



DARRYL ANDERSON CONSULTING PTY LTD

TOWN PLANNING & DEVELOPMENT CONSULTANTS

PREFERRED PROJECT REPORT MAJOR PROJECT APPLICATION NO. 05_0198

**PROPOSED RESIDENTIAL SUBDIVISION
AT LOT 1 DP 167380, LOT 1 DP 134787,
LOT 2 DP 961928 AND LOT 5 DP 1117326
WALMSLEYS ROAD AND STOTT STREET
BILAMBIL HEIGHTS (SHIRE OF TWEED)**

PREPARED FOR:

WDLC PTY LTD, M WALMSLEY,
R WALMSLEY, H MABBUTT & D MILLER

PREPARED BY:

DARRYL ANDERSON CONSULTING PTY LTD

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Suite 7, Corporate House
8 Corporation Circuit
Tweed Heads South NSW 2486

Ph: 07 55233611
Fax: 07 55233612
Email: admin@daconsulting.com.au

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REVISED PREFERRED PROJECT REPORT
PROPOSED RESIDENTIAL SUBDIVISION – MP 05_0198
WALMSLEYS ROAD AND STOTT STREET, BILAMBIL HEIGHTS

1.0 BACKGROUND

On 17 August 2009 Major Project Application No. 05_0198 was lodged with the Department of Planning. The Environmental Assessment was publicly exhibited from 31 August 2009 until 29 September 2009.

On 8 October 2009 and 30 October 2009 the Department of Planning forwarded the submissions to Darryl Anderson Consulting together with a number of key issues raised by the Department. The Department advised that if changes are proposed to the project to minimise its environmental impact, a Preferred Project Report is required together with a revised Statement of Commitments.

A Preferred Project Report was submitted to the Department in May 2010 addressing the various issues raised.

Subsequently, on 8 July 2010 in response to the Preferred Project Report, Mr Enguang Lee of the Department of Planning and Infrastructure forwarded an email relating to outstanding issues including:

- ♦ Buffer width and vegetation management;
- ♦ Lot 13 public reserve;
- ♦ Landscaping;
- ♦ Geotechnical and earthworks.

On 30 July 2010, an onsite inspection was undertaken involving Mr Enguang Lee, Mr Peter Nelson (Department of Planning Ecologist), members of the consulting team (including Dr Steve Phillips) and the landowners.

It was generally agreed at the meeting that:

- ♦ The extent of the endangered ecological community should be accurately mapped, particularly in the north western corner;
- ♦ A buffer of less than 50m would be considered subject to further justification;
- ♦ The location and configuration of the public reserve (Lot 13) is satisfactory subject to the submission of more details in relation to finished landforms.

On 24 June 2010, Tweed Shire Council provided comments on the Preferred Project Report. The issues raised in those comments have been the subject of extensive discussions between relevant Council Engineering Officers and the applicant's Consulting Engineers (Opus), as a result of which the issues have been resolved. Detailed responses to the various issues are contained in this revised Preferred Project Report.

A revised Preferred Project Report dated December 2010 was reviewed by the Department following which the Department advised in correspondence dated 1 February 2011 that further revision was required, particularly relating to the endangered ecological communities on the site.

In response, the Ecological and Bushfire Planning Assessment Report has been revised. The final revised report dated June 2011 was emailed to Enguang Lee and Joanna Bakopanos on 14 June 2011 for comments. During a teleconference on 23 June 2011, Enguang Lee and Joanna Bakopanos advised that the revised final Ecological and Bushfire Report is acceptable.

This version of the Preferred Project Report (October 2011) incorporates the full version of all consultant reports and plans which have been amended to address the key issues raised in the submissions.

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2.0 SUMMARY OF MODIFICATIONS

2.1 Amended Subdivision Layout

In response to issues raised by the Department of Planning, State Agencies, Tweed Shire Council and members of the community, the project has been amended to:

- ♦ Reduce the total number of lots to 85 including 77 conventional residential lots, 5 community title residential lots; 1 neighbourhood property lot; 1 sewer pump station lot (Lot 62) and 1 public reserve (Lot 13);
- ♦ Delete Road No. 4;
- ♦ Relocate the sewer pump station (Lot 62);
- ♦ Reconfiguration of the lot layout in the north western and north eastern corners of the site to provide suitable buffers to the endangered ecological communities.

The amended layout is shown on the amended Plan of Proposed Subdivision at **Annexure A**.

The amended proposal retains the Community Title Precinct in the north eastern corner of the site comprising 5 residential lots and 1 neighbourhood property lot, being the private access road.

As indicated in Table 21 of the Environmental Assessment Report, a Community Title Subdivision is proposed because it is difficult to strictly comply with geometric standards applicable to public roads under Tweed Development Control Plan 2008, Section A5 – Subdivision Manual, particularly in relation to road widths and lengths of culs-de-sac.

The Community Scheme as proposed avoids the need for a public road and related design standards and also enables the developer to more closely manage urban design and built form considerations in this part of the site.

2.2 Buffers to Endangered Ecological Community

As indicated in the revised Ecological and Bushfire Planning Assessment at **Annexure M**, the edge of the endangered ecological communities in the north western and north eastern parts of the site have been defined and suitable buffers have been provided as shown on the Subdivision Plans at **Annexures A, B and F**. Adjustments to the Subdivision Layout have been made to reflect the required 25m buffer incorporating a 15m ecological management area (EMA) and a 10m wide asset protection zone (APZ).

A detailed response in relation to buffer widths and the Vegetation Management Plan is contained in Section 3.0.

The Revised Statement of Commitments proposes vegetation management within all land zoned 7(d) within the study area referred to in the Revised Ecological and Bushfire Planning Assessment at **Annexure M**. This includes part of Lot 6 DP 1117326, which is owned by Margaret Elizabeth Roberts. The owner's son Mr Chris Roberts has been consulted in relation to the proposed vegetation management work and is supportive of the work.

2.3 Relocated Pump Station

The sewer pump station site (proposed Lot 62) has been relocated to achieve an increased buffer to the endangered ecological community.

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Potential alternative locations to that shown in the original Environmental Assessment (proposed Lot 58) are constrained by the topography, the need to achieve gravitational grading of sewer lines from the lots to the sewer pump station and the requirement for buffers to Endangered Ecological Communities (see **Annexure F**).

The relocated site (proposed Lot 62) achieves a nominal 25m buffer to the Endangered Ecological Communities, whilst still enabling gravity servicing of adjacent lots.

2.4 Other Modifications

As a consequence of the amendments to the layout and issues raised in submissions, the Engineering Infrastructure Assessment and Plans and the Landscape Design Intent Report have also been amended. The amended versions are at **Annexures H** and **I** respectively.

3.0 RESPONSE TO SUBMISSIONS BY STATE AGENCIES, TWEED SHIRE COUNCIL AND COMMUNITY MEMBERS

The following table (**Table 1**) identifies the various issues raised by State Agencies, Tweed Shire Council and members of the community and includes a response to relevant issues.

TABLE 1 – RESPONSE TO SUBMISSIONS	
AGENCY COMMENTS	RESPONSE
DEPARTMENT OF ENVIRONMENT AND CLIMATE CHANGE – 22 September 2009 and 27 October 2009 (Now Office of Environment and Heritage (OEH))	
<p>The Office of Environment and Heritage (OE&H) (formerly Department of Environment, Climate Change and Water) confirms its support for the proposal subject to some changes to the subdivision layout and amendments to the Statement of Commitments. The following issues were raised:</p> <p>Biodiversity</p> <p>A Vegetation Management Plan (VMP) should be prepared for 7(d) zones within the study area. The VMP will detail measures to diminish the threat of invasive species, facilitate the removal of Camphor Laurel and other weed species; support and detail techniques for the restoration of the native rainforest communities and protect threatened flora species and remnant vegetation on the site.</p> <p>Street landscaping of the proposed development precinct will make extensive use of suitable species of endemic rainforest vegetation, including the use of native groundcover/shrub layer.</p> <p>Vegetation modification for the purposes of establishing APZs will be restricted to the removal of Camphor Laurel trees only.</p> <p>Prior to the commencement of development works, all rare and/or threatened flora species that occur within 25m either side of the 2(c)D(d) zoning interface will be located and appropriately identified and/or signposted such that they remain unaffected by any activities (including provision of Asset Protection Zones (APZs) for bushfire purposes).</p> <p>The subdivision layout shall be amended to avoid impacts on Endangered Ecological Communities (EEC) and include a buffer between lot boundaries and the EEC.</p>	<p>Preparation of a Vegetation Management Plan is already a recommendation arising from the Ecological Assessment at Annexure 13 of the Environmental Assessment. This requirement is included in the Revised Statement of Commitments (Annexure J).</p> <p>Details of the proposed Vegetation Management Plan are contained in the revised report at Annexure M.</p> <p>The revised Ecological and Bushfire Planning Assessment at Annexure M includes, at Appendix 3, key objectives and guiding principles to be included in the Vegetation Management Plan.</p> <p>The revised Landscape Design Report at Annexure I proposes appropriate street landscaping (see Revised Statement of Commitments).</p> <p>These recommendations have been included in the revised Statement of Commitments.</p> <p>This requirement is included in the revised Statement of Commitments at Annexure J.</p> <p>The subdivision layout has been amended (see Annexures A and F) to provide for a combined Ecological and Bushfire buffer of 25m being the width recommended in the revised Ecological and Bushfire Planning Assessment at Annexure M. justification for the combined buffer is contained in the response to the issue raised by the Department of Planning and Infrastructure.</p>

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DECCW (Email 27 July 2010) (OEH)	
<p>Asset Protection Zones (APZs) are an important part of the planning and development process. However an APZ of 25 metres seems excessive and our understanding is that usually a 10 metre APZ (dependant on slope) is applied when rainforest is the dominant vegetation type. This matter should be further investigated and justified.</p> <p>As indicated in DECCW's correspondence dated 27 October 2009, DECCW considers that no part of the EEC should be cleared/removed from the property and all EEC areas should be buffered. DECCW routinely advocates a 50 metre vegetated buffer for all EECs. A reduced buffer distance may be acceptable if it can be adequately justified, however the current proposal of no buffer at all (apart from a 25m grassed APZ) is not an acceptable or justified buffer to the EEC.</p> <p>It should also be noted that DECCW considers that the vegetated areas of the property that are to be retained (EEC and rehabilitation areas) are best located within a secure tenure such as Council owned land not on small and multiple private allotments. Attempting to protect vegetation in the long term through a covenant on private land on numerous lots is not ideal and unlikely to be accepted by Council.</p> <p>All retained vegetation areas should be appropriately rehabilitated in accordance with an approved Vegetation Management Plan.</p> <p>8. The edge of the buffer zone to the EEC should also be identified by bollards or the like to provide a physical barrier to reduce edge effects brought about by incompatible land use and human intrusion.</p>	<p>The revised Ecological and Bushfire Planning Assessment at Annexure M proposes a 10m APZ to the eastern and western site boundaries, as required by Planning for Bushfire Protection, 2006.</p> <p>The amended Plan of Proposed Subdivision at Annexure A provides for a suitable APZ/EMA.</p> <p>Justification for the proposed buffer width of 25m (combined EMA 15m and APZ 10m) is included in the Revised Ecological and Bushfire Assessment at Annexure M.</p> <p>In summary, the Assessment concludes that based on a review of edge effects by Murcia (1995), OEH advocates the need for a 50m buffer to any EEC such as that identified by this report. However, we consider such a buffer to be inappropriate in this instance based on the following reasoning:</p> <ul style="list-style-type: none"> (i) for the most part, the EEC is located on lands which drop steeply away from the vegetation/development interface, thus negating the need for a large buffer area, (ii) the current successional stage and disturbed nature of the EEC mandates long-term, active management in order for ongoing rehabilitation works (Camphor Laurel & Privet control, additional plantings and weed control) to be enacted. <p>As a consequence of the above considerations we propose that effective buffering in this instance can be affected by a dual purpose 25m Asset Protection Zone/Ecological Management Area, with additional rehabilitation work to also be undertaken for a further 20-25m downslope of the existing edge. To assist the overall process of EEC management we have aligned the proposed APZ/EMA buffer (Appendix III refers) to best manage the current vegetation edge, rather than necessarily restrict it to either side of the 2(c)/7(d) zoning interface.</p> <p>Departmental Officers have reviewed the Revised Ecological and Bushfire Assessment and advise that is satisfactorily addresses these issues.</p> <p>The Subdivision Layout has been amended in the north western and north eastern sections of the site to ensure that lot layouts and building envelopes comply with the agreed 25m combined EMA/APZ line (see Annexures A and B).</p> <p>Tweed Shire Council has declined to accept dedication of Lot 59 (now Lot 61). However, all vegetated areas of the lot will be retained in Lot 61 and suitably rehabilitated in accordance with the Vegetation Management Plan.</p> <p>A Vegetation Management Plan is proposed (see Revised Statement of Commitments).</p> <p>See Revised Statement of Commitments.</p>

