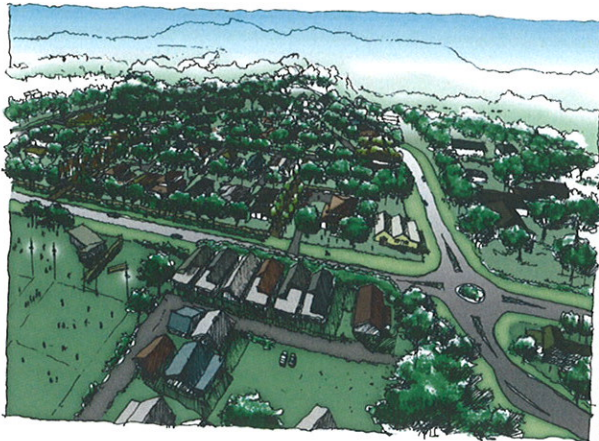




Planning

**MAJOR PROJECTS ASSESSMENT:
RESIDENTIAL SUBDIVISION OF
LOTS 2 AND 3 DP244652 at
URLIUP ROAD, BILAMBIL
VILLAGE**

**Proposed by JACKSON
INTERNATIONAL Pty Ltd**



Director-General's
Environmental Assessment Report
Section 75I of the
*Environmental Planning and Assessment
Act 1979*

June 2010

ABBREVIATIONS

CIV	Capital Investment Value
Department	Department of Planning
DGRs	Director-General's Requirements
Director-General	Director-General of the Department of Planning
EA	Environmental Assessment
the Act	<i>Environmental Planning and Assessment Act 1979</i>
the Regulation	<i>Environmental Planning and Assessment Regulation 2000</i>
EPI	Environmental Planning Instrument
MD SEPP	<i>State Environmental Planning Policy (Major Development) 2005</i>
Minister	Minister for Planning
Part 3A	Part 3A of the <i>Environmental Planning and Assessment Act 1979</i>
PPR	Preferred Project Report
Proponent	Jackson International Pty Ltd

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EXECUTIVE SUMMARY

Jackson International Pty Ltd (the Proponent) is seeking project approval to carry out a 53-lot subdivision, primarily for residential purposes at the intersection of Urliup Road, Bilambil Road and Hogan's Road (Lots 2 and 3 DP244652), Bilambil in the Tweed local government area.

The project includes:

- 49 residential lots ranging in size from 467m² – 704m², with an average residential lot size of approximately 545m²;
- One (1) lot for a proposed future commercial use (childcare centre);
- Dedication of foreshore as public reserve, and revegetation of the area adjacent to Bilambil Creek;
- Provision of a local park with playground;
- Bulk earthworks and re-contouring of the site;
- Construction of the proposed roads within the subdivision and upgrading of surrounding roads to Council standard; and
- Provision of all normal infrastructure, including provision of sewage reticulation (including pump station).

The subdivision will be constructed in one stage. A Development Application for the construction and operation of the proposed childcare centre will be lodged separately. The approval and construction of future dwellings will occur at a later stage.

The estimated capital investment value of the project is \$2.405 million. The project will create 29 full time equivalent construction jobs and 3 indirect full time equivalent post construction.

During the exhibition period, the Department received a total of 7 submissions from government authorities, including Council and 42 submissions from the public. With the exception of Council, who objected to the project, all government authorities broadly supported the project or raised no objection subject to further information. Of the public submissions, the Department received 41 letters of objection and 1 letter of support. As a result of these submissions and the Department's own assessment of the project, the following key issues have been assessed:

- Subdivision design and layout;
- Village character;
- Earthworks and filling;
- Stormwater;
- Flooding;
- Geotechnical considerations;
- Flora and Fauna;
- Transportation – Road works and Access; and
- Wastewater.

The Department has assessed the merits of the project and is satisfied that the impacts of the proposed project have been addressed via the Proponent's Statement of Commitments and the Department's recommended conditions of approval, and can be suitably mitigated and/or managed to ensure a satisfactory level of environmental performance. On these grounds, the Department is satisfied that the site is suitable for the proposed project and that the project will provide social and economic benefits to the region. All statutory requirements have been met.

The Department recommends that the project be **approved**, subject to conditions.

1 BACKGROUND

1.1 SITE DESCRIPTION

The land is legally described as Lots 2 and 3 DP244652, Bilambil in the Tweed local government area and is the site of an old quarry. The land is owned by Jackson International Pty Ltd. (the proponent). The total area of the site comprises 4.713 hectares.



FIGURE 1: Site location in relation to Tweed Heads on the far north coast of New South Wales

1.1.1 Locality

The site is located within the rural village of Bilambil. Bilambil is located in the far north coast region of New South Wales and lies toward the western-most extent of the coastal zone in this area. The New South Wales/Queensland border is located approximately 5 km to the north, and the major regional centre of Tweed Heads is located approximately 9 km to the north-east. Bilambil is located approximately 2 km west of the Bilambil Heights urban area (refer to Figure 1).

