

MAJOR PROJECT 06_0276

ENVIRONMENTAL ASSESSMENT

PROPOSED RESIDENTIAL SUBDIVISION



LOT 1 DP 1087105 and LOT 4 DP1087106

Off Leo Drive Narrawallee for HAZCORP PTY LIMITED

Part One: Sections 1.0 - 5.0

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SUBMISSION OF ENVIRONMENTAL ASSESSMENT

Prepared under the Environmental Planning and Assessment Act 1979


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Part 3A Activity	
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Land on which activity to be carried out	Lot 1 DP 1087105 & Lot 4 DP 1087106 off Leo Drive Narrawallee – City of Shoalhaven
Project	Seven Stage 168 Lot Residential Subdivision & 3 Public Reserves allotments
Environmental Assessment	An Environmental Assessment (EA) is attached
Declaration	I declare that I have prepared this Environmental Assessment to the best of my knowledge: <ul style="list-style-type: none">▪ It has been prepared in accordance with the relevant provisions of the Environmental Planning and Assessment Regulation 2000;▪ The information which it contains is neither false nor misleading information.
Signature	
Name	Kerry Rourke
Date	March 2007

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1.0 EXECUTIVE SUMMARY

Introduction

This Major Project Application is a response to the adoption of a SEPP 71 Master Plan for the subject land, where the Minister for Planning issued a number of variations to the submitted Master Plan including an expansion of the proposal objectives, provision of pedestrian / cycle paths to link the subdivision through an adjacent public reserve to facilitate access to Narrawallee Inlet and Narrawallee Beach, provision of additional open space and vegetation retention within the subdivision, along with landscaping and street tree planting.

Subject Land

This subdivision proposal is lodged over Lot 1 DP 1087105 and Lot 4 DP 1087106 off Leo Drive Narrawallee in the City of Shoalhaven. Narrawallee is located approximately 3km due east of Milton (4km by road), approximately 1km north of Mollymook and 5.7km north of Ulladulla by road. The proposed subdivision adjoins the existing residential area at Narrawallee and connects into the existing road network with an extension of the characteristic lineal subdivision pattern. The subject land has an area of 21.3 hectares zoned Residential 2(c) under the provisions of the Shoalhaven Local Environmental Plan, 1985.

The subject land was zoned Residential 2(c) as part of Shoalhaven Local Environmental Plan, 1985 Amendment No. 195 gazetted 13th June 2003, and at that time the proponent was under contract to purchase the land including the adjoining 63 hectares of land zoned Environmental Protection 7(a) and 7(d2) under that same plan amendment.

The dedication of those 63 hectares of native bushland to the west of the 2(c) Residential zone was negotiated during the rezoning process and was subsequently supported by Shoalhaven City Council, Department of Planning, National Parks and Wildlife Service and New South Wales Agriculture. This ensured the protection of the environmental values of the area and provides vegetated open space linkages to other forested areas to the south and to Narrawallee Nature Reserve in the north. This dedication has now been finalised by the proponents resulting in the registration of Lot 2 DP1087105 and Lot 5 DP 1087106.

Project

This application proposes 168 generally rectilinear residential allotments and three public reserves, where the residential allotments vary in size from 604 sq metres to 1,221 sq metres. The application plans prepared by Rygate & West (Ulladulla) (**Annexure 1 dated October 2006**) propose the subdivision of the land via Freehold Torrens Title with all lots being of similar character to the adjacent residential neighbourhood, with no proposal to nominate any allotments for future medium density development.

This proposal includes the provision of a 2 metre wide cycleway extending from Seaspray Street along the western perimeter road linking into Leo Drive through the Council owned public reserve south of Macleay Street. Pedestrian pathways are provided on the perimeter of the southern loop road reserve, and along the

extension of Gemini Way through the subject land to the northern intersection linking to the cycleway. It is also proposed to extend that pedestrian path along Gemini Way to the south of the subject land linking to Seaspray Street through the existing Council public reserve pathway.

The project will be developed over a 7 to 10 year period in stages, releasing between 17 and 32 lots per stage. Appropriate infrastructure will be provided to each stage, including sewage, water, stormwater drainage, telephone and electricity integrating the development into the existing neighbourhood. The staging proposes a logical and orderly extension of the existing road pattern, ultimately linking Gemini Way to Seaspray Street at the completion of the project.

Constraints

There are a number of physical and legislative constraints that apply to the development of this land and have shaped the subdivision layout, which will be discussed in detail in this Environmental Assessment; however they are summarised as follows:

- Ecological constraints – the subject land adjoins 63 hectares of land zoned Environmental Protection which contains an endangered ecological community and SEPP 14 – Coastal Wetland. These influence the management of stormwater within the subject land and its flow into the surrounding landscape. There are also a number of threatened species found within the locality and the development of this land should not adversely impact upon those species.
- Topological constraints – the land contains a low coastal ridgeline which is visible from several public areas external to the site, it is important to preserve vegetation along the ridgeline so that the scenic quality of the locality is preserved and the subdivision enhanced;
- Natural Hazard constraints – the land is mapped by Shoalhaven City Council as being bushfire prone land, and the development of this land should be undertaken in such a manner that it will not lead to the loss of life (including fire fighters) or property as a result of bushfire impacting upon the land. The subdivision should be provided with mitigation measures that not only protect the proposed development but enhance protection for the existing residential neighbourhood;
- Vegetative constraints – the subject land primarily contains Tall Blackbutt forest which is contiguous with the surrounding coastal forest. This proposal aims to protect some of that forest within the site through the provision of two bushland public reserves that will be managed where required so that they do not have an adverse impact upon the bushfire protection measures for adjoining residential properties, or carry fire to land outside of the site, within the bounds of current best practice requirements;
- Archaeological constraints – the site is known to contain Aboriginal archaeological objects and sites of low significance;

- Potential contamination - the land contains a disused gravel quarry, which is proposed to be rehabilitated and used as an active recreation space – an extension of an adjoining Council reserve. A Phase 1 assessment has been made of this land to ascertain its suitability for adaptive reuse in a residential environment as mines and extractive industries are potentially contaminating landuses;
- Legislative constraints include a number of environmental planning instruments which direct the use of the land, particularly for residential purposes, and the requirement that this subdivision is of state significance given its location within the coastal zone. The environmental planning instruments addressed in this Environmental Assessment include SEPP 11 – Traffic Generating Development, SEPP 14 – Coastal Wetlands, SEPP 71 – Coastal Protection - the land is within the NSW Coastal Zone, EP & A Act, Illawarra Regional Environmental Plan, and the provisions of the Shoalhaven Local Environmental Plan.
- The provisions of a range of other statutory or non statutory policies are also considered including Shoalhaven City Council's DCP 100 – Subdivision Code, Shoalhaven Planning Policy No. 1, Coastal Design Guidelines for NSW and the South Coast Regional Strategy.

Environmental Assessment

In order to address the site constraints and the Director – General's Environmental Assessment Requirements (D-GR's), a number of professional reports have been commissioned to support this application, to ensure a high level of scientific certainty that the development is not likely to have significant ecological consequences, and that this proposal represents the most appropriate environmental outcome for the subject land and surrounding developed and natural lands. This Environmental Assessment draws together the conclusions and recommendations of these reports and addresses the specific Environmental Assessment Requirements issued by the Director – General.

Brief comments are provided here in regard to the D-GR's:

Environmental Assessment Requirement	Brief Comment with regard to this proposal
<p>1. General Consistency with the approved Master Plan</p> <p>1.1 The project application must be generally consistent with Master Plan No. MP 11-5-2003, for the site, approved by the Minister for Planning on 31 July, 2006.</p>	<p>This proposal is generally consistent with the issued SEPP 71 Master Plan. The number of allotments adopted in that plan was 163; this application proposes 168, with the increase derived through a reduction in width in some allotments from 20 – 18 metre frontages. This does not impact upon the required provision of public open space, or result in any environmental consequences. The application plans prepared by Rygate & West (Ulladulla) dated October 2006 are attached as Annexure 1 to this Environmental Assessment.</p> <p>One matter that is inconsistent with the adopted Master Plan is the Northern park is not proposed to be provided with play ground equipment as indicated by item 5 of the approved Master Plan – it is not considered to be appropriate to clear</p>

	<p>trees for the purposes of providing such a community facility if the intention is to retain coastal vegetation as required by item 17 of the adopted Master Plan.</p>
<p>2. Design and Visual Impacts</p> <p>2.1 Demonstrate suitability of the proposal with the surrounding area in relation to potential character, bulk, scale and visual amenity of development resulting from the subdivision having regard to the <i>Coastal Design Guidelines of NSW (2003)</i> and Shoalhaven Subdivision DCP.</p> <p>2.2 Address the cumulative visual impact of the project from public areas including streets.</p> <p>2.3 Identify the extent of potential development footprints, building envelopes and built form controls and any significant trees to be removed.</p>	<p>The proposed allotment sizes are commensurate with the existing character of the immediate locality – those existing properties were subdivided from the mid 1980's and range in size from 650m² to 1685m², where the majority of allotments have full street frontage, though there are several battle axe allotments, particularly off Blake Place. It is anticipated that the proposed residential allotments will be used for detached dwellings; there are no medium density allotments proposed or nominated in this subdivision.</p> <p>There are several public localities beyond the immediate vicinity of the site where it may be possible to view the subject land including Bannister's Head and areas of Milton. The development will be visible from Leo Drive particularly that on the eastern side of the ridgeline due to the removal of trees adjacent to the existing allotments with frontage to Leo Drive. However, beyond that immediate vicinity it is unlikely that the dwellings will be visible due to intervening vegetation and dwelling houses. From positions such as the Jones Beach carpark at Bannister Point some 2.2km from the site, the future dwellings on the subject land will not be visible though the removal of some vegetation along the ridgeline may be noted.</p> <p>Building envelopes are not proposed to be nominated for any allotment – Council's current building setback regulations are considered to be sufficient to result in a similar built form to the existing residential neighbourhood.</p> <p>A large number of trees will ultimately be removed from the site; however, the subdivision works per se only proposed removal of trees which are within proposed road reserves, and to reduce the density of vegetation for bushfire asset protection purposes.</p> <p>The proposal is consistent with the design principles for coastal towns as identified in the Coastal Design Guidelines for NSW.</p>
<p>3. Access to Public Open Space and adjoining residential areas</p> <p>3.1 Ensure existing and future opportunities for public access to and along open space areas and adjoining residential areas.</p> <p>3.2 Establish appropriate mechanisms to ensure access is properly managed.</p>	<p>Public access is provided through the development to existing and proposed public reserves, facilitating access for both existing and future residents to public lands including Narrawallee Inlet and Narrawallee Beach. Pedestrian pathways and a cycle way are proposed through the development, with an open space network provided for both passive and active recreation within the land. Rygate & West (Ulladulla) (Annexure 7 – December 2006) have designed a path way and cycle way network that will be constructed as part of this</p>

	<p>development.</p> <p>There is no intention to fence the western boundary of the land which would otherwise prevent access to the adjacent public reserve, however to facilitate access over the bio retention swale a small bridge will be provided to prevent damage to the swale.</p>
<p>4. Remediation</p> <p>4.1 A preliminary contamination assessment is to be prepared by a suitably qualified person having regard to the quarry use. If research into the previous indicates the likelihood of onsite contamination, a remediation report is to be prepared indicating the method of remediation proposed.</p> <p>4.2 Any required remediation should be completed and certified by a suitably qualified person prior to the commencement of any development consent for any subdivision works within the site.</p>	<p>Network Geotechnics Pty Ltd (Annexure 3 - May 2005) carried out a preliminary contamination assessment over the area of the disused ridge gravel quarry – it has been determined that this quarry was unlikely to have been used for silica mining, and that the land is suitable for residential purposes without any requirement for remediation.</p> <p>It is proposed to rehabilitate the quarry area however, and adapt it for use as a public reserve as it is adjacent to an existing public reserve, and a concept plan has been provided with this application illustrating its layout and the facilities to be provided within that reserve.</p>
<p>5. Design of Parks</p> <p>5.1 A landscape plan is required to be proved for approval for the areas the subject of the park lands.</p> <p>5.2 Invasive plant species must be removed from the open space and buffer areas. A weed removal plan is to be submitted verifying this action.</p>	<p>HLS Pty Ltd (Annexure 4 - May 2005) has prepared the landscaping plan for the rehabilitation of the disused quarry area for its use as a public reserve. It is intended that this area will have a pathway network linking to the adjoining public reserve and adjacent residential streets. Further, it is proposed that swings and other play equipment, seating, turfing and lighting will be provided, existing vegetation retained where appropriate with other complimentary landscaping works will be undertaken to augment and enhance the area.</p> <p>Conacher Travers Pty Ltd (Annexure 5 - May 2005) has prepared a Weed Management Plan for the subject land, particularly for the disturbed areas of the site that are to be retained as public reserve along the ridgeline and to assist in the protection of the nearby endangered ecological community.</p>
<p>6. Street Trees</p> <p>6.1 Details of the proposed street tree planting are to be provided. The detail to be provided includes the species (to be endemic), planting size and appropriate bonding for planting to occur after the final road seal and footpaths have been provided.</p> <p>6.2 Details of a maintenance and replacement period for the establishment of the trees are required.</p>	<p>HLS Pty Ltd (Annexure 6 - November 2006) has also prepared a street tree planting plan, which will be phased to co-ordinate with the construction staging, with the planting to be undertaken at the completion of each. The species chosen are indigenous to the locality and are not likely to have any adverse impacts on the biodiversity of the locality.</p> <p>Shoalhaven City Council requires a maintenance period of 6 months from completion of construction – at the release of each stage, where they require a cash maintenance bond to be paid at a rate of 5% of the cost of the construction works for that stage. In order to seek refund of the paid bond, all construction and landscaping works are to be maintained to an acceptable standard. Council then takes over</p>

	the maintenance of the public road upon refund of that bond.
<p>7. Footpaths/cycleways</p> <p>7.1 Combined footpath/cycle ways are to be provided for the entire loop road (on the eastern side), one side of the elongation of the access way off Leo Drive, one side of the elongation of Gemini Way (north of its intersection with the elongation of the access way off Leo Drive), and one side of the south/north road leading off the elongation of the access way off Leo Drive to the proposed extension of the public reserve.</p>	<p>Rygate & West (Ulladulla) (Annexure 7 - December 2006) have prepared a pedestrian path and cycle way plan which provides access along the western road reserve extension of Seaspray Street to the northern boundary, with construction of the path through the public reserve south of Macleay Street. Further, the pedestrian pathway will continue south from that point to Gemini Way, linking to the public reserve at the southern boundary of the land. A pedestrian path will also be provided around the southern ridge public reserve. The pathway / cycleway will be constructed in accordance with this plan.</p>
<p>8. Traffic, Parking and Access</p> <p>8.1 Provide a Traffic Impact Study in accordance with the RTA <i>Guide to Traffic Generating Developments</i>.</p> <p>8.2 Identify the need (if any) to upgrade roads/junctions and improvement works to address any traffic inefficiency and safety impacts associated with the development where relevant. This should include identification of pedestrian movements and appropriate treatments.</p> <p>8.3 Provision must be made for bus access through the site, including the provision of suitably located bus stops. These bus stops must be provided at the final stage of the subdivision.</p> <p>8.4 Adequate road safety measures are required for the proposal. This may involve reports demonstrating compliance with sight distance requirements for all intersections.</p> <p>8.5 Local Area Traffic Management devices are required for relevant adjoining road intersections. Traffic calming devices are to be provided within the straight alignments of the extensions to Seaspray Street, Gemini Way, and Seawind Parade.</p>	<p>Colston Budd Hunt & Kafes Pty Ltd (Annexure 8 - November 2006) have prepared a traffic study for the proposal in accordance with the provisions of the RTA Guide to Traffic Generating Development. This report also takes into consideration the provisions of Council's Subdivision Code – DCP 100 and Shoalhaven Planning Policy No 1. It has been determined that the proposed subdivision is within the environmental capacity of the road network in the Narrawallee / Mollymook area.</p> <p>The proposal is a traffic generating development under the provisions of State Environmental Planning Policy No. 11 as it proposes to create more than 50 residential allotments.</p> <p>The traffic report proposes a number of mitigating measures to reduce conflict between traffic and other road users, such as a roundabout at the intersection of Gemini Way and Seawinds Parade, two speed humps on Leo Drive between Sagittarius Way and Aries Place, a roundabout within the subdivision at the intersection of Leo Drive and the extension of Gemini Way.</p> <p>Rygate & West (Ulladulla) detailed engineering design plans for each road (Annexure 9 for detailed plan and long sections - December 2006) providing 12 metre carriageways for some roads within the development to provide a bus route. Both this plan and the recommendations of the traffic report will be implemented in this development.</p>
<p>9. Staging and Infrastructure Provision</p> <p>9.1 Consideration should be made for appropriate staging of the subdivision with the associated provision of infrastructure.</p> <p>9.2 Infrastructure provision required includes the construction of parks and open space, completion of a bio-swale, weed removal, construction of a pedestrian/cycle path to the reserve, roundabouts, and traffic calming devices.</p>	<p>Rygate & West (Ulladulla) (Annexure 10 - December 2006) have prepared a staging plan for the implementation of all construction works and infrastructure provision for this proposal. It is proposed that the subdivision will progress in seven (7) stages with the extension of Gemini Way into the site being the first stage, and the extension of Seaspray Street being the last stage. It is anticipated that this will be carried out over a period of 7 – 10 years depending on market influences, with the release of between 17 and 32</p>

	<p>lots per stage.</p> <p>The public reserves will be released in different stages to the adopted Master Plan, where the southern active reserve is to be released in Stage 2, as is half of the southern bushland reserve. The northern bushland reserve is to be released in Stages 4 and 6. The remainder of the southern bushland reserve is to be released in Stage 7 of the development.</p>
<p>10. Stormwater Maintenance and Monitoring Plan</p> <p>10.1 Prepare a stormwater plan for the subdivision layout based upon best practice Water Sensitive Urban Design Principles. An operation and maintenance manual must accompany this and a copy provided to Council prior to the commencement of works on Stage 1.</p> <p>10.2 The maintenance requirements of the manual are to be carried out by the developer generally consistent with the approved master plan.</p> <p>10.3 A water quality monitoring program is required and submitted for approval prior to the commencement of works on Stage 1. The monitoring program is to be carried out by the developer for the duration of the project generally consistent with the approved master plan.</p>	<p>J Wyndham Prince Pty Ltd has prepared a Stormwater Management Strategy (Annexure 11 - November 2006) for the subdivision proposing different implementation strategies for the eastern and western catchments due to differing environmental constraints. This includes a bio-retention swale adjacent to the western boundary of the land to enhance the protection of the endangered ecological community.</p> <p>The eastern subcatchment will discharge into existing Council infrastructure with "Enviropods" (or equivalent) being used to reduce pollution by trapping litter, oils and other materials prior to discharge into the stormwater system.</p> <p>Bioengineered Solutions has prepared an Operation & Maintenance Manual for the Enviropods, Basins and Bio Retention Swales (Annexure 12 - November 2006). This manual has been prepared for the on going maintenance and management of the various water quality devices, including management under the ownership of Shoalhaven City Council. The purpose of the manual is to ensure the various components of the system function appropriately so that there are no adverse impacts on the surrounding natural or built environment.</p> <p>Australian Wetlands Pty Ltd (Annexure 13 - April 2005) has provided a Water Quality Management Strategy for the proposal. This water quality monitoring program is to commence prior to stage 1 of the subdivision and is to continue on a monthly basis "until at least 80% of the dwellings are complete on all stages".</p>
<p>11. Maintenance of Native Vegetation on site</p> <p>11.1 The application must demonstrate the retention of native and other vegetation which is generally consistent with the approved master plan.</p>	<p>The adopted Master Plan variations required a reduction in lot yield in order to gain an additional 13% of the site for bushland retention. This has been achieved through the provision of two natural area public reserves for passive recreation purposes.</p>
<p>12. Bushfire</p> <p>12.1 Address the requirements of <i>Planning for Bush Fire Protection 2001</i>. In particular the provision of adequate access for fighting bushfire, adequate APZs outside the property boundaries and water supply for bushfire suppression operations.</p> <p>12.2 Prepare a Plan of Management for fuel</p>	<p>Conacher Travers Pty Ltd (Annexure 14 - March 2007) have prepared a bushfire protection assessment in accordance with the provisions of Planning for Bushfire Protection, 2006 which takes into considerations the deemed to satisfy provisions of the BCA – in this regard AS3959-1999 – Construction of Buildings in Bushfire Prone Areas.</p> <p>This assessment makes provision for asset</p>