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<p>Aboriginal Cultural Heritage</p> <p>Aboriginal community consultation:</p> <p>We note the proponent has not provided evidence of support for the project application and particularly for the proposed ACH recommendations and conclusions, from the local Aboriginal community. The complete absence of any cultural response from the community means DECCW is unable to comment on the cultural significance of the area. The cultural significance of a site can only be determined by the Aboriginal community.</p> <p>The OE&H encourages the proponent to continue to engage with the local Aboriginal stakeholders in developing appropriate cultural heritage outcomes for the proposed development. We recommend evidence of this consultation is provided in support of the project application. We have also proposed conditions of approval to target this issue.</p> <p>Absence of field survey:</p> <p>It is noted that the AHIMS database and the Bundjalung Mapping Project did not identify any Aboriginal sites within the project area and that the consultant's archaeological models conclude that the area is likely to be of low archaeological potential. Nevertheless, an Aboriginal cultural heritage survey, involving a qualified archaeologist and representatives from the local Aboriginal community is to be conducted within the project area to assess the extent, nature and significance of the project area's Aboriginal cultural heritage values.</p> <p>This assessment is to be undertaken in accordance with the requirements set out in the former Department of Environment and Conservation's (DEC's) draft <i>Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation 2005</i> and DEC's <i>Part 3A EP&A Act Guidelines for Aboriginal Cultural Heritage Assessment and Community Consultation 2007</i>.</p>	<p>Two Aboriginal Cultural Heritage Reports have already been prepared (see Annexure 16 of Environmental Assessment).</p> <p>The history of Cultural Heritage Assessment of the site is addressed in Section 6.6 of the Environmental Assessment and more particularly in the letter from Darryl Anderson Consulting Pty Ltd to the Department of Planning dated 12 June 2009.</p> <p>In the circumstances it is submitted that it would be manifestly unreasonable to require the proponents to undertake a third Cultural Heritage Assessment and further community consultation, particularly as the site has been highly modified and disturbed by intensive agricultural activities over many years.</p> <p>For the reasons identified above, a further cultural heritage survey is not a reasonable requirement. However, the conditions recommended by OEH relating to Aboriginal objects, human remains and cultural objects which may be disturbed during the construction phase have been included in the Statement of Commitments.</p>
GOLD COAST CITY COUNCIL – 8 October 2009	
<p>Gold Coast City Council considered that the EA did not sufficiently address the impacts on the Gold Coast city road network, particularly in relation to Boyd Street and proposed upgrades associated with increased traffic volumes resulting from the development.</p>	<p>This issue is addressed in Section 6.8 of the Environmental Assessment. In summary, the project does not rely on Boyd Street (Tugun) for access. Tweed Shire Council has allocated capacity on Kennedy Drive for the subdivision.</p>
NSW OFFICE OF WATER – 29 September 2009	
<p>The NSW Office of Water (NOW) raised no objection to the proposal and raised the following issues:</p> <p>Water Supply:</p> <p>The use of reticulated water supply for the development is supported.</p> <p>Riparian Management:</p> <p>NOW recommends appropriate buffers are conserved/established around all drainage lines, watercourses and wetlands within the development site. NOW supports the 50m buffer to protect the wetland from any adverse impacts from the development.</p> <p>Earthworks and Landforming:</p> <p>Earthworks must not impact on groundwater, riparian areas or alter the drainage patterns across the site.</p>	<p>The Application Plans and final Statement of Commitments confirm that reticulated water supply will be provided.</p> <p>The amended subdivision layout maintains a minimum 50m buffer to the wetland.</p> <p>Potential impacts and mitigation measures are addressed in the Environmental Assessment. In summary, the site is elevated (RL 50m to RL 80m AHD) and the earthworks will not intercept the water table. Riparian areas are buffered, located clear of the development footprint and earthworks are limited to that required to achieve compliance with Tweed Shire Council design standards.</p>

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<p>Groundwater Management:</p> <p>Any stormwater basins associated with the development are preferably constructed above the water table and lined with impermeable material. NOW does not endorse the direct discharge of stormwater into an excavation if it intersects the water table. All works that intersect the water table require a licence under the Wafer Act (1912). The proponent may need to drill monitoring bores within the area to ascertain the depth of the watertable, if unknown.</p>	<p>Bore Logs have not indicated a water table within the subject land. The land ranges from RL 50m AHD to RL 80m AHD and therefore the water table is not likely to be intercepted. Any stormwater management basins will be constructed to Tweed Shire Council standards.</p>
ROADS AND TRAFFIC AUTHORITY – 18 September 2009	
<p>The RTA has no objection to the subject proposal as it is not considered to have a significant impact on the classified road network.</p>	<p>Noted.</p>
RURAL FIRE SERVICE – 24 September 2009	
<p>The Rural Fire Service (RFS) raised the following issues:</p>	
<p>Asset Protection Zone (APZ)</p> <p>At the commencement of subdivision works and in perpetuity the entire site shall be managed as an APZ as outlined within Appendices 2 & 5 of Planning for Bush Fire Protection 2006 and the NSW Rural Fire Service's document Standards for asset protection zones.</p> <p>The proposed 25 metre APZ to the west of proposed Lot 56 <u>lies outside the boundary of the property</u> and is required to be protected and maintained in perpetuity. The APZ shall be managed as outlined within Appendices 2 & 5 of Planning for Bush Fire Protection 2006 and the NSW Rural Fire Service's document Standards for asset protection zones.</p>	<p>This is broadly consistent with the subdivision design concept and intent to use rainforest vegetation for landscaping purposes. The revised Ecological and Bushfire Planning Assessment (Annexure M) contains recommended measures to mitigate bushfire risks. These measures are included in the Revised Statement of Commitments.</p> <p>Easement now proposed to APZ area to west of proposed Lot 56 (now Lot 54).</p> <p>This issue is addressed in the revised Statement of Commitments.</p>
<p>Water and Utilities</p> <p>The proposed reticulated water supply shall comply with the requirements for services as outlined within section 4.1.3 of Planning for Bush Fire 2006.</p>	<p>This issue is addressed in the revised Statement of Commitments. The requirement will be complied with.</p>
<p>Access</p> <p>The proposed public and private roads shall comply with the requirements of section 4.1.3 (1) of Planning for Bush Fire Protection 2006. A perimeter road <u>is not required</u> in this instance.</p>	<p>As above.</p>
<p>Landscaping</p> <p>Landscaping, restoration and regeneration works within the site is to comply with the principles of Appendix 5 of Planning for Bush Fire Protection 2006.</p>	<p>This issue is addressed in the revised Statement of Commitments.</p>
<p>General Advice</p> <p>For the proposed Lots 38, 39, 40, 41, 42, 57, 59, 60 & 61, the thinning of Camphor Laurel trees only within the 25 metre recommended APZ may not be sufficient to meet the requirements as outlined within Appendices 2 & 5 of Planning for Bush Fire Protection 2006 and the NSW Rural Fire Service's document Standards for asset protection zones.</p>	<p>Camphor Laurel is dominant tree species in areas to be thinned such that this requirement is expected to be readily met.</p>
LAND AND PROPERTY MANAGEMENT AUTHORITY – 28 September 2009 (Now DPI, Crown Lands Division)	
<p>Endangered Ecological Communities</p> <ul style="list-style-type: none"> It is noted the Proponent argues against the establishment of a 50m-wide buffer to the identified 'Lowland Rainforest in the NSW North Coast and Sydney Basin Bioregions' endangered ecological community (EEC). Failure to establish a contemporary 50m wide buffer may limit management options designed to protect the EEC over the long term. 	<p>The intention is to rehabilitate the grassland areas within constraints imposed by APZ requirements so a dual function (fire management and ecological buffering) can be realised. See revised Statement of Commitments regarding Vegetation Management Plan and Annexure M. Further justification for a reduced buffer width is provided in the response to the issue raised by the Department of Planning and Infrastructure.</p>

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<ul style="list-style-type: none"> o The current successional stage and disturbed nature of the EEC mandates long term active management. The fact the EEC is disturbed reinforces, not diminishes, the need to establish a suitable buffer, so future on-ground activities aimed at recovering the EEC are afforded the best possible chances of success (that is, without complicating pressures from more severe edge effects). ♦ The constraints mapping shows patches of EECs occurring within the 25m APZ, that is, patches A, B & D. Patch B appears to extend beyond the APZ into the development envelopes of Lots 38, 39, 41 and 42. It is difficult to ascertain how the APZ in these cases will act as a buffer to the EEC when the EEC occurs within the APZ. ♦ APZs, by their very nature and as a result of imposed management regimes, do not allow for the regeneration of EECs, the juveniles of which may be difficult to spot and therefore protect during on-ground maintenance activities such as mowing. ♦ Drawing attention to threatened species 25m either side of the 2(c)/ 7(d) zone boundary with specific signposting, as proposed on Page 32, is not recommended as this may heighten the exposure of individuals and place them at an increased risk of wanton damage, destruction and unauthorised collection. ♦ Given the presence, or potential presence, of native fauna at particular risk of predation or injury from domestic pets (such as the Northern Brown Bandicoot and Common Planigale) it is recommended the proponent explore measures designed to limit domestic pet encroachment into sensitive habitats, such as the registration on title of covenants pertaining to pet ownership, or the erection of appropriate internal and external fencing. 	<p>The fact that the EEC is disturbed does not necessarily mandate that a buffer is the only management response that will enhance ecological integrity; there are other approaches (see below).</p> <p>It needs to be acknowledged that the EEC in question is dominated by Camphor Laurel, the gradual removal of which will theoretically further reduce the size of this patch.</p> <p>The amended layout provides for a combined APZ/EMA of 25m with all dwelling sites clear of the APZ/EMA.</p> <p>As discussed in the Revised Ecological and Bushfire Planning Assessment at Annexure M, APZs can be managed so as to allow some regeneration of EECs. In this instance, planting regime will also serve ecological role by increasing shade areas and thus lowering air temperatures, as well as providing an effective buffer from wind. It is also intended to “seal” the edges of the EECs in question (see below).</p> <p>Latter comment assumes active natural recruitment of threatened species into APZ area. This has not been demonstrated, nor is it likely to occur under current ecological conditions.</p> <p>Some threatened species may be planted in APZ area during rehabilitation works envisaged by the VMP, in which case they and other species will be suitably protected to avoid any management mishaps (e.g. mowing).</p> <p>No development will occur within APZs, while a minimum of 25m beyond boundaries of same will be rehabilitated as detailed above (see Annexure M).</p> <p>We note that this assertion conflicts with DECCW's SoC requirement. It is recommended that measures only apply during development works.</p> <p>A covenant prohibiting keeping of cats on all Lots adjoining EEC areas will be enacted.</p> <p>This issue is addressed in the revised Statement of Commitments.</p>
<p>Vegetation management plan</p> <ul style="list-style-type: none"> ♦ It is recommended the proposed VMP encompass the entirety of the 7(d) zone across the site, not just those areas within the “development precinct”. ♦ It is recommended the VMP incorporate scoped and appropriate performance requirements for the restoration of the notophyll rainforest. For example, in relation to the diversity and density of plantings, seedling survival and growth rates, cumulative crown coverages, and the abundance and diversity of weed species, referenced to appropriate benchmarks. Similarly the VMP shall specify appropriate trigger values for intervention or corrective actions, referenced to the above performance benchmarks. 	<p>Preparation of a VMP for all 7(d) zoned land is proposed in the Revised Statement of Commitments.</p> <p>This issue has been included in the revised Statement of Commitments.</p>

