.
- (2) Side and rear fencing is to be a maximum of 1.8m high and not impede safe sight lines for traffic (see 12.5 Corner Lots).
- (3) On corner lots the preferred outcomes is for the dwelling to front both street frontages providing a better overall streetscape presentation. Where fencing to the secondary street frontage is proposed, it is not exceed 1.8m high for more than one third of the length of the secondary road frontage.
- (4) On corner lots the fencing style is to be continued along the secondary street frontage to at least 1m behind the building line of the dwelling. Side fences higher than 1m are not to extend past the building façade line or garage building line.
- (5) Fencing that adjoins lanes is to permit casual surveillance. Colorbond or timber paling or lapped/capped fencing can only be used internally between dwelling lots.
- (6) Where cut is proposed on the boundary of a lot, retaining walls are to be constructed with side fence posts integrated with its construction (relevant construction details are required with retaining wall approval).

Otherwise retaining wall must be located a minimum of 450mm from the side or rear boundary of the lot containing the cut.

- (7) Any retaining wall more than 1 m high must be designed by a suitably qualified engineer

12.12 Bushfire

Objective

- 1) to ensure buildings are constructed to withstand bushfire hazard.

Control

- 2) Australian Standard AS3959 applies building standards to dwelling houses within 100 of a bushfire hazard. See Section 13 of this DCP.

12.13 Private Domain Landscaping

Objective

- 1) The residential lots will feature landscaping that will integrate with the surrounding bushland character and landscaped verges to create a unified development.
- 2) Landscape planting is to be in accordance with the species list below.
- 3) Existing trees are to be retained where possible on each lot, subject to safety and arboricultural advice.
- 4) All tree removal is to comply with the relevant Wyong Council tree removal and preservation policies
- 5) To enhance the site amenity, and integrate with the native streetscape planting and bushland surrounds.
- 6) Shrub and understorey planting is to be a mix of indigenous and low water use species that will provide colour, textural interest and appropriate screening to the property.

Controls

- 1) Landscaping is to avoid 'formal' landscapes to maintain the relaxed 'bushland' character of the area.
- 2) Each residential lot shall be landscaped to create an attractive setting for the house and lot.
- 3) Colours and finishes are to complement the architectural style and be in keeping with the bushland character of the development
- 4) Lots affected by the APZ shall satisfy the guidelines outlined in the Bushfire Management Plan.
- 5) A minimum of two, medium to large, indigenous trees shall be planted in the front garden and in the back yard of each house lot
- 6) Landscaping shall include lawn areas, and trees and shrubs selected from the species list prepared for the site. The list includes native trees and small exotic and deciduous trees, suitable for planting on the northern side of the house to improve solar access in winter.

Landscaping species table

Gwandalan land and streetscaping species list		
Street Trees		
<i>Angophora costata</i>	Sydney red gum	10-15m
<i>Banksia integrifolia</i>	Coast banksia	5-8m
<i>Cupaniopsis anacoides</i>	Tuckeroo	8-10m
<i>Eucalyptus botryoides</i>	Bangalay / Southern Mahogany	10-15m
<i>Eucalyptus capitellata</i>	Brown stringybark	8-12m
<i>Eucalyptus racemosa</i>	Scribbly gum	10-15m
<i>Eucalyptus piperita</i>	Sydney peppermint	10-15m
<i>Eucalyptus racemosa</i>	Scribbly gum	10-15m
<i>Eucalyptus umbra</i>	Broad leaved white mahogany	10-15m
Private Domain Trees		
<i>Angophora costata</i>	Sydney red gum	10-15m
<i>Banksia integrifolia</i>	Coast banksia	5-8m
<i>Banksia serrata</i>	Old man banksia	5-8m
<i>Corymbia maculata</i>	Spotted gum	10-15m
<i>Eucalyptus botryoides</i>	Bangalay / Southern Mahogany	10-15m
<i>Eucalyptus racemosa</i>	Scribbly gum	10-15m
<i>Hymenosporum flavum</i>	Native frangipani	5-8m
<i>Hibiscus tiliensis</i>	Rosemallow	8-10m
<i>Lagerstroemia indica</i>	Crepe myrtle	8-10m
<i>Plumeria spp.</i>	Frangipani	5m
<i>Tibouchina spp.</i>	Glory tree	5m
Swale Planting		
<i>Carex appressa</i>	Tall Sedge	0.8m
<i>Isolepis nodosa</i>	Knobby Club Rush	1.0m
<i>Juncus kraussii</i>	Sea Rush	0.5m
<i>Lomandra longifolia</i>	Spiny Headed Mat Rush	1.0m
<i>Phragmites australis</i>	Common Reed	0.3m

13 Bushfire Hazard

Bushfire construction levels will apply to areas on the perimeter of the subject to bushfire hazard.

Any lots on the north boundary of the site adjoining the State Conservation Area would be significantly affected by bushfire and APZ requirements and would need to be managed consistent with protection of the ecological values of the adjoining land.

