



DARRYL ANDERSON CONSULTING PTY LTD

TOWN PLANNING & DEVELOPMENT CONSULTANTS

**PREFERRED PROJECT REPORT
MAJOR PROJECT APPLICATION NO. 08_0118**

**PROPOSED RESIDENTIAL SUBDIVISION
AT LOT 4 DP 876253 WILLOW AVENUE
BOGANGAR (SHIRE OF TWEED)**

PREPARED FOR:

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AUGUST 2010

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ANNEXURES

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ANNEXURE 2	Revised Engineering Impact Assessment, Rev 1, – Opus Qantec McWilliam Pty Ltd, 23 August 2010
ANNEXURE 3	Revised Statement of Commitments – Darryl Anderson Consulting Pty Ltd, August 2010
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ANNEXURE 6	Revised Cultural Heritage Assessment – Everick Heritage Consultants Pty Ltd, August 2010

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PREFERRED PROJECT REPORT

PROPOSED RESIDENTIAL SUBDIVISION – MP 08_0118 WILLOW AVENUE, BOGANGAR

1.0 BACKGROUND

On 13 April 2010 Major Project Application No. 08_0118 was lodged with the Department of Planning. The Environmental Assessment was publicly exhibited during April and May 2010 with the exhibition period closing on 28 May 2010.

On 7 June 2010 the Department of Planning forwarded copies of 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 may be required together with a revised Statement of Commitments.

This Preferred Project Report addresses the following issues:

- Description of proposed changes to the exhibited proposal and how these respond to the issues raised.
- A response to all issues raised by Council, State Agencies and members of the community.
- A revised Statement of Commitments.
- Revised technical reports as relevant.
- Amended plans.

2.0 SUMMARY OF MODIFICATIONS

2.1 Amended Subdivision Plan

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 retain a total of 12 residential lots and 1 residue lot but amending the layout of the allotments to improve lot shapes and frontages to Willow Avenue and to address concerns raised in relation to the configuration of proposed Lots 11 and 12;

The amended layout is shown on the amended Plan of Proposed Subdivision at **Annexure 1**.

2.2 Flooding Issues

The Amended Engineering Impact Assessment at **Annexure 2** addresses issues raised in the submissions relating to flooding, stormwater management and engineering issues generally.

2.3 Authorisation for Filling of the Subject Land

The copy of Development Consent No. 97/251 and related documents at **Annexure 5** demonstrate that the subject land was lawfully filled pursuant to the terms of that consent.

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.

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AGENCY RESPONSE	COMMENTS
DEPARTMENT OF PLANNING - 7 JUNE 2010	
<p>The exhibition of the Environmental Assessment for the above project ended on 28 May 2010. The Department has undertaken its own initial assessment of the proposal and has provided comments in Attachment 1. In addition to these comments, please find enclosed copies of the submissions received by the Department during the exhibition (Attachment 2).</p> <p>In accordance with section 75H of the Environmental Planning and Assessment Act 1979, the Director-General requires KenMar Farms Pty Ltd to respond to the issues raised in these attachments in a Submissions Report.</p> <p>If there are any proposed changes to the project to minimise its environmental impact, a Preferred Project Report may be required. The Statement of Commitments may need to be revised to reflect any proposed changes to the project.</p> <p>if you have any queries, please contact Tom FitzGerald using the details provided above.</p>	
Attachment 1	
<p>1. Earthworks</p> <p>a. Provide a plan of earthworks proposed on-site that clearly indicates the levels and areas of cut/fill to achieve the appropriate flood level (in consultation with Tweed Shire Council as set out below). Provide documented evidence of your consultation with Tweed Shire Council in this regard. Provide cross-sections at the adjacent property boundaries to the east and west in order to demarcate any differences in levels (AHD).</p>	<p>Onsite earthworks are limited to house pads and minor earthworks to crate Tweed Shire Council compliant driveway access only. House pads will provide a minimum pad level of RL 3.44m in accordance with the revised flood modelling outlined in Item 2 below and freeboard of 0.5m. A proposed earthworks site cross-section plan has been included in the amended Engineering Impact Assessment Revision 1(EIA-R1) see Annexure 2.</p>
2. Flooding	
<p>Coastal flooding from Cudgen Lake, the adjacent canal, and the potential impacts of climate change together pose a risk to the viability of the development and surrounding property. It is also noted that access to and from the site will be cut off by flooding in Willow Ave/Tamarind Ave in events less than the 1 in 20 year recurrence, effectively isolating the site:</p> <p>a. Refer to the recently completed Tweed-Byron Coastal Creeks Flood Study (2009) with regard to flooding from the Cudgen Lake/Creek catchment and undertake additional consultation with Council in this regard.</p> <p>b. In light of the findings of the recently completed .Tweed-Byron Coastal Creeks Flood Study (2009) and the Engineering Report provided by Opus at Annexure 18, the Department requires clear identification of the flood planning levels on the site. Provide a marked up flood hazard plan for the site showing the latest 100 year ARI, 100 year ARI + freeboard, and the 100 year ARI + sea level rise of 0.9m + freeboard in determining the coastal risk area' as it applies to the site now, and in the year 2100.</p>	<p>TDCCP2008, Section A3.2.6 does not require PMF flood evacuation routes or PMF refuge for new infill subdivisions or sites of less than 5 hectares (the subject site is zoned 2(a) and is approximately 1.5 hectares).</p> <p>Further flood modelling has been conducted to calibrate the model for the proposed development to the Tweed Byron Coastal Creeks Flood Study (2009). The results are provided in the amended Engineering Impact Assessment Revision 1 (EIA-R1) and conclude that the development does not cause additional flooding or increase flood risk to lots and dwellings adjacent to the site.</p> <p>A Flood Hazard Plan has been prepared for the existing and developed cases which identifies, the Q100 level in accordance with the Tweed-Byron Coastal Creeks Flood Study, the Q100 flood level + a freeboard of 0.5m and the impact on the development.</p> <p>The proposed dwellings will be at the 100 year ARI level + freeboard. In this regard the proposed mitigation measures comply with Council's DCP.</p>