TABLE 1 – RESPONSE TO SUBMISSIONS	
AGENCY COMMENTS	RESPONSE
Soil contamination assessments <ul style="list-style-type: none"> It is noted the soil contamination assessments presented in Annexure 11 'Soil Contamination Assessment for Lot 1 DP167380, Lot 2 DP961928, Lot 1 DP134787 Walmsleys Road, Bilambil Heights' and 'Soil Contamination Assessment for Lot 4 DP1054848, Stott Street, Bilambil Heights' both state all the composite soil samples were analysed for organochlorine and organophosphate pesticides, arsenic, cadmium, copper, lead, mercury and zinc. Conclusions with respect to the concentrations of these potentially contaminating substances in the soils of the Subject Site are reached for all except <u>organophosphate pesticides</u>. 	<p>Laboratory analytical results from composite samples collected from Lot 1 DP167380, Lot 2 DP961928 and Lot 1 DP134787 Walmsleys Road and Lot 4 DP1054848 Stott Street, Bilambil Heights New South Wales (hereafter referred to as 'the site') during September and October 2003 confirm that no organophosphorus pesticide (OPP) contamination exceeding the NEPM Environmental or Health Investigation Levels was identified on the site. Furthermore no OPP results were reported above the laboratory's Limits of Reporting (LORs). Based on these findings and within the constraints of the 2003 investigations, Gilbert & Sutherland concludes that no OPP contamination was identified and that with respect to issues of soil contamination, the site, during the time of the investigation, is suitable for the proposed residential development.</p>
PUBLIC SUBMISSIONS	
Summary	
Traffic	
Walmsleys Road to Stott Street direct link will result in many more vehicles/short cuts ("rat runs")/compromised safety.	Tweed Shire Council requires connection of both roads which will ultimately be a bus route. Connection is consistent with new urbanism principles of improving connectivity and permeability. The roads are designed for a bus route and short cuts are unlikely given the road geometry and alignment and the proposed Scenic Drive/Piggabeen Road connection road planned to the west of the site.
Increase in traffic volume/accidents.	See comments above and the revised Infrastructure Impact Assessment at Annexure H . In summary, the existing road and street network has adequate capacity to accommodate the additional traffic.
Traffic will not be equally distributed through the existing Estates.	See comments above.
Piggabeen Road access only more suitable.	See comments above.
Kennedy Drive – will add to existing disruptions/little consideration of effects on Kennedy Drive – numbers (in traffic report) from 2006.	As noted in Section 6.8 of the Environmental Assessment, this Major Project has been allocated capacity within the Level of Service D maximum 24650 vpd on Kennedy Drive. In addition Council plans to upgrade Kennedy Drive.
Scenic Drive needs major work to make it safe/existing traffic queues.	Construction of the Scenic Drive/Piggabeen Road connection will improve safety and efficiency on Scenic Drive (funded from Section 94 Contributions).
Proposed roads unsuitable for main road link between Scenic Drive/Piggabeen Road.	See Annexure H . The design of the roads complies with Tweed Shire Council requirements.
Road intersections are congested and dangerous.	See Annexure H . Existing intersections have adequate capacity.
Traffic impacts on residents not considered.	See Annexure H . Projected traffic volumes are within the environmental and geometric capacity of the street network.
Estate not designed for large volumes of traffic.	As above.
Install traffic lights.	See Annexure H . Traffic lights are not warranted.
Existing roads already close to full capacity.	See Annexure H and comments above.
Walmsley Road is incapable of coping with traffic moving in both directions, higher traffic flows expected.	See Annexure H and comments above. Walmsleys Road has adequate capacity.
Cobaki Bridge is only one lane in each direction and has extremely high traffic volume.	See Annexure H and comments above re Kennedy Drive capacity.
No bridge link from Lakes Drive to Kirkwood Road.	Tweed Shire Council has abandoned the proposed Lakes Drive Bridge.
Old traffic data is being used for the proposal.	The data used is the most recent available (see Annexure M).

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TABLE 1 – RESPONSE TO SUBMISSIONS	
AGENCY COMMENTS	RESPONSE
The 6 community title schemes were not mentioned for the traffic capacity calculations.	Table 7.2.5 in the Infrastructure Impact Assessment (at Annexure H) – Proposed Traffic Generation for 82 dwellings includes 77 residential and 5 Community. The 6 th Community title is a private road reserve. The number of residential lots is now reduced to 82 as a result of Endangered Ecological Community (EEC) buffer zone constraints.
Safety – Traffic	
Blind bends.	Road geometry is in accordance with TSC Design Specification D1.
Steep roads.	As above
Narrow roads.	Formation widths comply with TSC Design Specification D1.
Safety – pedestrians/cyclists	
Afternoon sun impact on driver visibility.	Majority of road layout runs north to south, including the “connector road” linking Stott Street and Walmsleys Road.
No provision for pedestrians/cyclists onto surrounding roads.	Existing verges and proposed road profile verges provide for pedestrian access. Section 94 Contributions are payable toward the wider cycleway network.
No bus stops.	11m wide road pavement provides for bus stops as required by bus company and Tweed Shire Council standards.
Providing a bus stop on Scenic Drive is not appropriate and is dangerous.	No additional bus stop is proposed at Scenic Drive.
Access into the site by bicycle is difficult and dangerous.	The existing site consists of steep terrain. Road geometry is compliant with TSC design specification D1 – Road Design.
Traffic Noise	
The development will exceed allowable road traffic noise level.	It is agreed that the traffic noise level will exceed the allowable 2 dB rise in road traffic noise stemming from development traffic, but we note that noise from the traffic will be within 1 dB of the peak hour Leq level, which is not an audible exceedance (the average person cannot detect less than a 3 dB shift in sound pressure level). There is no opportunity to construct roadside barriers, alter road surface, or further disperse traffic to other streets to reduce noise impacts from traffic generation, due to topography and the fact that the areas adjoining the existing streets are already built up, therefore, there are no “feasible or reasonable” further noise control measures available to mitigate noise.
Assessment of expected noise level rise is inaccurate and planning controls not followed.	The methodology used in assessment of noise was conducted using an approved road noise prediction model, therefore, we are not aware of specific issues associated with the assessment being inaccurate.
Noise Impact Assessment considered accelerating/decelerating bus motors.	We are not aware of any requirements under the Environmental Criteria for Road Traffic Noise that requires an assessment of bus acceleration/deceleration of bus motors.
Road Construction	
Surrounding roads congested and need widening.	The increased traffic volumes due to the subdivision are within the functional capacities of existing streets and roads (see Annexure H).
Upgrading road development falling behind residential development will cause gridlock and accidents.	Development will contribute to regional road improvement via Section 94 contributions
Alternative roads need to be constructed to cater for future growth in the area.	Alternative roads are part of Tweed Road Contribution Plan, including the Scenic Drive/Piggabeen Road link.

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TABLE 1 – RESPONSE TO SUBMISSIONS	
AGENCY COMMENTS	RESPONSE
Infrastructure	
The proposal will put strain on local infrastructure.	Impacts have been assessed in the Infrastructure Impact Assessment at Annexure H . Adequate capacity exists for the project. Section 64 and Section 94 contributions also apply to fund upgrading of infrastructure.
Landslides/Topography	
Landslides and flooding in parts of the site.	The site is above RL 50m AHD. The design flood level for this area is approximately RL 3m AHD – clearly the site is not subject to flooding. The Geotechnical Reports at Annexure 12 of the Environmental Assessment do not identify any landslide areas.
Steep site.	It is acknowledged it is a steep site in parts but it is not highly constrained and the subdivision design addressed this issue in terms of road alignments, lot layouts and lot sizes.
Access	
No direct main road access to the estate.	This is acknowledged but is not a constraint. Direct main road access is not required under Tweed Development Control Plan 2008, Section A5 – Subdivision Manual.
Exclude access to Walmsley Road and Tweed Pacific Estate.	Proposed road connections are required by Tweed Shire Council and are consistent with contemporary urban design principles relating to connectivity and permeability.
Environment/Ecological	
Wildlife nearby – Wallum froglets.	Table 3 on page 16 of Annexure 13 of the Environmental Assessment refers. Atlas records for Wallum Froglet do occur within 5km of site but no habitat for this species is present in study area.
Construction vehicles on Scenic Drive/Warringa Drive are a hazard and cause environmental damage.	Construction works are relatively short. Maintenance on Heavy Haulage routes are covered by contributions imposed by TSC.
Relatively high elevation would seem to impose a greater environmental threat to downstream water quality/water pollution.	Stormwater treatment mitigations criteria are set by TSC and erosion and sediment controls is addressed in Annexure H and the Revised Statement of Commitments.
During construction, the development would add dirt and mud to the roads.	Construction practises are required to comply with TSC Soil and Management plans
Residential Amenity	
Impact on residential amenity.	Amenity issues generally are addressed in Section 6.0 of the Environmental Assessment and the mitigation measures in the Revised Statement of Commitments at Annexure J . In summary no significant impacts are likely.
Impact on views.	This issue is addressed in Section 6.3 of the Environmental Assessment. No significant impacts are likely.
Commercialise the area, taking away its uniqueness.	The proposal is entirely consistent with the existing 2(c) zoning which has applied to the land for approximately 20 years.
Indigenous Heritage	
Other important cultural heritage reports not mentioned in EA.	The Cultural Heritage Reports at Annexure 16 of the Environmental Assessment are considered to be adequate – see response to OEH comments of 27 October 2009.
No one onsite to recognise an Aboriginal relic.	See Revised Statement of Commitments and DECCW comments relating to identification and management of potential relics.
Not clear who will be contacted apart from DECCW if Aboriginal relics are found.	As above.

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TABLE 1 – RESPONSE TO SUBMISSIONS	
AGENCY COMMENTS	RESPONSE
Other	
Council refused subdivision in 1995.	<p>In approximately 1995 Council approved the Stott Street subdivision which involved the opening and construction of Stott Street from Piggabeen Road to service the site (Stott Street and Skyline Drive).</p> <p>At that time, the developers requested a connection from Stott Street to Walmsleys Road, to improve accessibility and connectivity.</p> <p>At its meeting on 18 January 1995, Council refused the application for opening and construction of a road to link the Stott Street subdivision to Walmsleys Road because there was no Development Control Plan, the proposal was likely to have an unacceptable adverse impact on the residential amenity of the residents of Tweed Pacific Estate and the originally proposed access from Piggabeen Road is the more appropriate option.</p> <p>Subsequently, of course, given new urbanism principles and the desirability of providing improved connectivity and permeability and bus routes, Tweed Shire Council requires connection and this is entirely appropriate given that that connection forms part of an integrated subdivision proposal abutting the road.</p> <p>The application refused by Council in 1995 did not involve an integrated subdivision of the land the subject of this Major Project Application and that was a key reason why it was not supported.</p>
Unacceptable in view of proposed population for Cobaki.	The proposal is entirely consistent with the Far North Coast Regional Strategy and current 2(c) zoning.
Developer deliberately lodged application with the State Government rather than Council.	The developer lodged a Part 3A Major Project Application with the Department of Planning because that is what was required under State Environmental Planning Policy (Major Development) 2005.
Lots of battleaxe blocks.	There are 14 battleaxe lots out of 82 which are justified because of the terrain and other relative constraints.
Out of proportion with surrounding development.	The proposal is entirely compatible with the established low density residential character of the area and the 2(c) zone objectives.
Doubt over the intended dwelling type and density over the community subdivision at Lot 81 (now Lot 80).	A single dwelling will be erected on each Community Title lot of a similar type to those identified in Annexure L .
The proposal is not in a suitable location – isolated.	The proposal is entirely consistent with the Far North Coast Regional Strategy and current 2(c) zoning.
Detrimental impact on existing community services.	Normal Section 94 Contributions will be paid to address the additional demand generated by the proposed development.
The land is owned by two separate landowners.	Lodgement of one application over two separate parcels achieves a co-ordinated and integrated development and more efficient use of land.
DEPARTMENT OF PLANNING – 30 October 2009 (Now Department of Planning and Infrastructure – DOPI)	
Key Issues	
1. Vegetation management and buffer width	
<p>a. The Department does not accept that a 25m Asset Protection Zone (APZ) is suitable as a buffer to the EECs or other threatened flora species on site. In fact it appears that the APZ for Lots 38, 39, 41 and 42 is to be provided within the EEC, this is not acceptable. Buffers to EECs are required for a variety of reasons and where there is no existing vegetation buffering an EEC it is expected that one be created.</p>	<p>The amended Plan of Proposed Subdivision at Annexure A provides for a suitable APZ/EMA.</p> <p>Justification for the proposed buffer width of 25m (combined EMA 15m and APZ 10m) is included in the Revised Ecological and Bushfire Assessment at Annexure M.</p>