Proposed Management

- **All lots within 100 metres of bushfire hazard are likely to require construction in accordance with AS 3959**
- **APZs are to be identified on land titles in the form of 88B instruments**

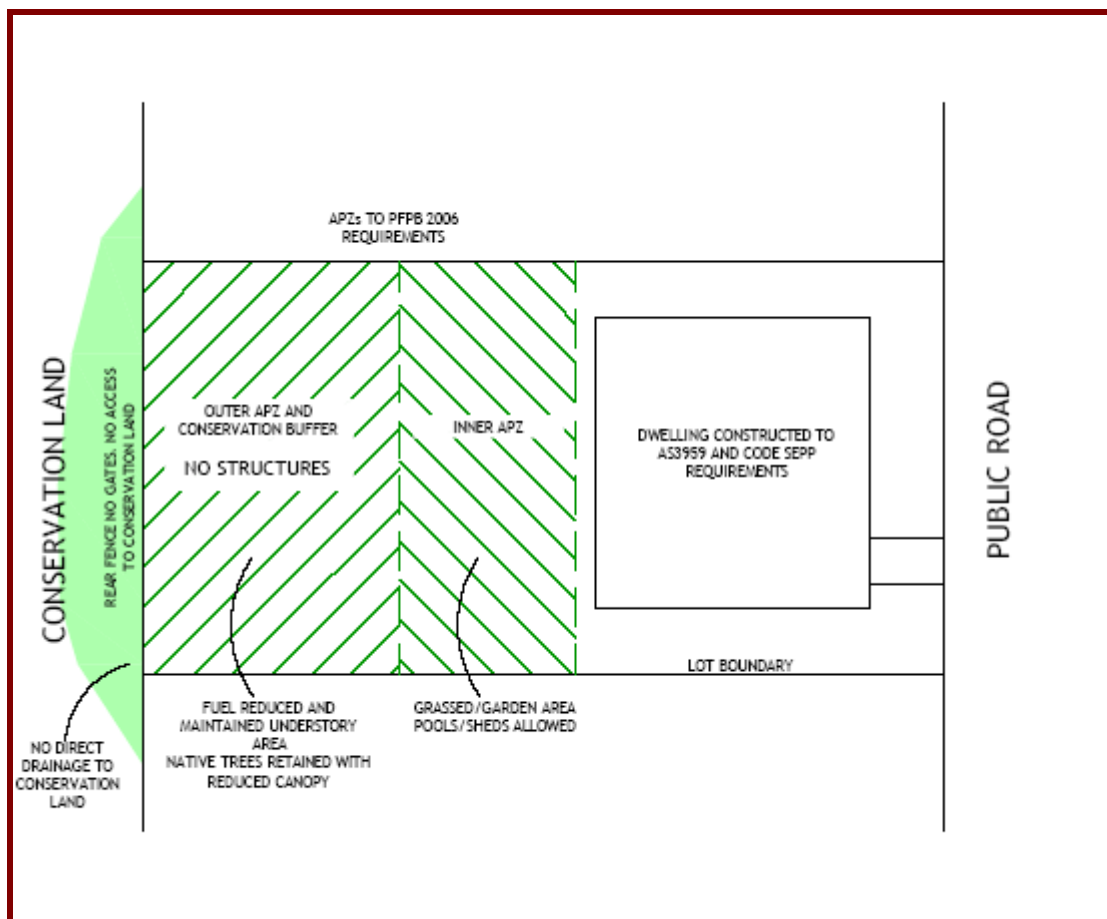


Figure 11 APZ management requirements for lots adjoining Lake Macquarie State Conservation Area