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AGENCY RESPONSE	COMMENTS
<p>The plan should also include the Probable Maximum Flood (PMF) level for the site and show proposed lots and indicative building envelopes. -Note: DECCW have advised that Council are likely to raise their required freeboard in the area to 0.5m on Wednesday 9 June 2010.</p>	<p>A sensitivity analysis for the development site was conducted in accordance with the Department of Climate Change: Practical Consideration of Climate Change (2007). The sensitivity analysis consisted of modelling the lake level at the 2100 year flood level of R.L 3.4m (as a result of 0.9m sea level rise at the creek outlet) with a 30% increase in Q100 storm increase (as a result of climate change).</p> <p>The sensitivity analysis provided a 2100 flood level of R.L 3.42 which is 20mm lower than the present Q100 event + freeboard scenario therefore validating the Q100 + freeboard level as a reasonable design level.</p> <p>The Existing Flood Hazard plan has identified that all dwellings are within the extent of 100 year ARI + sea level rise (0.9) + freeboard scenario. As demonstrated on the proposed Flood Hazard Plan by undertaking minor filling to the building envelopes the flood planning area on the developed lots would be mitigated and the coastal risk reduced.</p>
<p>c. Using the above flood hazard plan above, provide an appropriately detailed flood risk assessment of the proposal that addresses the planning criteria (Section 4) set out in the DRAFT NSW Coastal Planning Guideline: Adapting to Sea Level Rise (DoP, October 2009). The purpose of this risk assessment is to determine whether the proposal lies within a coastal flood risk area (refer Figure 5 of the Coastal Planning Guideline), what impacts climate change affected flooding will have on the proposal and surrounding development (including depth and flows), and to provide for specific flood risk avoidance or mitigation options. Particular regard shall be had to mitigating any effects of the as yet unspecified earthworks on flooding in adjacent properties.</p> <p>d. Justify why different catchment areas have been used in Figures 8.1 (existing catchments A & B) and 8.2 (proposed Catchments C & D) of the Engineering Report (Annexure 18). This has the result of reducing the anticipated local discharges post-development.</p> <p>e. Please provide an assessment of how the principles of Water Sensitive Urban Design have been incorporated into the proposed stormwater management from the Willow Avenue catchment (Catchment D in Figure 8.2).</p>	<p>A portion of the site situated within the sea level rise planning area and therefore within the coastal risk areas as detailed in the Draft NSW Coastal Planning Guideline: Adapting to Sea Level Rise (DoP, October 2009). The Existing Flood Hazard plan has identified that all dwellings are within the extent of 100 year ARI + sea level rise (0.9) + freeboard scenario. As demonstrated on the proposed Flood Hazard Plan by undertaking minor filling to the building envelopes the flood planning area on the developed lots would be mitigated and the coastal risk reduced. Furthermore the proposed dwellings refuge area previously discussed has been provided to mitigate the risk. Minor filling will be required to ensure proposed house pads are at the Q100 level + 0.5m freeboard. Flood modelling (attached within the EIA-R1) demonstrates the minor filling has no impacts on adjacent lots.</p> <p>The proposed catchments C and D in Figure 8.2 of the EIA-R1 are reduced in comparison to the existing catchments A and B as the roof water will be discharged to a rainwater tank with overflows directed to an infiltration trench. The infiltration trenches discharge to the canal at the rear of the site thus removing the roof areas from the catchment that discharge to the roadway.</p> <p>The new roadwork is the formalisation of kerb on the existing site road frontage as required by the Tweed Shire Council Development Control Plan (DCP) Section A5-Subdivision Manual. The Council DCP requires a "deemed to comply" device such as a GTP to treat flows from paved hardstand areas. Due to physical constraints from the existing road and drain and pipe drainage levels and probable backflow issues a GTP has not been included in the development. The development is only providing limited additional paved areas (road widening and driveways) causing a negligible contribution to pollutants. Roof water will be discharged to rainwater tanks and infiltration trenches in accordance with WSUD techniques.</p>

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AGENCY RESPONSE	COMMENTS
<p>3. Vegetation</p> <p>a. Provide a plan that clearly identifies all trees/vegetation on-site to be removed or retained, or alternatively make provision for this within any Vegetation Management Plan.</p>	<p>Appropriate provisions will be included in the Vegetation Management Plan. See Revised Statement of Commitments at Annexure 3.</p>
<p>4. Future Built Form - Design Guidelines</p> <p>a. Sections 8.2 and 8.4 of the Environmental Assessment (EA) are contradictory - on one hand it is stated that no buildings are proposed as part of the proposal, however section 8.4 then goes on to specify limitations on any buildings constructed and no assessment of this is provided. In light of this provide an assessment of the proposed s.88B restrictions on title against the provisions of the Coastal Design Guidelines for NSW, the North Coast Urban Design Guidelines, and any other relevant documents. This will require an updated version of the visual impact assessment, as future built form is explicitly not considered in the assessment. Alternatively you may delete the proposed restrictions on title and provide an updated Statement of Commitments reflecting this.</p>	<p>These have been deleted – see Revised Statement of Commitments at Annexure 3.</p>
<p>5. Statement of Commitments</p> <p>a. The SoC must be updated to include all recommendations in the various expert reports (as attached to the EA) that are to be adopted in the project. This provides the Department with certainty over exactly what recommendations are to be adopted e.g. VMP, information kit to residents regarding 'Streamwatch' etc.,</p>	<p>See Revised Statement of Commitments at Annexure 3.</p>
<p>Attachment 2</p>	
<p>Kym Coomber – Online Submission</p> <p>As an adjoining owner I would like to support this proposal in general but only on the basis that no further filling works be carried out on this site. I would like it noted that any further filling of the site will be detrimental to all properties in this area. Further filling of this site will only help to increase flooding in this area as filling will alter the natural course of any floodwaters. In the past we have asked Tweed Shire Council if we could construct a 900mm high concrete block fence around our property at 23 Willow Avenue and quite remarkably we were advised that it would not be approved by Council as it would alter the course of any flood waters. Therefore, I find it ridiculous if further filling of this 13 lot subdivision site be carried out (extensive filling has already been carried out a couple of years ago). The legalities & issues for Tweed Shire Council if flooding does occur to greater heights than previous flood heights could become an expensive problem for both Tweed Shire Council and the NSW Government.</p>	<p>Refer response to Item 2 for details regarding site filling and stormwater flooding impacts.</p>
<p>Scot Coomber</p> <p>11 Willow Avenue Bogangar NSW 2488</p> <p>I am writing in response to a proposal for a residential subdivision in Willow Avenue Bogangar that has been advertised by NSW Planning for submissions by the public.</p>	<p>Refer response to Item 2 for details regarding site filling and stormwater flooding impacts.</p> <p>Filling of three lots fronting Poplar Avenue and the subject land and the creation of the water quality control pond in the existing canal adjacent to Cudgen Lake was approved by Development Consent No. 97/251 (see Annexure 5).</p>

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AGENCY RESPONSE	COMMENTS
<p>As an adjoining neighbour I would like to object to this development on the grounds that the land has been built up over many years to a level that will increase flood levels in the immediate and surrounding areas. My concern is that the land will apparently be built up even more to be in line with the current flood level height as determined by Tweed Shire Council.</p> <p>During the time that we have lived here and through periods of high rainfall the parcel of land in question has allowed excess water from the adjoining canal to disperse over the land but now this will no longer happen and our property basically becomes a basin for any flood waters. Who will be responsible when the rainfall is actually lower than in previous floods yet the flood level is at a greater height due to nowhere else for the water to go? Also, is the filling of the land in regards to the change to ground level been done with the required approvals from Tweed Shire Council?</p> <p>I am sure anyone and everyone in our situation as an adjoining neighbour to such a development proposal whereby the adjoining land is a lot higher than their own would have concerns when the area is already in a flood zone.</p>	
<p>MB & CT Jameson</p> <p>I wish to make a comment regarding the subdivision above; we reside at Lot 635 Willow Avenue, which is situated between the Cudgen Lake and the proposed subdivision; with the canal being located behind our block. Our house was constructed in 2000 and was built at the current flood level as per Tweed Shire Council requires.</p> <p><u>Level of land on proposed subdivision:</u></p> <p>Allegedly this block of land has been lawfully filled many years ago. Between the years of 2000 and early 2005 this land had additional fill placed on the block to raise it to the current level which is 745mm above the level of our block.</p>	<p>Refer response to Item 2 for details regarding site filling and stormwater flooding impacts.</p> <p>DA97/251 and DA85/763 authorise filling of the land (see Annexure 5).</p>
<p>I have contacted Tweed Shire Council and spoke to town planner Denis Gally, I was under the impression that the excess fill had been approved by council; but was informed there had been no DA approved for additional landfill. The only DA on record was the Friday Island DA that was approved in 1976. I can only assume that Mr Ken Hansen is still working under this DA. I find it difficult to fathom that such an influential developer of the Bogangar region would not be concerned of the implications the additional fill may have on the surrounding areas during periods of flooding.</p> <p><u>Access to Willow Avenue:</u></p> <p>The only access to Willow Avenue is via Tamarind Avenue, during times of heavy rain and storms it is common for Tamarind Avenue to become flooded; which makes it difficult to access Willow Avenue. During the 2005 flood access to Willow Avenue was completely cut off from cars for at least a period of five days and the only way in was by watercraft.</p>	<p>The majority of the site was filled prior to 2000 as on 3rd January 2000 Hansen Developments Pty Ltd requested the final approval and release of the bond for the filter / sediment pond, which was the only source of fill for the site. Sheds were located on the eastern part of the site and filling around that area was therefore delayed (and the material was stockpiled) until such time as the sheds were removed and the fill material was finally placed in the resulting depressions.</p> <p>The flooding peaked at 5pm on Friday and early the next morning there were NRMA vehicles in Tamarind Ave. The road was accessible (not dry) within 24 hours. This claim is disputed.</p>