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While in certain circumstances it may be appropriate to provide the outer protection area of an APZ within the buffer, the inner protection area of an APZ is to be provided wholly outside of the buffer. As previously requested please provide a 50m buffer to the EECs on site.	<p>In summary, the Assessment concludes that based on a review of edge effects by Murcia (1995), OEH advocates the need for a 50m buffer to any EEC such as that identified by this report. However, we consider such a buffer to be inappropriate in this instance based on the following reasoning:</p> <ul style="list-style-type: none"> (i) for the most part, the EEC is located on lands which drop steeply away from the vegetation/development interface, thus negating the need for a large buffer area, (ii) the current successional stage and disturbed nature of the EEC mandates long-term, active management in order for ongoing rehabilitation works (Camphor Laurel & Privet control, additional plantings and weed control) to be enacted. <p>As a consequence of the above considerations we propose that effective buffering in this instance can be affected by a dual purpose 25m Asset Protection Zone/Ecological Management Area, with additional rehabilitation work to also be undertaken for a further 20-25m downslope of the existing edge. To assist the overall process of EEC management we have aligned the proposed APZ/EMA buffer (Appendix III refers) to best manage the current vegetation edge, rather than necessarily restrict it to either side of the 2(c)/7(d) zoning interface.</p> <p>Departmental Officers have reviewed the Revised Ecological and Bushfire Assessment and advise that it satisfactorily addresses these issues.</p> <p>The Subdivision Layout has been amended in the north western and north eastern sections of the site to ensure that lot layouts and building envelopes comply with the agreed 25m combined EMA/APZ line (see Annexures A and B).</p>
b. The VMP should encompass management actions for all 7(d) zoned land (including the residue lot), appropriate management of the interface between the APZ and EEC, performance standards, triggers for action, maintenance arrangements and funding and review.	<p>In summary, the preamble of the Vegetation Management Plan Objectives and Guiding Principles (Annexure M) provides as follows:</p> <p><i>“The purpose of this document is to detail objectives and guiding principles of a Vegetation Management Plan (VMP) for the proposed development site at Walmsley’s Road, Bilambil. The requirement for a VMP is a recommendation arising from a related ecological assessment by Biolink (2011) and will be a condition of any consent. The vegetation community of particular interest on the site, and thus the primary focus of the VMP, is that identified in Figure 4 of the Biolink (2011) report as Camphor simple notophyll closed forest which – for purposes of the ecological assessment – was assessed as conforming to the Endangered Ecological Community (EEC) Lowland Rainforest in the NSW North Coast & Sydney Basin Bioregions.</i></p> <p><i>Extent of EEC on the subject site</i> <i>The edges of the EEC on the Walmsley’s Road site are diffuse because the community tends to be variously dominated by an introduced species (Camphor Laurel), the careful and progressive management of which will need to be an integral aspect of the VMP. While the dominance of Camphor Laurel varies, the species is particularly abundant around the edges where it often exists as a virtual monoculture. Given the predominance of Camphor Laurel on the site, mapping and associated EEC categorisation has been precautionary and as such vegetation mapping by Biolink (2011) invariably overestimates the spatial extent of the EEC. This action was deliberately undertaken to assist the process of subdivision design while also ensuring that any associated edge treatments resulting in the removal of Camphor Laurels would not have any material impact on the constituent EEC elements.</i></p>

TABLE 1 – RESPONSE TO SUBMISSIONS	
AGENCY COMMENTS	RESPONSE
	<p><i>For reasons alluded to in the preceding paragraph (i.e. the predominance of Camphor Laurel and the associated inability to accurately define the spatial extent of the EEC), it was considered counter-productive and not necessarily in the best interests of the constituent EEC elements to simply buffer the associated vegetation community based on the existing vegetation boundary, rather there was considered to be a need for direct management intervention action on several fronts simultaneously; establishment of a definable edge and sealing thereof, a major focus on Camphor Laurel control and the filling of extant canopy gaps and/or openings."</i></p> <p>In summary, the Vegetation Management Plan will apply to 7(d) land within the study area. Preparation of the Vegetation Management Plan is included in the Statement of Commitments.</p>
2. Lot 13 - Public Reserve	
a. Investigate the possibility of establishing pedestrian links from the proposed public reserve to the neighbouring development (Bolwarra PI) and the Tweed Heads West area. This would have the effect of making the park more user friendly, and desirable -therefore encouraging better pedestrian access and park use.	<p>It should be noted that Lot 13 is intended to service the casual open space requirements generated by the proposed development only. The adjoining Bolwarra Place subdivision has its own casual open space available to it.</p> <p>Given the difficult terrain on the eastern boundary of the public reserve it would not be possible to provide a pedestrian/cycle connection to Bolwarra Place. Similarly, connection to the wider West Tweed area is simply not physically or economically feasible. Nevertheless, contributions will be paid towards the Council's future cycleway network which will ultimately improve connectivity for the estate.</p> <p>The boundaries shown on the Application Plans to the east of the site do not exist. The potential link was eliminated by registration of DP 1034976. All relevant plans have been amended accordingly.</p>
b. Alternatively consider moving the park to a more central location within the development where it complies more explicitly with the Tweed Development Control Plan 2007 - Part A5 Subdivision Manual in terms of street frontage and access.	<p>Relocation of the proposed park has been considered however this is not feasible for topographic, accessibility and commercial reasons.</p> <p>During a site inspection with Departmental Officers on 30 July 2010, it was acknowledged by all parties that the location of the public reserve was acceptable in the circumstances, subject to more detailed engineering information relating to finished landforms and compliance with Council's Subdivision Manual.</p> <p>That justification is provided in the amended engineering documents at Annexure H, including plans demonstrating compliance with Council's Development Control Plan requirements for embellished casual open space.</p>
3. Landscaping	
a. Produce an overall landscape plan for the site, produced by an appropriately qualified Landscape Architect ; that clearly shows the proposed landscaping and streetscape plantings, pedestrian and cycle paths, footpaths and linkages with open space areas, and any other embellishments.	<p>See Annexure I.</p> <p>A draft of the Landscape Design Intent Report at Annexure I was referred to Mr Enguang Lee for comment following which he advised that it adequately addressed this issue.</p>
b. Refer also to Council's submission in regard to landscaping.	As above.
4. Geotechnical and earthworks	
a. An update of the Geotechnical report (or an alternative approach prior to Stage 3 subdivision certificate application) listed under Annex 12, Part 1 is required as some of the recommendations in that report are obsolete. This is particularly important for progressing Stage 3 of the development (the community title area/proposed Lot 81) e.g. Section 6.3 of that report requires further inspection of the site in this area upon completion of the aged-care facility.	An appropriate condition has been included in the revised Statement of Commitments.

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TABLE 1 – RESPONSE TO SUBMISSIONS	
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b. Provide more detail on the impact of proposed earthworks on Endangered Ecological Communities (EEC) and other vegetation within and adjacent to the site. Section 6.1.1 of Annex 14 states that "Vegetation and site clearing should generally be limited to within five metres of the extent of earthwork lines as determined in the detailed engineering design". There appears to be a conflict with the ecologically sensitive areas around the north east of the site (particularly Lots 38, 39, 41, 42, the residue lot, 57, 59, 60 and 61).	The adopted 25m combined EMA/APZ achieves an appropriate buffer to the EEC. Revised Earthworks are 10m (minimum) clear of EEC. Sewer Pump Station relocated clear of EEC zone. Lot boundaries adjusted to accommodate EEC buffer zone. Number of lots has been reduced.
TWEED SHIRE Council – 23 October 2009	
A 150mm water main traverses the site along the alignment of the future extension of Stott Street. For this development to gain a water supply from this main it will need to also have pressure reduction in place. Council requires that the PRV be located in Walmsleys Road near the boundary of Lot 1 DP167380 and Lot 1 DP1034976.	The Statement of Commitments has been amended to require the PRV to be located as required by Tweed Shire Council.
The Infrastructure Impact Assessment (IIA) should demonstrate that head losses at peak flow including fire flow together with other existing and anticipated development demands can be met through the 150mm main.	Pipe Flow analysis shows sufficient capacity for development. Infrastructure Impact Assessment (IIA) (Annexure H) conclusion remains unchanged. This is a detailed issue and can be further addressed at detail design.
Council requires a minimum 5000L rainwater tank for each dwelling in accordance with its adopted Demand Management Strategy.	As a minimum each allotment will be required to provide a rainwater tank in accordance with BASIX requirements. Additional rainwater tank volume or alternative storage methods will be determined at the Construction Certificate stage based on the criteria provided by Council in the Conditions of Consent. Detention requirements will be designated to the relevant lots by Section 88B instruments outlining the detention storage necessary to address the Council criteria. Refer to Section 9.30 of Annexure H regarding proposed water sensitive design measures. The provision for this tank and other water sensitive issues will be implemented in the dwelling construction stages.
The eastern section appears to be able to drain to Council's existing SPS2050 Bolwarra Place pump station. The storage volume however is less than 8 hours of average dry weather flow and consequently, it is considered that at design stage, it will be necessary to demonstrate that the risk of overflow from this station is acceptable and what additional measures will be required to achieve this low risk of overflow.	A detailed assessment will accompany the Construction Certificate Application together with additional measures to address overflow risks, if required (see Revised Statement of Commitments).
A conventional sewerage system (with conventional sewerage pumping station) should be constructed for the western catchment of the site, pressure sewer systems should only be used where conventional systems cannot be installed.	A single pump station is proposed to service the lots west of Stott Street and reference to individual pump stations and pressure sewer has been removed from the Statement of Commitments. The amended Infrastructure Impact Assessment report (IIA) V9 (Annexure H) incorporates the single pump station within the report and referenced figures. The proposed sewer system therefore complies with the TSC requirements.
It is desired that the development provide a connection to the adjoining land to the south (in the western catchment) so that some of the development may be able to be serviced by this sewer pump station	The Services Plan (Figure 15, Annexure H) has been amended to show provision of the sewer reticulation to the southern boundary for future connection to the neighbouring development as requested.
S 64 Development Contributions	
Council will require payment of development contributions under Section 64 of the Local Government Act with the rate being that applicable in council's Fees and Charges at the time of approval and as varied should payment not be made within twelve months of approval.	It is acknowledged that current contribution rates will apply but as indicated in Section 7.18 of the Environmental Assessment, Contribution Credits apply to the existing lots and therefore contribution for 78 lots is considered to be applicable.