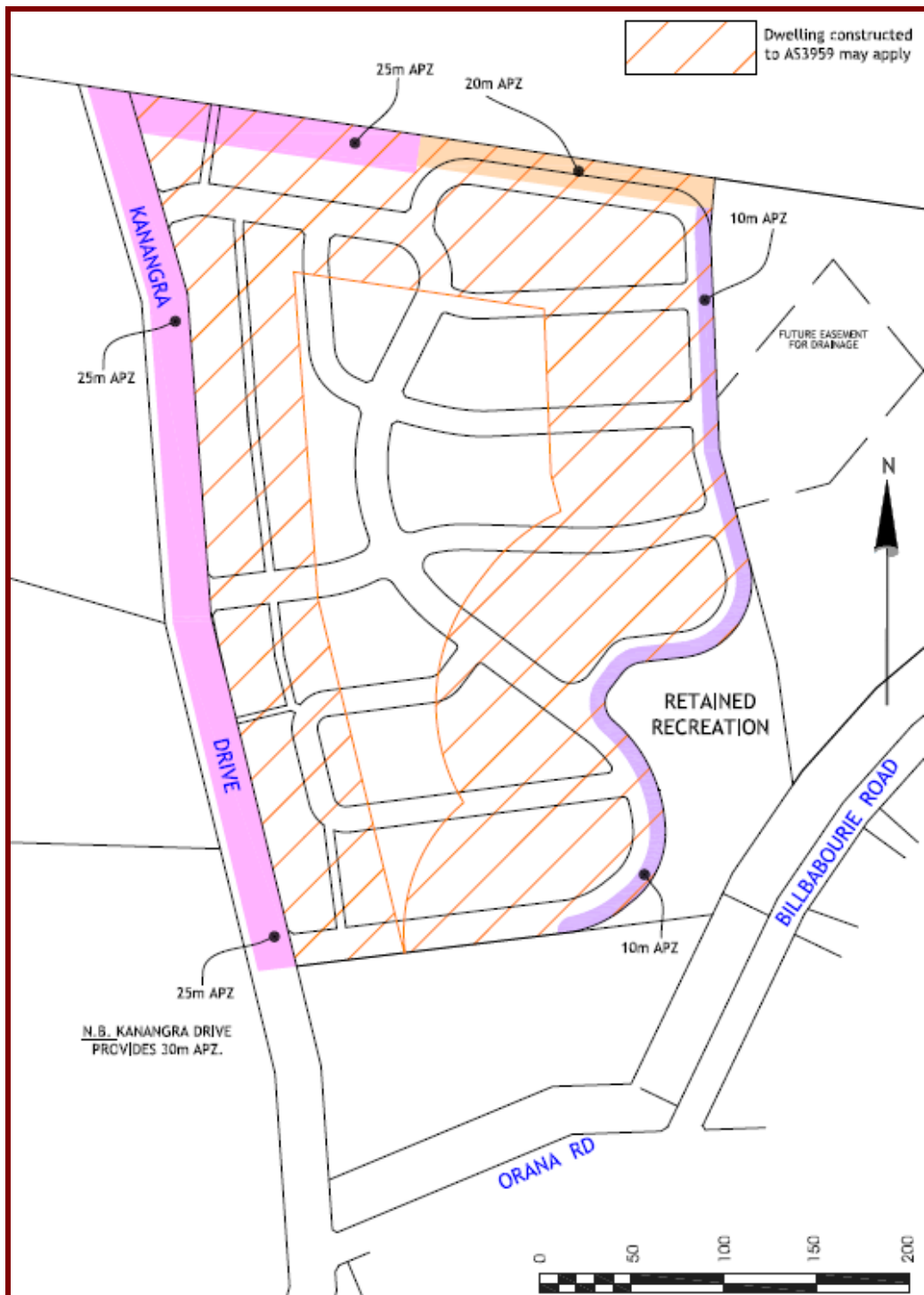


Figure 12 APZ and bushfire construction requirements generally

Appendix D

Tree Retention Plan

Point Wolstoncroft
Sports Centre



- LEGEND**
- PROPOSED OPEN SPACE AREAS TO REMAIN GENERALLY AT EXISTING LEVELS WITH SIGNIFICANT TREES TO BE RETAINED WHERE POSSIBLE
 - TREES TO BE RETAINED WHERE POSSIBLE
 - SITE AREAS TO REMAIN GENERALLY AT EXISTING LEVELS FOR RETENTION OF EXISTING TREES WHERE POSSIBLE.

PRELIMINARY Not for Construction

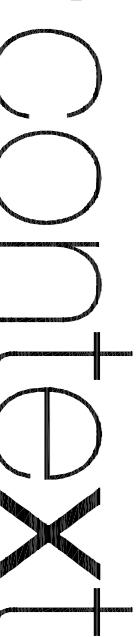
Date	16.02.2011	For Information	A
Issue	Amendment		

NOTES:
 1. VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.
 2. VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.
 3. VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.
 4. VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.
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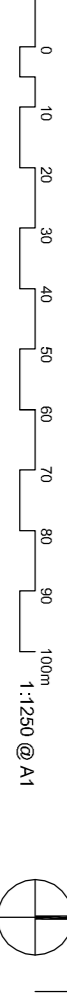


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PROJECT APPLICATION
 Project: Gwandalan
 Client: Rose Property Group Pty Ltd

AREAS TO SURVEY FOR TREE RETENTION
 Title: DP 11441604
 Date: November 2010
 DWG No: 106330-L-601
 Issue: A



Appendix E

Updated subdivision plan

Plan of: Proposed Subdivision of Lot 3 DP 588206

Location: Kanangra Drive, Gwandalan
Council: Wyong

Datum: N/A
Origin: N/A
Projection: N/A
Origin: N/A
North Direction: Grid
Contour Interval: Not Shown

Date: 10th November 2008
Sheet: 1 of 2
Plan By: MH/RC/MS
Project Manager: LB
Office: Hunter
Plan Purpose: Subdivision

Version: K (03/12/2010)
Client: Lakeside Living
Survey: N/A
AutoCAD: Dwg\11778-SITE-001-K
Our Ref: 11778

(A) ASSET PROTECTION ZONE

SITE BOUNDARY



adw johnson



" SEE SHEET 2 "

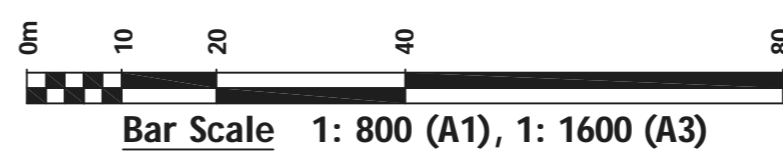
FUTURE EASEMENT FOR DRAINAGE
VARIABLE WIDTH
(TO BE DETERMINED)

3m WIDE POTENTIAL SECOND ACCESS

NOTES:-

1. PROPOSED EASEMENT FOR SERVICES & DRAINAGE NOT SHOWN AND WILL BE SUBJECT TO FINAL DESIGN.

Ver.	Date	Comment
K	03/12/2010	Add lane, rear of lots 129-138
J	30/11/2010	Amend Lots
H	26/11/2010	Amend residue, remove staging
G	03/11/2010	Change footpath alignments



adw johnson pty. ltd.

unit 7, building 2, 335 hillsborough road, warners bay 2282
ph: (02) 49785100 fax: (02) 49785199 hunter@adwjohnson.com.au abn 62 129 445 398

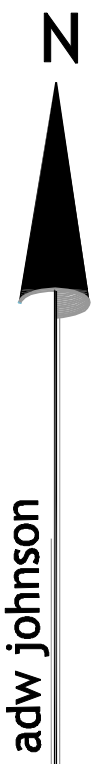
Plan of: Proposed Subdivision of Lot 3 DP 588206