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AGENCY RESPONSE	COMMENTS
<p><u>Drainage:</u></p> <p>I spoke to Danny Ross from Tweed Shire Council about drainage. I find it alarming that the majority of the storm water from Bogangar is directed into the Canal or the Cudgen Lake. In addition to this there is also the runoff from Round Mountain, Tangle Wood and the pipes that flow from the Casuarina and Salt development into Cudgen Creek; it is no wonder why the 2005 flood so drastically affected the lower area of Bogangar.</p> <p>Council has spent time clearing the drains since 2005, but when the water level reaches the height of the drains they are rendered useless. Kings Forest is a large housing estate that will be situated on the Northern side of the Cudgen Lake. When I asked Mr Ross, if the new development is approved where will the storm water go? Surprisingly the answer was Cudgen Creek.</p> <p>One would presume that the lesson learned from the 2005 flood if anything, would be that the Cudgen Creek/ Cudgen Lake couldn't cope with this capacity of water during a major flood.</p> <p><u>Flooding:</u></p> <p>The worst flood we have witnessed since living in Willow Avenue was in 2005; the water rose extremely fast. A staggering 1100mm from 3am to 3pm on that day was recorded at our house. Our yards and lower area of the house were inundated to the point where the bottom level of the house was 485mm underwater. The inundation was an accumulation of water from the Lake, Canal and the runoff from the adjoining block of land.</p> <p><u>Conclusion:</u></p> <p>I have been asked if I think the flooding is becoming worse; although I have not compared rainfall figures I do believe that the water levels are rising quicker. The 2005 flood demonstrated just how rapidly this influx of water could occur. Mr Ross assured me that this was a once in a century flood; I sincerely hope he is correct. One must take into account that the sea levels are rising and global warming is taking its toll, I believe these kinds of severe floods will only become more frequent. It is no longer a question of if this type of flooding will occur again, but when. Therefore with concerns that the proposed development may require the land to be raised again, and with no adequate drainage available in large flood situations, I am opposed to this development.</p>	<p>The stormwater drainage and flooding issues discussed are a result of the regional drainage issues and as such are influenced by the regional catchments which include but are not limited to the development site. The site stormwater drainage currently contributes to this network and additional flows would be negligible in relation to the Cudgen Lake catchments.</p> <p>The development site and adjacent lots are located within a flood plain and as demonstrated in flood modelling (refer attached EIA R1), the proposal does not increase flooding within the site or adjacent lots.</p> <p>Sea level rise and climate change impacts have been addressed in Item 2. The development does not result in additional flooding from climate change and sea level rise.</p>
TWEED SHIRE COUNCIL – 26 MAY 2010	
<p>I refer to your letter dated 16 April 2010 in which you request comments regarding the abovementioned Environmental Assessment (EA) currently on exhibition.</p> <p>Council Officers have reviewed the EA and have provided comments as detailed below. Also attached to this response is the report to Council and the mayoral minute. Please note that as part of the mayoral minute, Council resolved to separately write to the Planning Minister stating its dissatisfaction with the current part 3A process.</p>	NIL

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AGENCY RESPONSE	COMMENTS
<p>Due to the limited timeframes provided by the Department of Planning, Council officers have not been able to provide a detailed assessment of engineering matters relating to the subject proposal. A preliminary review of the submitted plans raises concerns regarding the provision of public road and drainage infrastructure in Willow Avenue, potential flooding of adjoining land, the configuration of lots including shared driveway accesses, grading of lots to Willow Avenue and lawful stormwater discharge to the residual lot at the rear.</p> <p>The development must comply with Council's Subdivision Manual (Development Control Plan Section A5) and its referenced design and construction specifications in order to ensure that all public infrastructure provided in conjunction with the subdivision is of an appropriate standard, and so that the development works will not adversely impact on adjoining land or existing infrastructure and development in the area. Based on the information provided by the applicant, Council officers cannot properly determine whether the subdivision is capable of achieving these requirements.</p> <p>As such Council is unable to recommend conditions of consent that will guarantee a valid and workable consent can be issued. If based on this advice the Department considers it appropriate to grant approval to the development, Council officers can provide consent conditions within an appropriate timeframe, however the Department would in doing so accept all risk associated with the feasibility of the development and any adverse impacts of the development on the locality. Further it may not be possible for Council to adequately maintain in the future faulty public infrastructure assets.</p> <p>Alternately, and preferably, the Department could provide Council officers with additional time to carry out a detailed assessment of the application in order to properly identify the amendments to the application and/or additional information necessary to demonstrate a compliant and acceptable the subdivision design and servicing plan. This would enable the Department to issue the applicant with a request for information that would assist the applicant in satisfying Council's usual requirements.</p> <p>It is considered that the Department's approach to the assessment of the subject major project is wholly inadequate and unreasonable, due to the limitations placed on Council, being the public authority that ultimately accepts maintenance responsibility of new public infrastructure, and that inherits the problems associated with developments that adversely impact on the existing community and environment.</p>	<p>NIL</p> <p>The Revised Statement of Commitments includes an undertaking to comply with Section A5.</p> <p>The EIA-R1 addresses and references the applicable sections of Council's Subdivision Manual.</p> <p>NIL</p> <p>NIL</p> <p>NIL</p>

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AGENCY RESPONSE	COMMENTS
<p>As the Department clearly does not have adequate technical expertise in the area of infrastructure provision, ample opportunity should be provided at the major project application stage to resolve issues relating to compliance with Council's DCPs and specifications, with relatively minor issues relating to be dealt with via conditions of consent and the construction certificate details. Reliance on consent conditions to resolve key issues a part of the construction certificate process usually proves to be a more difficult and confrontational process when the applicant has already gained a development consent with stamped subdivision plans.</p>	
<p>Acid Sulfate Soils and Dewatering</p> <ul style="list-style-type: none"> It is noted that the submission does not indicate whether or not dewatering is required. As the EA indicates that groundwater levels on the site are variable, consideration should be given to potential dewatering during placement of services. Any dewatering requirements will require close scrutiny and treatment/controls to ensure minimal impact on Cudgen Lake. 	<p>As outlined in the EA groundwater was encountered at 2-3 metres below the existing ground level. The minor earthworks relating to building pads, driveway construction and services trenching are not expected to encounter groundwater. A Dewatering Management Plan is not required.</p>
<p>Contaminated land</p> <ul style="list-style-type: none"> The EA states within the site history review and soil analysis that the subject land is not contaminated. However, Council considers that confirmation (statutory declaration) should be provided from a person with suitable historical knowledge which confirms that fill material was not introduced to the site from sand mining activities which may have contained potential radioactive materials. 	<p>See Statutory Declaration at Annexure 4.</p>
<p>Water Quality Monitoring</p> <ul style="list-style-type: none"> In regards to the Water Quality Monitoring Program (WQMP) nominated under the Soil and Water Management Plan, Opus November 2009, the Monitoring Frequency provisions do not appear appropriate. It is considered that the monitoring frequency provisions do not frequent enough during critical earth works periods. Also, Council is unsure exactly what the references to 'as per 26' and 'as per 29' in the Reporting section mean and the document does not identify the stormwater detention areas or monitoring locations. The applicant should be requested to provide a modified WQMP for consideration. 	<p>Due to the relatively small size of the subdivision construction time would likely be 8-10 weeks therefore water quality monitoring has been increased to fortnightly too better suit the timeline of the project.</p> <p>Please refer amended Soil and Water Management Plan appended in the attached EIA –R1 for details regarding revised section references.</p>
<p>Sewerage</p>	
<ul style="list-style-type: none"> It is noted in the EA (Section 11) that some significant errors in the detail in the calculation of Peak wet Weather Flows (PWWF) appears to be in an order of magnitude above Tweed Shire Council (TSC) estimates for this pump station. The EA-PWWF for ultimate development states 258L/s compared with TSC'S estimate of 12.4L/s. However, despite this obvious error, the correct conclusion that the existing sewer pump station was capable of receiving the additional flow from 12 new lots was reached. 	<p>Sewer calculations have been amended and are detailed in the EIA-R1. The amended sewer calculations result in a future sewer flow of 12 L/s at the sewer pump station within the capacity of the existing sewer pump station.</p>