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TABLE 1 – RESPONSE TO SUBMISSIONS	
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a) Stormwater Management	
i) The major system flow path from Road 2 should be relocated to be contained wholly within the public reserve, and located in line with the sag point in Road 2 (approx ch 126m).	Resolved with TSC as per internal TSC memo dated 22 June 2010. The design has been amended as shown on Figure 14 of Annexure H .
ii) Demonstrate that catchments A, B, C, D and E have a lawful point of discharge, as defined by DCP-A5 Subdivision Manual. For catchments discharging from Lot 5 DP 1117326, the SWMP must address the "restriction on the use of land" burdening the neighbouring land Lot 6 DP 1117326 that specifies that "no objection will be raised by the registered proprietor of Lot 6 to stormwater run-off from Lot 5 providing that the registered proprietor of Lot 5 discharges stormwater so that it reflects the existing natural drainage pattern of the catchment".	<p>The piped stormwater outlet at Catchment A has been determined by its location within flatter grades to assist in reducing outlet flow velocities. To follow the natural gully alignment would result in steeper pipe grades and thus, increased velocities. It is proposed that the flows be conveyed by open channel with energy dissipaters and level spreaders from the outlet to the natural gully formation. The proposed outlet and channel will be located within an easement.</p> <p>The inter allotment drainage within Catchment B services Lots 52 to 57 as shown on Figure 14.0 (Annexure H). The line work has been made colour on the amended plan for clarity.</p> <p>Refer to the Gully Report (Annexure H) by Landsurv confirming that the discharge point for Catchment B is located at an existing gully.</p> <p>The proposed stormwater drainage for Catchments D and E has been amended to reflect existing run-off patterns:</p> <p>Figure 14 (Annexure H) has been amended to demonstrate that Catchment D is to discharge at a proposed outlet aligned with the <i>naturally occurring gully</i> at the western boundary of Lot C6.</p> <p>Catchment E is proposed to discharge at an outlet aligned with the <i>existing drainage easement</i> running eastward into the neighbouring property. The existing drainage easement currently receives stormwater run-off from the existing Aged Care Facility, at Catchment E1, by way of an existing open channel.</p> <p>Detail design of stormwater drainage to account for post-development flows will be conducted at the construction certificate stage. Energy dissipaters and level spreaders are proposed at outlets where required. See sketch SK20100921 of Annexure H for detailed concepts of proposed level spreader and energy dissipaters.</p> <p>The proposed outlet locations and flow mitigation devices are in accordance with the restriction of use of land on the neighbouring lot to the east, by way of maintaining existing natural drainage patterns.</p>
iii) Discharge arrangements from Road No.3 need to be amended so that piped and overland systems are clear of the future sewage pump station site, and reflect the finished slope of the site.	The piped stormwater outlet at Catchment A has been determined by its location on flatter grades to assist in reducing outlet flow velocities. To follow the natural gully alignment would result in steeper pipe grades and thus, increased velocities. It is proposed that the flow be conveyed by open channel with energy dissipaters and level spreaders from the outlet to the natural gully formation. The proposed outlet and channel will be located within an easement.
iv) Details of "the residual lot" and "level spreaders" referenced in discussions relating to Road 3 stormwater drainage should be clarified. All stormwater management measures should be contained wholly within the subject land, unless owner's consent is provided.	Concepts for level spreaders and energy dissipaters are now included as sketch plan SK20100921 at Annexure H .
v) Preliminary design of interallotment drainage systems, catering for both minor and major storm events, including easements and restrictions to use to preserve these flow paths.	<p>To be conditions of consent as per internal TSC memo dated 22 June 2010 (see Revised Statement of Commitments).</p> <p>The inter allotment drainage will be subject to detail design. The requirements of TSC Development Design Specification 5 Stormwater Drainage Design will be addressed at that time.</p>

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TABLE 1 – RESPONSE TO SUBMISSIONS	
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(vi) Discussion of SWMP implementation with respect to the staging of the subdivision.	These issues are to be addressed in conditions of consent as per internal TSC memo dated 22 June 2010 (see Revised Statement of Commitments).
(vii) Verify the site requirements for on site detention / retention of stormwater to mitigate impacts on downstream land. What volume of permanent storage will be provided in rainwater tanks on each lot, and what, if any, storage will be provided in the public domain, and how?	<p>These issues will be addressed in as conditions of consent as per internal TSC memo dated 22 June 2010 (see Revised Statement of Commitments).</p> <p>Detailed design of the actual detention storage will be completed at the Construction Certificate stage based on the criteria provided by Council in the Conditions of Consent. A hydrological model will be developed to determine the actual detention storage required.</p> <p>No detention storage is proposed on public land. On sites with restricted above ground area underground tank storage within driveways and other suitable locations can be provided to ensure sufficient detention volumes are provided. The proposed detention can therefore comply with TSC requirements.</p>
(viii) It is not acceptable to have a Q100 overland flow path over the public reserve, an area dedicated to drainage is required at this location	The proposed public reserve (Lot 13) has an area of 3645m ² . A minimum of approximately 2224m ² is required for 82 residential lots and accordingly there is sufficient area available within Lot 13 for a drainage reserve to accommodate overland flow. Details will be provided with the Construction Certificate, as indicated in the Statement of Commitments.
b) Landforming	
(i) Limit retaining walls on the site perimeter to 1.2m height. This specifically applies to walls adjoining Road No.5.	<p>The Road No.5 retaining wall has been amended to be a stepped wall as there is adequate room to step the wall and allow for landscaping and drainage works.</p> <p>Figures 7.2 and 12 of Annexure H have been amended. The proposed walls on the eastern side of Road No 5 therefore comply with TSC Development Design Specification 6 Site Regrading.</p> <p>The 5 proposed lots within the neighbouring development are being accessed by an internal ROC and not the proposed road from the subject site.</p> <p>The neighbouring developer is considering the Council request to locate the proposed wall within the lots in order to facilitate a full verge width on the western side of Road 1 and is yet to advise. In lieu of a response from the neighbouring developer Road 1 cross sections have been amended to show a 2.2m (max.) wall within the road reserve. The proposed wall location will facilitate a verge wider than the 3.5m specified by the TSC standard Low Volume Neighbourhood Connector road as agreed with Danny Rose and Angie Cousens of Tweed Shire Council at a meeting held on site on the 09/02/2010.</p>
(ii) Clearly indicate the nominal height of all retaining walls and batters throughout the site. Wall and batter heights must comply with DCP-A5 Subdivision Manual, and Development Design Specification D6 - Site Regrading.	<p>The Road No.5 retaining wall has been amended to be a stepped wall as there is adequate room to step the wall and allow for landscaping and drainage works. Figures 7.2 and 12 of Annexure H have been amended and therefore comply with TSC Development Design Specification D6 Site Regrading.</p> <p>The proposed retaining wall on Road 1 will be located within the road reserve to facilitate the required verge width. The proposed verge width complies with TSC Development Design Specification D1 Road Design.</p>
(iii) Where interallotment batters are provided, the plans must demonstrate compliance with Clause D6.06A(2) of Development Design Specification D6 - Site Regrading.	This issue will be addressed in conditions of consent as per internal TSC memo dated 22 June 2010 (see Revised Statement of Commitments).
(iv) Additional detail of batters used for battleaxe lot accesses, to demonstrate that compliant driveways are possible to all adjoining lots, and that adequate building envelopes are still achievable on those lots containing the batters (specifically Lot 1, 2, 3, 4 and 77 and 79).	This issue will be addressed in conditions of consent as per internal TSC memo dated 22 June 2010 (see Revised Statement of Commitments).

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TABLE 1 – RESPONSE TO SUBMISSIONS	
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<p>Amended road design details are required to address the following;</p> <p>a) Extension of Walmsleys Road Pavement Width</p> <p>Amended road design details the proposed extension of Walmsleys Road with a future 11m pavement width.</p> <p>The road connecting Stott Street and Walmsleys Road will be the main thoroughfare and priority route (to adjoining subdivision) is required to give way at a “T” intersection. Unfortunately this may cause the application to lose a lot or two. An acceptable alternative would be to require a roundabout to be constructed at the junction of proposed Road No. 1 and Walmsleys Road which may minimise loss of developable land and resolve a street naming issue.</p> <p>It is noted that Stott Street is about 11m wide while Walmsleys Road is only 6-7m wide. Two road width transitions should be incorporated into the subdivision design. Road No. 1 should match the Stott Street width of 11m and the unconstructed Walmsleys Road should be constructed to 9m (to allow for bus routes). There will need to be two transitions to accommodate these widths within the subdivision and join to the existing Walmsleys Road pavement. A roundabout is a preferred transition point however the application may be able to provide other acceptable solutions (long tapers are very undesirable).</p>	<p>This issue will be addressed in conditions of consent as per internal TSC memo dated 22 June 2010 (see Revised Statement of Commitments).</p> <p>The proposed Walmsley Road and Stott Street intersection has been amended. Refer to sketch plans SK20100913 – 1 to 4 of Annexure H, the sketches show the proposed layout geometry, sight distance diagrams and bus turning paths compliant to TSC D1 Road Design Specifications. Lot 6 truncated boundary has been amended to accommodate DCP compliant sight distance.</p> <p>The proposed Walmsley Road and Stott Street intersection has been amended and Lot 6 truncated to achieve an adequate intersection design. Bus turning templates have also been provided to demonstrate adequate turning room. The proposed layout therefore complies with TSC Development Design Specification D1 Road Design.</p> <p>The previous Right of Carriageway No. 3 has been deleted and Lots 1 – 5 regraded to provide 1 in 4 slopes fronting Walmsleys Road. The 1 in 4 slopes facilitate access to Lots 1-5 in accordance with TSC Policy Driveway Access to Property Design Specification. The proposed regrading is shown on sketch plan SK20100713 at Annexure H.</p> <p>Walmsley Road and Road 1 (Stott Street extension) road cross sections have been amended to with the provision of footpaths on both sides complying to TSC Development Design Specification D1 Road Design standard for Neighbourhood Connector Roads. The proposed road design therefore complies with the TSC requirements.</p>
<p>b) Vertical Alignment</p> <p>Concern is raised in relation to the vertical alignment of Walmsleys Road. The subdivision layout has not addressed the existing vertical alignment of Walmsleys Road in conjunction with the proposed extension of Walmsleys Road. The current vertical alignment will form an unwarranted peak which will hinder sight distance and create a poor road design.</p> <p>Amended plans are required to address the existing vertical alignment of Walmsleys Road and the proposed vertical alignment of the Walmsleys Road extension to ensure a smooth, safe, vertical transition for the road alignment. Site distance is also required to be addressed for the extension.</p>	<p>This issue will be addressed in conditions of consent as per internal TSC memo dated 24 June 2010 (see Revised Statement of Commitments).</p> <p>Lot 6 access is amended to be from Road 1 and compliant sight distance from Lot 6, 5 and 4 demonstrated.</p>
<p>c) Property Access</p> <p>The applicant is requested to demonstrate that ALL lots can access the proposed roads and right of carriageways in accordance with Council's driveway policy i.e. maximum driveway gradient is 25% or 1 in 4.</p>	<p>Road No. 3 has been amended to provide 1 in 4 batters at lot frontages to facilitate access for Lots 52, 54, 56 and 57 in accordance with TSC Policy Driveway Access to Property Design Specification. Refer to Figure 11.0 of Annexure H for further details of lot regrading.</p> <p>The amended Figure 11.0 of Annexure H of provides 1 in 4 batters as stated in place of the previous 1 in 2 batters. The proposed road therefore complies with the minimum driveway gradients and conflict between Figures 11 and 7.2 has been resolved. The proposed Road 3 batters will provide TSC compliant lot access.</p> <p>Right of Carriageways (ROC) 3 and 4 have been designed in accordance with TSC Policy Driveway Access to Property Design Specification. Long sections and typical sections of ROC No. 3 and 4 are provided; refer to Figures 12.3 and 12.4 respectively of Annexure H.</p>