management including the provision and maintenance of APZ's and any areas of hazard and buffer zones.	protection zones for dwellings at the urban – bushland interface, with a 36 metre asset protection zone to the existing bushland to the north and west complying with PBP 2006 for Level 2 construction. However, for Level 3 construction the APZ would be 25 metres.
13. Management of Asset Protection Zones and Vegetation 13.1 Demonstrate through a Vegetation Management Plan how the APZ's and the bushland area on open space areas are to be effectively managed and maintained without eroding their integrity.	Planscapes (Annexure 15 - March 2007) has prepared a Vegetation Management Plan addressing the management of required asset protection zones for dwellings in the vicinity of the two native bushland public reserves, particularly the northern reserve where residential allotments have a common boundary.
14. Infrastructure and Utilities 14.1 Address existing capacity and requirements of the proposal for effluent disposal, water supply, electricity, and telecommunications services in consultation with relevant agencies and identify staging, if any, of infrastructure works. 14.2 Prepare a feasibility study for reclaimed water use in consultation with Shoalwater.	<p>Preliminary sewer and water reticulation designs have been prepared by Rygate & West (Ulladulla) (Annexures 16 & 16A - December 2006) for this subdivision extending the existing network into the subject land. A sewer rising main and pumping station are required at the northern end of the subdivision due to the slope of the land.</p> <p>There is no proposal for reclaimed water use in this proposal – it is not considered to be feasible due to the size of the proposal and the site's distance from the Ulladulla Sewage Treatment Plant.</p> <p>Shoalhaven Water have issued Development Advice notices (Annexure 17 - July 2005) for the 192 lot SEPP 71 Master Plan proposal which indicates that there is sufficient capacity in the existing system to cater for the proposed development, both for the supply of potable water and for the treatment and disposal of effluent. Council recently commissioned a new sewage treatment plant for Ulladulla.</p> <p>Electricity and telephone services will be provided at the full cost of the developer as per the requirements of Integral Energy and Telstra.</p>
15. Flora and Fauna 15.1 Outline measures to conserve flora and fauna and their habitats within the meaning of the <i>Threatened Species Conservation Act 1995</i> , having regard to the <i>Draft Guidelines for Threatened Species Assessment (DEC & DPI July 2005)</i> . In particular, address potential impacts of the development on any Endangered Ecological Communities.	<p>Extensive flora and fauna surveys of the site and the adjacent endangered ecological community have been undertaken and assessment reports prepared by Conacher Travers Pty Ltd (Annexure 18 - December 2006). There are no endangered species or core habitat on site that would be impacted by the proposal.</p> <p>There were two peer reviews of the 2004 Flora and Fauna assessments undertaken by Dr Kevin Mills (see Annexure 18 – Appendix 5, April 2004) and Dr David Robertson (see Annexure 19 – August 2004). Dr Mills reviewed the flora and fauna results where Dr Robertson reviewed the methodology.</p>
16. Cultural Heritage 16.1 Address the draft <i>Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation (DEC, July 2005)</i> if	An assessment of the impact of this subdivision on Aboriginal Cultural Heritage was undertaken by Navin Officer Heritage Consultants Pty Ltd (Annexures 20 & 20A - December 2002, August

required.	<p>2004). Several sites and artefact scatters were found within the site, and were determined to be of low significance – this determination was made in consultation with the Ulladulla Local Aboriginal Land Council.</p> <p>Consent to destroy Aboriginal objects in the course of activities associated with the residential subdivision of the land has been issued by the Department of Environment and Conservation (Annexure 21 - August 2005).</p>
<p>17. Soils and Contamination</p> <p>17.1 Identify the presence and extent of acid sulfate soils on the site and recommend appropriate mitigation measures. The level of assessment shall be consistent with the <i>Acid Sulphate Soil Manual</i> by ASSMAC.</p>	<p>A review of the Department of Lands Acid Sulfate Soils maps (1998) held at Shoalhaven City Council indicates that the subject land is not within an area containing any likelihood of acid sulfate soils. Acid sulfate soils are predominantly associated with low lying coastal floodplains however the subject land is located above the 1% AEP, though much of Narrawallee is mapped as being at risk – particularly to the north and east of the subject land (Low probability – between 1 – 3 meters below ground surface as mapped).</p> <p>The land to the north between the site and Narrawallee Inlet is also mapped as having a low probability however that adjacent the Inlet, and surrounding the SEPP 14 Coastal wetlands ranges from low probability at or near ground surface to high probability at or near ground surface.</p> <p>This matter was taken into consideration during the rezoning of the subject land, so that the land zoned for residential purposes was outside the mapped acid sulfate soils areas.</p>

Reports commissioned in response to the DGR's include Flora and Fauna Assessments, Archaeological Assessments, Traffic Reports, Bushfire Protection Assessments, Weed Management Strategy, Water Quality Monitoring Strategy Landscape plans and a Vegetation Management Plan for the proposed natural public reserve areas. The recommendations provided by these and other professionals have resulted in a subdivision layout that is a logical expansion of an existing coastal village and guiding the design so that it is compatible with the surrounding built and natural environment.

Each constraint and environmental assessment requirement is separately addressed in this report to demonstrate the proposal's compliance with both the issued SEPP 71 Master Plan and the Director – General's Environmental Assessment Requirements. It is concluded that this residential subdivision will not cause any detrimental impact on the surrounding environmental conditions or result in any coastal degradation.

2.0 BACKGROUND

2.1 Introduction

This major project application seeks consent for the residential subdivision of Lot 1 DP 1087105 and Lot 4 DP 1087106 into 168 allotments. It includes the construction of public roads including cycleways and pathways (and the removal of all vegetation in the proposed roadways as part of Stage 1), the creation of three public reserves, and the underscrubbing of the site (except public reserves unless required by the Vegetation Management Plan) to assist in asset protection in a bushfire emergency for the proposed subdivision and existing surrounding residential development.

It is proposed to phase the subdivision construction works so that a number of allotments can be released for sale at the completion of each stage and it is anticipated that the project would be completed over a 7 to 10 year period depending upon market forces.

A Master Plan proposal was lodged with the Department of Planning in 2003 for the residential subdivision of this land pursuant to the provisions of SEPP 71 as they existed at that time. After a lengthy assessment process including considerable public consultation, assessment of numerous environmental reports and subsequent amendments to the submitted plans, the Minister for Planning adopted the SEPP No 71 Master Plan No. 11-5-2003 on the 30 July 2006.

The current plan is a reflection of the requirements of the adopted Master Plan as varied and the application is lodged under Part 3A of the Environmental Planning & Assessment Act. This Environmental Assessment Report describes the proposal and addresses the Director - General's Environment Assessment Requirements (DGR's) forwarded to the proponents on the 23 October 2006 (**Annexure 2**).

While the adopted Master Plan sought a maximum of 163 residential allotments from the subject land, this application proposes 168 residential allotments. The additional five allotments do not result in any additional environmental consequences or cumulative impacts, and the reduction in lot width to create these additional lots reduces the likelihood of any allotment being used for medium density development in the future. This proposal is still within the intent of the issued Master Plan which is reflected in the issued Director – General's Environmental Assessment Requirements, as the preliminary application lodged for consideration under Part 3A proposed 168 allotments.

2.2 Project Team

This Major Project Application has been prepared by the following team co-ordinated by Rygate & West (Ulladulla) Surveyors, Planners, Road & Drainage Engineers, on behalf of Hazcorp Pty Ltd.

Architects and Planners: Cox Richardson Architects and Planners

Environmental Assessment Planner: Planscapes Town Planning Consultancy

Civil Engineers: J. Wyndham Prince Pty Ltd

Flora and Fauna: Conacher Travers Pty Ltd

Bushfire: Conacher Travers Pty Ltd

Archaeology: Navin Officer Heritage Consultants

Subdivision Layout: Rygate & West (Ulladulla)
Road Design: Rygate & West (Ulladulla)
Service & Infrastructure Provision: Rygate & West (Ulladulla)
Landscape: HLS Pty Ltd
Contamination: Network Geotechnics Pty Ltd
Weed Management: Conacher Travers Pty Ltd
Water Quality Monitoring Strategy: Australian Wetlands
Operation & Maintenance Manual: Bio Engineered Solutions
Traffic: Colston, Budd Hunt & Kafes Pty Ltd
Vegetation Management & Supplementary Bushfire Advice: Planscapes

2.3 Project Objectives

As an extension of the existing Narrawallee residential area, this Major Project Application adopts the following project objectives:

- To protect the natural environment, including the flora, fauna and the water quality of the locality without significant environmental harm or degradation through loss of biodiversity or environmental pollution, as a result of creating a liveable community;
- To recognise the value of Aboriginal archaeological sites, objects or artefacts and to protect those of high local and regional significance;
- To protect the built environment from the adverse impacts of bushfire through the provision of appropriate mitigation measures in accordance with adopted best practices measures;
- To incorporate water sensitive urban design principles within the development;
- To create a well linked and highly accessible residential precinct;
- To provide development that responds to environmental topographical and site features;
- To provide a clear urban structure and land use pattern;
- To provide dwellings with excellent linkages to open space and recreation networks.
- To comply with the Objects of the Environmental Planning & Assessment Act, 1979, particularly in regard to developing the land in accordance with its best economic use.

3.0 PROJECT DESCRIPTION

The site comprises approximately 21 hectares. This Major Project Application anticipates the delivery of 168 residential allotments and 3 public reserves.



Figure 1: Site Location *Google Earth image used under license*

3.1 Development Options

The submitted subdivision design for this application was derived from a series of options for the land drafted on behalf of the proponent and considered by the Department of Planning.

The first development option proposed for this site was presented to the Department of Planning as the plan for the original SEPP 71 Master Plan in 2003. That plan included 213 residential allotments and one public reserve where this was formed through the rehabilitation of the gravel quarry in the southern section of the land adjacent to the existing public reserve. The two main link roads were oriented north - south as extensions of Seaspray Street and Gemini Way, where the interconnecting roads between these two main streets and the entry off Leo Drive, were oriented east - west - see **Annexure 1A**.

However, during the Master Plan assessment, the DoP Assessing Officer requested the applicant review the plan to improve the solar efficiency of the subdivision. This review resulted in the road and lot orientation changing and provision of additional open space; the design was amended so that the roads were north - south and the majority of lots were oriented east - west. Complying with this amendment request resulted in the reduction of residential allotments proposed to 192 from the initial 213, which includes a playground reserve in the northern section of the subdivision - see **Annexure 1B**.

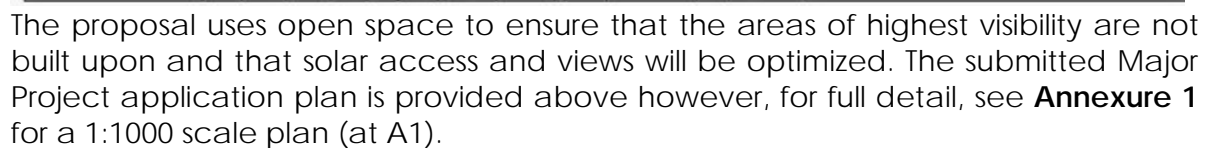
The adopted Master Plan however, further reduced the lot yield through a requirement for the retention of additional native vegetation within the site. This resulted in the total number of residential allotments being reduced by 35 to a total of 163 allotments. The MP variations required the provision of two reserve areas along the ridgeline to be maintained as native vegetation, one being an enlargement of a proposed playground area in the northern section of the subdivision and the other being the deletion of residential allotments within the southern loop road and the retention of the vegetation in that locale.

The preferred and current lodged option however is a consequence of further consultation with the Department of Planning, subsequent to the SEPP 71 Master Plan determination. The key features of the submitted plan are:

- An increase in lot yield from the "approved" 163 to 168 lots;
- Provision of an additional public reserves to provide a total of 3 reserves including two passive native vegetation reservations;
- Higher parts of the ridgeline largely left free of development;
- 71% of allotments achieving maximum solar access through east - west orientation with all other allotments complying with the minimum solar access requirements of the published DEUS Solar Access for Lots guidelines;
- Logical staging for the provision and extension of infrastructure services to the proposed residential development.

The proposed land use is residential in accordance with the 2(c) zone of the Shoalhaven Local Environmental Plan (SLEP 1985) and open space as required. The built form of the future residential neighbourhood is likely to reflect and compliment

FIGURE 2: Major Project Application Plan



Detail on the allotments proposed is tabulated below, where the lot sizes range from 604m² – 1,221m² with the average residential allotment being 738.52m² and the median allotment size being 707m². Lot orientation is also provided in accordance with the DEUS (SEDA) Solar Access for Lots Residential Guidelines.

TABLE 1: Proposed Allotment Areas & Orientation

Stage 1			Stage 2			Stage 3			Stage 4			Stage 5		
Lot	Area	Orient	Lot	Area	Orient	Lot	Area	Orient	Lot	Area	Orient	Lot	Area	Orient
101	724	3.00	201	692	6.00	301	708	6.00	401	681	3.00	501	1221	4.30
102	684	3.00	202	747	6.00	302	706	6.00	402	670	3.00	502	811	4.30
103	684	3.00	203	646	3.00	303	706	6.00	403	656	3.00	503	845	4.30
104	684	3.00	204	646	3.00	304	706	6.00	404	671	3.00	504	890	4.30
105	684	3.00	205	646	3.00	305	712	6.00	405	684	3.00	505	890	4.30
106	684	3.00	206	646	3.00	306	712	12.00	406	684	3.00	506	812	4.30
107	684	3.00	207	630	3.00	307	748	12.00	407	684	3.00	507	896	4.30
108	684	3.00	208	630	3.00	308	648	12.00	408	684	3.00	508	900	3.00
109	684	3.00	209	630	3.00	309	648	12.00	409	684	3.00	509	817	3.00
110	684	3.00	210	630	3.00	310	739	9.00	410	684	3.00	510	817	3.00
111	684	3.00	211	630	3.00	311	881	9.00	411	782	3.00	511	817	3.00
112	684	3.00	212	631	3.00	312	684	3.00	412	731	6.00	512	812	3.00
113	684	3.00	213	840	4.30	313	684	3.00	413	672	6.00	513	810	3.00
114	684	3.00	214	707	12.00	314	684	3.00	414	704	6.00	514	824	3.00
115	675	3.00	215	707	12.00	315	684	3.00	415	681	6.00	515	824	3.00
116	822	9.00	216	707	12.00	316	684	3.00	416	912	12.00	516	824	3.00
117	786	9.00	217	707	12.00	317	684	3.00	417	714	12.00	517	823	3.00
118	646	9.00				318	684	3.00	418	688	12.00	518	813	3.00
119	646	9.00				319	684	3.00	419	738	9.00	519	847	3.00
120	646	9.00							420	775	9.00	520	844	3.00
121	646	9.00							421	798	9.00	521	866	3.00
122	646	9.00										522	1070	3.00
123	646	9.00										523	765	12.00
124	646	9.00										524	706	12.00
125	646	9.00										525	706	12.00
126	646	9.00										526	706	12.00
127	646	9.00										527	707	9.00
128	646	9.00										528	707	3.00
129	737	6.00												
130	702	12.00												
131	684	3.00												
132	741	3.00												

Stage 6			Stage 7		
Lot	Area	Orient	Lot	Area	Orient
601	714	6.00	701	634	9.00
602	971	6.00	702	634	9.00
603	1130	6.00	703	631	9.00
604	749	9.00	704	630	9.00
605	732	9.00	705	630	9.00
606	732	9.00	706	630	9.00
607	730	9.00	707	630	9.00
608	719	9.00	708	630	9.00
609	720	9.00	709	630	9.00
610	784	9.00	710	630	9.00
611	721	9.00	711	604	9.00
612	721	9.00	712	766	9.00
613	721	9.00	713	761	6.00
614	823	10.30	714	1136	1.30
615	649	10.30	715	643	1.30
616	782	10.30	716	776	1.30
617	767	10.30	717	821	3.00
618	1108	10.30	718	810	3.00
619	683	3.00	719	810	3.00
620	751	3.00	720	810	3.00
621	798	3.00	721	810	3.00
622	880	3.00	722	810	3.00
623	839	3.00	723	810	3.00
624	752	12.00	724	810	3.00
			725	911	3.00
			726	813	3.00
			727	813	3.00

All Areas are in m²

Orientation Labelling

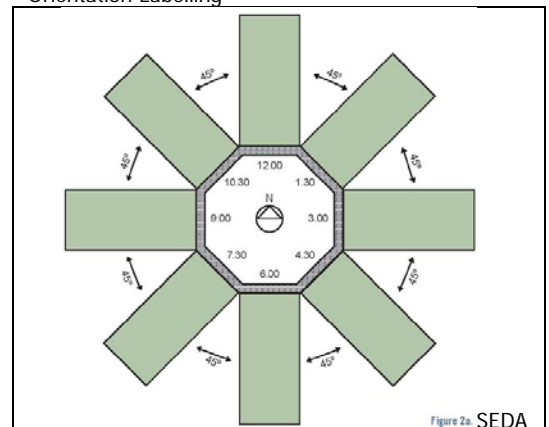


Figure 2a SEDA

Average Allotment Size 738.52m²

Active Public Reserve Lot – 4061m²
 Southern Bushland Reserve – 1.575ha
 Northern Bushland Reserve – 7445m²

Figure 2a: DEUS – SEDA Solar Access for Lots – Guidelines for Residential Subdivision in NSW

3.2 Project Justification

The subject land was rezoned by Shoalhaven City Council in 2003 to permit residential development and a range of compatible land uses, along with a requirement for the dedication of approximately 63 hectares of adjoining coastal forest for conservation purposes.

If this subdivision did not proceed, the land could be used for a range of higher density and traffic generating land use forms, including medium density, residential flat development, commercial development, and tourist development, all of which are permissible under the provisions of the Residential 2(c) zone.

The proposal is in keeping with the Coastal Design Guidelines and is also consistent with the South Coast Regional Strategy. It is the only remaining urban zoned land in the locality available for development, there are approximately 20 vacant allotments left in the Narrawallee locality. The surrounding residential area of Narrawallee achieves a lot density of between 12 and 15 dwellings per hectare, where this development achieves approximately 8 dwellings per hectare.

It is considered that this subdivision proposal given the site constraints is the best use of the land.

3.3 Access

Legal and practical access to the subject land is provided through the existing local street network where local street access is via Matron Porter Drive from Milton and then directly from Leo Drive with connections at Gemini Way and a future extension of Seaspray Street on the southern side of the site.

A perimeter road is proposed as the extension of Seaspray Street adjacent to the west and north interface with the bushland contained in the adjoining Environmental Protection zone Public Reserve. On the east the access road is an extension of Gemini Way, with an east - west link between the two north - south roads as an extension of the unnamed access off Leo Drive. Local access streets complete the proposal which contains no cul-de-sacs to ensure circulation and social interaction.

The subdivision plan considers the movement of bicycles and vehicles within the total context of the site. A cycleway/pathway is to be provided along the perimeter road and through the existing public reserve to the north to link with Leo Drive near Macleay Street providing access to the beach and inlet. Additional walking paths will be provided as detailed on the pathway linkage concept plans (see **Annexure 7**).

Road reserves are generally 18 metres in width with 8 or 12 metre carriageways to facilitate two way traffic movements and to cater for emergency vehicles, buses and garbage contractors, with on street parking available within the road reserve.

The road reserve widths provided in this application are far in excess of the minimum example acceptable solutions of Shoalhaven City Council's Development Control Plan No. 100 – Subdivision Code, where access streets which provide access to 50 dwellings are designed for a traffic speed of 30km/hr, have a

carriageway or pavement width of 5.0 – 6.0 metres. Local streets which collect traffic from access streets and connect to major roads (such as Leo Drive connecting to Matron Porter Drive) generally provide access to up to 200 dwellings and are to be designed for a traffic speed of 40km/ hr with pavement widths of 7.0 – 9.0 maximum. Further, the road widths provided in this application are also larger than many of the existing streets in the locality which do not comply with the current Subdivision Code or the provisions of Planning for Bushfire Protection due to the age of the original subdivisions.

Public transport is catered for through the provision of Bus stops as required by Ulladulla Bus Lines Pty Ltd and Council where the northern sections of the loop road and the east - west link have been widened to incorporate a 12m carriageway to accommodate a bus route.

3.4 Open Space & Landscaping

The provision of open space within the development is used as a mechanism to:

- Screen development from visual access points;
- Control and manage environmental quality;
- Connect publicly accessible uses and spaces;
- Effect the microclimate of an area;
- Connect Flora and Fauna corridors.

The proposal uses open space to ensure that the areas of highest visibility are not built upon and accordingly offers visual relief. The ridge therefore generally reserved as open space incorporating two areas for public reserves of 1.575ha and 7,445m² located on the higher areas of the ridge running north/south through the site. The land adjoining to the west and north has already been reserved for environmental protection by dedication as public reserve, and accordingly forms a major flora and fauna corridor in the Narrawallee area.