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AGENCY RESPONSE	COMMENTS
Planning Matters	
<ul style="list-style-type: none"> It is considered that proposed Lot 12's configuration is not appropriate given that it only has minimal road frontage and requires a right of carriageway to gain lawful access. <p>Also, the orientation of this allotment is not desirable given the close location of Council's sewerage pump station. Council will also require constant access to the sewerage pump station for maintenance and future upgrading works and it is considered that the orientation of the allotment may obstruct these activities.</p>	See Amended Plan of Subdivision at Annexure 1 .
<ul style="list-style-type: none"> It is considered that proposed Lots 3 and 4 do not achieve good planning outcomes as the nominated lot frontage for these two lots are only 4.0m in width. As this is a greenfield development, it is considered that it would be a better planning outcome if the frontages were wider than 4.0m and have a more regular configuration. 	The Amended Subdivision Layout Plan at Annexure 1 provides for a 9.12m alignment frontage for Lot 3 and a 6.75m alignment frontage for Lot 4. Clearly, the frontage at the building line (ie. 6m from the street alignment) will be more than adequate to enable a compliant dwelling to be sited.
<ul style="list-style-type: none"> Appropriate buffers to the rear of all allotments should be imposed as they adjoin the 7(1) Environmental protection (Habitat) Zone. 	The location of the 7(l)/2(a) boundary was determined at the time of gazettal of Tweed Local Environmental Plan 2000 Amendment No. 7 which was informed by a Local Environmental Study. Negotiations occurred between Council and the applicants at that time to ensure that the location of the zone boundary provided adequate buffers to the existing artificial waterway and it was agreed that the buffers would be zoned 7(l). It is therefore submitted that no additional buffers should be required, however buildings are intended to be sited towards the Willow Avenue frontage of the site generally as shown on the Indicative Building Envelopes Plan forming Annexure 8 of the Environmental Assessment. This provides suitable buffers by way of mown lawns, etc. to the 7(l) zoned land.
Ecology	
Council considers this site to be within an ecologically sensitive area and therefore respectfully requests the Department of Planning to have due consideration.	See comments above.
Contributions	
Contributions will be provided upon request by the Department of Planning.	NIL
Integrated Water Cycle Management <ul style="list-style-type: none"> It is a requirement within the Tweed that all new development include a commitment to mandate a minimum rainwater tank size in accordance with Council's Demand Management Strategy: <p>Single Dwellings Minimum 5000L rainwater tank with a minimum 160 m2 roof area connected to it.</p> <p>These tanks shall be plumbed to provide water for external uses, toilet flushing and laundry cold water for washing machines.</p>	See Annexure 2 and Revised Statement of Commitments at Annexure 3 .

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AGENCY RESPONSE	COMMENTS
<p>In addition to these comments, a list of recommended conditions (but not exhaustive) have been attached for your consideration.</p> <p>Should you require further information regarding any of these matters please contact Adam Henson on (02) 6670 2661</p>	
DECCW – 27 MAY 2010	
<p>I refer to the Environmental Assessment and accompanying information provided for the above proposal received by the Department of Environment, Climate Change and Water (DECCW) on 20 April 2010.</p> <p>DECCW has reviewed the information provided and has determined that it is able to support the proposal subject to the Department of Planning seeking amendments to the draft Statement of Commitments, identified in Attachment 1. Attachment 2 contains DECCW's assessment of the proposal, including justification for the amendments.</p> <p>It is expected that DECCW will be given an opportunity to review the draft Director-General's Environmental Assessment Report for this proposal. If the amendments to the draft Statement of Commitments are not included to the satisfaction of DECCW, we will be recommending that they are included as Conditions of Approval, if approval is recommended by the Department of Planning. It should be noted that these amendments are important for DECCW's ongoing support of the proposal.</p> <p>Should there be any other matters, or should the Department of Planning be in possession of any further information of interest to the DECCW associated with the proposed development, please contact Adrian Deville on (02) 6640 2514.</p>	
ATTACHMENT 1 -STATEMENTS OF COMMITMENT AND RECOMMENDED CONDITIONS	
A) ADDITIONAL STATEMENTS OF COMMITMENTS	
<u>Biodiversity Conservation</u>	
<p>(Additional Statements of Commitment (underlined))</p> <p>7.1.1 A Vegetation Management Plan will set out strategies and procedures to protect and enhance the retained vegetation (habitat) within Land Parcel A, <u>based on the principles recommended in the Flora and Fauna Assessment (JWA, 2009, Annexure 15, pp10-17 of the EA).</u></p> <p>7.1.2 Potential habitat will be extended to Include the revegetated buffer between the rear lot boundaries EEC. <u>The VMP for this work will establish suitable on ground techniques and targets, species selection for replanting and commitment to follow-up works, to ensure enhanced conservation value and connectivity of this area.</u></p> <p>7.1.3 <u>Strategies for minimising new residents' Potential impacts on the nearby Cudgen Lake Nature Reserve and the EEC to the south of the residential development as recommended in the Flora and Fauna Assessment (JWA, 2009, Annexure 15 of the EA) will be implemented.</u></p>	<p>Included in Revised Statement of Commitments at Annexure 3.</p> <p>Included in Revised Statement of Commitments at Annexure 3.</p> <p>Included in Revised Statement of Commitments at Annexure 3.</p>