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TABLE 1 – RESPONSE TO SUBMISSIONS	
AGENCY COMMENTS	RESPONSE
<p>The maximum driveway gradient is 1 in 4 or 25%. Proposed right of carriageway 4 serving Lots 35, 36, & 37, and proposed right of carriageway 5 serving Lots 53 and 60, are not compliant with Council's driveway policy.</p> <p>The proposed rights of carriageways do not address on street parking. A public local access street has a minimum of 6m, the right of carriageway specifies 4.5m</p> <p>The proposed right of carriageways present issues with garbage services. No turnaround facilities have been provided for a garbage vehicle for the collection of waste. Right of way no.2 has gradients in excess of 17%, which is too steep for a garbage vehicle</p> <p>Where street grades are in excess of 12% the number of properties with frontage to that section shall be limited. Where frontage is provided, the feasibility of gaining safe property access shall be demonstrated, paying regard to driveway grade (including edge line grades) footpath continuity and combined cross fall.</p>	<p>Proposed geometry of all Right of Carriageway's complies with TSC Policy Driveway Access to Property Design Specification. Details of longitudinal sections and cross sections have been provided in Figures 11 to 12.4 of Annexure H.</p> <p>Off-street parking within the right of carriageway (ROC) itself is not possible due to width constraints and is not a requirement of the TSC Driveway Access specification. However, to facilitate off-street parking for lots accessed by ROC's it is proposed that a Section 88B instrument be designated to relevant lots conditioning that at least 1 visitor car park be provided by the future owner (see Revised Statement of Commitments).</p> <p>The proposed layout is not able to facilitate a garbage truck turning area within a right of carriageway access, because of topographic constraints.</p> <p>However, in order to facilitate garbage collection for lots being accessed by long or steep ROC, bin storage areas have been incorporated within the ROC boundaries and located adjacent the road reserve boundary. The relevant ROC boundaries have been revised and plans amended (see Annexure A).</p> <p>The previous ROC No. 3 located at the rear of Lots 1 – 6 has been deleted. Lot access is now achieved from Walmsley Road. The Engineering Report and sketch plan SK20100713 at Annexure H show the proposed regrading to facilitate access from Walmsleys Road.</p> <p>Road No. 3 batters have been amended to provide 1 in 4 batters at lot frontages to facilitate lot access. Figures 7.2 and 11 of Annexure H have been amended to resolve conflicting information regarding access. The proposed regrading therefore complies with TSC Policy Driveway Access to Property Design Specification.</p> <p>Access to lots 1-5 has been provided on the lot frontage with 1 in 4 batters and the right of carriageway removed. The proposed regrading therefore complies with TSC Policy Driveway Access to Property Design Specification.</p> <p>The amended Walmsley Road and Stott Street intersection geometry and Lot 6 access location comply with sight distance requirements in accordance with TSC D1 – Road Design Specification as shown in sketches SK20100913-1 to 4 of Annexure H. The proposed road and Lot 6 truncation therefore comply with TSC requirements.</p>
d) Developer to communicate with adjacent land owner (Lot 2 DP 1098348)	
<p>Development Application DA09/0288 for a 21 lot subdivision (including demolition of existing structures and demolition of public road) is currently with Council for determination. DA09/0288 is also located off the proposed Walmsleys Road extension which is part of this development application.</p> <p>It is noted that 5 lots from DA09/0288 are proposed adjacent to proposed Road No. 1 (part of this development application).</p> <p>It is requested that the developer liaise with the land owner or developer of Lot 2 DP 1098348 to ensure that the following occurs;</p> <p>i) 5 lots proposed under DA09/0288 have frontage to proposed Road No. 1 and,</p>	<p>The Walmsley Road and Stott Street intersection has been amended and concept detailed on sketches SK20100913-1 to 4 of Annexure H. A meeting has been held on-site with the neighbouring developer, Peter Walmsley, Les Dickinson and Council officers Angie Cousens and Danny Rose on 09/02/2010.</p> <p>The 5 proposed lots within the neighbouring development are being accessed by an internal ROC and not the road from the subject site. The neighbouring developer is considering the Council request to locate the proposed wall within lots in order to facilitate a full verge width on the western side of Road 1 and is yet to advise.</p> <p>Due to no forthcoming agreement from the neighbouring developer Road 1 cross sections have been amended to show a 2.2m (max.) block wall within the road reserve as agreed with Council officers at the site meeting of 09/02/2010. The proposed wall location will facilitate a verge wider than the 3.5m specified by the TSC standard Low Volume Neighbourhood Connector road. The proposed road cross section will therefore comply with TSC Development Design Specification D1 Road Design.</p>

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TABLE 1 – RESPONSE TO SUBMISSIONS	
AGENCY COMMENTS	RESPONSE
ii) The proposed design levels of all roadworks, earthworks and landforming between the two proposed subdivisions align with one another.	As above.
e) Road gradients greater than 12%	
For gradients greater than 12% the requirements for pedestrians, cyclists, waste collection vehicles and transverse access are to be addressed explicitly in the design.	Bin storage areas have been incorporated within the ROC boundaries adjacent to the road reserve boundary to facilitate garbage collection for lots being accessed by long or steep ROC. Compliant garbage collection is therefore achieved.
f) Road No. 1	
i) Footpaths – A 1.2m shared cycleway / footpath on one side is shown on the plans. Council's development design specifications require a 1.2m concrete footpath to be located on both sides of the road.	Figures 8 and 9 at Annexure H have been amended to show a footpath on both sides of Road No. 1. The amended Road No. 1 cross section provides a proposed road cross section in accordance with TSC low volume collector road as requested. The proposed road cross section will therefore comply with TSC Development Design Specification D1 Road Design.
ii) Footpath verge – the minimum footpath verge proposed for Road No. 1 is 3.5m Council's standards require the footpath verge to be 5.5m with a 1.2m concrete footpath located on both sides. The plans are to be amended to provide an adequate verge width of 5.5m and concrete footpaths.	The Road No.1 cross sections have been amended to include a 2.2m (max.) high wall. The proposed wall location will facilitate a verge wider than the 3.5m specified by the TSC standard Low Volume Neighbourhood Connector road. The proposed road cross section will therefore comply with TSC Development Design Specification D1 Road Design. The proposed block retaining wall is to be provided as agreed at the site meeting with the Council officers Angie Cousens and Danny Rose on 09/02/2010.
iii) Road Gradient – The absolute maximum gradient for a neighbourhood collector road is 12%. The longitudinal section for Road No. 1 (should read Walmsleys Road) shows gradients up to 14.4%. The road gradient is to be amended to a maximum of 12%.	This issue will be addressed in conditions of consent as per internal TSC memo dated 24 June 2010 (see Revised Statement of Commitments).
g) Road No. 2,3 & 4	
The minimum footpath verge proposed for Road Nos. 2,3 & 4 is 4.25m. Council's standards require the footpath verge to be 5.5m.	This issue will be addressed in conditions of consent as per internal TSC memo dated 24 June 2010 (see Revised Statement of Commitments).
h) Road No. 5	
i) Pavement width – Proposed Road No. 5 is a community title road with a pavement width of 5m. The pavement width is to be increased to a width of 5.5m or 6m to allow for the safe passing of two vehicles. Please note that Council's development design specifications require a minimum pavement width of 6m for a local access road to be dedicated as public infrastructure.	This issue will be addressed in conditions of consent as per internal TSC memo dated 24 June 2010 (see Revised Statement of Commitments).
ii) Footpath verge – The minimum footpath verge proposed is 1.5m. Council's standards require the footpath verge to be 5.5m with a 1.2m concrete footpath located on one side. The plans are to be amended to provide an adequate verge width of 5.5m.	This issue will be addressed in conditions of consent as per internal TSC memo dated 24 June 2010 (see Revised Statement of Commitments).
iii) Retaining walls – The 2.5m high retaining wall above street level does not comply with Council's development design specifications of 1.2m. The retaining wall is to be reduced and the plans amended.	The Road No.5 retaining wall has been amended to be a stepped wall as there is adequate room to step the wall and allow for landscaping and drainage works. Figures 7.2 and 12 of Annexure H have been amended. The proposed walls comply with TSC Development Design Specification D6 Site Regrading.
i) Right of carriageway detail	
i) Right of carriageway no.1 No detail has been provided for the right of carriageway serving proposed Lots 76, 77, 78, 79 and 80. A typical cross section and longitudinal section is to be provided for the right of carriageway serving future Lots 70, 71 & 72 demonstrating compliance with Council's standards.	Proposed geometry of all Right of Carriageway's complies with TSC Policy Driveway Access to Property Design Specification. Details of longitudinal sections and cross sections have been provided in Figures 11 to 12.4 of Annexure H .

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TABLE 1 – RESPONSE TO SUBMISSIONS	
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<p>ii) Right of carriageway no. 2</p> <p>It is assumed that a right of carriageway is also providing access to proposed lots 70, 71 & 72. A typical cross section and longitudinal section is to be provided for the right of carriageway serving future lots 70, 71 & 72 demonstrating compliance with Council's standards.</p>	As above.
j) Future Road Connections	
<p>Council's Engineering and Operations Division has been investigating future possible road connections in the Bilambil Heights release area. A connection of Walmsleys Road to Scenic Drive to the east along the existing road reserve does not appear likely given the steep terrain. However a future practical connection might be gained through the 2(c) zoned land at the eastern end (Lot 1 DP 1032820). In the interim (and possibly permanently) traffic from the proposed subdivision will need to access Scenic Drive from Nabilla Street – Warringa Drive dogleg. A traffic report is requested to investigate the existing intersections of Nabilla Street and Walmsleys Road, Nabilla Street and Warringa Drive and Warringa Drive and Scenic Drive to ensure that level of service is adequate for increased traffic. This traffic report should estimate traffic splits of the traffic generated both with and without the proposed Cobaki Parkway and traffic generated by the adjoining proposed subdivision. The applicant may seek to share costs with the adjoining developer.</p>	<p>Refer to Section 7 of Annexure H for traffic impact assessment of the surrounding street network. The Intersections along the priority routes from the development to Piggabeen Road and from the development to Scenic Drive have been assessed for Level of Service (LOS). Each intersection has been determined as LOS A with regards to average delay and queue lengths in accordance with RTA <i>Guide To Traffic Generating Developments</i> (October 2002). Average delay and queue lengths calculations are based on Austroads <i>Guide to Traffic Engineering Practice Part 5: Intersection at Grade</i> (June 2005). The assessment has identified that the proposed development has no impact on the existing LOS for intersections along the existing priority routes nor does it impact the LOS on the peak hour road flows.</p> <p>The proposed roadway LOS therefore complies and is in excess of the TSC minimum LOS C.</p> <p>Traffic priority at the Nabilla - Warringa Road intersection is not impacted by the development however the intersection has been amended to account for the likely priority route from Scenic Drive to Piggabeen road due to the connection of Walmsleys Road and Stott Street. Refer to sketch plan SK20100913-5 of Annexure H for the proposed intersection priority treatment of Walmsley Road and Nabilla Street. The existing intersections at Skyline Drive - Stott Street and Nabilla Street - Warringa Drive have adequate treatments already in place. No additional treatment is deemed necessary.</p>
Further TSC comments from email dated 4 August 2010 not addressed above	
Parks	
<p>Landscape Masterplan – 'Public Park Concept'</p> <p>Civil drawings and the slope analysis (figure 16) indicate a batter of 15 to 20% extending 8 metres from the road into the park. The public park concept drawing does not however indicate any batter, and indicates 'at grade access for PWD'.</p> <p>The slope analysis indicates a 5% to 10% slope across the majority of the park, including the playground area. As the playground area must be flat, this cannot be accurate and batters or steeper slopes will occur either side of the levelled playground area.</p> <p>One large scale section view of the park is provided in the civil drawings (Section 2, Figure 7.1). It is appropriate the Public Park Concept Plan show at least 2 cross sections, including one in the area where the playground and park furniture is to be.</p> <p>No park furniture is indicated. The Tweed DCP Section A5 (Subdivision Manual) establishes the amenities generally required in parks – see table A5-8.2.1. Note that not all items listed will be required and discussion is sought with the developer regarding the infrastructure suitable in this park.</p>	<p>Sketch plan SK 20100809 – 01 at Annexure H has been included to clarify the proposed local park areas and demonstrate compliance to TSC Development Design Specification D6 Site Grading.</p> <p>Sketch Plan SK 20100809-02 at Annexure H has been included to clarify surface slopes of the proposed local park including play areas. The proposed park grading therefore complies with the required slopes.</p> <p>As above.</p> <p>The park will be embellished in accordance with the provisions of Council's Subdivision Manual (see Statement of Commitments).</p>