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 Origin: N/A
 Projection: N/A
 Origin: N/A
 North Direction: Grid
 Contour Interval: Not Shown

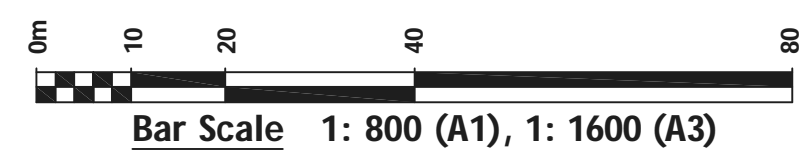
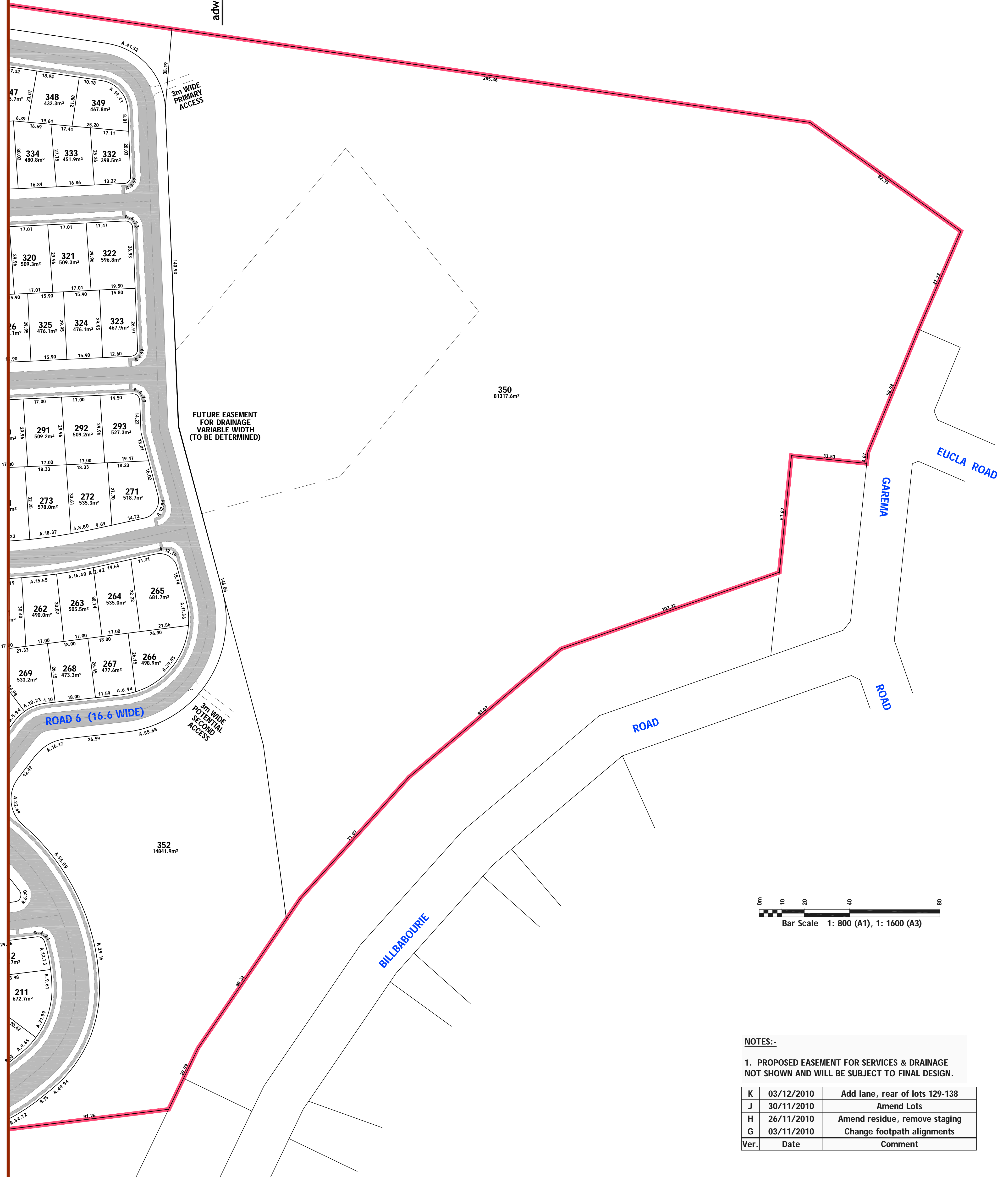
Date: 10th November 2008
 Sheet: 2 of 2
 Plan By: MH/RC/MS
 Project Manager: LB
 Office: Hunter
 Plan Purpose: Subdivision

Version: K (03/12/2010)
 Client: Lakeside Living
 Survey: N/A
 AutoCAD: Dwg\11778-SITE-001-K
 Our Ref: 11778

Location: Kanangra Drive, Gwandalan
 Council: Wyong



— SITE BOUNDARY



NOTES:-

1. PROPOSED EASEMENT FOR SERVICES & DRAINAGE NOT SHOWN AND WILL BE SUBJECT TO FINAL DESIGN.

Ver.	Date	Comment
K	03/12/2010	Add lane, rear of lots 129-138
J	30/11/2010	Amend Lots
H	26/11/2010	Amend residue, remove staging
G	03/11/2010	Change footpath alignments