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AGENCY RESPONSE	COMMENTS
<u>Aboriginal Cultural Heritage</u>	
<p><u>Additional Statement of Commitment</u></p> <p>Written evidence will be provided that the opinion of Bo Lourey and John Cavanagh (representing Ngarakwal) and Jackie McDonald (representing Gold Coast Native Title Group) has been sought and appropriately incorporated into the development proposal.</p>	<p>See Revised Cultural Heritage Assessment at Annexure 6.</p>
<p><u>Flooding Considerations</u></p> <p><u>Further consultation with Council will be undertaken regarding minimum fill and floor level requirements and issues surrounding isolation of the site and evacuation in the event of a flood, with the proposal to be modified as appropriate.</u></p>	<p>Refer response to Item 2 for details regarding site filling and stormwater flooding impacts.</p>
<u>(B) RECOMMENDED CONDITIONS</u>	
<p>DECCW recommends that the following be incorporated by the Department of Planning as Conditions of Approval in relation to this proposal:</p>	
<p>1. If Aboriginal cultural objects are uncovered due to the development activities, all works must halt in the immediate area to prevent any further impacts to the object(s). A suitably qualified archaeologist and Aboriginal community representatives must be contacted to determine the significance of the object(s). The site is to be registered in the AHIMS (managed by DECCW) and the management outcome for the site included in the information provided to the AHIMS. It is recommended that the Aboriginal community representatives are consulted in developing and implementing management strategies for all sites, with all information required for informed consent being given to the representative for this purpose.</p>	<p>This requirement has been included in the Revised Statement of Commitments at Annexure 3.</p>
<p>2. If human remains are located during the project, all works must halt in the immediate area to prevent any further impacts to the remains. The NSW Police, the Aboriginal community and DECCW are to be notified. If the remains are found to be of Aboriginal origin and the police consider the site not an investigation site for criminal activities, DECCW should be contacted and notified of the situation and works are not to resume in the designated area until approval in writing is provided by DECCW. In the event that a criminal investigation ensues, works are not to resume in the designated area until approval in writing from NSW Police and DECCW.</p> <p>3. All reasonable efforts must be made to avoid impact to Aboriginal cultural heritage values at all stages of the development works. If impacts are unavoidable, mitigation measures are to be negotiated with the Aboriginal community and DECCW.</p> <p>4. The applicant must continue to consult with and involve Aboriginal representatives in the ongoing management of the Aboriginal cultural heritage values for the project.</p> <p>5. It is recommended an Aboriginal Cultural Heritage Education Program be developed for the induction of personnel and contractors involved in the construction activities on site. The program should be developed in collaboration with the Aboriginal community.</p>	<p>This requirement has been included in the Revised Statement of Commitments at Annexure 3.</p> <p>This requirement has been included in the Revised Statement of Commitments at Annexure 3.</p> <p>See Revised Cultural Heritage Assessment at Annexure 6.</p> <p>The project Heritage Consultant concludes that this is unnecessary given the size of the site and depth of existing fill and as only minor works are proposed.</p>

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AGENCY RESPONSE	COMMENTS
ATTACHMENT 2 - DECCW'S ASSESSMENT	
<u>Biodiversity Conservation</u>	
Overview of Impacts on Biodiversity	
Taken as a whole, the central EA Report and associated Annexures offer various principles and practices to be implemented on and off the development site concerning avoidance, mitigation and compensation for impacts (or possible impacts) on vegetation, habitat and fauna. The ecological impact assessment and a range of proposed measures to avoid, mitigate and compensate for impacts appear to meet DECCW's requirements. However, DECCW notes that such an assessment of the proposal is largely reliant upon commitment to the development and implementation of a future vegetation management plan (VMP), as recommended and outlined in the Flora and Fauna Assessment prepared by James Warren and Associates (JWA) in Annexure 15. The specifics of such a VMP cannot yet be assessed, while the wording provided in the draft Statements of Commitment leaves some scope for ambiguity.	Noted.
Statements of Commitment	
The Draft Statements of Commitment (SoCs) have been structured in terms of meeting the 'Environmental Outcome' of protecting 11 threatened species of flora as identified in the James Warren and Associates Report (November 2009)", which suggests a connection between the proposed VMP and various principles and practices recommended by JWA for incorporation into such a VMP (pp10-17 of Annexure 15). However, this is not explicit in the SoCs (discussed below), and further, the 'environmental outcome' in the draft SoCs makes no reference to threatened species of fauna, endangered ecological communities or their habitats, the inclusion of which would better ensure commitment to compliance with the Threatened Species Conservation Act (1995). DECCW recommends alteration of the wording of the 'environmental outcome' in the SoCs to reflect this concern.	Noted.
<p>In the documentation provided, the overarching 'environmental outcome' is to be sought through commitment to two key 'Measures':</p> <p>7.1.1 A Vegetation Management Plan will set out strategies and procedures to protect and enhance the retained vegetation (habitat) within Land Parcel A.</p> <p>7.1.2 Potential habitat will be extended to include the revegetated buffer between the rear lot boundaries EEC.</p> <p>In order to make explicit the connection between the expressed intentions, principles and practices for vegetation loss avoidance and mitigation as set out in the JWA flora and fauna assessment (ie pp10-17 of JWA Annexure 15) and other supporting proposal components (ie Landscape Concept Plan by LVO Architecture, Annexure 9), DECCW recommends some rewording of the statement of commitments as follows:</p>	See Revised Statement of Commitments at Annexure 3 .

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AGENCY RESPONSE	COMMENTS
<p>7.1.1 A Vegetation Management Plan (VMP) will set out strategies and procedures to protect and enhance the retained vegetation (habitat) within Land Parcel A <u>based on the principles recommended in the Flora and Fauna Assessment (JWA, 2009, Annexure 15, pp10 -17 of the EA.</u></p> <p>In the case of protecting and buffering the identified Swamp Schlerophyll Forest EEC fringing the canal system to the rear of the development site, DECCW is supportive of the intentions expressed in the documentation as a whole to protect and rehabilitate this EEC and to extend general habitat areas between the EEC and the rear boundaries of the proposed residential subdivision. While DECCW would generally prefer to see a more significant vegetative buffer to such a riparian EEC (such as 50m from residential development)', the proposal to revegetate and protect the EEC in the area outside the residential lots with native vegetation would be regarded as satisfactory, provided it is clearly tied to the proposed VMP, as suggested in the JWA report (Annexure 15, p34), which recommends "revegetating the land from the EEC to the lot boundaries forming a buffer to the EEC and Increasing the width and habitat value of the Vegetation along the canal." DECCW understands that a bushfire assessment has been made in relation to this land parcel and that bushfire asset protection is to be located within the proposed residential lots with a 9m Asset Protection Zone (APZ) to be maintained by residents, allowing scope for native vegetation buffering and enhancement as described above. However, DECCW also notes that the Landscape Concept Plan by LVO Architecture (Annexure 9) suggests a significantly smaller revegetation area is proposed than this, which taken together with the general EA report, produce an ambiguous proposal. Given DECCW's position on buffering EECs, that there appears to be limited bushfire threat concern and the more generous recommended program of revegetation in the JWA report, <u>DECCW recommends the amendment of the existing SoC as follows:</u></p>	<p>This requirement has been included in the Revised Statement of Commitments at Annexure 3.</p>
<p>7.1.2 Potential habitat will be extended to include the revegetated buffer between the rear lot boundaries EEC. The VMP for this work will establish suitable on around techniques and targets, species selection for replanting and commitment to follow-up works, to ensure enhanced conservation value and connectivity of this area.</p>	<p>This requirement has been included in the Revised Statement of Commitments at Annexure 3.</p>
<p>A range of threats to the EEC have been identified including gradual human impacts through vegetation losses and human uses of EEC areas, to be addressed through educative and informative processes that target new residents. These intentions are supported by DECCW, but again, as they appear to largely be incorporated in the development and adoption of a future VMP, <u>DECCW recommends that the development, adoption and implementation of such a VMP, with associated monitoring and reporting measures, is made a condition of approval though a suitable rewording of the existing SoCs,</u> as outlined above.</p>	<p>This requirement has been included in the Revised Statement of Commitments at Annexure 3.</p>