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TABLE 1 – RESPONSE TO SUBMISSIONS	
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It remains desirable that should development of the land east of the public reserve (Lot 6 DP1117326) occur, a public access link should be provided to Community Land described as Lot 33 DP1034976 (adjacent to Bolwarra Place)	The access link from Bolwarra Place is not required as agreed with DoP representatives at the site meeting held 30 th July 2010.
PUBLIC OPEN SPACE	
<p>Council's subdivision guidelines specify 2.83 hectares of local open space is to be contributed per 1,000 population. This comprises 1.7 ha for structured open space (sportsfields) and 1.13 for casual open space (parks). Being a 74 lot subdivision, 2.4 residents per lot equates to a population of 178. The amount of local open space to be contributed for 178 people is:</p> <ul style="list-style-type: none"> Structured open space (sportsfield): 3,026m² <p>No sportsfields are proposed on the site, so the equivalent value should be contributed to the appropriate Contributions Plan.</p> <ul style="list-style-type: none"> Casual local open space - 2,011 m² <p>A public reserve (Lot 13) of 3,645m² is proposed. The size of this land parcel is acceptable although it exceeds the amount required.</p>	<p>The revised proposal involves 82 residential lots which equates to 197 persons.</p> <p>3345m² required – a contribution in lieu of dedication is proposed.</p> <p>Approximately 2224m² required – 3645m² proposed – the proposed public reserve complies with Council requirements.</p>
<p>Quality of Proposed Public Open Space</p> <p>The location of the proposed public reserve (casual open space) has one particular benefit. It has potential for a future connection to an existing area of casual open space around 120m to the east. This would however require dedication of land outside that now proposed for development. A sewer easement now follows the possible future link.</p> <p>The public reserve must meet the requirements of casual open space in Councils Subdivision Manual (Tweed Development Control Plan, Section A5). In particular, it is noted that the finished slopes proposed for this land exceed Council's maximum slope criteria and is not acceptable.</p> <p>The eastern boundary of the proposed park has steep slopes falling away to private land below. Drainage and maintenance issues at this boundary are likely to occur.</p> <p>The slope stability assessment describes 2 areas of concern (the 'eastern depression' and 'previous dam site') in the proposed public reserve. In particular the 'previous dam site' is described as having previously been filled and having the potential for 'significant settlement with time'. This is not appropriate for a park as 'settling over time' creates maintenance, drainage and safety concerns.</p>	<p>It should be noted that Lot 13 is intended to service the casual open space requirements generated by the proposed development only. The adjoining Bolwarra Place subdivision has its own casual open space available to it.</p> <p>Given the difficult terrain on the eastern boundary of the public reserve it would not be possible to provide a pedestrian/cycle connection to Bolwarra Place. Similarly, connection to the wider West Tweed area is simply not physically or economically feasible. Nevertheless, contributions will be paid towards the Council's future cycleway network which will ultimately improve connectivity for the estate.</p> <p>The boundaries shown on the Application Plans to the east of the site do not exist. The potential link was eliminated by registration of DP 1034976. All relevant plans have been amended accordingly.</p> <p>Refer Figure SK 20100809-01, Rev A at Annexure H which demonstrates compliance with Tweed Shire Council Design Specification D6 – Site Grading.</p> <p>Mitigating measures to address issues will be assessed as part of the detail design to accompany the Construction Certificate Application (see Revised Statement of Commitments).</p> <p>Unsuitable material will be removed. Suitable material will be re-compacted as required.</p> <p>Dam Fill and earthworks stabilising requirements will be outlined and included in the detail design to accompany the Construction Certificate Application (see Revised Statement of Commitments).</p>
LANDSCAPE PLAN	
The landscape strategy lacks desirable information and an amended landscape strategy prepared by a suitably qualified landscape architect is required. The following amendments or modifications are required to be addressed:	See Landscape Design Intent Report (LDIR) at Annexure I . The LDIR has been prepared by a qualified Landscape Architect and contains sufficient detail for the Project Application stage.
<ul style="list-style-type: none"> There are two 'appendix 1 '. 	The LDIR replaces the original Landscape Strategy.
<ul style="list-style-type: none"> There are two different 'planting details' provided. The strategy should quote Council standard drawings, particularly S.D 701: Tree and Shrub Planting Detail. 	See Revised Statement of Commitments at Annexure J .

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TABLE 1 – RESPONSE TO SUBMISSIONS	
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<ul style="list-style-type: none"> The roundabout planting arrangement is not accepted. Low maintenance plantings can be considered, however the proposed hoop pine in the centre represents a safety concern. A concrete safety buffer for maintenance workers is required. 	The LDIR at Annexure I Proposes native rainforest trees. Details of species and siting will accompany the Construction Certificate Application.
<ul style="list-style-type: none"> A scale should be provided on all plans, particularly to assess the 'constructed batter'. 	The LDIR at Annexure I contains appropriate plans drawn to scale.
<ul style="list-style-type: none"> The 'street tree planting detail' is not acceptable. Mass planting under trees on the streetscape is a maintenance liability and is not supported. 	The LDIR at Annexure I proposes appropriate street tree planting detail. Any variations can be addressed by consent conditions.
<ul style="list-style-type: none"> Concern is expressed at the selection of the threatened species <i>Lepidererna pulchella</i> for street trees. Threatened species proposed need to be grown from seed collected in the immediate local area. Planting threatened species from a different gene pool may harm the native gene pool. In addition, maintenance and future works by Council may cause harm to such threatened street trees and would require additional approval and likely compensation. 	As above.
<ul style="list-style-type: none"> Timber garden bed edging is not acceptable. 	As above.
<ul style="list-style-type: none"> There is no indication of plantings or landscape treatment proposed for the public reserve. Details in this regard should be provided. 	The LDIR at Annexure I includes concept details for the proposed public reserve. A detailed Landscaping and Embellishment Plan will accompany the Construction Certificate Application (see Revised Statement of Commitments).
<p>CONTAMINATION</p> <p>It is noted that the Gilbert and Sutherland Soil Contamination Assessments submitted with the application are dated September and October 2003. These reports are therefore six (6) years out of date. Further it is noted that the portions of the land have been used for small cropping. It is not known if the use of those portions of the land for this purpose ceased at the time of the contamination assessments or not.</p> <p>Therefore it should be required that the contaminated land consultants are requested to advise if the land has been subjected to further use for cropping activities that may have contributed to the land being contaminated between the time that the contamination assessment was last carried out and the present, i.e. in the intervening six (6) year period and if necessary advise if further contamination investigations together with the submission of additional contaminated land investigation report(s) are required.</p> <p>It is also noted that the proposed allotment layout has changed slightly between the times of the contamination investigations in 2003. The contaminated land consultant should be requested to advise if the original contamination investigation in respect to the soil sample regime is still adequate, particularly in respect to the proposed neighbourhood title allotment configurations.</p>	<p>Gilbert & Sutherland have discussed interim usage of the site with the land owner, Jim Dickinson, and were assured that no cropping has occurred on Lot 1 DP167380, Lot 2 DP961928 and Lot 1 DP134787 Walmsleys Road and Lot 4 DP105848 Stott Street, Bilambil Heights New South Wales since G&S conducted the two (2) contaminated lands assessments during September and October 2003. Based on this assurance Gilbert & Sutherland considers that the conclusions within the 2003 contamination reports remain valid. Furthermore, Gilbert & Sutherland confirm that the design of the sampling program depicted within both reports, i.e. a grid based method in accordance with AS4482.1, achieved adequate site characterisation to determine the potential risks associated with contamination of the site, for the original layout and this remains valid and adequate for the amended layout.</p>
<p>OVERHEAD POWERLINES</p> <p>It is noted that overhead high voltage power lines traverse both existing lot 2 and lot 5. It is not known if this line will be relocated below ground as a consequence of the proposed development (it is recommended in the bushfire report).</p> <p>In the event that this line remains an above ground line, consideration should be given to requesting a report from a suitably qualified person to assess any potential Electric and Magnetic Radiation (EMR) issue in respect to future residents in the vicinity of this line should the development proceed in its present form.</p>	Underground power will be provided in accordance with Tweed Shire Council requirements contained in Tweed Development Control Plan 2008, Section A5 – Subdivision Manual.

TABLE 1 – RESPONSE TO SUBMISSIONS	
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<p>ECOLOGICAL ISSUES</p> <p>Council does not have the resources to provide a detailed ecological assessment of the proposal, however it is recommended that the Department assess (through independent ecological expert assessment) the following issues and ensure they are adequately addressed:</p>	
<ul style="list-style-type: none"> The applicant has identified two species of koala feeding species on the site occurring in two areas. Whilst these trees constitute greater than 15% of the total number of trees in the upper strata, the applicant argues that the land does not comprise of core koala habitat as the amount of koala habitat present in the study area is small and no evidence of koalas was found. 	<p>Pages 34 – 36 of Biolink report (at Annexure M) addresses SEP44 and concludes that a Koala Plan of Management is not required. Reiterate that no evidence of habitat use, specifically absence of koala faecal pellets or any other signs (e.g. scratch marks) was recorded. Regardless, areas of koala habitat are excluded from development footprint.</p>
<ul style="list-style-type: none"> Rare and /or threatened species and endangered ecological communities are located on site (including the Black Walnut, Fine leaved Tuckeroo, Spiny Gardenia, Long leaved Tuckeroo and Rough-shelled Bush Nut). A seven part test was provided and should be independently assessed. Sufficient buffers should be provided to limit edge effects. 	<p>7-part tests have been reviewed by DECCW, DoP & DEWHA (re: Spiny Gardenia).</p> <p>Appropriate buffers are addressed in the response to the Department of Planning comments dated 30 October 2009.</p>
<ul style="list-style-type: none"> A regional fauna corridor is located to the west of the site (according to Council's GIs). The impact of the development on the fauna corridor should be investigated. 	<p>The corridor is well removed from the development site. Given the scale of the development minimal impact is likely to result.</p>
<ul style="list-style-type: none"> A vegetation management plan should be prepared and independently assessed prior to approval of the concept plan. 	<p>A Vegetation Management Plan is proposed (see Revised Statement of Commitments).</p>
<ul style="list-style-type: none"> Matters in clause 8 of SEPP 71 (Coastal Protection) should be addressed. 	<p>These matters are addressed in Table 11 (Sec 7.10) of the Environmental Assessment.</p>
<p>PLANNING</p>	
<ul style="list-style-type: none"> The land is zoned 2 (c) Urban Expansion and 7 (d) Environmental Protection Scenic Escarpment. clause 26 relates specifically to development in the 7(d) Environmental Protection (Scenic Escarpment) zone. It seeks to minimise soil erosion and preserve the scenic quality of the land and the locality. No physical works are proposed on the land zoned 7(d) and it is proposed to be contained within one lot, along with approximately 1000m² of 2 (c) land on which a dwelling house can be located. The applicant advises that all land zoned 7(d) will exclude any disturbance or landform changes. This should be included in the statement of commitments. 	<p>See Revised Draft Statement of Commitments.</p>
<ul style="list-style-type: none"> The proposal includes a 'Future Residential Character and Built Form Report' prepared by BDA architecture dated 18 October 2007 proposed to apply to all dwellings. It includes variations to setbacks of car ports from the frontage (minimum reduced from 2 metres to 1 metre) and variations to rear setbacks. The applicant should provide further justifications to variations proposed to Council's Development Control Plan (DCP) A1 in this regard as well as clarify how the 'Future Residential Character and Built Form Report' is interpreted in relation to Council's DCP. 	<p>See Tweed Development Control Plan 2008, Section A1 Compliance Checklist at Annexure K. The Future Residential Character and Built Form Report at Annexure 17 of the Environmental Assessment has been revised to address the amended layout. The revised version is at Annexure L.</p>
<ul style="list-style-type: none"> The applicant has provided details on colours and built forms. These are to be light weight, slope sensitive and use earthy tones. This approach is acceptable and is incorporated into the statement of commitments. 	<p>Noted – see Revised Statement of Commitments.</p>
<ul style="list-style-type: none"> Clause 39A of the TLEP relates to bushfire protection and is relevant as the site is bushfire prone. The Department should be satisfied that the proposal complies with the Planning for Bushfire Protection policy. The proposed Asset Protection Zones (APZs) should be indicated on a plan in conjunction with existing on-site threatened species and Ecologically Endangered communities for clarity and assessment by independent ecological experts. Should the Rural Fire Service require a certain standard of dwelling construction, the Department should ensure that this does not conflict with the proposed slope sensitive, light weight building designs. 	<p>The Revised Ecological and Bushfire Planning Assessment demonstrates compliance with APZ and other requirements. See Rural Fire Service comments. Building construction standards will be addressed when Development Applications for dwellings are assessed.</p>