An open space perimeter corridor ensures that runoff is managed within the perimeter road area though a vegetated bio-retention swale, controlled and scrubbed within the confines of the site prior to release into the local system in a manner replacing natural overland flows.

In terms of the broader open space corridors, the site is constrained by an Environmental Protection zone to the west which is now Public Reserve dedicated by the proponents in order to facilitate the rezoning of the land. The Environmental Protection zone is flora reserve and fauna corridor protecting wildlife within the area and known endangered ecological communities. The open space structure within the site is responsive to the flora and fauna report prepared for the site as attached and areas of Glossy Black Cockatoo feeding resource are able to be retained in the northern reserve even though the loss of that area of feeding resource would not have had any significant impact upon that threatened species (see **Annexure 18**).

Open space reserves located on the high points of the north - south ridgeline will retain existing trees in order to minimize the visual impact of the development. Street trees will be established and the park at the southern extremity of the site will

be landscaped and developed as detailed in **Annexure 6** to provide a useable active recreation area which will be a feature of the development.

Plans have been prepared by HLS Pty Ltd (**Annexures 4 & 6**) for the planting of street trees and landscaping of the southern active public reserve adjoining Council's existing reserve off Seaspray Street and Gemini Way. The proposed works will enhance the subdivision and locality with the rehabilitation of the quarry and the planting of native species.

3.5 Drainage & Stormwater Design

The western side of the ridgeline forms a narrow arm of Narrawallee Inlet catchment where the land within the site to the north and the eastern side of the ridgeline drains generally to the east and northeast via existing Council infrastructure through the adjacent residential development.

An open space perimeter corridor ensures that runoff is managed, controlled and scrubbed within the confines of the site prior to release into the natural water system. The proposed water management system contains all runoff from the site through the introduction of a retention system on the north and west of the site. Flow to the east of the site is dealt with through the upgrading of the existing drainage infrastructure. A Stormwater Management Strategy and Operation & Maintenance Manual for the structures are provided (see **Annexures 11, 12 & 13**).

3.6 Energy Efficiency

The residential allotments are arranged in a manner that will optimize access to passive solar heating. In accordance with the requirements of Shoalhaven City Council Subdivision Code - DCP No. 100, and the DEUS / SEDA (2004) – Solar Access for Lots (Guidelines for Residential Subdivision in NSW), a high level of passive solar access has been achieved in this subdivision layout, enabling reduced energy consumption for future dwelling houses and encouraging energy smart home design.

Of the proposed lots, 71% are oriented east – west maximising northern aspect for potential dwellings, where 20% are oriented north – south. The remaining 9% of lots are oriented either south-west / north-east, or north-west / south-east. Flexible solar access zones and minimum solar access zones in accordance with the SEDA guidelines are achievable on each lot, where proposed lots are 18 metres wide rather than 20 metres as indicated in the guidelines. It is considered more appropriate to use the Bega Solar Access dimensions rather than Sydney – Bega is marginally closer to the site but it also allows for larger solar access zones.

3.7 Services

The provision of infrastructure on the site will be in accordance with the relevant service provider's requirements for the development.

It is intended to connect into the current water supply and sewage services in the Narrawallee area. Draft sewer and water reticulation plans have been prepared and are provided (see **Annexures 16 & 16A**).

The water supply authority - Shoalhaven Water (Shoalhaven City Council) have previously assessed the 192 lot SEPP 71 Master Plan proposal and advised that the sewer and water strategy proposed for this development is satisfactory and achievable. In that regard the proponent has been provided with Shoalhaven Water's infrastructure provision requirements in the form of a Development Application Notice for each stage of the development (see **Annexure 17**).

Integral Energy will extend electricity reticulation to the site in accordance with their standards at the proponents full cost.

Telstra will extend telephone services to the site as required in accordance with their usual policies. If cable broadband becomes available prior to the development of any stage it will also be provided.

No additional services are currently available in the local area.

3.8 Staging and Infrastructure Provision

It is proposed to release the subdivision in 7 stages as detailed on the following staging plan over a period of 7 – 10 years, depending on market forces and infrastructure required for each stage will be provided as necessary.

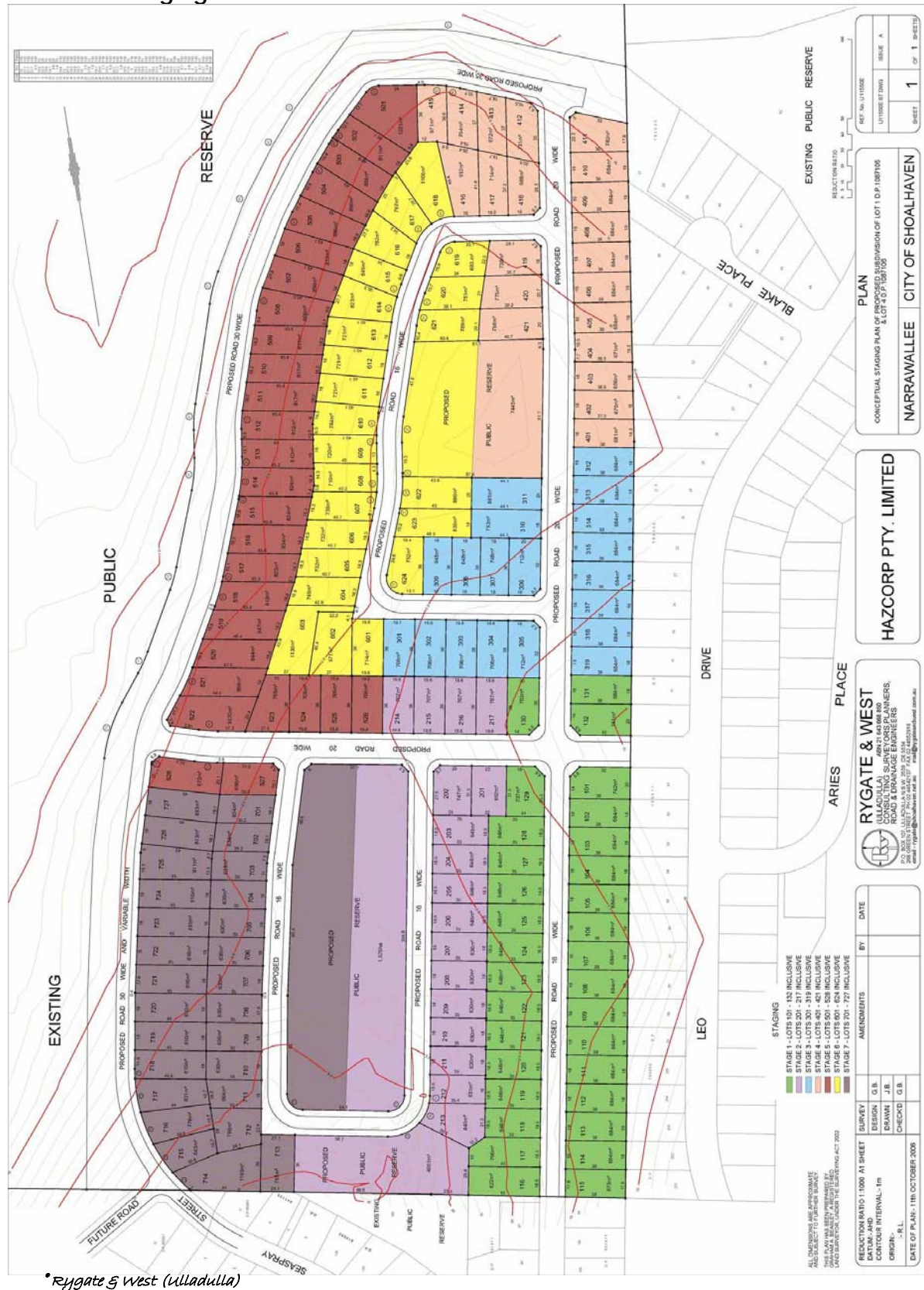
Stages 1 – 3 inclusive connect into the existing road infrastructure and extend the existing sewage, water, telephone and electricity infrastructure into the subject land.

Stage 1 will include the construction of a mountable roundabout at the existing Gemini Way and Seawinds Parade intersection and a mountable roundabout at the east - west access road for Leo Drive and the Gemini Way extensions. The Gemini Way extension into Stage 1 will be of the same width as the existing Gemini Way road reserve, that is 16 metres wide and north of the new east – west extension off Leo Drive, the road reserve will be 20 metres wide.

This stage also includes the underscrubbing the total site (excluding proposed reserves unless otherwise required by the Vegetation Management Plan) and the removal of required trees to create a woodland residue to be maintained as an Asset Protection Zone for lots in each stage and the adjoining existing residential development (woodland residue being managed so that it is consistent with the outer protection area requirements of PBP 2006). Removal of all trees within the proposed road reserves will also be undertaken as part of Stage 1. All vegetation will be mulched and retained on site to provide a seed bank for revegetation of disturbed areas and for landscaping purposes as the subdivision progresses.

Stage 2 will include the construction of the southern active recreation park in accordance with the landscaping concept plan. It will also include the payment to Council of the contribution for a roundabout at the corner of Bannister Head Road and Tallwood Avenue Mollymook of \$15,000.00 and the construction of the required Local Area Traffic Management (LATM) measures in Leo Drive in accordance with both the Council's and Consultant traffic engineer's recommendations. The park will be released as part of that stage and dedicated to Council in the subdivision plan along with half of the southern natural area public reserve.

FIGURE 3 - Staging Plan



Stage 4 requires the construction of a sewer pumping station at the northern end of the site to cater for stage 4 lots and subsequent stages. Stage 4 will also include the construction of the pathways/cycleway link through the northern reserve to Leo Drive near Macleay Street and the construction of the bio retention swales along the northern section of the perimeter road. The eastern half of the northern public reserve will be dedicated in Stage 4, fronting the extension of Gemini Way.

Stage 5 incorporates the bio retention swales and extensions of the pathway/cycleway on the perimeter road.

Stage 6 proposes construction of road and service infrastructure to lots on either side of the western arm of the northern loop road, between Stage 4 and 5. The western section of the northern natural area public reserve will be dedicated in this stage, fronting in internal loop road.

Stage 7 includes the remainder of the perimeter road, bio retention swales and pathway/cycleway link and the connection to Seaspray Street to the south. The remainder of the southern natural area public reserve will be dedicated in this stage.

4.0 SITE ANALYSIS

4.1 Location

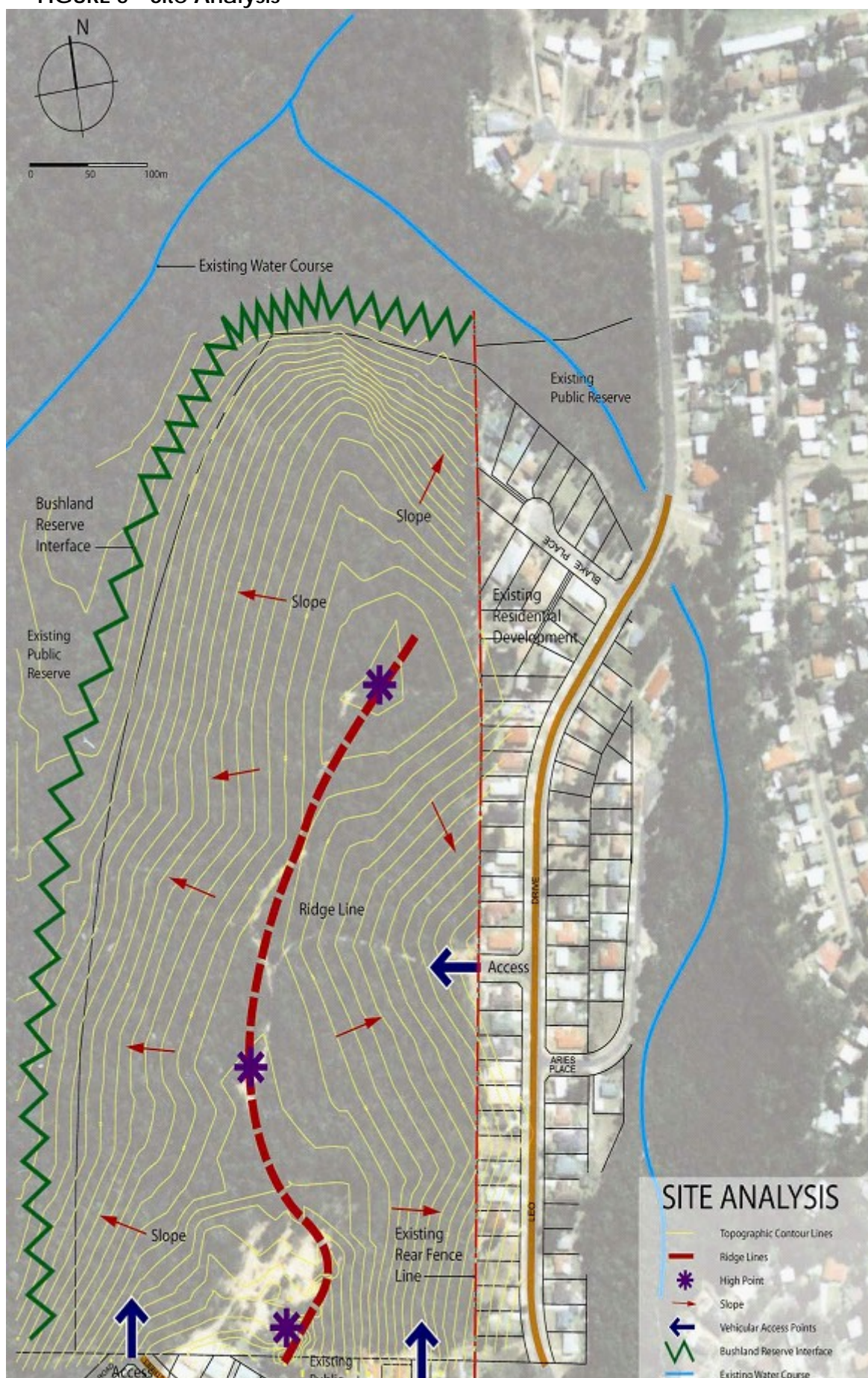
The site is located approximately 3km due east of Milton and approximately 1km north of Mollymook. The proposed subdivision adjoins the existing residential area at Narrawallee. The major retail centres in this area are Milton and Ulladulla where these are approximately 4 – 5 km from the site by road. Narrawallee Inlet is located approximately 500 metres to the north of the subject land, and in that particular locale, there is an identified State Environmental Planning Policy No. 14 Coastal Wetland (No. 286) adjacent to Narrawallee Inlet.

FIGURE 4- Site Location in Region



© Cox Richardson Architects & Planners

FIGURE 5 - Site Analysis



*Cox Richardson Architects & Planners

4.2 Site Description

This subdivision is over Lot 1 DP 1087105 and Lot 4 DP 1087106 off Leo Drive at Narrawallee (City of Shoalhaven), where the site has an area of 21.43 hectares.



The site is situated on a low ridgeline aligned north/ south forming a northern facing slope at the narrow end (as illustrated on the previous site analysis diagram).

The site is naturally vegetated consisting predominantly of Blackbutt Tall forest.



Google Earth Pro images used under license (dated January 2006)



End of Gemini Way



End of Seaspray Street



Off Leo Drive

The site is bound to the north and west by native coastal forest previously dedicated to Shoalhaven City Council by the proponents as Public Reserve - a consequence of the rezoning of the subject site to residential.

The site adjoins an existing residential environment to the east and south, developed during the 1980's and 1990's where this proposal will form a contiguous extension of the street network (two main former subdivision approvals – SF5052 – 30/09/1982 & SF6479 – 05/01/1989).

Legal and practical access to the land is available from Gemini Way and the access off Leo Drive where it would appear that those streets were originally approved and constructed with the intention of the roads continuing into the subject land, those streets were not provided with cul – de – sac turning heads as would normally be the case if the roads were to terminate. The subject land does not at this time have a common boundary with the Seaspray Street road reserve; however that matter will be resolved prior to construction of Stage 7 in accordance with Council's Shoalhaven Planning Policy No 1 which requires the extension of that road into the subject land.

4.3 Topography

The site is located partially on a ridge running in a north - south direction. The western side of the ridgeline forms a narrow arm of the catchment of Narrawallee Inlet where the northern and the eastern side of the ridgeline drains generally to the east and northeast. Gradients on the site are generally 5% to 15% with lower gradients along the ridge top. The elevation of the site is generally between 10 and 30 metres AHD.

The site is largely screened from the nearby highly frequented public places such as Narrawallee Beach and the Inlet due to the nature of the surrounding landscape where vegetated slopes screen the site's ground level from the public locales such as illustrated below. The site is in the vicinity of the red line on the below panorama taken from Narrawallee Headland.



Dwellings constructed within the site would not be viewed from the beach or this position or from Bannister Point as illustrated below due to the intervening vegetation – this is discussed in more detail in Section 7.2 – Visual Impact.



View from Jones Beach carpark - Bannisters Point - vicinity site marked

4.4 Climate

The climate of the region is considered to be moderate with a high degree of comfort due to the summer north-easterlies as the site is in close proximity to the coast. The average rainfall is in the vicinity of 1,200mm per annum, with average daily minimum temperatures between 12 – 15 degrees Celsius and average daily maximum temperatures between 21 – 24 degrees Celsius.

4.5 Site Constraints

There are several physical constraints that impact upon the development of the subject land which have influenced the design of the subdivision and these are addressed as follows (legislative constraints are addressed in Section 5):

Archaeological: An indigenous heritage assessment was undertaken by Navin Officer Archaeologist in 2002 which resulted in further investigation by a subsurface testing program in 2004. As a result of the above studies a consent to carry out the destruction of an Aboriginal object place was applied for by the proponent under S.90 of the National Parks and Wildlife Act 1974 and a consent was issued on the 29/08/2005 due to the low archaeological significance of the sites.

The only evidence of European Heritage associated with the land consists of the remains of an old gravel quarry adjacent to the southern boundary. Therefore, there are no archaeological constraints to the proposed subdivision.

Potential Contamination: The site is potentially contaminated due to a former land use being the gravel quarry. In that regard a Phase 1, Preliminary Contamination Assessment has been prepared and accompanies this application. This application proposes to utilise that area for the purposes of active open space as an addition to Shoalhaven City Council's existing adjoining public reserve.

Drainage: Due to the site topography and its location within close proximity to a SEPP 14 wetland and an endangered ecological community, stormwater drainage must be sensitive to these ecological constraints. In that regard the Narrawallee Inlet catchment must be protected from adverse impacts arising as a

consequence of developing the subject land. Therefore, Water Sensitive Urban Design principles are to be employed in the design of road infrastructure for this subdivision to ensure environmental thresholds are maintained.

Flora and Fauna: There are a number of endangered species and an endangered ecological community identified on the NSW Wildlife Atlas within close proximity of the subject land. Investigations in this regard have been thorough to ensure that this subdivision proposal is not likely to impact upon those species, communities or their habits, and that a high level of biodiversity is maintained in the region. Studies undertaken by Conacher Travers Pty Ltd have also been subject to a peer review process to ensure a high level of scientific certainty that there will not be irrevocable damage to the environment through the implementation of this subdivision and the subsequent use of the land for residential purposes.

Weed Management: The site has been subject to a number of disturbances over the years while in the former private ownership, including the extraction of a mineral resource from the southern section of the site, and its use by the general public for recreation purposes (bushwalking and motor bike riding). The vegetation on site is bisected by a track to the quarry and another to Leo Drive, where domestic weed infestation has occurred, intruding into the native forest. This requires rectification for two main reasons, one being the retention of native forest within the site for open space purposes and the second being to reduce the likelihood of increasing infestation into the adjoining coastal forest and the endangered ecological community to the west.

Bushfire: Shoalhaven City Council has mapped this land as being bushfire prone land, and given the surrounding native vegetation there is a genuine risk of bushfire threatening the subject land. The risk associated with the bushfire threat must be reduced in accordance with current best practice measures to ensure that there is minimal loss of life (including fire fighters) and property during a bushfire emergency. A positive benefit of this subdivision proposal is a consequential reduction in the risk of bushfire threatening the existing residential community in the immediate vicinity of the subject land, due to the subsequent vegetation density reduction, incorporation of a perimeter road and asset protection zone provision.