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AGENCY RESPONSE	COMMENTS
<p>As required by the DGR 7.3, a range of impacts on the nature reserve are identified as likely, related to increased residential density in the area. Various strategies are again suggested in Annexure 15 (pp35-40). While DECCW is supportive of all such strategies, it is noted that these recommendations are not explicitly reflected in the SoCs. <u>DECCW recommends that an additional SoC be included in this proposal to ensure that the above impact management strategies become conditions of approval, as follows:</u></p> <p>7.1.3 Strategies for minimising potential impacts from new residents on the nearby Cudgen Lake Nature Reserve and the EEC to the south of the residential development as recommended in the Flora and Fauna Assessment (JWA, 2009, Annexure 15 of the EA) will be implemented.</p>	<p>This requirement has been included in the Revised Statement of Commitments at Annexure 3.</p> <p>This requirement has been included in the Revised Statement of Commitments at Annexure 3.</p>
<p>The White Eared Monarch</p> <p>Page 76 of the Flora and Fauna Assessment (JWA, 2009, Annexure 15) indicates that the threatened White Eared Monarch was recorded on site in Table 3, however elsewhere, it is reported only as a species that could possibly occur on site. DECCW's assessment of this report has been conducted on the assumption that this was reported in error given that further consideration was not given to this species.</p>	<p>James Warren and Associates advise that the species was considered to possibly occur.</p>
<p>Monitoring and Reporting</p> <p>It is stated in the table of Statement of Commitments, that "Monitoring and reporting incidents to be recorded in the Incident Register and details to be included in the quarterly Compliance Report". It is not clear which Incident register is being referred to and reporting to whom is required? <u>DECCW recommends that greater clarity is provided in relation to this SoC.</u></p>	<p>This requirement has been included in the Revised Statement of Commitments at Annexure 3.</p>
<p>Aboriginal Cultural Heritage</p> <p>A review of the documentation was undertaken including the Attachment entitled <i>Cultural Heritage Assessment, Willow Avenue, Bogangar, NSW - Report Prepared for Kenmar Farms Pty Ltd</i>, dated November 2009, to assess the potential impacts of the project on Aboriginal Cultural Heritage (ACH) values. It is noted that this assessment report has not supplied written evidence documenting the opinions of the Aboriginal community groups involved in the consultation process. These groups would include:</p> <ul style="list-style-type: none"> • Bo Lourey and John Cavanagh (representing Ngarakwal); and, • Jackie McDonald (representing Gold Coast Native Title Group). 	
<p>It is therefore recommended that prior to making its determination, the Department of Planning should ensure that the proponent can demonstrate that it has sought the opinions of these parties and that these have been satisfactorily incorporated into their proposal. As <u>such</u>, <u>DECCW recommends that an additional statement of commitment be provided</u>, as follows:</p>	

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AGENCY RESPONSE	COMMENTS
<ul style="list-style-type: none"> • <u>Written evidence will be provided that the opinion of Bo Lourey and John Cavanagh (representing Ngarakwal) and Jackie McDonald (representing Gold Coast Native Title Group) has been sought and appropriately incorporated into the development proposal.</u> 	See comments at Page 8.
<p>In addition, DECCW recommends that the following be incorporated by the Department of Planning as Conditions of Approval in relation to this proposal:</p> <p>6. If Aboriginal cultural objects are uncovered due to the development activities, all works must halt in the immediate area to prevent any further impacts to the object(s). A suitably qualified archaeologist and Aboriginal community representatives must be contacted to determine the significance of the object(s). The site is to be registered in the AHIMS (managed by DECCW) and the management outcome for the site included in the information provided to the AHIMS. It is recommended that the Aboriginal community representatives are consulted in developing and implementing management strategies for all sites, with all information required for informed consent being given to the representative for this purpose.</p> <p>7. If human remains are located during the project, all works must halt in the immediate area to prevent any further impacts to the remains. The NSW Police, the Aboriginal community and DECCW are to be notified. If the remains are found to be of Aboriginal origin and the police consider the site not an investigation site for criminal activities, DECCW should be contacted and notified of the situation and works are not to resume in the designated area until approval in writing is provided by DECCW. In the event that a criminal investigation ensues, works are not to resume in the designated area until approval in writing from NSW Police and DECCW.</p> <p>8. All reasonable efforts must be made to avoid impact to Aboriginal cultural heritage values at all stages of the development works. If impacts are unavoidable, mitigation measures are to be negotiated with the Aboriginal community and DECCW.</p> <p>9. The applicant must continue to consult with and involve Aboriginal representatives in the ongoing management of the Aboriginal cultural heritage values for the project.</p> <p>10. It is recommended an Aboriginal Cultural Heritage Education Program be developed for the induction of personnel and contractors involved in the construction activities on site. The program should be developed in collaboration with the Aboriginal community.</p>	<p>See Revised Statement of Commitments at Annexure 3.</p> <p>As above.</p> <p>As above.</p> <p>See Revised Cultural Heritage Assessment at Annexure 6.</p> <p>See comments at Page 9, Item 5.</p>
<p><u>Flooding Consideration</u></p> <p>It is noted that the 2(a) zoned sites have been filled to 3.4m AHD.</p> <p>In March 2010 Tweed Shire Council completed its Tweed-Byron Coastal Creek Flood Study which included Cudgen Creek, Cudgen Lake, Bogangar and the subject site.</p>	

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AGENCY RESPONSE	COMMENTS
<p>This study showed a 1 in 100 year flood level at Willow Avenue of 2.92m AHD. The climate change assessment indicated that the 1 in 100 year flood level at the subject site could increase by up to 0.5m by 2100. The study also indicated that the only access from the Willow Avenue site, Tamarind Avenue, will be flooded in events less than the current 1 in 20 year recurrence.</p> <p>In light of the above findings, DECCW therefore recommends the inclusion of the following additional SoC:</p> <p><u>Further consultation with Council will be undertaken regarding minimum fill and floor level requirements and issues surrounding isolation of the site and evacuation in the event of a flood, with the proposal to be modified as appropriate.</u></p>	<p>Refer response to Item 2 Flooding Considerations for details regarding additional consultation and provisions regarding refuge areas as a result of site access during flood events.</p>
<p>ROADS AND TRAFFIC AUTHORITY – 6 MAY 2010</p>	
<p>I refer to your letter dated 16 April 2010 regarding the above major project application.</p> <p>The Roads and Traffic Authority (RTA) was contacted in February 2009 regarding this proposal. Please find attached a copy of this response.</p> <p>If you have any further enquiries please contact Leisa Sedger on 6640 1362 or email land-use-northern@rta.nsw.gov.au.</p>	
<p>Previous response dated 16 February 2009</p> <p>I refer to your letter dated 29 January 2009 concerning the request for provision of details of key issues and assessment requirements for a major project application 08_0118.</p> <p>The Roads and Traffic Authority (RTA) advises that the scale of this development is below the size to require a SEPP Infrastructure referral to the RTA. As Willow Avenue is a local road, it is under the care and control of Tweed Shire Council. Therefore, this application should be referred to Council for key issues and assessment requirements.</p> <p>For any further information please contact Greg Sciffer (Development Assessment Officer) on 02 6640 1300 or by email at land-use-northern@rta.nsw.gov.au.</p>	<p>Tweed Shire Council's comments are addressed elsewhere in this table.</p>
<p>LPMA – 25 May 2010</p>	
<p>I refer to your letter dated 16 April 2010 inviting comments from the Land and Property Management Authority (LPMA) in relation to the abovementioned major project application and accompanying environmental assessment (EA), as lodged by Kenmar Farms Pty Ltd (the Proponent). Thank you for providing an opportunity to submit comments.</p> <p>LPMA does not object to the proposed development, subject to the following:</p>	