Appendix F

Updated landscape plans

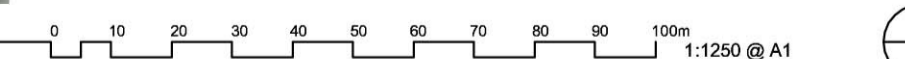


LEGEND

- TURF TO VERGES AND OPEN SPACE AREAS
- EXISTING NATIVE TREES TO BE RETAINED WHERE POSSIBLE
- PROPOSED STREET TREES
- DETENTION BASIN PLANTING
- SITE BOUNDARY
- STAGE BOUNDARIES
- LOT BOUNDARIES
- 25M APZ AREA
- ACCESS ROAD
- PROPOSED TIMBER FENCE
- PROPOSED FENCE TO KANGARA DRIVE
- PROPOSED CHAINWIRE FENCE
- PICNIC AREA

INDICATIVE PLANT SCHEDULE

Botanical Name	Common Name	Mature Height
TREES		
Street Trees		
<i>Angophora costata</i>	Sydney red gum	10-15m
<i>Banksia integrifolia</i>	Coast banksia	5-8m
<i>Cupaniopsis anacoides</i>	Tuckeroo	8-10m
<i>Eucalyptus botryoides</i>	Bangalay / Southern Mahogany	10-15m
<i>Eucalyptus capillata</i>	Brown stringybark	8-12m
<i>Eucalyptus racemosa</i>	Scribbly gum	10-15m
<i>Eucalyptus piperita</i>	Sydney peppermint	10-15m
<i>Eucalyptus racemosa</i>	Scribbly gum	10-15m
<i>Eucalyptus umbra</i>	Broad leaved white mahogany	10-15m
Private Domain Trees		
<i>Angophora costata</i>	Sydney red gum	10-15m
<i>Banksia integrifolia</i>	Coast banksia	5-8m
<i>Banksia senata</i>	Old man banksia	5-8m
<i>Corymbia maculata</i>	Spotted gum	10-15m
<i>Eucalyptus botryoides</i>	Bangalay / Southern Mahogany	10-15m
<i>Eucalyptus racemosa</i>	Scribbly gum	10-15m
<i>Hymenosporum flavum</i>	Native frangipani	5-8m
<i>Hibiscus tiliensis</i>	Rosemallow	8-10m
<i>Lagerstroemia indica</i>	Crepe myrtle	8-10m
<i>Plumeria spp.</i>	Frangipani	5m
<i>Tibouchina spp.</i>	Glory tree	5m
Swale Planting		
<i>Carex appressa</i>	Tall Sedge	0.8m
<i>Isolepis nodosa</i>	Knobby Club Rush	1.0m
<i>Juncus kraussii</i>	Sea Rush	0.5m
<i>Lomandra longifolia</i>	Spiny Headed Mat Rush	1.0m
<i>Phragmites australis</i>	Common Reed	0.3m



PRELIMINARY Not for Construction

Date	Amendment	Issue
17.02.11	Project Application	A
02.12.10	Project Application	B

NOTES:
 VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.
 REPORT ALL DISCREPANCIES TO LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION.
 USE FIGURED DIMENSIONS IN PREFERENCE TO SCALED DIMENSIONS.
 DRAWINGS MADE TO LARGER SCALES AND THOSE SHOWING PARTICULAR PARTS OF THE WORKS SHALL TAKE PRECEDENCE OVER DRAWINGS MADE TO SMALLER SCALE AND FOR GENERAL PURPOSES.

ALL WORK IS TO CONFORM TO RELEVANT AUSTRALIAN STANDARDS AND OTHER CODES AS APPLICABLE TOGETHER WITH OTHER AUTHORITIES' REQUIREMENTS AND REGULATIONS.



LANDSCAPE ARCHITECT
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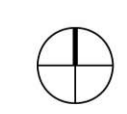
PROJECT APPLICATION
 Project: Gwandalan
 Client: Rose Property Group Pty Ltd

Title: **LANDSCAPE PLAN**
 Date: November 2010
 Dwg No: 10630-L-101
 Dn/Ch: JR/UB
 Issue: B



- LEGEND**
- TURF TO VERGES AND OPEN SPACE AREAS
 - EXISTING NATIVE TREES TO BE RETAINED WHERE POSSIBLE
 - PROPOSED STREET TREES
 - SITE BOUNDARY
 - STAGE BOUNDARIES
 - LOT BOUNDARIES
 - ACCESS ROAD
 - PROPOSED TIMBER FENCE
 - PICNIC AREA

0 5 10 15 20 25m 1:500 @ A1



PRELIMINARY Not for Construction

17.02.11	Project Application	A
Date	Amendment	Issue

NOTES:
 VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.
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ALL WORK IS TO CONFORM TO RELEVANT AUSTRALIAN STANDARDS AND OTHER CODES AS APPLICABLE TOGETHER WITH OTHER AUTHORITIES' REQUIREMENTS AND REGULATIONS.