5.0 STATUTORY AND NON STATUTORY FRAMEWORK

There are a number of relevant environmental planning instruments and other guidelines that relate to the development of this site, including:

- Environmental Planning & Assessment Act, 1979;
- Environmental Planning & Assessment Regulation, 2000;
- National Parks & Wildlife Act, 1974;
- Native Vegetation Act, 2003;
- Roads Act, 1993;
- Rural Fires Act, 1997;
- SEPP 11 – Traffic Generating Development;
- SEPP 14 – Coastal Wetlands;
- SEPP 44 – Koala Habitat;
- SEPP 55 – Remediation of Land;
- SEPP 71 - Coastal Protection;
- SEPP (Major Projects) 2005;
- Illawarra Regional Environmental Plan, 1986;
- Shoalhaven City Council LEP, 1985 including Amendment 195;
- Shoalhaven City Council DCP 93 – Waste Minimisation & Management;
- Shoalhaven City Council DCP 100 – Subdivision Code;
- Shoalhaven City Council Planning Policy N° 1;
- Shoalhaven City Council Policy for the Control of Building Height & Amenity
- Narrawallee Inlet Natural Resources Management Strategy;
- Shoalhaven City Council – Housing Strategy;
- NSW Coastal Policy, 1997;
- Coastal Design Guidelines for NSW;
- Safer by Design Guidelines;
- Exhibited Draft South Coast Regional Strategy.

Comments relating to this application's compliance with each of the above statutory instruments or non statutory guidelines follow.

5.1 Environmental Planning & Assessment Act & Regulation

Section 75B of the EP & A Act identifies Major Projects to which the provisions of Part 3A of the Act apply. This proposal represents a Major Project due to its nature and location, where it is considered to be of state or regional environmental planning significance under the provisions of SEPP (Major Projects) 2005. Therefore this Major Project application is lodged with the Director – General of Planning for the Minister's approval.

Under Section 94 of the EP & A Act, the developer of the land will make monetary contributions to Council for the provision and improvement of amenities and services such as community facilities (library, mobile children's services, Shoalhaven City Art Centre, multi purpose centre), active recreation facilities (hockey, tennis, cricket, netball facilities, regional leisure centre), embellishment of Icon parks and walking track, fire control & SES, and road projects (Matron Porter Dr, Garrads Lane north, southern link Rd & Bishop Drive northern link road).

With regard to passive recreation there are no requirements for monetary contributions, it is proposed in this application however that land will be dedicated for both active and passive open space purposes.

This proposal is a major project subject to Part 1A of the Regulations, however it is not a development that requires consideration under State Environmental Planning Policy – Building Sustainability Index (BASIX) 2004 as this policy does not apply to the subdivision of land at this time.

There are no other specific requirements in the EP & A Regulation that impact upon this development proposal.

5.2 National Parks & Wildlife Act

An archaeological survey (**Annexure 20**) of the site was undertaken to ascertain the likelihood of the proposed development adversely impacting upon the conservation of objects, places or features of cultural value, particularly those of high significance to Aboriginal peoples.

There were " three Aboriginal sites, an open artefact scatter and two isolated finds identified in the in course of the field inspection of the study area. An area of potential archaeological deposit was also identified in the north western corner of the study area" (Navin Officer Heritage Consultants 2004). A program of Archaeological subsurface testing was then undertaken, it was found that the material detected was of low local archaeological significance. It was recommended that an application should be made to the Department of Environment & Conservation under Section 90 of the NP & W Act if it was proposed to disturb the sites (**Annexure 20A**).

That application was made to the DEC and Consent to Destroy under Section 90 of the Act has been issued (**Annexure 21**).

5.3 Native Vegetation Act

Schedule 1 of the NV Act identifies that Urban Areas and in particular those within a zone designated as residential under an environmental planning instrument, are excluded from the provisions of this Act. The subject land is zoned Residential 2(c) under the provisions of the Shoalhaven Local Environmental Plan, 1985, therefore the aims and provisions of this Act result in no additional constraints for this proposal.

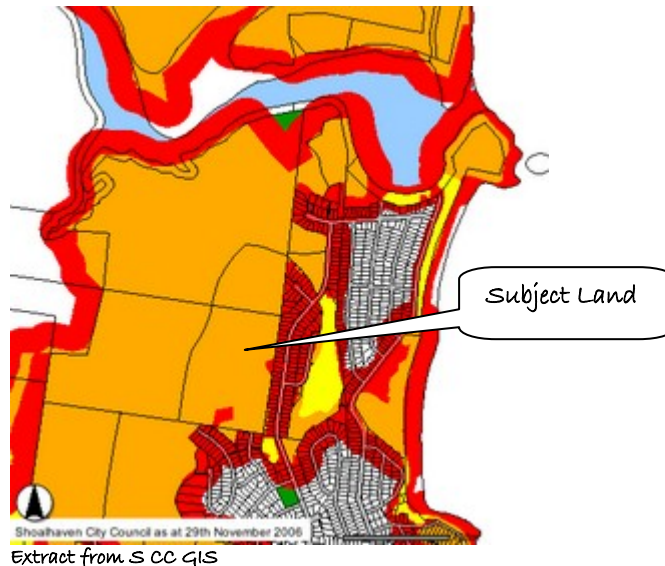
5.4 Roads Act

While the Minister for Planning is the consent authority with regard to this Major Project application, Shoalhaven City Council is the owner of the public roads adjacent to the boundaries of the subject land where extension works will be required (Seaspray Street, Gemini Way and the entry off Leo Drive). Application will be made to Shoalhaven City Council for approval under Section 138 of the Roads Act for consent to carry out works within the road reserve to facilitate the extension of those roads into the development site, with the detailed engineering construction plans, if the Major Project Application is approved by the Minister.

Preliminary engineering plans relating to the design and construction of each proposed road within the subdivision are submitted for Council's consideration in this regard – see **Annexures 9 & 9A**.

5.5 Rural Fires Act & Regulation

Shoalhaven City Council has identified the land as being bushfire prone land, containing Category 1 vegetation, with associated buffers in the southern section of the site.



Section 91 of the EP & A Act identifies where approvals are required by statutory bodies other than the consent authority, resulting in the application being an integrated development. However, this proposal being a Major Project under Part 3A of the EP & A Act is not an integrated proposal subject to the issue of General Terms of Agreement under Section 100B of the NSW Rural Fires Act

Notwithstanding the above, bushfire threat is a natural hazard which constrains the development of the subject land and in this regard, and in accordance with the Director – General's Environmental Assessment Requirements, this application is accompanied by a Bushfire Protection Assessment for the subdivision, prepared by Conacher Travers Pty Ltd (**Annexure 14**).

As part of the SEPP 71 Master Plan assessment for MP 11-5-2003, the NSW Rural Fire Service issued a Section 100B Bushfire Safety Authority, dated 8th August 2003. The main issue of concern to the RFS that required resolution under the Master Plan (as identified in the Director General's Major Project Assessment report July 2006), was the widening of road pavements to ensure compliance with the access provisions of Section 4.1.3 of Planning for Bushfire Protection, 2006. This subdivision proposal will provide 8 metre carriageways, kerb to kerb, within the road reserves as required by the RFS (**Annexure 9**).

Section 46 of the RF Regulation requires residential subdivision to comply with the provisions of *Planning for Bushfire Protection* (PBP) and in that regard this application's compliance with PBP has also been demonstrated in the accompanying Bushfire Assessment Report.

5.6 Threatened Species Conservation Act

As this proposal is a Part 3A Major Project under the EP & A Act, strict compliance with the provisions of this Act in regard to the preparation of a 7-Part test is not required. However the issue of impact upon threatened species or endangered ecological communities has been addressed through the provision of Flora and Fauna reports prepared by Conacher Travers Pty Ltd (**Annexure 18**) in accordance with the requirements of the Director – General’s Environmental Assessment Requirements.

As a result of extensive field survey work, the reports concluded that this subdivision is not likely to have a significant or adverse impact upon any threatened species, population or endangered ecological community or their habitat.

Further, the reports prepared by Conacher Travers have been subject to a rigorous peer review process ensuring the conclusions achieved result in no loss of biodiversity in the region. The peer review of these findings was undertaken by Kevin Mills and Associates (Dr Kevin Mills) (see **Annexure 18** – Appendix 5) and the methodology by Cumberland Ecology (Dr David Robertson) (**Annexure 19**). The conclusion of all reports is that no significant impact will occur and that a Species Impact Study is not required

Dr Kevin Mills also accurately mapped the boundary of the endangered ecological community to demonstrate that the site boundaries and proposed works did not impinge on this community.

5.7 SEPP No. 11 – Traffic Generating Development

A traffic report accompanies this major project application as the proposal is a traffic generating development as determined under clause 7(1) of this state policy. While the land does not have direct access to an arterial road nor is it within 90 metres of an arterial road, nor is it a proposal for more than 200 allotments as identified under Schedule 1 of the policy, it is a subdivision of land into more than 50 allotments as identified in Schedule 2. The original SEPP 71 Master Plan lodged with the Department of Planning in 2003 was a proposal identified under SEPP 11 as it proposed approximately 213 allotments, which was subsequently reduced over time to 192 and through the issued Master Plan reduced to 163.

This application will require referral to the Local Traffic Committee at Shoalhaven City Council, however, as it has previously been assessed by the Regional Traffic Committee, and the recommendations of that Committee have been taken into consideration, it is not anticipated that there will be any other Local Area Traffic Management measures proposed (see **Annexure 8**).

5.8 SEPP No. 14 – Coastal Wetlands

The subject land does not contain a coastal wetland however SEPP 14 Wetland No. 287 and other SEPP 14 wetlands are located approximately 500 metres to the north, and the site is within the catchment of those wetlands and Narrawallee Inlet. To ensure that there are no adverse impacts as a result of this development on that wetland, water sensitive urban design measures have been incorporated into the

proposal with engineering solutions to retain and filter stormwater within the boundary of the subject land.

5.9 SEPP No. 44 – Koala Habitat

This State Policy applies to the City of Shoalhaven and an assessment under this SEPP was part of the flora and fauna survey works by Conacher Travers Pty Ltd, and it has been concluded that this site does not contain any core Koala habitat – see **Annexure 18**.

5.10 SEPP No. 55 – Remediation of Land

Within the southern section of the site there is a disused gravel quarry. This former land use has the potential to contaminate that part of the subject land containing and surrounding the quarry. Mining and extractive industries are identified in the DUAP / EPA publication – Managing Land Contamination as it is a potentially contaminating landuse because of the potential for the use of the following elements or compounds: Acids, Alkalis, Total Dissolved Solids (TDS), Organic flocculants (e.g. sulphate, cyanide), Metals (e.g. arsenic, copper, iron, mercury), Total petroleum hydrocarbons, Monocyclic aromatic hydrocarbons (e.g. benzene, toluene, ethylbenzene & xylene)



Old ridge gravel quarry from the ground and the air

Section 7(1) of SEPP 55 states:

- (1) *A consent authority must not consent to the carrying out of any development on land unless:*
 - (a) *it has considered whether the land is contaminated, and*
 - (b) *if the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose for which the development is proposed to be carried out, and*
 - (c) *if the land requires remediation to be made suitable for the purpose for which the development is proposed to be carried out, it is satisfied that the land will be remediated before the land is used for that purpose.*

In that regard, a preliminary investigation of the site has been undertaken by Network Geotechnics Pty Ltd and forms part of this application (**Annexure 3**). This investigation concludes that this part of the site is not significantly contaminated

and the quarry can be rehabilitated so that it can be used for residential purposes, which in this case is an active recreation space adjoining an existing Council maintained public reserve.

5.11 SEPP No. 71 – Coastal Protection

This policy applies to all land within the coastal zone, being generally 1 kilometre inland from the high water mark of the NSW Coast, and from some rivers and coastal lakes. In this particular instance, the subject land at its closest point is approximately 570 metres west of Narrawallee Beach, the site is therefore within the NSW Coastal Zone, and however the site is not within a sensitive coastal location as defined which is located within 150 metres of the high water mark.

This proposal was originally lodged with the Department of Planning for the issue of a Master Plan under the provisions of SEPP 71 as they existed in 2003. That policy was amended in 2005 due to the gazettal of SEPP Major Projects. Notwithstanding the changes the Minister for Planning has adopted the Master Plan and has issued variations to it in relation to this site. However, with regard to the Aims of this policy the following comments are made:

SEPP No. 71 Aims	Comment on this proposal
<i>1. To protect and manage the natural, cultural, recreational and economic attributes of the NSW Coast, and</i>	This subdivision proposal will have no adverse impacts upon the natural, cultural, recreational or economic values of the coast. There will be positive economic benefits to the community through the provision of additional construction works including public infrastructure, public reserves, and future dwelling houses.
<i>2. To protect and improve existing public access to and along coastal foreshores to the extent that this is compatible with the natural attributes of the coastal foreshore, and</i>	The proposal has no adverse impact upon public access to the foreshore, while it is not located within close proximity it does not impede pedestrian access utilising the road network adjacent to the land to the beach. It does however provide through Master Plan variation requirements, a cycleway / pathway linking to Leo Drive north of Blake Place via Council public reserve, which is illustrated on Annexure 7 .
<i>3. To ensure that new opportunities for public access to and along coastal foreshores are identified and realised to the extent that this is compatible with the natural attributes of the coastal foreshore, and</i>	The proposal does provide for improved public access to the coastal foreshore through pedestrian pathways and a cycleway linking to an existing public reserve north of Blake Place.
<i>4. To protect and preserve Aboriginal cultural heritage, and Aboriginal places, values, customs, beliefs and traditional knowledge, and</i>	An archaeological survey of the site has been undertaken and several sites and artefact scatters have been found. These areas and artefacts are not of high Aboriginal cultural significance, and an N P & W Act Section 90 Consent to Destroy has been issued.
<i>5. To ensure that the visual amenity of the coast is protected, and</i>	The visual amenity of the coast is not likely to be impacted – there is limited view towards the water from the site and the site is not readily viewed from the coast due to the intervening topography and remnant vegetation. Further the vegetated ridgeline will remain largely in tact through the two additional provisions of public reserve areas. For further discussion, see Section 7.2 Visual Impact.
<i>6. To protect and preserve beach</i>	Beach environments and amenity will not be impacted in any

<i>environments and beach amenity, and</i>	way by the proposed subdivision construction works as it is not in close proximity to the foreshore. Stormwater drainage will be directed to Council's infrastructure. The beaches and foreshore environment are however likely to be used by future residents of the subdivision for recreation purposes.
<i>7. To protect and preserve native coastal vegetation, and</i>	The native coastal vegetation on site consists largely of Blackbutt Tall Forest, with scatters of other species including <i>Syncarpia glomulifera</i> (Turpentine); <i>Angophora floribunda</i> (Rough Barked Apple) and <i>Allocasuarina littoralis</i> (Black She Oak). The issued SEPP 71 Master Plan requires the retention of two areas of native coastal vegetation within the site which will be in the form of public reserves to protect the vegetation, however they will managed as required, particularly the northern reserve, to reduce the likelihood of bushfire impacting adversely upon adjoining residential development (see Annexure 15).
<i>8. To protect and preserve the marine environment of NSW, and</i>	There will be limited impact on the marine environment which may be through a minor increase in stormwater runoff; however, the aim of the proposal is to limit post development flows to the equivalent of pre development flow rates. There will also be water sensitive urban design measures incorporating a retention system designed to contain and reduce runoff intensity adjacent to the western boundary of the site, so that runoff does not adversely impact upon Narrawallee Inlet. Future dwellings will be provided with first flush devices along with a water tank to reduce pollution and detain flows.
<i>9. To protect and preserve rock platforms, and</i>	The proposal will have no impact on rock platforms – there are none in the immediate vicinity of the subject land.
<i>10. To manage the coastal zone in accordance with the principles of ecologically sustainable development, and</i>	<p>The principles of ecologically sustainable development are not compromised by this proposal.</p> <p>With regard to the precautionary principle, it has be demonstrated through various expert reports that there is a high level of scientific certainty that there will not be irrevocable damage to the environment through the implementation of this subdivision and the subsequent use of the land for residential purposes.</p> <p>Biological diversity and ecological integrity is maintained as there will be no loss of critical habitat or adverse impacts upon endangered ecological communities, and impacts upon threatened flora and fauna is minimal.</p> <p>Intergenerational equity is provided through the retention of native coastal vegetation within the subdivision and minimising adverse impacts upon the adjacent endangered ecological communities, ensuring natural areas are available for future generations.</p>
<i>11. To ensure that the type, bulk, scale and size of development is appropriate for the location and protects and improves the natural scenic quality of the surrounding area, and</i>	<p>Council with State Government support specifically rezoned this land for residential purposes. The likely future streetscape will consist of a mix of single and two storey dwelling houses, similar to those which currently characterise the locality. There are no areas for medium density housing provided within the subdivision layout, which must be identified if proposed at this stage in accordance with Council policy.</p> <p>Native vegetation has been retained within the subdivision, to</p>

	<p>be managed where appropriate to reduce the threat of bushfire impacting upon the surrounding residential neighbourhood. The areas of vegetation retained are along the ridgeline to be enhanced by street tree plantings of local species.</p> <p>Water sensitive urban design measures are incorporated into the subdivision design to reduce adverse stormwater runoff impacts upon the surrounding natural and built environment.</p>
12. To encourage a strategic approach to coastal management.	This proposal does not adversely impact upon either the Council or the Department of Planning's strategic approaches to coastal management.

With regard to Section 8 of SEPP 71 – Matters for consideration, the following comments are made with regard to this development proposal.

SEPP 71 Matters for Consideration	Comment on this proposal
<i>the aims of this Policy set out in clause 2,</i>	The aims of the policy have been met as outlined above – it has been demonstrated that the proposal is consistent with the aims of the policy and does not propose a development that by its nature will adversely impact on the coastal zone or associated coastal processes.
<i>(b) existing public access to and along the coastal foreshore for pedestrians or persons with a disability should be retained and, where possible, public access to and along the coastal foreshore for pedestrians or persons with a disability should be improved,</i>	Pedestrian and disabled access to the coastal foreshore is not adversely impacted by this proposal.
<i>(c) opportunities to provide new public access to and along the coastal foreshore for pedestrians or persons with a disability,</i>	This development incorporates both pedestrian and cycle paths for access through the development to streets accessing the beach nearby.
<i>(d) the suitability of development given its type, location and design and its relationship with the surrounding area,</i>	The layout of the subdivision is consistent with the character of the surrounding residential environment. The street pattern is based on a grid pattern with no cul-de-sacs proposed. This provides better access in a bushfire emergency and for passive solar access to each lot and future dwelling house.
<i>(e) any detrimental impact that development may have on the amenity of the coastal foreshore, including any significant overshadowing of the coastal foreshore and any significant loss of views from a public place to the coastal foreshore,</i>	This proposal is not likely to have any detrimental impact upon the coastal foreshore by way of overshadowing or loss of views, as it is not located in a sensitive coastal location or adjacent to the foreshore.
<i>(f) the scenic qualities of the New South Wales coast, and means to protect and improve these qualities,</i>	The scenic qualities of the NSW coast are not adversely impacted by this proposal, the subject land is located more than 500 metres from the foreshore and in the main the proposed lots and future dwellings will not be viewed from the foreshore due to intervening existing developed and vegetated lands. There are two public reserves proposed to retain native coastal vegetation within the development on the ridgeline.
<i>(g) measures to conserve animals</i>	There are no known threatened species, populations,

<i>(within the meaning of the Threatened Species Conservation Act 1995) and plants (within the meaning of that Act), and their habitats,</i>	endangered ecological communities or their habitats adversely impacted by this proposal as detailed in the submitted flora and fauna reports.
<i>(h) measures to conserve fish (within the meaning of Part 7A of the Fisheries Management Act 1994) and marine vegetation (within the meaning of that Part), and their habitats</i>	The proposal will have no impact upon marine vegetation or fish breeding grounds.
<i>(i) existing wildlife corridors and the impact of development on these corridors,</i>	The subject land is not located within a wildlife corridor.
<i>(j) the likely impact of coastal processes and coastal hazards on development and any likely impacts of development on coastal processes and coastal hazards,</i>	It is reasonable to assume that normal coastal processes and coastal hazards are not likely to have an impact upon the development – the site is located in excess of 500 metres from the foreshore, where it is located above expected 1% AEP & PMF flood levels and at a minimum height of 10 metres AHD rising up to 32m AHD. The site would not be reasonably affected by storm surge.
<i>(k) measures to reduce the potential for conflict between land-based and water-based coastal activities,</i>	This subdivision construction works are not likely to have any impact upon, or result in, conflict between land based and water based coastal recreation activities. The future resident population associated with the development is likely to result in an increase in use of both land and water based coastal activities throughout the year or passive and active recreation purposes.
<i>(l) measures to protect the cultural places, values, customs, beliefs and traditional knowledge of Aboriginals,</i>	An assessment of known items or places of Aboriginal significance found on the subject land has been undertaken and specifically addressed in the accompanying Archaeological reports. The sites were of low local significance and are not being retained within the development.
<i>(m) likely impacts of development on the water quality of coastal waterbodies,</i>	Water sensitive urban design measures are incorporated within the development to reduce impacts of stormwater runoff and ensure water quality of surrounding coastal environments, particularly Narrawallee Inlet. Future dwelling houses will be designed in accordance with BASIX to reduce water consumption and enhance energy efficiency.
<i>(n) the conservation and preservation of items of heritage, archaeological or historic significance,</i>	There are no known items of European environmental heritage or archaeological significance on the site as listed in any LEP or REP.
<i>(o) only in cases in which a council prepares a draft local environmental plan that applies to land to which this Policy applies, the means to encourage compact towns and cities,</i>	The Draft LEP that Shoalhaven City Council placed on public exhibition resulted in this land being gazetted as Residential 2(c) zone for the expansion of the Milton – Ulladulla urban area. This proposal is a logical expansion of the urban area extending the existing street network providing improved traffic manoeuvrability and enhanced protection of existing development from the risk and threat of bushfires.
<i>(p) only in cases in which a development application in relation to proposed development is determined:</i> <i>(i) the cumulative impacts of the proposed development on the environment, and</i>	This subdivision proposal is not likely to have a significant cumulative impact upon the environment. The anticipated traffic increases are within the environmental capacity of the existing road network. There are no natural or technological hazards associated with

(ii) measures to ensure that water and energy usage by the proposed development is efficient.	<p>the site that are likely to result in adverse environmental damage – matters pertaining to the site being bushfire prone or potentially contaminated by a past landuse have been addressed in the subdivision design, with the provision of perimeter roads, asset protection measures for future dwelling houses and public reserves.</p> <p>The majority of proposed allotments are oriented east – west to maximise solar access for any future dwelling houses, which will be designed to comply with BASIX.</p>
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Sections 15 & 16 of this policy apply to the subject land; therefore in relation to effluent disposal the site is to be connected to Council's reticulated sewage scheme with the extension of mains to service the land. In regard to stormwater discharge, as previously indicated, water sensitive urban design measures have been incorporated into the subdivision design with engineering solutions to reduce impacts on surrounding natural areas and coastal wetlands.