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AGENCY RESPONSE	COMMENTS
<p><u>Adjoining Crown Parcels</u></p> <ul style="list-style-type: none"> The Subject Site (Lot 4 DP876253) does not immediately adjoin any Crown parcels. Part of Camp Wollumbin, being part of Crown Reserve No. 83495 for Public Recreation notified on 6 October 1961, lies to the immediate north of Lot 618 DP508200 (Lot 466 DP755701). The Lands Administration Ministerial Corporation is the appointed Corporate Manager of the Camp Wollumbin Reserve Trust, which is charged with the care, control and management of the Reserve. The Reserve is shown in Figure 1. 	
<ul style="list-style-type: none"> With respect to the Reserve, please ensure the Proponent does not: <ul style="list-style-type: none"> o encroach upon the Reserve; o remove any vegetation from the Reserve; or o stockpile any materials or store any equipment, plant or machinery on the Reserve. 	See Revised Statement of Commitments at Annexure 3 .
<p><u>Vegetation Management Plan</u></p> <ul style="list-style-type: none"> It is recommended the scope of the proposed 'Vegetation management Plan' (VMP) be expanded to encompass the entirety of the Subject Site and not just 'Land Parcel A' (that is, to include weed control and the restoration of the endangered ecological community (EEC) <i>'Swamp sclerophyll forest on coastal floodplains of the NSW North Coast, Sydney Basin and South East Corner bioregions'</i> on land parcels B and C). It is further recommended the Proponent commit to funding the implementation of the VMP over a defined time period. The VMP should incorporate appropriate, scoped performance requirements for the restoration and enhancement of the EEC and its buffers. Such performance requirements may pertain to the diversity and density of native species within the EEC, seedling survival and growth rates, cumulative crown coverage, and the abundance and heterogeneity of weeds, referenced to appropriate benchmarks (such as a comparable, undisturbed EEC). It is similarly recommended the VMP specify appropriate trigger values for intervention or corrective actions, referenced to the aforementioned performance requirements. 	<p>It is submitted that the Vegetation Management Plan should be limited to that part of the site zoned 2(a) and on which the physical development is proposed. No development or change of use is proposed on residue Lot 13 and therefore it is unreasonable to require the Vegetation Management Plan to extend to that lot. In the circumstances it is submitted that there is no reasonable nexus between the project which is the subject of this application and any requirement to carry out vegetation management on the residue lot, the use and disposition of which will not be changed.</p> <p>The proponent undertakes to fund the implementation of the Vegetation Management Plan over a period of five years. This undertaking is included in the Revised Statement of Commitments at Annexure 3.</p> <p>The Vegetation Management Plan will address these issues.</p> <p>Adaptive management techniques would be incorporated into the final Vegetation Management Plan.</p>
<p><u>Cudgen Nature Reserve</u></p> <ul style="list-style-type: none"> LPMA notes not all the recommended actions under Section 8.13.3 'Aquatic Habitats', in relation to avoiding or mitigating the anticipated impacts of the proposed development on Cudgen Nature Reserve, have been included in the 'Draft Statement of Commitments' (section 7.1), particularly in relation to the production of an 'Information Kit'. 	See Revised Statement of Commitments at Annexure 3 .

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AGENCY RESPONSE	COMMENTS
<ul style="list-style-type: none"> • LPMA recommends the Proponent commit to implementing all of the actions, by including them in the 'Draft Statement of Commitments'. • Given the presence, or potential presence, on or adjoining the Subject Site of native fauna at particular risk of predation by, or injury from, domestic pets (such as the Koala (<i>Phascolarctos cinereus</i>)), it is recommended the Proponent explore much more definitive measures designed to limit domestic pet encroachments into sensitive habitats, including Cudgen Nature Reserve (such as the registration on title of covenants pertaining to pet ownership, or the erection of appropriate internal and external fencing). <p>Please feel free to contact me on 6640 3436 or Ian.Hanson@lands.nsw.aov.au if you have any questions or concerns in relation to these comments.</p>	<p>See Revised Statement of Commitments at Annexure 3.</p> <p>As the residential component of this subdivision is bounded on 3 sides by private property where no pet ownership restrictions exist and the back by a waterway / drainage easement, and Koala's are not that accomplished swimmers, the imposition of this covenant is unreasonable and should not be required.</p>
NSW OFFICE OF WATER – 26 MAY 2010	
<p>I refer to your letter of the 16 April 2010 seeking the NSW Office of Water's (NOW) comments on the Environmental Assessment (EA) for the proposed 13 lot residential subdivision at Willow Avenue, Bogangar including advice on recommended conditions of approval.</p> <p>NOW has reviewed the EA and identified a number of environmental matters that require consideration by the Department of Planning in its assessment of the project application. These issues are outlined in Attachment A.</p> <p>NOW also provides for your consideration, recommended conditions of approval in Attachment 8, should the Minister for Planning determine the application by granting approval.</p> <p>If you require clarification on any of the above please don't hesitate to contact me on (02) 6701 9652.</p>	
<p><u>Groundwater</u></p> <p>The EA outlines groundwater was encountered on the site between 2 and 3 metres below the existing surface level. It is not expected groundwater will be encountered however minor earthworks will be undertaken on the site including stripping topsoil across the wider building envelopes, disturbances for slab footings, shallow trench excavation for underground services, widening of existing road and footpath construction.</p> <p>Groundwater is not expected to be encountered as part of the proposed subdivision, however if groundwater is encountered and dewatering is required as part of the development then a dewatering licence is required under Part 5 of the Water Act 1912, accompanied by a groundwater management plan.</p>	<p>Noted.</p> <p>See Revised Statement of Commitments at Annexure 3.</p>
<p><u>Surface Water</u></p> <p>The development site is located within the catchment of Cudgen Lake, therefore the containment of and appropriate treatment of, runoff is highly important in reducing lake nutrient and sediment levels. It is particularly important to ensure any runoff leaving this site has been treated to an appropriate standard.</p>	<p>The Engineering Impact Assessment provides water quality monitoring and control measures during the construction and operation stages of the development and addresses WSUD and Best Management Practices (BMP's). Refer the EIA-R1 for further detail.</p>

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AGENCY RESPONSE	COMMENTS
<p>The Tweed Coast Estuaries Management Plan 2004-2008 developed by Tweed Shire Council for Cudgen Lake identifies stormwater impacts from Bogangar. Currently stormwater from the undeveloped site flows to the Bogangar Drainage Canal at the rear of the site and then into Cudgen Lake. It is proposed to discharge stormwater from the new lots to the Bogangar Drainage canal once treated. It is proposed to treat the discharge water from the site with sediment traps and barriers. NOW considers stormwater management on the site should follow water sensitive urban design and be in conjunction with the requirements outlined in the Tweed Urban Stormwater Quality Management Plan 1999.</p>	<p>As detailed in the EIA-R1, the site generally falls towards Willow Avenue and surface water in the roadway is collected in existing gully pits and piped to Cudgen Lake. The proposed development includes WSUD in the form of rainwater tanks and infiltration trenches for roofwater.</p>
<p><u>Water Supply</u></p> <p>The EA outlines reticulated water will be provided for the development by connecting to the existing water main adjacent to the site. NOW supports the provision of water to the development by town water supply.</p>	<p>Noted.</p>
<p>NSW OFFICE OF WATER'S RECOMMENDED CONDITIONS OF APPROVAL</p>	
<p><u>Water Supply</u></p> <p>1. The proponent must ensure that it has a sufficient and sustainable water supply for the project.</p>	<p>See Revised Statement of Commitments at Annexure 3.</p>
<p><u>Groundwater</u></p> <p>2. A dewatering licence must be obtained for all works that intercept the watertable. A groundwater management plan must accompany the licence application. for approval by NOW.</p>	<p>See Revised Statement of Commitments at Annexure 3.</p>
<p><u>Stormwater Management</u></p> <p>3. Appropriate stormwater management techniques should be used on site to ensure stormwater is treated to an appropriate standard prior to discharging from the site.</p>	<p>Appropriate provisions included in Revised Statement of Commitments at Annexure 3.</p> <p>Noted- Provision of rainwater tanks and infiltration/ dispersal trenches has been provided and appropriate Erosion & Sediment Controls have been detailed in the EIA-R1.</p>
<p>NSW INDUSTRY AND INVESTMENT – 14 MAY 2010</p>	
<p>Thank you for your letter of 16 April 2010 seeking comment from Industry & Investment NSW (I&I NSW) on the Environmental Assessment (EA) for the above mentioned project. The proposal raises no agricultural, minerals or forestry issues.</p> <p>I&I NSW is responsible for ensuring that fish stocks are conserved and that there is "no net loss" of key fish habitats upon which they depend. I&I NSW has reviewed the project application and has identified the following matters for your consideration prior to approval.</p> <p>I&I NSW endorse the provision of a buffer abutting the canal upon which "no physical development or disturbance is proposed" (Table 18, page 45). It is recommended that this be made a condition of consent.</p>	<p>See Revised Statement of Commitments at Annexure 3.</p>