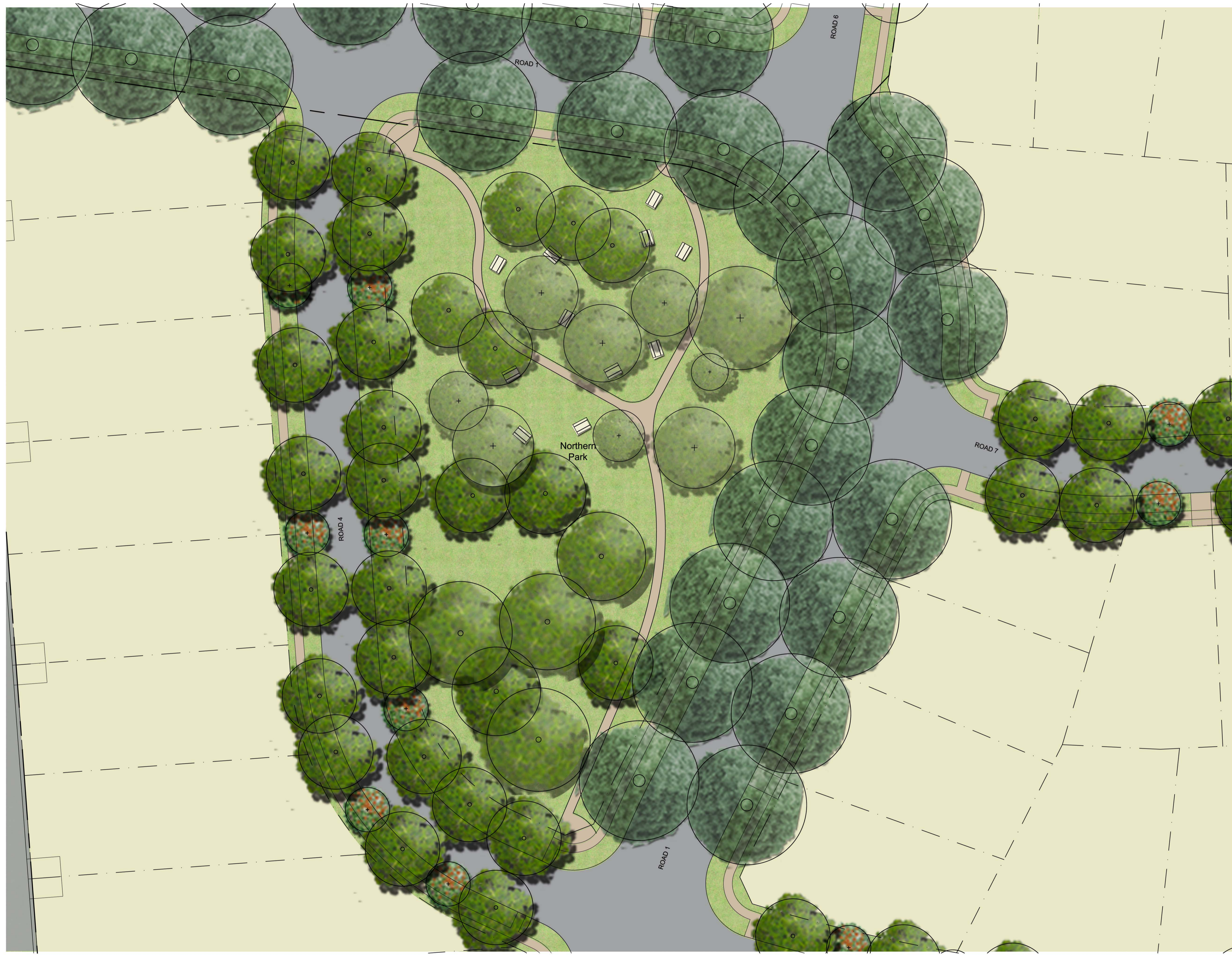




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PROJECT APPLICATION
 Project Gwandalan
 Client Rose Property Group Pty Ltd

Title **DETAIL PLAN - SOUTH EAST PARK**
 Date November 2010
 Dn/Ch JR/UB
 Dwg No 10630-L-302
 Issue A



- LEGEND**
-  TURF TO VERGES AND OPEN SPACE AREAS
 -  EXISTING NATIVE TREES TO BE RETAINED WHERE POSSIBLE
 -  PROPOSED STREET TREES
 -  LOT BOUNDARIES
 -  PICNIC AREA



PRELIMINARY Not for Construction

17.02.11	Project Application	A
Date	Amendment	Issue

NOTES:
 VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK.
 REPORT ALL DISCREPANCIES TO LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION.
 USE FIGURED DIMENSIONS IN PREFERENCE TO SCALED DIMENSIONS.
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ALL WORK IS TO CONFORM TO RELEVANT AUSTRALIAN STANDARDS AND OTHER CODES AS APPLICABLE TOGETHER WITH OTHER AUTHORITIES' REQUIREMENTS AND REGULATIONS.



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PROJECT APPLICATION	
Project	Gwandalan
Client	Rose Property Group Pty Ltd

Title	DETAIL PLAN - NORTHERN PARK	
Date	November 2010	Dn/Ch JR/UB
Drawg No	10630-L-301	Issue A