5.12 SEPP (Building Sustainability Index) 2004

At the current time, this State Policy does not apply to residential subdivision however, it does apply to buildings including new dwelling houses and alterations and additions to existing dwelling houses.

The aim of BASIX is to reduce potable water consumption and reduce greenhouse gas emissions through energy efficient design and product installation (e.g. hot water & air conditioning). In that regard, lot orientation is an important factor in reducing energy consumption encouraging building designers to pursue active and passive solar principles in the design phase of dwelling construction. This project proposes allotments which comply with the provisions of Council's DCP 100 & SEDA's Solar Access for Lots Guidelines enhancing the ability for future dwellings to comply with the provisions of BASIX.

5.13 SEPP (Major Projects) 2005

This development is a major project under this State Policy as the land is located within a Coastal Area as identified in Schedule 2, and proposes a subdivision of land in a residential zone into more than 25 lots. Therefore, this Major Project application is lodged with the Department of Planning for the consent of the Minister, in accordance with the issued Director – General's Environmental Assessment Requirements.

5.14 Illawarra Regional Environmental Plan, 1986

The land is subject to the provisions of the Illawarra Regional Environmental Plan No. 1, 1986, and the objectives relating to living areas are address as follows:

Objectives	Comments on this proposal
<i>a. To ensure that urban expansion is orderly and efficient having regard to the constraints of the natural environment and that sufficient land is available to prevent price rises resulting from scarcity of land;</i>	The surrounding environment is not subject to any significant natural constraints that would render the site unsuitable for residential development. The subject land and that surrounding the site is mapped as being bushfire prone land, containing Category 1 vegetation. The expected impacts associated with a bushfire emergency can be catered for in this proposal with the provision of a perimeter

	<p>road and impact mitigation through the provision of asset protection zones in accordance with current best practise guidelines – Planning for Bushfire Protection, 2006.</p> <p>The site is not affected by other natural hazards such as flooding or coastal erosion. The issue of potential contamination by a past land use has been addressed through a preliminary investigation in accordance with SEPP 55 – Remediation of Land.</p> <p>The other main constraints associated with the subject land are flora and fauna related and Aboriginal archaeology finds. There are no topographical constraints – no excessively steep slopes, water courses or environmental sensitive land within the site.</p> <p>The subject land has been deemed to be satisfactory for urban expansion by its inclusion as a residential living area in the Shoalhaven Local Environmental Plan, 1985 Amendment No. 195.</p>
<i>b. To ensure that new residential land or land for higher density development is only developed where there are adequate utility and community services available or there is a commitment from the developer to provide those services;</i>	This proposal is not for higher density residential living, a low density development is proposed resulting approximately 8 dwellings per hectare over the subject land. Lot sizes proposed are commensurate with the surrounding urban form. The land will be serviced by sewer, water, telephone and electricity. Passive and active recreation spaces are provided for the health and welfare of existing and likely future residents of the locality.
<i>c. To provide for a range of lot sizes, dwelling types and tenure forms to cater for varying household needs in all local government areas;</i>	This proposal seeks to create 168 residential allotments of varying sizes, with the minimum being 604m ² and the largest being 1221m ² . The allotments are predominantly in excess of 700m ² , making them large lots in terms of Council's Subdivision Code requirements. All lots are proposed to be freehold Torrens Title, no Community or Strata Title are proposed, nor are any allotments nominated for the purposes of Medium Density housing, ensuring a low density residential living environment.
<i>d. To ensure that residential development does not take place on hazard – prone lands; and</i>	<p>The subject land is bushfire prone and impacts can be mitigated within the subdivision through the provision of a perimeter road, asset protection zones, and future dwellings being constructed in accordance with AS3959-1999 – Construction in Bushfire Prone Areas.</p> <p>The land is not mapped as flood prone, subject to slip, subsidence, or as having any probability of containing acid sulfate soils.</p>
<i>e. To minimise bush fire risks to urban development.</i>	As previously outlined, the land is bushfire prone and impact mitigation measures are proposed to reduce the risk of loss of life and property and damage to the environment within the site. Tree removal within the land for the majority of the residential lots will take place during subdivision works to achieve a woodland vegetation category, with minor works proposed within the public reserves – particularly the northern reserve, to reduce asset protection zone requirements for the adjoining residential lots.

Further, the land is not within a wildlife corridor as identified on the Illawarra Regional Environmental Plan No. 1, 1986 maps; does not contain rainforest

vegetation; is not prime crop and pasture land; does not contain an identified extractive resource; and does not have high environmental scenic quality attributes (ranked as II low).

It has been demonstrated that this development proposal does meet the objectives of the IREP with regard to the development of urban areas and as the proposal provides allotments for residential use, it does not compromise the future use of the land for urban purposes. The land is zoned Residential 2(c) and other compatible land uses are permissible in the zone.

5.15 Shoalhaven Local Environmental Plan, 1985

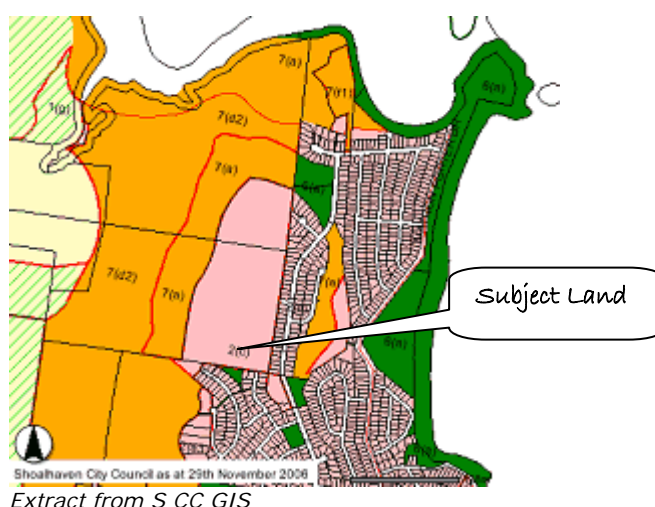
The provisions of the Shoalhaven Local Environmental Plan, 1985 (SLEP85) apply to the subject land. The objectives of the SLEP85 are as follows and comment has been provided on each aspect with regard to this proposal:

LEP Objective	Comment on compliance
(a) <i>To provide for a variety of residential life styles;</i>	That objective is achieved with this proposal.
(b) <i>To ensure space is provided for community services and facilities as well as recreational activities;</i>	Three public reserves for both active and passive recreation are proposed within this subdivision layout, with playground equipment being provided in the active space adjacent to Council's existing public reserve off Gemini Way / Seaspray Street. Bus stops will be provided along the bus route as required, so that they are no more than 500 metres distant from any proposed dwelling. No other community services or facilities are provided within this subdivision. Contributions will be made to Council under S94 of the EP & A Act towards the provision of facilities in the locality.
(c) <i>To enable a variety of commercial uses while consolidating existing commercial centres;</i>	This proposal has no impact with regard to this objective.
(d) <i>To enable accommodation of industrial uses;</i>	Not applicable – industrial development is not generally permissible in the zone.
(e) <i>To ensure that the council gives due regard to the effect of natural hazards upon development;</i>	The subject land is mapped as being bushfire prone land and this has been taken into account in designing the subdivision with the provision of a perimeter road adjacent to the western boundary of the site, and asset protection zones within the land as required by Planning for Bushfire Protection. Vegetation within the site will be mainly managed during construction stage as woodland, with the exception of the two public reserve areas along the ridge line, which will be largely retained in a forest structure with minor works to prevent the build up of fine fuels which may otherwise result in a bushfire hazard.
(f) <i>To ensure that development and expansion of coastal villages are sympathetic to the coastal environment;</i>	Council designated this land for the purposes of urban expansion in the 2003 gazetted amendments to the Shoalhaven Local Environmental Plan, 1985 (Amendment No. 195). The design is considered to be sympathetic to the coastal environment, protecting large areas of contiguous coastal forest to the west from adverse impacts of development, and retaining native vegetation along the ridge line. Water sensitive urban design measures are incorporated to reduce rainfall runoff impacts particularly on the coastal wetlands nearby the site.

<i>(g) To maintain the agricultural use of prime crop and pasture land by minimising development which has an adverse and irreversible impact on the land's agricultural potential;</i>	The land is not mapped as being prime crop and pasture land.
<i>(h) To protect items of the environmental heritage;</i>	There are no listed items of environmental heritage located on site or within the immediate vicinity.
<i>(i) To provide a safe and efficient transport network connecting land use activities inside and outside the City;</i>	This proposal connects into the existing street system, and facilitates public transport through the inclusion of carriageway widths accommodating a bus route.
<i>(j) To encourage the provision of adequate community facilities and services;</i>	There is no requirement to provide community facilities or services as part of this development, other than the playground within the southern most public reserve area.
<i>(k) To ensure the social amenity and well-being of the City;</i>	This proposal is not likely to adversely affect the overall amenity or well being of the City of Shoalhaven. With regard to that of the immediate vicinity, the proposal will provide accessible public open spaces with linkages to the adjoining reserve areas, to promote the health and wellbeing of the community.
<i>(l) To provide the most appropriate public utility services in the most effective manner.</i>	Sewer and water will be provided to the development in accordance with the requirements of Shoalhaven Water; electricity and telephone services will also be provided during construction works for each stage.
<i>(m) To encourage appropriate forms of tourism which are sensitive to and compatible with the natural and cultural environments of the City;</i>	Not applicable.
<i>(n) To maintain the rural character of non-urban areas;</i>	This objective is not compromised by this development within the existing urban boundary.
<i>(o) To ensure the protection of important natural and cultural environments;</i>	This objective is not compromised by this proposal, however as previously mentioned measures are proposed to protect the nearby coastal wetlands and coastal vegetation from adverse environmental damage including stormwater pollution.
<i>(p) To protect and enhance scenic and landscape qualities;</i>	This objective is not compromised by this proposal – the subdivision retains native coastal vegetation to enhance amenity of the future residents, while maintaining similar scenic attributes.
<i>(q) To ensure that the potential for winning extractive and mineral resources, where appropriate, is not compromised by other forms of development;</i>	This objective is not relevant to this proposal as there is no extractive resource on the site to be retained. The gravel quarry has been abandoned for some years and will be rehabilitated for the purposes of active recreation.
<i>(r) To ensure that development achieved the water quality or river flow objectives of ground water, rivers, estuaries, wetlands, and other water bodies;</i>	The proposal is not likely to have a significant or adverse long term impact on the water quality of the nearby Narrawallee Inlet if adequate erosion control measures and water quality control / stormwater pollution measures are in place during both subdivision construction and construction and occupation of any future dwelling house on the resultant lots.

<i>(s) To avoid, mitigate or remedy the adverse effects of development on the environment;</i>	This proposal is unlikely to have any significant or adverse impacts upon the natural environment. The matters of impacts upon threatened species, bushfire mitigation, water quality and control, Aboriginal archaeology, and weed management have all been separately addressed and each report concludes that this development if carried out in accordance with each expert consultant's recommendations will not have any significant, adverse or long term impacts on the surrounding natural or built environment.
<i>(t) To minimise energy consumption and promote energy efficient design and appliance use;</i>	Solar access to lots has been maximised through the subdivision design and layout, promoting energy efficient housing design to take advantage of passive and active solar principles. Further the future dwelling houses will be provided with water saving fittings, water tanks and be of energy efficient design as per the requirements of BASIX.
<i>(u) To minimise potable water consumption and promote wastewater reuse as well as water saving designs and fittings;</i>	Potable water for the proposed new lots will be via Council's reticulated water supply and compliance with BASIX re water saving devices and water tanks is likely to reduce water consumption by future occupants.
<i>(v) To minimise waste generation and promote recycling and reuse of materials; and</i>	The subdivision is likely to result in the generation of waste materials during the civil works to be undertaken, including removal of trees and shrubs. However those will be mulched and reused on site for native bushland regeneration and landscaping purposes. Future dwelling occupants will utilise Council's existing contracted waste disposal service for removal of domestic garbage.
<i>(w) To minimise the clearing of native vegetation especially those local species which are poorly represented in conservation reserves.</i>	The subdivision is not likely to result in the removal of any poorly represented native vegetation as outlined in the flora and fauna reports submitted.

Clause 9 of the SLEP85 – the land is zoned Residential 2(c) under the provisions of the Shoalhaven Local Environmental Plan, 1985 where the objective is *"to provide for new residential areas with a range of housing types with provision of urban facilities to serve the local community"*. This proposal does not compromise this objective, and residential subdivision is permissible with consent.



Rather than listing development that is permissible in the land use tables which form part of Clause 9 of the SLEP85, Shoalhaven City Council has listed the types of development that are prohibited in the zone, which are:

Advertising structures; amusement parks; animal boarding establishments; bulk stores; bulky goods retailing; car repair stations; caravan parks; drive-in theatres; industries (other than those specified in Schedule 6); intensive animal husbandry; junk yards; liquid fuel depots; motor showrooms; retail plant nurseries; road transport depots; roadside stalls; sawmills; sexual services premises; timber yards; transport terminals; turf farming; warehouses.

Subdivision as previously mentioned is permissible in the zone, as is a range of other uses which are considered to be compatible with a residential environment and of benefit to the community such as child care centres, general stores, professional consulting rooms – doctors & dentists, and medium density development.

Clause 10 of the LEP states that land shall not be subdivided except with the consent of the Council. In this case however, as the proposal represents a Major Project under Part 3A of the Environmental Planning & Assessment Act, 1979, the consent authority is the Minister for Planning.

The LEP does not contain any development standards in relation to the subdivision of Residential 2(c) land as it does for rural zones or rural residential zones; however this is addressed by Council's DCP 100 – Subdivision Code and Shoalhaven Planning Policy No. 1, to be discussed in detail in Section 5.15 of this environmental assessment.

The relevant Environmental Management clauses of the SLEP85 (Division 5) are addressed as follows:

LEP Clause	Comments on this proposal
Clause 21 – Land of Ecological Sensitivity	The subject land is not mapped as being of ecological sensitivity.
Clause 21A – Vegetation Linkage	The land is not mapped as being within a designated vegetation linkage area.
Clause 22 – Activities in Zone No. 1(c), 7(a), 7(c), 7(d2), 7(e), 7(f1), 7(f2) and 7(f3)	This clause relates to tree clearing in those zones and it does not apply to the subject land as the land is zoned Residential 2(c). While the site adjoins Environmental Protection 7(a) land, there is no requirement for any tree clearing within that land as it is external to the site boundaries and not within the scope of works proposed.
Clause 23 – Protection of Streams	<p>This clause applies to perennial watercourses in rural zoned lands (1a – 1g), indicated by continuous blue lines on a topographic map. This clause does not apply to the subdivision despite the topographic map indicating there are drainage lines adjacent to the western boundary of the subject land mapped with continuous blue lines being an ephemeral watercourse as that land is zoned Environmental Protection.</p> <p>Notwithstanding the above, water quality and stormwater retention considerations have been made in this subdivision proposal through engineering design solutions with detailed expert consultant reports supporting the proposal.</p>
Clause 24 – Water Catchment Areas	The subject land is not located within a drinking water catchment area.

Clause 25 – Steep lands	This clause applies to land with slopes in excess of 20%, zoned Rural 1(a), 1(b), 1(c), 1(d) or 1(e) and therefore does not apply to the subject land.
Clause 26 – Soil, Water and Effluent Management	<p>A consultant's report has been submitted addressing the matter of drainage of stormwater and solutions to mitigate adverse environmental impacts through a combination of measures.</p> <p>Potable water will be supplied via extensions of Council's reticulated mains; similarly sewer mains will be extended to provide the disposal of household wastewater. The provisions of this clause can be accommodated within this development proposal in an efficient and effective manner without adverse environmental consequences.</p>
Clause 27 – Acid Sulfate Soils	A review of the Department of Lands Acid Sulfate Soils maps held at Council indicates that the land is not likely to contain any acid sulfate soils. The scale of the map is at 1:25,000; however a transparency of the topographic map was overlaid on the acid sulfate map of the same scale to ensure the site is not within an area of low or high probability. Further, it would appear that during the rezoning process, the zone boundary was positioned so that there would be no new residential allotments likely to be at risk of containing acid sulfate soil.
Clause 28 – Danger of Bushfire	The subject land is mapped by Shoalhaven City Council as being bushfire prone land, therefore an assessment has been made of the development in accordance with the provisions Planning for Bushfire Protection, 2006. Asset protection zones complying with the provisions of PBP, 2006 can be accommodated within the boundary of the subject land, along with a perimeter road. It is considered that the provisions of this clause in the LEP can be met within this particular development proposal without adverse environmental impact.
Clause 29 – Development on Flood Liable Land	The land is not mapped by Council as being flood liable land.

Clause 38A & Schedule 8 – Fair Trading Policy – Clause 38A provides for the carrying out of certain development which will result in the dedication of land to Council at no cost, which will be in the public interest, where the development proposed *"is not excessive balanced against the public interest gained by dedication of land"* and the development will not result in significantly adverse impacts upon the environment. This clause and the subsequent Schedule were included in Council's LEP Amendment No 195 – Milton – Ulladulla LEP.

Schedule 8 then provides for Part Lot 4 Parish of Ulladulla and Lot 4 DP 1015161 to be subdivided into 3 lots – one lot of approximately 41 hectares, one lot of approximately 6 hectares and one lot of approximately 57 hectares. The 41ha allotment was to be dedicated to Council at no cost, the 57 hectare parcel contained rural zoned lands capable of further subdivision under the same schedule, and the 6ha lot contained the residentially zoned land the current subject land of this Major Project Application. Subdivision in accordance with this provision of the LEP was approved by Council and the three lots were registered as DP1087105.

Further Schedule 8 provides for the subdivision of Lot 4 DP 771597 also into three similar lots to the above, where 22 hectares was to be dedicated to Council at no

cost for public open space, 25 hectares of rural land to be further subdivided under the provisions of the LEP and 16ha in the residentially zoned parcel, again the subject of this Major Project Application. Those lots were registered as DP 1087106.

With regard to the provisions of Clause 38A and this Major Project subdivision application, this residential subdivision is not excessive when balanced against the public interest that was gained through the dedication of 63 hectares of land for open space. The rezoning has been offset by the dedication of environmentally sensitive land and land containing an endangered ecological community, making them available to the public for recreational and education purposes fostering intergenerational equity and community well being.

Generally, it has been demonstrated that the proposal complies with the provisions of the Shoalhaven Local Environmental Plan, 1985 without any requirement for variation to any standard or by compromising any objective.

5.16 Shoalhaven DCP 93 – Controls for Waste Minimisation & Management

Shoalhaven City Council DCP 93 requires all applications for building, demolition or development works to be supported by a Waste Minimisation and Management Plan (WMMP) detailing all waste proposed to be produced by developing the land, through either the construction or demolition phase of that development. These plans are also to state whether the waste products are to be reused on site or disposed of to a waste facility.