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AGENCY COMMENTS	RESPONSE
<ul style="list-style-type: none"> Clause 44 of the TLEP relates to development of land within likely or known archaeological sites. The applicant has prepared a Cultural Heritage Report which concludes that the site does not possess the geographical features commonly associated with sites of Aboriginal cultural significance. It is recommended that the Department be satisfied that this advice is sufficient and should consult with the Tweed Byron Aboriginal Land Council. 	See response to DECCW comments.
<ul style="list-style-type: none"> Clause 43 of the SEPP (North Coast Regional Environmental Plan) 1988 seeks to ensure residential density is maximised without adversely affecting the environmental features of the land. The EA identifies that the proposed 84 lots result in a yield of approximately 9 lots per hectare. Whilst the North Coast Urban Planning Strategy identifies a target yield of 15 dwellings per hectare, the on-site constraints and environmental zone land do not allow for a greater yield. 	As acknowledged by Tweed Shire Council, the site constraints and character of the area do not allow for higher yields.
<ul style="list-style-type: none"> The Draft Tweed LEP Amendment 21 -Vegetation Management was exhibited in December 2004 to March 2005. It replaced 7 (d) Environmental Protection (Scenic Escarpment) zoning with 7 (a) Environmental Protection (Significant Vegetation and Wildlife Habitat) zone. It also included relocating the 2 (c) 17 (a) zone boundary to the west on that part of the site east of the aged care complex as well as back zoning the eastern part of Lot 4 from 2 (c) to 7 (a). The major project applicant is not inconsistent with the Draft plan. No lots are proposed within any of the land to be zoned 7 (a). 	The amended layout is not inconsistent with the Draft Plan.
<ul style="list-style-type: none"> It is noted that regionally significant agricultural land is located approximately 250 metres to the north-west of proposed residential lots. The Department should seek advice from the Department of Primary Industries on the potential for land use conflict in this regard. 	The DPI did not raise any issues relating to potential conflicts.
STATEMENT OF COMMITMENTS	
The following additions and modifications to the statement of commitments is requested.	
Telecommunications	
<ul style="list-style-type: none"> The applicant shall undertake in the Statement of Commitments to provide "fibre to the home" (FTTH) telecommunications infrastructure throughout the subdivision, in accordance with the requirements of Council and the relevant service providers." 	This has been included in the revised Statement of Commitments.
<ul style="list-style-type: none"> Construction site work including the entering and leaving of vehicles is limited to the following hours, unless otherwise permitted by Council: - Monday to Saturday from 7.00am to 6.00pm, No work to be carried out on Sundays or Public Holidays. The proponent is responsible to instruct and control subcontractors regarding hours of work. 	See revised Statement of Commitments.
<ul style="list-style-type: none"> All reasonable steps shall be taken to muffle and acoustically baffle all plant and equipment. In the event of complaints from the neighbours, which Council deem to be reasonable, the noise from the construction site is not to exceed the following: A. Short Term Period - 4 weeks. LAeq noise level measured over a period of not less than 15 minutes when the construction site is in operation, must not exceed the background level by more than 20dB(A) at the boundary of the nearest likely affected residence. B. Long term period -the duration. LAeq noise level measured over a period of not less than 15 minutes when the construction site is in operation, must not exceed the background level by more than 15dB(A) at the boundary of the nearest affected residence. 	As above.

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TABLE 1 – RESPONSE TO SUBMISSIONS		
AGENCY COMMENTS		RESPONSE
<ul style="list-style-type: none"> It is the responsibility of the applicant to restrict public access to the construction works site, construction works or materials or equipment on the site when construction work is not in progress or the site is otherwise unoccupied in accordance with Workcover NSW requirements and Occupational Health and Safety Regulation 2001. 		As above.
<ul style="list-style-type: none"> All work associated with this approval is to be carried out so as not to impact on the neighbourhood, adjacent premises or the environment. All necessary precautions, covering and protection shall be taken to minimise impact from: - <ul style="list-style-type: none"> Noise, water or air pollution dust during filling operations and also from construction vehicles material removed from the site by wind. 		As above.
<ul style="list-style-type: none"> The burning off of trees and associated vegetation felled by clearing operations or builders waste is prohibited. Such materials shall either be recycled or disposed of in a manner acceptable to Councils General Manager or his delegate. 		As above.
Sewer and Water		
Water Supply	<ul style="list-style-type: none"> The proponents shall provide a water supply system capable of serving all lots in the development by connection to the Tweed Shire Water Supply System including all works necessary in accordance with the provisions of Tweed Shire Council Development Design Specification D11. 	As above.
Rainwater Tanks	<ul style="list-style-type: none"> The subdivision will provide that the following minimum Sewer and Water requirements are mandatory for development on each lot created: <p>Single Dwellings:</p> <p>Minimum 5000L rainwater tank roof area connected to it.</p> <p>Multi Dwellings & other buildings:</p> <p>Rainwater tanks to be provided on a similar basis connecting 80% - 90% of the roof area</p> <p>These tanks shall be plumbed to provide water for external uses, toilet flushing and laundry cold water for washing machines.</p> 	As above.
Sewerage/Effluent Disposal	<ul style="list-style-type: none"> The subdivision shall be seweraged by conventional gravity sewerage including the construction of a sewerage pump station to service the lots west of Stott Street. The gravity sewer shall provide a connection point for further development to the south. A review of the risk of overflow at SPS2050 Bolwarra PI shall be carried out and any works required to ensure a low risk will be provided. Sewerage shall be designed in accordance with the provisions of Tweed Shire Council Development Design Specification D12. 	Noted. Analysis of existing sewer pump station storage capacity and mitigating measures are subject to detail design. This is not an absolute constraint on the development (see Revised Statement of Commitments).
Section 64 Development Contributions	<ul style="list-style-type: none"> Development contributions under S64 of the Local Government Act shall be made in accordance with Council requirements and at the prevailing rates. 	See revised Statement of Commitments.

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TABLE 1 – RESPONSE TO SUBMISSIONS	
AGENCY COMMENTS	RESPONSE
Environmental	
<ul style="list-style-type: none"> No physical works occur in any current or future (Draft as advertised) Environmental Protection zones. This includes clearing, roads, fences, provision of services, erosion and sediment control devices and access. 	See revised Statement of Commitments. Design complies.
<ul style="list-style-type: none"> An acceptable vegetation management plan is required prior to approval of concept plan. 	See revised Statement of Commitments.
<ul style="list-style-type: none"> The development shall be undertaken in accordance with approved staging plan. 	See Revised Statement of Commitments.
<ul style="list-style-type: none"> The high voltage power lines should be diverted underground as identified in the bushfire assessment prepared by Biolink. 	See revised Statement of Commitments.
CONDITIONS	
The following conditions are recommended. Additional conditions will be provided after review of the Preferred Project Report.	
Sewer <i>These conditions are considered to be appropriate in the event that individual privately owned sewage ejection pump stations or other onsite sewage management systems will be installed on allotments within the proposed subdivision.</i> Prior to the installation of any private sewage ejection pump station or other on-site sewage management system the applicant shall obtain approval to install under Section 68 of The Local Government Act 1993 or to the satisfaction of the Tweed Shire Council General Manager or his Delegate. Prior to the issue of the subdivision certificate the applicant shall obtain approval to operate under Section 68 of The Local Government Act 1993 to the satisfaction of the Tweed Shire Council General Manager or Delegate for any private sewage ejection pump station or other on-site sewage management system installed within the property boundary.	No private sewage ejection pump systems proposed As above.
Tweed Shire Council dated 24 June 2010 (in response to the original Preferred Project Report)	
PROPOSED LOT 59 (NOW LOT 61 IN ANNEXURE A)	
The Department of Planning required advice from Council stating that Council would not accept or did not require dedication of Lot 59 (now Lot 61).	Council responded by email on 26 November 2010 as follows: Please be advised that Council does not require dedication of Lot 59 (now Lot 61) provided there is a suitable Vegetation Management Plan for the site as well as an appropriate restriction on the use of the allotment to ensure it's ecological values are protected and maintained over time. This may be in the form of an 88B restriction on the title. An appropriate provision has been included in the Revised Statement of Commitments.

4.0 SUMMARY AND CONCLUSION

All relevant issues raised in the submissions have been addressed and where appropriate, the Application Plans have been amended to mitigate potential impacts and address the specific issue. In addition, the Statement of Commitments has been revised to include further measures to mitigate and manage potential adverse impacts.

In summary, the amendments to the project do not significantly change its scale and nature, but are considered to properly address the relevant issues.

Approval of the revised project is therefore considered to be sustainable and in the public interest based on the Revised Statement of Commitments.

Darryl Anderson Consulting Pty Ltd

A.C.N. 093 157 165
Town Planning & Development Consultants



ANNEXURE A Revised Plan of Proposed Subdivision Job No. 35054 Rev F, 4 May 2011 (3 Sheets)
– Landsurv Pty Ltd

Darryl Anderson Consulting Pty Ltd
A.C.N. 093 157 165
Town Planning & Development Consultants

Revised Preferred Project Report MP 05_0198
Project No: DIC 04/39 Part 2 – October 2011

Walmsleys Road & Stott Street
Bilambil Heights



**ANNEXURE B Amended Proposed Subdivision Plan Overlay on Aerial Photograph, Job
No. 35054-37401, Rev K, 4 May 2011 – Landsurv Pty Ltd**

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A.C.N. 093 157 165
Town Planning & Development Consultants



ANNEXURE C Plan of Proposed Staging, Job No. 35054, Rev F, 4 May 2011 – Landsurv Pty Ltd

Darryl Anderson Consulting Pty Ltd
A.C.N. 093 157 165
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Project No: DIC 04/39 Part 2 – October 2011

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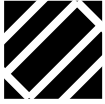
**ANNEXURE D Plan of Draft TLEP 2010 Overlay, Job No. 35054, Rev F, 4 May 2011, – Landsurv
Pty Ltd**

Darryl Anderson Consulting Pty Ltd
A.C.N. 093 157 165
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**ANNEXURE E Plan of Land To Be Dedicated To Council, Job No. 35054, Rev F, 4 May 2011 –
Landsurv Pty Ltd**

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ANNEXURE F Plan of Constraints, Job No. 35054, Rev F, 4 May 2011 – LandSurv Pty Ltd

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ANNEXURE G Draft Neighbourhood Management Statement

Darryl Anderson Consulting Pty Ltd
A.C.N. 093 157 165
Town Planning & Development Consultants

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Project No: DIC 04/39 Part 2 – October 2011

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ANNEXURE H Amended Engineering Plans (32 Sheets), April 2009, April, July, August, September 2010, June 2011 and Infrastructure Impact Assessment, 11 August 2011 – Opus Qantec McWilliam and Council Memos and Correspondence

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A.C.N. 093 157 165
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Council Memos and Correspondence

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A.C.N. 093 157 165
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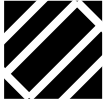


ANNEXURE I Landscape Design Intent Report (7 Sheets), 8 December 2010 – Form Landscape Architects

Darryl Anderson Consulting Pty Ltd
A.C.N. 093 157 165
Town Planning & Development Consultants

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Project No: DIC 04/39 Part 2 – October 2011

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ANNEXURE J Revised Statement of Commitments, September 2011

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A.C.N. 093 157 165
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**ANNEXURE K Tweed Development Control Plan 2008, Section A1 – Residential and Tourist Code,
Compliance Checklist – BDA Architecture, May 2010**

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A.C.N. 093 157 165
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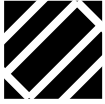


ANNEXURE L Revised Residential Character and Built Form Report – BDA Architecture, May 2010

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A.C.N. 093 157 165
Town Planning & Development Consultants

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**ANNEXURE M Ecological and Bushfire Planning Assessment and Proposed Vegetation
Management Plan, Objectives and Guiding Principles – Biolink Ecological
Consultants, June 2011**

Darryl Anderson Consulting Pty Ltd
A.C.N. 093 157 165
Town Planning & Development Consultants



ANNEXURE N Existing Gully Confirmation Report – Landsurv Pty Ltd, 17 September 2010

Darryl Anderson Consulting Pty Ltd
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Town Planning & Development Consultants

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Project No: DIC 04/39 Part 2 – October 2011

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**ANNEXURE O Email from Rowena Michel of Tweed Shire Council Dated 26 November 2010
Regarding Lot 59 (now Lot 61)**

Darryl Anderson Consulting Pty Ltd
A.C.N. 093 157 165
Town Planning & Development Consultants