Appendix G

Response to public submissions

GWANDALAN SUMMARY OF PUBLIC SUBMISSIONS

No.	ISSUE RAISED	COMMENT / RESPONSE
1	The development is zoned for conservation and not land development.	Incorrect, the subdivision is over land zoned for low density residential development
2	The size of blocks will cause removal of vast areas of trees.	A tree management plan has been submitted with the PPR.
3	Query on the location of access to the Residual eastern lot.	Details of the access is included with the PPR.
4	The additional entrances off Kanagra Drive will cause a traffic hazard for the public school.	The traffic assessment did not identify any hazards to the school from the road layout
5	Stormwater controls run through residue lot and query on who maintains this.	The private lot will be burdened with maintenance of the stromwater detention basin.
6	Why is the offset land dedication so far away from Gwandalan.	The location of the offset land is not relevant.
7	Kanangra Drive is unsuitable for more traffic from the school to the Camp.	Disagree, refer to traffic report.
8	The proposal should provide access to the foreshore.	The foreshore is not within the development area. Access to foreshaore is available over existing public roads.
9	Infrastructure for the development should be provided by the developer.	Provsion has been made via the SoC and draft VPA
10	The proposal will create an isolated group of houses with no amenity to the present area.	The site adjoins existng urban development and will have a similar urban amenity
11	There are no shared path/cycleways and no local cycle path network.	Streets and roads are to Wyong Council subdivision standards
12	Access lanes for Kanangra Drive properties are too narrow especially for caravans and boats.	Agreed but this is not a subdivision design standard, most proposed lots however can accommodate boats and caravans
13	There is no commitment to improve the quality of Kanangra Drive carriageway.	This could be covered by Council S94 contributions.
14	Blocks are mostly 550sqm and too small for the area.	The proposed lots meet both state and local minimum size requirements
15	No objection to the development but believe plan is very poor.	Disagree with coomment on the design. It is consistent with a large range of planning priniples.
16	This development will reduce the overall fragment size of the north-south vegetated corridor.	The size of the corridor will still be adequate
17	Removal of trees will affect the habitat of identified flora & fauna species.	No threatened species will be significantly affected by the proposal
18	Impact of domestic animals needs to be considered.	DECCW generally supports the proposal.
19	Access to Pacific Highway unable to support current traffic let alone additional traffic.	The intersection will be upgraded via a VPA.
20	Sewerage and water and power infrastructure unable to cope with the development.	Infrastructure has been considered and adequate arrangements are in place
21	No mention of additional school funding to cope with additional population.	The VPA provides for state infrastucture contributions including for education
22	Loss of bio-diversity caused by the development and will not be replaced because of the offset land.	The offsets have been accepted by DECCW and the Commonwealth
23	Fencing to kanangra Drive is old and too high. It should be replaced with more modern fencing.	This has been accommodated in the PPR.
24	Traffic report is out of date.	The traffic report adequately addresses the proposed layout

Appendix H

Response to Agency submissions

GWANDALAN SUMMARY OF AGENCY SUBMISSIONS

AGENCY	ISSUE RAISED	COMMENT / RESPONSE
1. WYONG SHIRE COUNCIL		
1.1	Little or no detail in relation to social planning matters.	Assessment not required by DGRs. Substantial social assessment carried out for previous application, no significant issues identified. Infrastructure affects are covered by local and state government contributions made by the developer.
1.2	No social infrastructure is proposed to be provided within the development. No details on Proponents commitment to social infrastructure via a VPA. No negotiations on a VPA have been entered into with Council.	Commitment to pay S94 contributions is made in the Statement of Commitments. VPA for state infrastructure is currently on exhibition.
1.3	Proposed development will place additional demands on Gwandalan Public School which is near capacity. Provide evidence of discussions with Dept of Education in regard to expansion of the school.	This item is covered by the VPA which is on exhibition.
1.4	Proposed subdivision does not integrate well with the surrounding area and is isolated from the existing Gwandalan community.	The land has been identified in the Central Coast regional Strategy and Wyong Shire Council residential land release strategy.
1.5	It is suggested that the following modifications be incorporated into the proposal to address lack of integration: Provide a link to connect with Billabourie Rd and existing residential area. Provide a shared pathway from northern access to Kanangra Dr running down main north-south internal road linking 2 parks and the school. Provide a shared pathway to access foreshore. Provide street lighting, landscaping and shade to encourage walking. Work with bus services to identify and locate key bus stops and routes.	There is no common boundary with Billabourie Road to allow access. Public access is via the proposed road network. Not provided as the access would have to be over privately owned land excluded from the project application Will be provided by proposed landscaping Discussions will be held with appropriate agencies to the locate bus stops.
1.6	Planning objectives that promote housing choice and affordable housing should be included in the DCP.	While this is a legitimate strategic aim for the LGA as a whole it is not consistent with the existing character of Gwandalan
1.7	Play, exercise and social engagement opportunities should be provided in both parks.	Refer to landscape plans submitted with PPR.
1.8	Documents should show location of WSUD devices.	Swale and constructed wetland shown on engineering concept plans.
1.9	Canopy trees should be retained to retain shaded areas.	Tree retention plan shows locations that existing trees will be retained where possible.
1.10	Proposed species list is generally acceptable.	Agreed
1.11	An assessment of traffic movements must take into consideration current and future development	The traffic report provided with the EA adequately assesses traffic effects
1.12	Management of traffic during construction and impact on residents and visitor parking is not provided	This will be assessed in the CMP prior to works commencing.
1.13	The proposed development should be assessed in accordance with "Designing Projects for Active Living"	The design is consistent with principles for active living including walkability, quality public domain and the provision of travel alternatives
1.14	The following items should be implemented to improve movement for pedestrians and cyclists: The provision of an off-road shared pathway along MC01 and MC06 connecting numerous points including the foreshore. The provision of an off-road shared pathway around the constructed wetland linking to the south east park. A bridge to be provided to cross the swale drain. Adoption of 40km per hour speed limits. Shared paths to travel behind bus stops/refuges. Provision of seating along shared pathways. Provision of bicycle racks, seating and drinking water.	Adequate provision has been made for cycling and walking The wetland will be on private property No public purpose served Roads to be dedicated to Council and Council will be able to determine speed limits The design is to Council engineering standards Shared pathways are not provided, seating can be provided in parks Not proposed
1.15	Adequate and proper bus service facilities including U turn provisions are to be included for each stage of development.	Noted. Details to be provided prior to construction.
1.16	Statement of Commitments makes reference to Hunter Water rather than Wyong Shire Council.	This been amended in PPR.
1.17	The EA does not include any evidence that consultation has been undertaken with the NSW Rural Fire Service.	See response to Agency submissions.
1.18	The proposal fails to adequately address development within a coastal zone in relation to providing access to the foreshore.	The foreshore is not part of the development proposal.
1.19	The Draft DCP does not adequately address the requirements of the SEPP particularly under Clause 29.	The DCP has been amended and included in the PPR.
1.20	The Draft DCP is considered to be inadequate in terms of guiding future development.	The DCP has been amended to provide greater detail on future dwelling requirements
1.21	There has been no further consultation with Government Agencies or Wyong Council.	Incorrect - substantial consultation with DoP, DECCW and others has been conducted.
2. OFFICE OF WATER		
2.1	The EA provides concept plans only of the detention basin only. Detailed design of the detention basin, riparian zone rehabilitation and reshaping of creek entrance should be undertaken.	Will be covered by in detailed construction plans.
2.2	A monitoring strategy, assessing the input of nutrients to Lake Macquarie should be considered.	As part of the CEMP monitoring of discharges to the Lake will take place.