In this case, there will be waste generated during the pre – construction and construction phase, through vegetation underscrubbing and required tree removal, as well as soil stock piling during infrastructure construction. Vegetation removed will be mulched and stored on site for regeneration and landscaping purposes. However, Council's DCP 93 does not require a WMMP to be submitted at the development application stage if a construction certificate is required; therefore a WMMP will be submitted with the subsequent Construction Certificate application if this subdivision proposal is supported.

5.17 Shoalhaven DCP 100 – Subdivision Code

DCP 100 is the Council's Subdivision Code and it is a performance based document containing relevant Elements, objectives, performance criteria and example acceptable solutions as to how to address the performance criteria. There is no requirement to vary any of the example acceptable solutions of this DCP as this proposal is capable of complying with those solutions and in the main provides a development outcome far in excess of those acceptable solutions, particularly in regard to the engineering solutions provided for road and pavement design.

There are several elements within this DCP which are applicable to this subdivision application and these are addressed as follows with a summary compliance table added as Section 12 of this report (Page 120):

Objectives	Performance Criteria	Comment on this proposal
RE1 – Site Analysis Urban		
<p>O1 To provide a site layout that provides a pleasant, attractive, manageable and resource efficient living environment;</p> <p>O2 Provide for the ecologically sustainable subdivision of land.</p>	<p>P1 A site analysis is undertaken which includes:</p> <ul style="list-style-type: none"> ▪ Topographical features such as slope, existing natural vegetation and opportunities for the creation of views and vistas. ▪ Orientation of allotments having regard to solar access, wind and views. ▪ The character of surrounding development, traffic routes. ▪ Opportunities to link into existing open space pedestrian and cycle networks. ▪ Flooding and drainage constraints, easements for services and extent of contaminated land. ▪ The provision of services, water, sewerage and electricity. ▪ Topographical features of waterways, water bodies and wet lands. 	<p>The submitted application plans and the site analysis plan included in this report – Section 3 – Site Analysis illustrate the topography, lot orientation, road network, and other site constraints.</p> <p>Topographic features of the site include the ridge line that runs south at the high point to north at the low point, the existing Tall Blackbutt Forest, the disused gravel quarry. With the removal of the trees on the eastern side of the ridge for dwelling allotments those lots may achieve views towards the east and the ocean as available to those lots currently fronting Leo Drive.</p> <p>The majority of allotments are oriented east – west so as to maximise solar access to likely future dwelling houses, encouraging energy efficient design.</p> <p>Open space linkages are provided through the rehabilitation of the quarry for recreation purposes. Also the cycleway / pathway system will provide access to the existing public reserve south of Macleay Street facilitating access safely through the subdivision to Leo Drive.</p> <p>Reports and preliminary plans where required, have been prepared by suitably qualified consultants in regard to traffic, stormwater management, weed management, landscaping and street tree planting, contamination, and the provision of water and sewage services.</p>
	<p>P2 To conserve ecological diversity and promote ecologically sustainable development –</p> <ul style="list-style-type: none"> ▪ To prevent the extinction and promote the recovery of threatened species populations and ecological communities. ▪ To protect the critical habitat of those threatened species, 	<p>In this regard, detailed flora and fauna reports have been prepared and submitted with this application addressing the likely implications of this development on threatened species, populations and endangered ecological communities within the immediate vicinity of the subject land. It has been demonstrated through rigorous and extensive investigation, reporting and review procedures</p>

	<p><i>populations and ecological communities that are endangered.</i></p> <ul style="list-style-type: none"> ▪ <i>To eliminate or manage certain processes that threaten the survival or evolutionary development of threatened species, populations and ecological communities.</i> ▪ <i>To ensure that the impact of any action affecting threatened species, populations and ecological communities is properly assessed.</i> ▪ <i>To encourage the conservation of threatened species, populations and ecological communities by adoptions of measures involving cooperative management.</i> 	<p>that the development is not likely to have any adverse impacts on threatened species, populations or endangered ecological communities.</p> <p>Principles of ecologically sustainable development are not compromised by this proposal. Detailed and thorough scientific investigation and peer review has been undertaken to ensure that the precautionary principle is not triggered with regard to threatened species, populations and endangered ecological communities.</p> <p>Intergenerational equity is ensured through the provision of native forest within the development and adjacent to the development (during the rezoning process) to foster community health and wellbeing through recreational and educational opportunities.</p>
RE2 Residential Neighbourhood Design		
<p>O1 <i>To provide safe and interesting residential environment that meets the diverse and changing needs of the community and offer a wide choice in good quality housing;</i></p> <p>O2 <i>To provide good internal and external access for residents and minimise the impact of through traffic;</i></p> <p>O3 <i>To provide quality public assets requiring minimum maintenance cost;</i></p> <p>O4 <i>To encourage walking and cycling; and</i></p> <p>O5 <i>To minimise energy consumption</i></p>	<p>P1 <i>The subdivision layout responds to site characteristics, setting, landmarks and views through street and open space networks.</i></p>	<p>Site characteristics have been taken into consideration in the design of this subdivision. Native vegetation is retained along the ridgeline and the existing quarry will be modified and reused as open space.</p>
	<p>P2 <i>Neighbourhood identity is reinforced by locating community facilities at focal points within convenient walking distance for residents.</i></p>	<p>Community facilities proposed in this development includes all open space and the provision of an active recreation space adjacent to an existing reserve at the southern boundary of the site.</p>
	<p>P3 <i>The street network provides a high level of internal accessibility and good external connections for local vehicle, pedestrian and cycle movements with traffic management to restrain vehicle speed, deter through traffic and create safe conditions for all road users.</i></p>	<p>Road design responds to the topography, and provides a grid pattern similar to that in the existing neighbourhood. Pavement design incorporates local area traffic management mechanisms to reduce traffic speed without impeding manoeuvrability particularly of public transport and service vehicles. Pedestrians and cyclists are catered for with a pathway network within the site connecting to adjacent streets.</p>
	<p>P4 <i>The street layout and lot density minimise fuel use by reducing travel distance, maximising public transport</i></p>	<p>The site is within 4 km of the nearest town or village where employment opportunities and commercial activities can be</p>

	<i>effectiveness and encouraging walking and cycling to daily activities.</i>	found. These distances are not excess, for either cycling or walking, however, it is proposed to incorporate a bus route into the design of the road network, encouraging the reduced reliance on private vehicles within the subdivision.
	<i>P5 The street and lot layout enables efficient provision of physical services.</i>	<p>The grid street pattern, which is an extension of the existing street layout does facilitate the efficient provision of services such as sewer and water. Electricity provision will be underground and likely in the same trench as other services.</p> <p>Linkages are continuous with no dead end extensions of either sewer or water mains, reducing the length of construction required.</p>
	<i>P6 The street and lot orientation and lot dimensions facilitate the setting and design of energy efficient dwellings.</i>	71% of the proposed lots are oriented east – west facilitating maximum solar access opportunities for future land owners with regard to design of dwellings and living spaces. The remainder of lots comply with the SEDA guidelines for Solar Access for Lots, where each lot has adequate solar access to encourage energy efficient design.
	<i>P7 The lot design and layout provide a variety of lot sizes and enable a variety of housing types and compatible land uses, and Council's Housing Strategy.</i>	<p>There are a variety of lot sizes proposed in this plan, ranging from 604m² to 1221m², with the average allotment being 738m².</p> <p>The land is zoned Residential 2(c) which allows for a range of compatible land uses including medium density, child care centres, professional consulting rooms, however no lot has been nominated in this subdivision for medium density development. This provides surety in regard to population density and the likely future character of the locality with regard to infrastructure provision. If sites are not nominated for medium density development within the subdivision, Council is not likely to support that use in the future if an application is subsequently lodged.</p>
	<i>P8 The lot design and layout provide for higher densities in</i>	Council's Shoalhaven Planning Policy No. 1 recommends that

	<i>areas close to the CBD, services, public transport, open space provided it is consistent with the relevant zone.</i>	medium density development sites should be provided adjacent to the southern active public reserve. However, high densities are not considered to be appropriate for this site due to the various natural hazards or physical constraints that otherwise may affect the land, or are in close proximity and medium density site are therefore not proposed. Further, the land is not in close proximity to either the Milton or Ulladulla CBDs. However, public transport is provided with a bus route through the subdivision, and both passive and active open spaces are provided.
	<i>P9 The layout distributes public open space that contribute to the character of the development, provide for a range of uses, are cost effective to maintain, and contribute to stormwater management and environmental care and or conform with Council's Section 94 Contributions Plan for recreation and open space.</i>	Public open space is provided in three separate parcels, with an active space adjoining Council's existing reserve located south of the site and two remnant vegetation parcels will be provided also. Bio retention swales are provided within the western road reserve to control water quality and maintain run off at predevelopment flow rates, reducing potential adverse impacts upon the nearby endangered ecological community and wetland.
	<i>P10 The layout retains significant vegetation and habitat areas, incorporates natural and cultural features, minimises soil erosion and avoids development on flood prone land. Identifies threatened species and their habitats, as well as providing habitat interconnections.</i>	As a consequence of the rezoning the proponent dedicated 63 hectares of land to the west of the site to Shoalhaven City Council as public reserve. That has ensured that significant vegetation and habitat in the region has been conserved. The inclusion of two public reserves within the site adds benefit to the proposal by maintaining a vegetated ridgeline and additional natural areas providing habitat connectivity.
	<i>P11 The retention of a riparian buffer zone along waterways, of a minimum width of 20 metres from the edge of the waterway banks or 20 metres from the centreline where banks are not defined.</i>	There are no riparian areas within the site.
	<i>P12 The layout is integrated with the surrounding urban environment, complements</i>	The proposal provides a logical extension of the existing street network, where the streets

	<i>existing attractive streetscapes and landscapes, and provides for shared use of public facilities by adjoining communities.</i>	terminate currently without adequate turning areas. Streets are to be landscaped and public reserves provided to enhance the living environment of existing and likely future residents.
	P13 <i>The layout enhances personal safety, and minimises potential for crime through surveillance by pedestrians and drivers of passing vehicles.</i>	There are no cul-de-sacs or narrow lane ways within the development. Passive and active surveillance is maintained, with street lighting to be incorporated into the road construction.
	P14 <i>The pedestrian network is safe, attractive and efficient, running largely along public spaces fronted by houses, and avoiding areas that generate major breaks in surveillance on routes used at night.</i>	Pedestrian movement is facilitated with a pathway system linking the existing residential areas to the south to the beach and inlet. The pathway network is within the road reserve adjacent to dwellings providing surveillance.
	P15 <i>The layout of residential development provides an arrangement that forms part of a strategy to afford protection from bushfire where necessary.</i>	Bushfire protection measures are provided within the development to benefit both the future residents and the existing developed neighbourhood through the provision of a perimeter road, asset protection zones and reduced vegetation density within the site to minimise the likelihood of fire impacting the site and surrounding developed residential neighbourhood.
Element RE3 – Major Street Networks		
O1 <i>To provide major street networks for vehicles, public transport, pedestrians and cyclists that:</i> <ul style="list-style-type: none"> • are integrated; • are cost effective; and • minimise the impact of traffic on the residential environment. 	P1 <i>The street network can accommodate the traffic volumes of the area meeting the area needs including the provision of public transport and pedestrian and cyclist needs.</i>	A traffic report has been provided indicating that traffic volumes will be catered for in the street network, with LATM provided to reduce traffic speed to ensure that the residential neighbourhood is a safe environment.
	P2 <i>The arterial road network has the capability to accommodate public transport services and has capacity to safely and effectively accommodate projected movements.</i>	The extension of the bus service into this subdivision does not have any impact upon the capability of the arterial road network to accommodate public transport.
	P3 <i>The street network connects with external traffic routes in a manner which maximises movement efficiency on the traffic routes.</i>	The location of new intersections and connections into the existing street network are provided with safe intersection sight distances applicable to the traffic speed zones of the road.
	P4 <i>Corridor traffic routes are</i>	This subdivision is located at the

	<i>more convenient for through traffic than streets within precincts.</i>	northern end of Narrawallee where there is no through movement of traffic as there is no connectivity with other towns or villages beyond this land. The network is a local precinct and the roads have been designed accordingly, which provide a bus route, emergency vehicles and a bushfire perimeter road.
	<i>P5 Streets within any neighbourhood should not unnecessarily operate as through traffic routes for externally generated traffic (other than for pedestrians, cyclists and public transport).</i>	There are no traffic routes provided through this subdivision, it is designed to link into the existing neighbourhood network providing for local traffic, pedestrians and cyclists.
	<i>P6 Safe and convenient links are provided for pedestrians and cyclists across transport corridors.</i>	This road network provides for local traffic and not through traffic, though a pedestrian / cycle way is incorporated to facilitate access to the Inlet and Beach via Leo Drive to the south of Macleay Street. Further, engineering design solutions are provided for safe movement within the subdivision minimising the potential for conflict between pedestrians and vehicular traffic.
RE4 Local Street Network		
<i>O1 To create street networks in which the function of each street is clearly defined, providing acceptable levels of access, safety and convenience for all users and minimise environmental impact.</i>	<i>There are numerous performance criteria where these all relate to engineering design requirements</i>	<p>The street network has been designed in accordance with Element RE4 of this DCP. The detail can be found in the preliminary engineering designs attached to this application (see Annexure 9).</p> <p>The road network proposed is a logical extension of the existing street pattern where the links provided have been predetermined by the previous subdivision history in the locality – despite the land not being zoned residential at the time of those subdivisions. Each link has complying safe intersection sight distance ensuring minimal visual intrusion and driver distraction at the intersections.</p>
RE5 Pedestrian & Cyclist Facilities		
<i>O1 All residents should have the opportunity to walk or cycle to the nearest community facilities, such as shops and schools. They should also be provided with safe and convenient links to other major</i>	<i>There are numerous performance criteria where these all relate to engineering design requirements</i>	Pedestrian and cyclist movement has been provided through a pathway system linking to a public reserve north of the subject land, providing access through the subdivision to Narrawallee Inlet and the beach.

<p><i>destinations external to the neighbourhood. The design of the street network should encourage walking and cycling along quieter local streets, reducing the need for separate rights of way for cycle and pedestrian linkages.</i></p>		<p>The streets are of gentle grade to encourage pedestrian activity.</p> <p>Council's standard cycleway width is 2.0 metres and Council's Pedestrian Access & Mobility Plan (PAMP) identifies proposed shared paths to be constructed in the vicinity of the site along Leo Drive to and along Macleay Street to Matron Porter Drive. The cycleway linkage plan provided as Annexure 4 illustrates the proposed connection with the Council's proposed shared facility, through the public reserve on the southern side of Macleay Street north of the creek though that reserve.</p>
RE6 Public Transport		
<p>O1 <i>To increase opportunities for choice in mode of transport and provide cost effective and energy efficient public transport services that are accessible and convenient to the community.</i></p>	<p><i>There are numerous performance criteria where these all relate to engineering design requirements</i></p>	<p>A bus route has been provided within the road design, along with cycle way / pedestrian paths for easier access to the beach and inlet.</p>
RE7 Public Open Space		
<p>O1 <i>To provide, where appropriate, public open space that meets user requirements for outdoor recreational social activities and for landscaping that contributes to the identity and environmental health of the community.</i></p>		<p>Public open space is provided adjacent to an existing park area between Gemini Way and Seaspray Street. The proposed park will be created from the rehabilitation of the quarry area, and it will be an active space with playground equipment for the use of the existing and likely future residents.</p> <p>Further, there are two areas proposed for native vegetation retention within the subdivision. These areas will be managed where appropriate to prevent the build up of ground fuels which could result in bushfire impacting on adjacent residential properties. These areas also are likely to provide habitat resources for the endangered Glossy Black Cockatoo, with the retention of a number of <i>Allocasuarina littoralis</i> specimens in the northern reserve area.</p>
<p>Sections RE8 Street Design, RE9 Street & Common Driveway Construction, RE10 Utility Services, RE11 Stormwater Drainage, and RE12 Stormwater Quality Management are not</p>	<p>The plans provided comply with the objectives and the performance criteria as well as complying without variation to the example acceptable solutions of this DCP.</p> <p>There are numerous performance criteria where these all relate to engineering design requirements, the road pavements provided</p>	

<p>individually addressed in this report as detailed plans and suitably qualified practising consultant's reports are provided with this application to demonstrate compliance with the performance criteria and objectives of these sections.</p>	<p>within this development are larger than those required by Council for a subdivision of this nature which is not a through road network. The stormwater management and design has been extensively detailed in the accompanying plans and reports. Staging plans and infrastructure provision plans are similarly provided for the Department's and Council's consideration.</p> <p>Annexure 1 Major Project Application Plan (Oct 06) Annexure 9 – Draft Road Design Detailed Plan & Draft Road Design Roads 1 – 7 including long sections (Dec 06) Annexure 10 – Major Project Application Staging Plan (Oct 06) Annexure 11 – Stormwater Management Strategy (Nov 06) Annexure 12 – Operation & Maintenance Manual for the Enviropods, Basins & Bio Retention Swales (Nov 06) Annexure 13 – Water Quality Monitoring Strategy (April 05) Annexures 16 & 16A – Draft Sewer & Water Reticulation Plans (Dec 06)</p>	
<p>RE13 Streetscape</p> <p>O1 To provide attractive streetscapes that:</p> <ul style="list-style-type: none"> ▪ Reinforce the functions of a street, ▪ Enhance the amenity of buildings, and ▪ Are sensitive to the built form, landscape and environmental conditions of the locality. 	<p>P1 <i>The street and landscape design achieves:</i></p> <ul style="list-style-type: none"> ▪ <i>The creation of attractive residential environments with clear character and identity</i> ▪ <i>Respect for existing attractive streetscapes in established areas</i> ▪ <i>Appropriate streetscapes in areas where desired future urban character has been defined</i> ▪ <i>Provision for appropriate street tree planting taking into account the natural landscape, the image and role of the street, solar access requirements, soils, selection of appropriate species, and services</i> ▪ <i>Use of such facilities as views, vistas, existing vegetation and landmarks.</i> <p>P2 <i>The design of the landscape in public streets:</i></p> <ul style="list-style-type: none"> ▪ <i>Defines a theme for new streets, or complements existing streetscapes and integrates</i> 	
		<p>It is proposed to incorporate street tree planting into each stage in accordance with the lodged landscape concept plan.</p> <p>The species chosen are indigenous to the locality and have been found on the site and in the nearby coastal forests. Species chosen include <i>Corymbia gummifera</i> (Red Bloodwood) on the main Leo Drive entry into the site and extending along that road to the west, <i>Angophora floribunda</i> (Rough Barked Apple) along the northern extension of Gemini Way from the new Leo Drive intersection. <i>Melaleuca linariifolia</i> (Snow in Summer) is proposed to be planted in the road reserve for the southern end of the Gemini Way extension in Stage 1 to the intersection with Leo Drive, and along the western perimeter road in both Stages 5 & 7. Plantings of <i>Glochidion ferdinandi</i> (Cheese Tree) are proposed along the residential allotment frontage of the southern loop road, and <i>Banksia integrifolia</i> (Coast Banksia) are proposed within the northern loop road.</p> <p>These plantings will result in a very attractive streetscape with species suited to the soil and climatic characteristics of the locality.</p> <p>The theme for the street tree plantings is essentially an extension of the surrounding landscape into the new residential environment,</p>

	<p><i>with new developments</i></p> <ul style="list-style-type: none"> ▪ <i>Is sensitive to site attributes</i> ▪ <i>Complements the functions of the street</i> ▪ <i>Reinforces desired traffic speed and behaviour</i> ▪ <i>Is of an appropriate scale relative to both the street reserve width and existing or expected future building bulk</i> ▪ <i>Promotes safety and casual street surveillance</i> ▪ <i>Improves privacy and minimises unwanted overlooking</i> ▪ <i>Incorporates existing vegetation where possible and desirable</i> ▪ <i>Promotes the planting of native vegetation in environmentally sensitive areas</i> ▪ <i>Appropriately accounts for streetscapes and landscapes of heritage significance</i> ▪ <i>Assists in microclimate management</i> ▪ <i>Maximises landscaped areas where appropriate</i> ▪ <i>Integrates and forms linkages with parks, reserves and transport corridors</i> ▪ <i>Enhances opportunities for pedestrian comfort</i> ▪ <i>Achieves lines of sight for pedestrians, cyclists and vehicles</i> ▪ <i>Provides adequate lighting for pedestrian and vehicle safety</i> ▪ <i>Provides attractive and coordinated street furniture and facilities to meet user needs</i> ▪ <i>Satisfies maintenance and utility requirements and minimises their visual impact of above ground utilities.</i> 	<p>providing continuity and connectivity with the adjacent coastal forests.</p> <p>The design speed of the road network is generally low however the planted specimens should not interfere with sight distance from any intersection or private driveway.</p> <p>The species chosen do not have weeping habits and are all generally up right growing and when judiciously pruned in early growth stages can ensure minimal low branches, which should not have any impact upon passive surveillance or vehicular sight distances.</p> <p>The Bloodwoods provide a feeding resource for Gliders including the threatened Yellow-bellied Glider and other species such as the Greater Glider which are prey for the Powerful Owls known to den and roost in the Mollymook – Narrawallee locality.</p>
RE 14 – Allotment Sizes		
<p>O1 <i>To provide a range and mix of lot sizes to suit a variety of dwellings and household types, with areas and dimensions to meet user requirements.</i></p> <p>O2 <i>To provide lots that are oriented where practicable to enable the application of energy conservation principles.</i></p> <p>O3 <i>To provide lots of sufficient size to protect environmental</i></p>	<p>P1 <i>Lots have the appropriate area and dimensions for the siting and construction of a dwelling and ancillary outbuildings, the provision of private outdoor space, convenient vehicle access and parking.</i></p>	<p>All lot sizes provided are above the minimum example acceptable solution of 500m² and are similarly larger than the minimum frontage of 16 metres. The allotments are rectilinear with an average 18 metre width at the street frontage or building line maximising dwelling space and private recreation opportunities. Of the 168 proposed lots, 167 have full width street frontage providing convenient access for</p>