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AGENCY RESPONSE	COMMENTS
<p>It is noted the development is located only 100 metres upstream of Cudgen Lake. The Healthy Rivers Commission's report on Coastal Lakes identified Cudgen Lake as one of a very small number of coastal lakes on the northern NSW coast as being in "Healthy Modified Condition". Cognisant of the value of Cudgen Lake and the practical opportunity to minimise deleterious impacts, I&I NSW recommend the Statement of Commitments for the proposal be amended to specifically include the provision of "Best Management Practices (BMP) in sediment and erosion control and water cycle management". Reference should be made to the "Blue Book" for guidance on BMP sediment and erosion control.</p> <p>Subject to these relatively minor amendments, I&I NSW is generally satisfied that the proposal limits direct impacts on fish and key fish habitats.</p> <p>Should you require further information or clarification please contact Fisheries Conservation Manager, Patrick Dwyer, on (02) 6626 1397.</p>	<p>Reference to best management practices for Erosion and sediment control and the 'Blue Book' are included in the EIA-R1.</p> <p>Stormwater management is dealt with in Annexure 2 in accordance with Tweed Shire Council's Stormwater Management Plan. Tweed Shire Council does not adopt the "Blue Book".</p>
NRCMA – 12 MAY 2010	
<p>Thank you for your letter of 16 April 2010 with the opportunity of providing input into this application. The Northern Rivers Catchment Management Authority (NRCMA) has previously forwarded comment on this project on 20 Feb 2009.</p> <p>Following assessment of the report and its appendices, the NRCMA has the following points for your consideration:</p>	
<p>The Director General's Environmental Assessment Requirements, requests that the Environmental Assessment must address the requirements of the 'North Coast guide for avoiding and reducing rural land use conflict and interface issues'. Page 93 of the EA discusses complying with principles of Chapter 4 of the guide in relation to conflict between rural land parcels and urban development where it was found that there was minimal or no conflict.</p> <p>In our correspondence of the 20 Feb 2009, referring to complying with the principles of the 'North Coast guide for avoiding and reducing rural land use conflict and interface issues' document, attention was drawn to the proposed development being adjacent to land zoned for environmental protection (71) and requested the following in relation to the document:</p> <p>The subdivision is located adjacent to land zoned for environmental protection and in close proximity to Cudgen Lake. The EA should demonstrate consistency and compliance with the recommendations listed, particularly the recommended buffer distances, to reduce land use conflict detailed in the above publication.</p> <p>The applicant should list and provide detail of actions that have been developed to mitigate any detrimental affect on the adjacent environmental protection zone in the short term during development and the long term following development.</p>	<p>This is discussed in Section 2.7 of Annexure 11 of the EA (ie. DGEAR - Address the requirements of the 'North Coast guide for avoiding and reducing rural land use conflict and interface issues').</p> <p>See Section 2.5 of Annexure 11 of the EA (DGEAR - Address measures to protect and manage adjacent aquatic habitats including Cudgen Lake).</p>

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AGENCY RESPONSE	COMMENTS
<p>The NRCMA requests that the applicant addresses this issue to demonstrate consistency with Chapter 6 of the 'North Coast guide for avoiding and reducing rural land use conflict and interface issues' and how there will be no negative or conflicting Impacts on the adjacent land zoned for environmental protection - prior to development approval.</p> <p>If you require further information or clarification of our comments please contact Peter Boyd In our Murwillumbah office on phone 02 6676 7393 or email peter-bovd@cma.nsw.aov.au</p>	<p>Mitigation and Offsets for Cudgen Lake Nature Reserve were discussed – Buffers proposed including revegetation of rear of lots. Signage and education programme. A recommendation for an "Erosion & Sediment Control Plan" "to direct management procedures during construction activities" was made.</p> <p>An assessment of the Cudgen Nature Reserve Plan of Management was included in Annexure 11 of the EA.</p> <p>This was addressed in Section 2.7 of Annexure 11 of the the EA (ie. DGEAR - Address the requirements of the 'North Coast guide for avoiding and reducing rural land use conflict and interface issues').</p>
RURAL FIRE SERVICE – 7 JUNE 2010	
<p>I refer to your letter dated 16 April 2010 seeking a review by the NSW Rural Fire Service (RFS) and comments on the Environmental Assessment for the project and the accompanying plans.</p> <p>The Service has reviewed the EA and the following conditions are recommended:</p> <ol style="list-style-type: none"> 1. The entire site of proposed Lots 1 to 12 shall be managed as an inner protection area (IPA) as outlined within Appendix 2 & 5 of <i>Planning for Bush Fire Protection</i> 2006 and the NSW Rural Fire Service's document 'Standards for asset protection zones'. 2. The revegetation of proposed Lot 13 shall not exceed the Landscape Concept Plan. A plan of management shall be prepared and implemented for proposed Lot 13 to ensure the bush fire hazard is not increased beyond that identified in the Landscape Concept Plan. 3. Water, electricity and gas are to comply with section 4.1.3 of <i>Planning for Bush Fire Protection</i> 2006. 4. Landscaping to the site is to comply with the principles of Appendix 5 of <i>Planning for Bush Fire Protection</i> 2006. In this regard the linking of vegetation particularly on the eastern boundary of proposed Lots 11 and 12, and the north western boundary of proposed Lot 1, should be avoided. 5. Any future development application lodged within this subdivision under section 79BA of the <i>Environmental Planning & Assessment Act 1979</i> will be subject to requirements as set out in <i>Planning for Bush Fire Protection</i> 2006. <p>For any enquiries regarding this correspondence please contact Garth Bladwell.</p>	<p>See Revised Statement of Commitments at Annexure 3.</p> <p>See Revised Statement of Commitments at Annexure 3.</p> <p>See Revised Statement of Commitments at Annexure 3.</p> <p>See Revised Statement of Commitments at Annexure 3.</p> <p>See Revised Statement of Commitments at Annexure 3.</p>

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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 Draft 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 Draft Statement of Commitments.

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**ANNEXURE 1 Amended Plan of Proposed Subdivision Reference 17199D, Rev C, – B & P Surveys
Pty Ltd, 30 June 2010**

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**ANNEXURE 2 Revised Engineering Impact Assessment, Rev 1, – Opus Qantec McWilliam Pty Ltd,
23 August 2010**

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ANNEXURE 3 Revised Statement of Commitments – Darryl Anderson Consulting Pty Ltd, August 2010

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ANNEXURE 4 Statutory Declaration – Ken Hansen , 8 July 2010

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**ANNEXURE 5 Development Consent No. 97/251, Pollution Control Approval and Letters from
Tweed Shire Council Dated 10 August 1998, 21 October 1998 and 4 November 1997
and Letter from Hansen Developments to Tweed Shire Council Dated 3 January
2000**

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**ANNEXURE 6 Revised Cultural Heritage Assessment – Everick Heritage Consultants Pty Ltd,
August 2010**

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