GWANDALAN SUMMARY OF AGENCY SUBMISSIONS

3. ENVIRONMENT, CLIMATE CHANGE & WATER		
3.1	Following a review of the proposed subdivision design, Draft DCP, and asset protection zone measures, DECCW is generally satisfied that the majority of issues have been adequately addressed.	Noted.
3.2	DECCW is satisfied that the majority of the issued DG's key assessment requirements for biodiversity impact have been adequately addressed.	Noted.
3.3	DECCW has no additional concerns with the Aboriginal cultural heritage assessment for the application and recommends conditions of approval as listed.	Noted.
4. HEALTH		
4.1	Attention should be given to ensuring that the development site positively supports existing and future native flora and fauna facilitating human health and wellbeing.	The proposal will provide an acceptable level of residential amenity.
4.2	Dwelling design is to address the issue of energy efficiency to facilitate human health and comfort during blackouts and extreme weather.	Basix will ensure individual dwellings achieve acceptable energy efficiency
4.3	Ensure crime prevention and sense of safety in urban design.	The subdivision design is consistent with PTED principles
4.4	Ensure use of WSUD principles in stormwater design in accordance with relevant policies.	WSUD principles have been included in site drainage and stormwater management design
4.5	Health supports the design of the primary street.	Noted
4.6	Provide walking opportunities for all people of all abilities through a pedestrian pathway network.	An extensive pedestrian network has been provided in accordance with Wyong Council design standards
5. BUSWAYS		
5.1	Busways believe that the current bus route would be extended along Kanangra Drive and a roundabout required at the midpoint of the development with a full bus stop facility at this point.	Previous consultation with Busways produced the current layout that shows the proposed bus route through the site.
5.2	Busways advise that half the future residents would be within 400m of the current bus route and as such an extension of the bus route, whilst being desirable is not essential.	Previous consultation with Busways produced the current layout that shows the proposed bus route through the site.
6. RTA		
6.1	Pacific Highway and Kanangra Drive intersection to be modified.	Noted.
6.2	Developer will be required to enter into a WAD.	Noted.
7. TRANSPORT		
7.1	Proposal should demonstrate consistency with the objectives and actions of draft Central Coast Regional Transport Strategy and draft North Wyong Structure Plan.	Subdivision of the site is identified in the Central Coast Regional Strategy. The proposal is consistent with the overall urban form identified in the structure plan and the objectives for roads, cycling and buses in the draft transport plan.
7.2	Traffic report has not complied with the DGR's, in particular, pedestrian and cycle modes not fully covered.	Provision has been made for on road cycling, there is no recreational cycle network to connect to. Footpaths have been provided to
7.3	Subdivision should accommodate desire lines and provide a shared pedestrian and cycle link with the adjoining community.	Design complies.
7.4	Proposal should address internal cycle connections including the provision of shared pedestrian/cycle access and other off-road cycle opportunities.	Design complies.
7.5	The staging of the proposal should facilitate the provision of potential bus services to the site and its integration with the existing bus service.	Provision has been made in the design.
7.6	Capability of staged development should achieve consistency with transport NSW's bus planning service guidelines.	Noted.
7.7	Ensure subdivision design facilitates bus access in a safe and accessible manner.	Bus access to the subdivision and school has been a key component of subdivision design
8. RURAL FIRE SERVICE		
8.1	Does not support vegetation classification of tall heath and the slope analysis of 5 degrees. The service has assessed the vegetation as forest with a downslope of 5-10 degrees. Accordingly the APZ affecting proposed lots 129-138 is 35m	Prior work and RFS review and the current bushfire assessment established that the vegetation was Forest and the slope was 0-5%. The subdivision APZs have been designed accordingly. There is a paved fire trail, not a public road proposed on the perimeter. The proposal thus meets PFPB requirements. (note: the error in the bushfire assessment classifying the vegetation to the north of lots 129 to 138 is acknowledged, a copy of the correct assessment report is included in the PPR the slope of 0-5% has been rechecked).
8.2	The proposed carriageway width of Road 6 on the interface with lots 341 - 349 shall be a minimum of 8m.	This carriageway is not classified as a road and is actually a fire trail and as such a 6m width complies with PFPB.