<p><i>features and take into account site constraints.</i></p> <p>O4 <i>To provide for smaller lots in locations adjacent to neighbourhood centres, public transport stops and adjacent to higher amenity areas.</i></p>		pedestrians and vehicles.
	P2 <i>Lot areas and dimensions take into account the slope of the land and the desirability of minimising earthworks / retaining walls associated with dwelling construction.</i>	As far as possible, lots have been designed to minimise cut and fill for dwelling construction.
	P3 <i>Lot areas and dimensions enable dwellings to be sited to:</i> <ul style="list-style-type: none"> ▪ <i>Protect natural or cultural features</i> ▪ <i>Acknowledge site constraints including soil erosion and bushfire risk</i> ▪ <i>Retain special features such as trees and views</i> 	The lot sizes provided permit the location of a dwelling with adequate asset protection zones if they are necessary, where coastal views are likely to be available to those lots on the eastern side of the development and extensive rural views to those on the western side of the development.
	P4 <i>Lot frontages are oriented to streets and open spaces so that personal and property security, deterrence of crime and vandalism, and surveillance of footpaths and open spaces are facilitated.</i>	<p>The proposal complies with this performance criterion – all of the proposed lots are oriented to public roads with legal and practical access available to each. There is one battle axe lot proposed in this design.</p> <p>Road reserves are wide and generally straight allowing good surveillance of the street.</p>
	P5 <i>Lot design precludes the need to reverse onto a major or minor distributor road</i>	The minor distributor roads in this vicinity are Leo Drive and Matron Porter Drive. There are no lots within the proposed subdivision with direct frontage to Leo Drive, therefore this performance criterion is achieved as no lot will reverse on to that road from this subdivision.
	Battle-axe Lots	
	P6 <i>Lots to provide appropriate dimensions for the siting and construction of residential development and ancillary outbuildings or facilities.</i>	There is one battleaxe lot proposed in this subdivision (Lot 603 in Stage 6). This lot has an access handle to the road and the lot is of adequate dimensions to permit the construction of a dwelling and vehicle manoeuvring area so that vehicles can exit the site in a forward direction.
	P7 <i>Adequate provision be made for access to the property.</i>	Each lot has direct access to a proposed public road, where 167 of the residential allotments have full street frontage and one lot has an access handle to the street.
	P8 <i>Suitable building envelope, of relatively flat land</i>	This battleaxe lot has an area of 1103m ² , dimensions internally of

	<i>that can be developed.</i>	<p>27m x 40.4 m (excluding the width of the access handle).</p> <p>Council's acceptable solution in this situation is to provide a building envelope of 15m x 15m with 5 metre setbacks to boundaries. While a building envelope is not proposed for this lot, the acceptable dimensions mentioned above are met within this lot.</p>
	<i>P9 Minimise overshadowing and privacy impacts on adjoining residents.</i>	<p>Each lot has adequate dimensions to permit the construction of a single storey dwelling house, however if a future owner chooses to construct a two storey dwelling house, the individual applications will be assessed on their merits regarding overshadowing.</p> <p>However, the majority of lots are oriented east west so that maximum solar access is provided for north facing living and open space areas, with solar access zones that will be generally free of overshadowing.</p> <p>Overlooking of adjoining properties would be minimised with single storey construction, and there is no intension of benching out allotments as part of the subdivision to provide level building platforms for slab on ground construction.</p> <p>The natural slope of the lots is likely to result in a variety of construction methods, materials and designs, where each dwelling can comply with Council's required building setbacks from side and front boundaries to reduce adverse impacts upon neighbouring properties.</p>
	<i>P10 Provide opportunity for future dwellings to have good solar access.</i>	<p>As indicated above, the majority of lots are oriented east – west to provide maximum solar access to lots to enable energy efficient design of future dwellings, with living areas oriented north.</p>
	<i>P11 Retain character of location by preserving existing mature trees or provide opportunities for future planting.</i>	<p>It is proposed to retain trees on the ridge line in two public reserves, with complimentary street tree plantings of indigenous species to enhance the proposal. The public reserves will be under</p>

		<p>scrubbed if required to reduce fine fuels build up lessening likely bushfire impacts upon adjacent residential properties. The mature trees in the main will be retained unless they are required to be removed for asset protection works previously described.</p> <p>During the first stage of the subdivision, the whole site (excluding the reserve areas on the ridgeline) will be under scrubbed, and those trees within the proposed road reserves will be removed, reducing tree density to that of a woodland structure as described in Planning for Bushfire Protection, 2006.</p>
	Orientation & Energy	
	<p><i>P15 A solar-efficient subdivision will ensure that the overall development is significantly more energy efficient than conventional development because once the lots are correctly aligned and proportioned individual houses in general will perform better with comparatively less effort. A subdivision design must maximise and protect solar access for each dwelling. This is achieved by defining the lot size, shape, orientation, the solar setback line and possibly a building height envelope which together determine the ideal locations of the northern wall of a dwelling and the time solar north-facing windows for any given lot. Together these factors ensure that dwellings are located on lots such that reasonable solar access is achievable.</i></p>	<p>71% of the proposed lots are oriented east - west for maximum solar access to the land, allowing a dwelling house to be designed with the living areas to the north, reducing energy consumption.</p> <p>All other allotments are provided with adequate solar access zones or are oriented to enable energy efficient design on dwellings.</p> <p>The future dwellings will also be required to comply with the provisions of State Environmental Planning Policy – Building Sustainability Index – BASIX with regard to energy efficiency and water consumption.</p>
RE15 Bushfire Mitigation		
<p>O1 To prevent the risk of fire in the immediate vicinity of habitable dwellings by adopting suitable protection measures relating to siting, layout, design and construction techniques, and landscaping.</p> <p>O2 To coordinate and establish a system of fire breaks to protect life and property.</p>		<p>This Subdivision Code was drafted by Council prior to the implementation of Planning for Bushfire Protection (PBP), 2001, while it was not adopted until after the publication of PBP the bushfire provisions of the DCP are not entirely consistent with PBP. This subdivision has been designed in accordance with PBP and is supported by a Bushfire Assessment Report addressing compliance with the provisions of that document.</p>

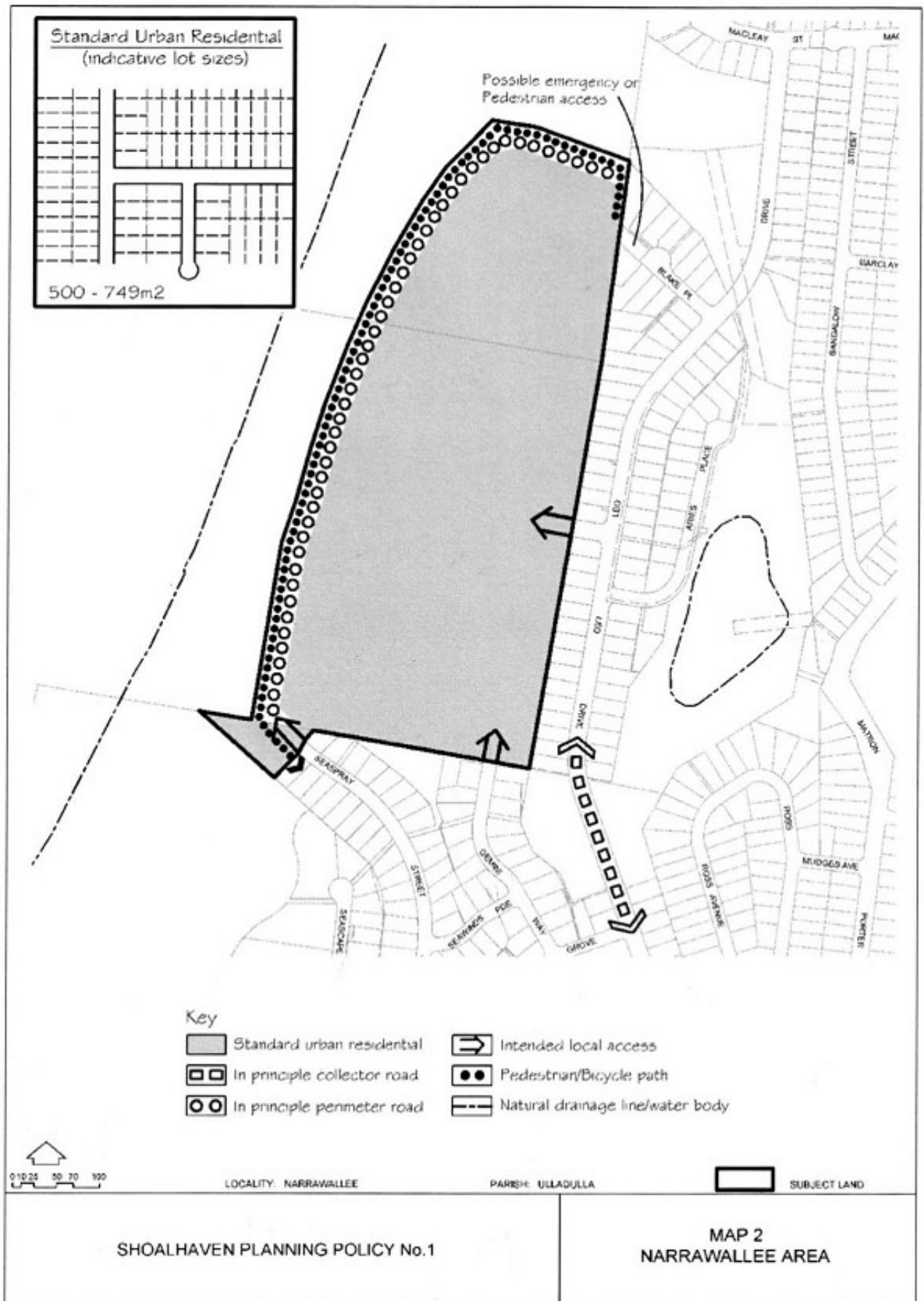
		This subdivision complies with PBP 2006 and provides bushfire mitigation measures to protect both this subdivision and part of the adjoining community through management of vegetation and provision of a perimeter road.
RE16 Geotechnical		
<i>O1 To ensure efficient and economical subdivision design which will have minimal impact on adjoining properties and provide safe building conditions for development</i>		The site is not known to be prone to slip or to have other geotechnical constraints that may impact upon road, infrastructure or future dwelling construction.

5.18 Shoalhaven Planning Policy No. 1

This planning policy, adopted by Shoalhaven City Council in November 2004, provides guidelines for development of certain lands zoned Residential 2(c) under the gazettal of Shoalhaven Local Environmental Plan, 1985 Amendment No. 195 in the Milton – Ulladulla area. This policy was not adopted by Council until more than one year after the lodgement of the original SEPP 71 Master Plan application by the proponent, and the proposal did not address the requirements of that policy. However with regard to the current proposal, this Policy contains performance criteria specifically relating to Area 4 – Narrawallee, which are addressed as follows:

SPP 1 Performance Criteria	Comments on Proposal
Access Network	
<i>The Street Network forms an efficient and purposeful access system with a clear hierarchy. As far as practicable, the street network will disperse, rather than concentrate, traffic flows.</i>	<p>The plan below illustrates the location of an in principle collector road (Leo Drive) and an in principle perimeter road adjacent to the western boundary of the subject land. The perimeter road is provided in this subdivision proposal to the access requirements complying with Planning for Bushfire Protection 2006. This road forms an extension of Seaspray Street, linking at the northern end of the subdivision to an extension of Gemini Way providing a through road network connecting onto Leo Drive.</p> <p>It is not proposed to utilise Blake Place for any access be it emergency or other wise (including pedestrian), while the land at the end of Blake Place is in the ownership of the proponent, there has been extensive objection from the local community to the provision of access / egress for emergency or otherwise from that land – as evidenced by parliamentary petitions and submissions to DoP during the SEPP 71 Master Plan application.</p> <p>The NSW RFS have previously accepted the perimeter road and internal network as complying with Planning for Bushfire Protection without the necessity of an additional emergency egress point to the north.</p>
<i>Pedestrian / bicycle paths are established throughout the area providing linkages to Narrawallee Beach and the open space to the west.</i>	A cycleway will be provided adjacent to the western boundary within the road reserve enabling a link to the public reserve to the south of Macleay Street to facilitate pedestrian and cyclist movement from the subdivision to the Inlet and Beach areas. This also provides access for others to the bushland to the west of the subdivision. A plan has been provided with this application illustrating the location of both the pedestrian and cycle paths

	through the proposed subdivision – see Annexure 7 .
Residential Subdivision	
<i>Residential lot sizes are relevant to demand and context.</i>	<p>This Policy indicates that allotment sizes should be “Standard lots” with areas of between 500m² – 749m². This application however proposes a minimum 604m² to 1,221m² which are larger allotments than those indicated by Council as being suitable for the locality. Given the physical constraints and natural hazards associated with the site, including the nearby SEPP 14 wetland, endangered ecological community and potential bushfire risk, it is considered that higher densities are not appropriate for this site. The initial SEPP 71 Master Plan proposal lodged provided 213 allotments which were subsequently reduced through open space retention and street realignment to 163 allotments. Complying with the density provision of this policy would not be consistent with the adopted Master Plan for the site.</p> <p>This Policy also indicates Council’s desire to provide medium density development around future open space being the extended public reserve in southern section of site. For similar reasons to the above density provisions, the provision of higher density in a locality that has sensitive ecological constraints and bushfire hazard at a distance from the CBD, is not considered to be an appropriate option.</p> <p>The allotments proposed are of adequate size for dwellings and potentially dual occupancy with little opportunity for resubdivision under either an amended dual occupancy subdivision policy or under DCP 100.</p>
Open Space Network	
<i>Open space within the area links with adjoining open space and is adequate to the needs of future residents.</i>	<p>Council’s Section 94 Plan does not identify any land within this site for acquisition for public open space purposes, and Council does not yet have a published or publicly exhibited Open Space Plan that identifies where open space is to be provided or where it is surplus to requirements.</p> <p>The provision of two additional open space reserves in the vicinity of 2 hectares adjacent to 63 hectares of recently dedicated ecologically sensitive lands is not considered to be of any additional benefit to the community. However, it does provide visual relief to the subdivision, encouraging wildlife movement into the urban environment and provides educational and recreational opportunities for residents.</p>
<i>Where possible the scenic quality of the ridgeline is maintained.</i>	<p>Public reserves are provided on the ridge line at the highest point and the knoll towards the end of the ridge; lot yield has been reduced so that these natural areas can be retained for public purposes. These areas are likely to be visible from outside the site at various locations including Jones Beach carpark at Bannister Head, some 2.5 kilometres from the site. However dwellings will not be visible from any public location other than the immediately adjoining streets. For further detail, see Section 7.2 Visual Impact.</p>



5.19 Policy to Control Building Height and Amenity in Residential Areas

Shoalhaven City Council introduced this policy in 1990, where it is applicable to all residential zones, including new release areas such as the subject land. This policy has 8 primary aims:

- a) *"To recognise the right of residents to the style of house which they reasonably seek and to encourage the design of new houses and additions to houses which do not unreasonably or detrimentally affect the amenity of neighbours or the local environment.*
- b) *To assist applicants by setting out both controls on the height and size of houses and general design guidelines requiring buildings to take account of topography and any existing view, privacy and access to sunlight, enjoyed by adjacent properties.*
- c) *To introduce a degree of predictability into the residential environment by indicating, for the benefit of designers, residents, prospective purchasers and builders and the general public the objectives behind the proposed controls and the general nature of houses which will be acceptable to the Council.*
- d) *Ordinary dwelling houses and additions to dwelling houses to maintain a reasonable level of sunlight to neighbours' living areas and recreation space between 9.00am and 3.00pm during the winter solstice on the 22nd June and to determine this Council retains the right to require the applicant to provide a shadowcast diagram, if deemed necessary by Council.*
- e) *All new dwelling houses and additions to dwelling houses are sited and designed so as to minimise overlooking of neighbours' living areas and recreation space.*
- f) *Any building development works shall maintain or encourage replacement of tree cover whenever possible to ensure the retention of the landscape quality of the City is maintained and enhanced.*
- g) *To increase the amount of land available for landscaping and open-space around dwelling houses and between adjoining dwelling houses.*
- h) *Council is not in favour of development on land in excess of 20% grade and any land in excess of this grade will require the submission of geo-technical advice and recommendations to be submitted with any application."*

This subdivision does not propose to include building envelopes, height restrictions or building alignments on any of the allotments to be created. Council's policy is well founded and more than adequate to achieve the desired neighbourhood outcomes so that there is compatibility between the existing housing stock and the future residential development within the subject land.

5.20 Narrawallee Inlet Natural Resources Management Strategy

The Shoalhaven Planning Policy No 1 advises that *"proponents should be aware of the provisions in the Narrawallee Inlet Natural Resources Management Strategy in any development application on land within the Narrawallee area."* This Strategy was adopted by Council in June 2002 after the subject land was identified for rezoning for Residential purposes in the Milton Ulladulla Structure Plan.

Narrawallee Inlet has a catchment of approximately 80sq kilometres, including the subject land, the large agricultural landscape surrounding Milton and the forested lands towards the escarpment to the west. The Inlet which is approximately 4 kilometres long has three main tributaries – Croobyar, Currowar and Yackungurrah Creeks. Adjacent to Narrawallee Inlet are several SEPP 14 wetlands and there are other wetlands such as Garrads Lagoon within the vicinity of the subject land.

The key management areas of the Narrawallee Inlet Natural Resources Management Plan are:

1. Water Quality
2. Erosion & Sedimentation
3. Water Flow
4. Nature Conservation
5. Entrance Management
6. Recreation
7. Visual Quality
8. Cultural Heritage

It is considered that areas 1 and 2 above are of high importance in regard to the subject subdivision proposal. The objectives relating to water quality are achieved in this proposal through the use of water sensitive urban design principles, including the construction of the bio-swale which along with other proposed mechanisms will ensure that the water quality of runoff leaving the subject land is not detrimental to the health of the Inlet and nearby wetlands.

Erosion and sedimentation control measures will be in place during all construction works within the site, including the subdivision civil works and any proposed future dwelling house.

The objective of the Strategy with regard to water flow is to maintain natural flow patterns, and that is achieved in this development proposal through retention of runoff so that pre-development flow rates are maintained.

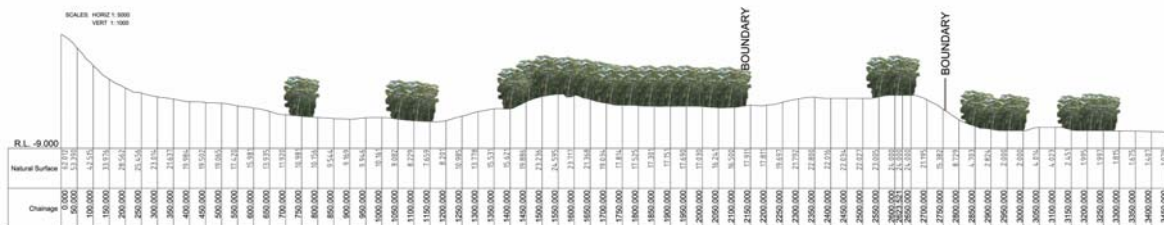
The Nature Conservation objective is to maintain or restore the ecological integrity and biodiversity of the Inlet and its catchment. That has been achieved in two ways, initially through the dedication of 63 hectares of land for conservation purposes to the west of the subject land, which contains an endangered ecological community and other habitat. Secondly, the water quality control and retention mechanisms proposed will ensure that there is no net nutrient increase (particularly nitrogen and phosphates) from this subdivision into the adjacent plant and wetland communities which may alter or damage those sensitive environments.

Of the four major areas of visual importance in the catchment, there is one that incorporates the subject land, and that is "*the views from Milton towards the coast, across grazing lands to the coastal forests and the headland and seas beyond*".

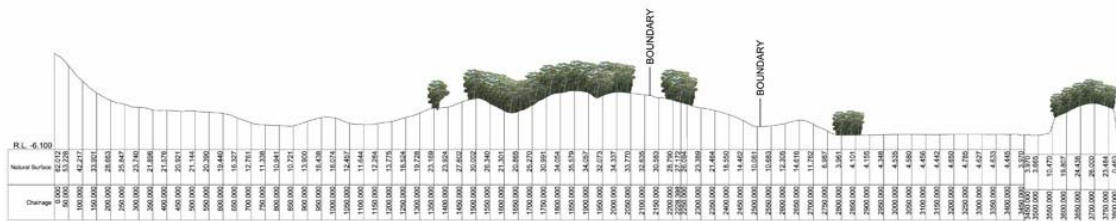
One potential location in Milton where the subject land may be visible is from the Princes Highway lay-by in the vicinity of Warden Street on the southern (Ulladulla) edge of the village. The below panorama taken from that position looking from west, through north to east, and the accompanying exaggerated vertical scale long sections from that same position (V5000:H1000), reveal that the land is not clearly visible due to intervening topography and vegetation. Further, the visual impact would be ameliorated due to the distance of the subject land from this position. For further detail in this regard, see Section 7.2 of this Environmental Assessment.



From Princes Highway lay-by adjacent to Warden Street – panorama from west through north to east



Section 5 from Princes Highway Lay – by to northern public reserve within subject land



Section 6 from Princes Highway Lay – by to southern public reserve within subject land

5.21 Shoalhaven Housing Strategy

Council initially adopted the Shoalhaven Housing Strategy on 11th July 2000 however, this document has been revised and placed on public exhibition in March 2006. Subsequent to this public exhibition the Shoalhaven Housing Strategy 2006 was adopted on 27th June 2006. This contained a number of strategies and actions with regard to housing the increasing population of the Shoalhaven, particularly older persons and others including university students and therefore encouraging the provision of affordable housing.

Actions include making the subdivision of dual occupancy development permissible in areas with good services for the aged and disabled such as Nowra and Ulladulla, permitting boarding houses within 1km of the town centres of both Nowra and Ulladulla. Another action is to encourage 1 & 2 bedroom unit development within the Milton - Ulladulla area along with villas and integrated development in the same locality, and also in the Nowra – Bomaderry urban area.

This subdivision proposal is not within the CBD area of Ulladulla and is in excess of 3km from the town centres of both Milton and Ulladulla. It is not considered appropriate given the distance and site constraints to provide medium density housing in this subdivision. This has been reiterated by the Department of Planning in their initial SEPP 71 Master Plan assessment report.

5.22 NSW Coastal Policy, 1997

The NSW Coastal Policy contains nine goals and a number of strategies to maintain an ecologically sustainable coastline for NSW. The nine goals are:

- *Protecting, rehabilitating and improving the natural environment of the coastal zone.*
- *Recognising and accommodating the natural processes of the coastal zone.*
- *Protecting and enhancing the aesthetic qualities of the coastal zone.*
- *Protecting and conserving the cultural heritage of the coastal zone.*
- *Providing for ecologically sustainable development and use of resources.*
- *Providing for appropriate public access and use.*
- *Providing information to enable effective management of the coastal zone.*
- *Providing for integrated planning and management of the coastal zone.*

With regard to these goals, a number of strategic actions have been formulated, many of which are the responsibility of Council to implement when pursuing the rezoning of land (through Section 117 Directions).

Goal 1 – Protecting, rehabilitating and improving the natural environment of the coastal zone, has the following objective:-

"To identify coastal lands and aquatic environments with conservation values and devise and implement acquisition policies, management strategies and controls to ensure that those values are protected".

This objective is followed by 11 strategic actions, including 1.1.11 which states – *"Regional open space networks / corridors (including water areas) should, where possible, be used to protect natural habitats and environments"*. The prime responsibility for that strategic action lies with the Department of Planning and Local Councils, with other responsibility being with the Department of Environment and Conservation (NPWS) and the Department of Natural Resources.

With regard to the subdivision of the subject land, that strategic action was achieved during the rezoning process when Council zoned the subject land Residential 2(c) and the dedication of approximately 63 hectares of coastal forest was achieved through the inclusion of an allowance clause in Schedule 8 of the Shoalhaven Local Environmental Plan, 1985 to facilitate further subdivision. The land dedicated by the proponent to Shoalhaven City Council forms part of a contiguous coastal forest that provides habitat linkages in line with the desired environmental outcomes of the South Coast Regional Strategy.

Goal 3 - *"To protect and enhance the aesthetic qualities of the coastal zone"* has an objective (3.2) which states *"To design and locate development to complement the surrounding environment and to recognise good aesthetic qualities"*, where one corresponding strategic action is *"In preparing and amending regional and local environmental plans and development control plans and when assessing development applications, consideration of the design and locational principals contained in the Coastal Policy (Appendix C Table 3) will be*

required". The prime responsibilities for this strategic action are with the Department of Planning and local Councils.

Table 2 of the Appendix contains a list of strategic actions (SA) which are relevant to development control, and these are addressed as follows:

SA	Provision	Comment on this proposal
Natural Environment		
1.16	Voluntary Conservation Agreements	As 63 hectares of land has previously been dedicated to Shoalhaven City Council for conservation purposes, the further preservation of plants and animals within this subdivision through a VCA with NPWS is not warranted. Additional public reserves are proposed within the subdivision, as a requirement of the adopted Master Plan, to be transferred to Shoalhaven City Council for open space and aesthetic purposes.
1.17	Seagrass, mangroves, saltmarsh and other wetland associated species	This strategic action relates to controlling runoff, sedimentation and other water quality impacts particularly in regard to the conservation and management of SEPP 14 wetlands and endangered ecological communities. An endangered ecological community has been found near the subject land, and the subject land is within the catchment of a number of SEPP 14 wetlands bounding Narrawallee Inlet. Stormwater and water quality management measures are proposed within this subdivision with the use of water sensitive urban design mechanisms with on going monitoring for the term of the development of Stages 1 – 7 of the subdivision, to ensure that there are no adverse impacts upon the wetlands or the EEC.
1.2.3	Fish habitat modification or alteration	This action relates to the study of changes in fish habitats and use by fish populations and communities. This development proposal is not in close proximity to the estuary and should have no impact on fish habitats or breeding grounds. However, stormwater and water quality control measures proposed (if properly managed and monitored in the future) will ensure that this subdivision and subsequent housing development, will have no on going impact upon potential habitats in the nearby estuary.
1.2.5	Threatened Species Conservation Act	There are a number of threatened species identified on the NSW Wildlife Atlas as being found within the locality of the subject land, along with an endangered ecological community. Extensive and rigorous studies (including peer review of results and methodology) has been undertaken to provide scientific certainty that this development proposal is not going to have any adverse impacts upon any currently listed threatened species, population or endangered ecological community or their habitats.
1.3.1	EPA licensing of STP and other point source discharges	This strategic action is not relevant to this subdivision proposal as it relates to discharge from Sewage Treatment works and other point sources that require licensing.
1.3.2	Non – point source pollution	A water quality monitoring strategy has been devised for this proposal to ensure that there are no adverse pollution consequences as a result of this development taking place.
1.3.7	Waste water discharge limits	It is not proposed to dispose of waste water (effluent) from

		this land into the nearby estuary.
1.3.8	Contaminated stormwater	The use of water sensitive urban design measures including the bio-swale system on the western boundary of the land, if managed accordingly will ensure that there will be no future discharge of contaminants (domestic pesticides and herbicides, aromatic hydrocarbons etc) from this site into the Narrawallee Inlet catchment.
1.3.12	Vessel sewage pumpout facilities	This strategic action is not relevant to this urban subdivision proposal.
1.3.13	Re-use of treated bio-solids and effluent	This strategic action is not relevant to this proposal – there is no proposal to re-use treated bio-solids and effluent throughout this subdivision – all wastewater will be reticulated to Council's West Ulladulla STP in accordance with the requirements of Shoalhaven Water.
1.4.5	Assessment of coastline development proposals	The subject land is not located immediately on the NSW Coastline and will not be subject to coastal hazards such as tidal impacts, storm surge and beach or headland erosion. This proposal does not pose any physical threat to the well being of the coastline.
1.4.7	Assessment of estuarine development proposals	The subject land is not located immediately adjacent to the Narrawallee Inlet estuary, but is approximately 500m south. Likely impacts of the development of the subject land upon the estuary have been considered however, particularly in regard to stormwater management and water quality control implementation measures. These will ensure there are no adverse impact upon the estuary or the nearby endangered ecological community.
Natural Processes & Climate Change		
2.1.3	Physical and ecological processes to be considered when assessing development applications	The subject land is not located immediately adjacent to the Inlet or beach and is not likely to be subject to any coastal processes such as tidal action, accretion, erosion or storm surge. The subject land is located above the 1% AEP flood recurrence level and is not located within an area identified as being likely to contain acid sulfate soils.
2.1.4	Acid sulfate soils – environmental studies; DLWC mapping and EPA guidelines; requirements for EIS; monitoring and restoration works; management plans	The site is not identified as being likely to contain acid sulfate soils as mapped by the then Department of Land and Water Conservation. This would appear to have been taken into consideration when determining the residential zone boundary in the Milton – Ulladulla Structure Plan, as the site / zone boundary is outside the mapped areas.
2.2.2	Sea level change	<p>The Intergovernmental Panel on Climate Change was established in 1988 and sea level change is one of the prime concerns. The 3rd Assessment report released in 2001 indicated a sea level rise of between 9 and 88 cm (potentially in the order of 50cm) between 1990 and 2100 with a potential hundred fold horizontal impact with the landward recession of the shoreline, wetlands and saline environments and associated water temperature rises. The 4th Assessment report was released in February 2007.</p> <p>With regard to the subject land, the site is located upon a low ridgeline in excess of 500 metres from the beach and inlet at its lowest elevation of 10 metres above current sea level. The implications of sea level change are difficult to assess and it would be more likely to have significant "short</p>

		<p>term" impacts upon the SEPP 14 wetlands, and coastal forest communities, including the endangered ecological communities. The site would likely be, if a 50cm rise occurred, above reasonably expected storm surge and 1% AEP flood levels.</p> <p>In 2004 Shoalhaven City Council commissioned Snowy Mountains Engineering Corporation (SMEC) to undertake a Coastline Risk Management Assessment, the results of which were published in 2004. With regard to Narrawallee Beach, it was indicated that land at the 10m AHD would not be "<i>considered to be at threat from coastal processes,</i>" and that Narrawallee Beach did "<i>not appear to be experiencing severe foreshore recession. A buffer width of 40m would appear to provide adequate protection for in excess of 50 years and the existing dune would prevent inundation of the existing urban development.</i>" However the report indicated that scenario may be considerably different in the future if the tombolo connecting the beach and the headland is breached due to storm surge, which could result in the realignment of the beach and loss of existing beachfront development along Matron Porter Drive (potential impact upon 60 dwellings), though the threat of that breach is at present low.</p> <p>Shoalhaven City Coastline Management Plan will be developed over three years as a result of the above risk management assessment, with Ulladulla – Mollymook to be the next area of study between January and March 2007 (Stage 3), and Narrawallee along with Conjola and other areas between July and September 2007 (stage 5), with the Plan to be finalised by April 2009.</p>
Aesthetic Qualities		
3.2.1	North & South Coast Design Guidelines and Guidelines for Tourist Development along the NSW Coast	The Coastal Design Guidelines for NSW prepared by the Urban Design Advisory Service were published in 2003. These guidelines, which will be discussed in further detail in Section 5.22 of this report, classify Ulladulla as a Coastal Town with regard to settlement hierarchy. It is considered that this subdivision proposal is consistent with the desired future character of the Coastal Town.
3.2.4	Design and locational principles for development applications	Table 3 provides guiding principles for development within the littoral zone or land adjoining estuaries. Many of the principles relate to visual amenity and conservation reasons, particularly building height and location adjacent to beaches frontal dune systems or developed headlands. The subject land is not located within the littoral zone nor is it within close proximity of the estuary of Narrawallee Inlet, therefore, these development control provisions do not impact upon the proposed development.
3.2.5	Siting of navigational aids, marine communications towers, warning signs and moorings	This strategic action has no bearing on this subdivision proposal.
Cultural Heritage		
4.2.3	Coastal sites of Aboriginal heritage significance	A detailed investigation of the subject land for Aboriginal sites, scatters and artefacts has been undertaken by Navin Officer in accordance with Department of Environment & Conservation guidelines. The Ulladulla Local Aboriginal Land Council was included in the investigations and the

		significance of areas / items found was considered to be low. Therefore, the proponent was issued with a Section 90 Consent to Destroy to undertake activities on the land associated with the subdivision.
Ecologically Sustainable Use of Resources		
5.1.11	Ecotourism developments and Guidelines for Tourist Developments Adjacent to Natural Areas	There is no proposal to include sites within the development for tourism based activities; therefore this strategic action does not apply to this subdivision.
5.3.3	Aquaculture procedures, permits and guidelines	This strategic action does not apply to this proposal.
5.3.4	Development consent for mining	This strategic action does not apply to this proposal as it does not include any mining within the coastal zone.
Ecologically Sustainable Human Settlement		
6.1.4	Canal Estate development	This proposal does not include any canal estate development.
Public Access		
7.1.5	Tourism development and public foreshore access	This proposal does not include any tourist related activities and the site is not in close proximity to the foreshore, therefore this strategic action does not apply to this development.
7.2.3	Coastal Development and surf lifesaving facilities	Council provides beach patrols of Narrawallee Beach during the December / January School holidays.
7.2.4	Surf lifesaving facilities and Section 94 levies	Shoalhaven City Council has no Section 94 contributions specifically for surf lifesaving facilities.

Therefore, it has been demonstrated that this proposal complies with the provisions of the NSW Coastal Policy.

5.23 Coastal Design Guidelines for NSW

NSW Coastal Guidelines were published in 2003 and Ulladulla is identified as a Coastal Town. It is considered that Narrawallee is an integral part of this coastal town rather than being a separate Coastal Village as it forms part of the existing contiguous urban area. The Milton - Ulladulla district has a population of approximately 12,000 people (based on 2001 census data as 2006 data is not expected to be released prior to June 2007), where Narrawallee accommodates approximately 10% of that population. The current dwelling occupancy rate for Narrawallee is 2.25 persons per household, based on that rate, the population increase as a result of this subdivision is approximately 378 persons.

The Guideline document identifies key issues associated with each type of locality, and then sets out desired future character criteria relating to the relationship to the environment, visual sensitivity, edges to the water and natural areas, streets, buildings and height characteristics. The guidelines also set out design principles for coastal settlements.

More detailed assessment of these Guidelines is made in Section 7.2 under the Director – General's Environmental Assessment Requirements. However, it has been

demonstrated that this subdivision proposal complies with the intent of the Coastal Design Guidelines and is not likely to have an adverse impact upon the settlement pattern or character of the coastal town.

5.24 Safer by Design Guidelines

The Crime Prevention through Environmental Design strategy has been taken into consideration in the preparation of the plans for this development utilising the "Safer by Design" principles to provide natural surveillance within the development, with 167 allotments having full street frontage so that dwellings will address that frontage with views to other allotments largely unobscured. In the short term street trees may lead to some interference though they are species which will attain a mature height with no low level branches which lead to prolonged obstruction i.e. the streets will have generally clear sight lines aiding natural surveillance.

The street pattern is regular and linear providing clear sight distances through the majority of the development, with no narrow lanes or drainage pathways which would be fenced limiting natural surveillance.

Public and private spaces are distinctly separate with natural surveillance available from dwellings opposite or adjacent to those spaces, however as these areas are largely required to be retained in their existing vegetated states, there will be no surveillance available through those public reserves (not including the rehabilitated quarry area).

Lighting of the public spaces and the residential streets within the proposal will be provided so that the lux levels are to Australian Standards and are appropriate to the use of the spaces, including the pedestrian and cycleway paths.

While this development extends the existing street network, it does not provide a through road structure, which will discourage non resident users from entering the neighbourhood. However, it is anticipated that non resident pedestrian and cyclist use will be high, with the provision of the cycle way linking to the north and south through the development, and the provision of the main road off Leo Drive permitting access to the public reserve lands to the west of the subdivision for bushwalkers or fishermen. This is not ideal in terms of planning for a safer community, however, there is a high degree of natural surveillance provided for these path and road networks which should aid in attaining a safe residential neighbourhood.

5.25 South Coast Regional Strategy

The subject land was zoned Residential 2(c) prior to the adoption of the South Coast Regional Strategy and in that regard has already been identified for urban expansion. The Draft Strategy was placed on public exhibition on 30th March 2006 and was released on 9th February 2007. While the purpose of this Strategy is to guide the future planning directions of local government with regard to rezoning of land for residential or rural residential purposes, it also provides opportunities for the expansion of employment lands and for the protection of environmental and coastal assets.

This Strategy includes a broad range of growth outcomes for the South Coast for the next 25 years, including increasing the population by accommodating an additional 60 000 people with the corresponding increase in housing stock by 45 000 dwellings. In that regard, Ulladulla is identified as a Major Town “identified for lesser growth” than a Major Regional Centre such as Nowra, Bateman’s Bay or Bega which are the major population increase targets.

This Strategy provides guidance for rezoning proposals rather than to provide regulations for development projects such as this proposal, however, there are potential issues or consequences for the development of the subject land.

The Strategy includes Outcomes and Actions in regard to the Natural Environment, and in regard to the subject proposal, there are potential Biodiversity and Coastal Assets in the vicinity of the subject land, as identified on Map 2 in that Strategy. The subject land however would appear on the map to be identified within an existing urban area.

In close proximity to the site an “Indicative Habitat Corridor” has been identified extending from Burrill Lake to Narrawallee Inlet and further north. The scale of the mapping available on the Department of Planning Website is too small to readily identify the exact location of the site in relation to the attributes identified. However, it is likely that the habitat corridor in the vicinity of the site is the representative of the vegetated lands reserved to the west of the subject land.

Further, the mapping indicates “Biodiversity Assets outside Conservation Reserves” both to the east and west of the abovementioned habitat corridor. The map legend indicates that this includes endangered ecological communities or other vegetation of high conservation value; old growth forest; threatened flora habitat; threatened fauna habitat; or extant vegetation of Landscape > 70% cleared. Studies accompanying this application have identified an endangered ecological community within close proximity to the site, and threatened flora or fauna habitats are known in the locality from both those studies and previous sightings. It is also considered that the vegetation on site is not “old growth forest” as there is evidence of the land having been cleared or impacted by bushfire in the past from reviews of aerial photography – see comments made by Network Geotechnics regarding changes in vegetation density over time.

Narrawallee Inlet has also been identified on that map as being classified for “comprehensive protection” under the Healthy Rivers Commission Classification of Coastal Lakes. That marker on the map is to the north of the subject land in the vicinity of the SEPP 14 wetland adjacent to the 7(a) / 7(f1) zoned land north east of the site (vicinity of Lots 145 DP 718994 & Lot 1 DP 561660).

The natural environment outcomes require Council’s to verify the abovementioned attributes particularly in relation to rezoning land for future urban use.

The Natural Hazards outcomes and actions are to *“prevent future urban development from being located in areas at high risk from natural hazards”* particularly in relation to flooding, coastal hazards and bushfire. This land is mapped by Council as being bushfire prone land because of its current vegetated state and its connectivity to other forested lands; therefore it has the capacity to carry bushfire. In regard to bushfire the current best practise methodology is

"Planning for Bushfire Protection, 2006", and it has been demonstrated that this application complies with the provisions of that document in regard to compliance with road design requirements, asset protection measures and fuel management.

The land is not within close proximity to the coast and should not therefore be subject to coastal hazards and it is above the 1% AEP flood recurrence level.

The housing and settlement provisions of the Strategy provide for 26,300 additional dwellings in the Shoalhaven of which 23,900 are to be provided from existing zoned land (such as the subject land) or investigation areas (such as those identified in the Nowra – Bomaderry Settlement Strategy). The majority of this land is in the major centre of Nowra – Bomaderry or the major towns, including Ulladulla. This proposal is consistent with these provisions as it is located adjoining an existing, well serviced residential area. At a dwelling occupancy rate of 2.25 persons, this subdivision proposal would provide housing for approximately 378 persons.

There are also employment opportunities as a result of this proposal, with the life of the development in the vicinity of 10 years through staging and subsequent dwelling construction, providing an economic benefit to the local community.

Therefore, it is considered that this proposal is not contrary to the intent of the South Coast Regional Strategy and its likely impacts upon the City of Shoalhaven.