Bilambil is centred on the intersection of four roads: Uriup Road, Bilambil Road, Carol Road and Hogan's Road. The main connections from the Pacific Highway are via Terranora Road and Bilambil Road approaching from the south, and via Kennedy Drive and Scenic Drive from the north. Bilambil is also connected via Terranora Road, to Tumbulgum about 4.5 km in a straight line to the south, and Murwillumbah.

1.1.2 Site context

The site comprises the largest two lots of 2(d) Rural Village zoned land (*Tweed Local Environmental Plan 2000*) in Bilambil Village. There are approximately 14.9 ha. of 2(d) Rural Village zoned land in Bilambil, and this site comprises approximately one third of that area.

The site is bounded on the immediate west by Bilambil Creek that meanders down the valley, through Bilambil Village and is at its approximate tidal limit adjacent to the site. The Bilambil Village is situated about a third of the way up the valley of Bilambil Creek, which meanders for

another 4.5 km eastward before it empties into the estuarine environment of the Terranora Broadwater.



FIGURE 2: Bilambil Village and surrounding predominantly rural area

The site is bounded to the north by Uriup Road, Bilambil Road to the east, and Hogan's Road to the south (refer to Figure 2). The village centre is defined by the intersection of Carool, Bilambil and Uriup Roads to the north-east of the site.

1.1.3 Surrounding development

The key land uses within the existing village of Bilambil include:

- Approximately 22 dwelling houses occupying a variety of lot sizes and footprints.
- Bilambil Creek Residential Village (aged care accommodation for active over 50 year olds containing approximately 25 cabins).
- A public primary school (Bilambil Primary School, current enrolment: approximately 360 pupils).
- A community hall located on the north eastern corner of the site – refer to Plate 4.
- A combined service station, post office and convenience store.
- A public park (Prindable Park) adjacent to Bilambil Creek containing picnic shelters, playground equipment and landscaping.
- Bilambil sports fields comprising a turf cricket wicket, football fields (some floodlit), tennis courts, cricket practice nets, a licensed clubhouse and amenities building.

The land surrounding Bilambil is mainly rural and used primarily for grazing and other agricultural purposes (refer Figure 3).



FIGURE 3: Aerial photo of the site showing site context and with proposed subdivision layout overlain

1.1.4 Existing site features

The subject site has been highly scarred by previous land uses including quarrying, stockpiling of spoil (soil and rock) and grazing. Existing ground levels range from approximately RL 4m AHD at Hogan's Road rising to approximately RL 26m AHD towards the centre of the site. The centre of the site is dominated by a hillock that has been scarred and terraced on its SW face through past quarrying activities (refer to Plates 1 and 3).

As a result of its previous uses, the site is in a highly degraded state with the majority of native vegetation having been removed, bare earth exposed and weeds prevalent. Bands of mature Camphor laurel (*Cinnamomum camphora*) trees occur along the northern and western property boundaries. Although highly degraded and dominated by Camphor laurel trees, the riparian area adjacent to Bilambil Creek retains some species consistent with a sub-tropical riparian rainforest community. Significant vegetation on the site includes only one threatened species listed as vulnerable - the Rough-Shelled Bush Nut tree (*Macadamia tetraphylla*).

There are no structures on the land other than an overhead electricity transmission line located on the southern side of the site adjacent to Hogan's Road. There is a two-lane bridge across Bilambil Creek which abuts the south-western corner of the site at Hogan's Road.



PLATE 1: face of existing quarry - looking north



PLATE 2: Bilambil Creek and the riparian zone from Hogan's Road bridge. Subject site is to the right of picture. Direction of flow is marked with blue dashed arrow.



PLATE 3: view across the site with Bilambil Rd in the foreground.



PLATE 4: view south down Bilambil Rd boundary. Note village hall in right foreground and Camphor laurel (*Cinnamomum camphora*) trees on road edge.

2 THE PROPOSED PROJECT

2.1 PROJECT DESCRIPTION

This is an application for project approval to undertake a 53-lot subdivision primarily for residential purposes. The Proponent has applied to subdivide the existing two lots into:

- 49 residential lots ranging in size from 467m² – 704m², with an average residential lot size of approximately 545m²;
- One (1) lot for a possible future commercial use (childcare centre) (Lot 50) – 1,300m²;
- Dedication of foreshore as public reserve, and revegetation of the area adjacent to Bilambil Creek (Bilambil Creek Foreshore, Lot 52) – 8,160m²;
- Provision of embellished open space (Lot 51) – 2,625m²;
- Creation of an easement for electricity transmission lines 40m wide over the existing overhead transmission lines through the site adjacent to Hogan's Road;
- Bulk earthworks and re-contouring of the site (including the construction of retaining walls) to ensure its suitability for construction;
- Construction of the proposed roads within the subdivision and upgrading of surrounding roads to Council standard;
- Provision of all normal infrastructure (including water, telecommunications, electricity);
- Sewage reticulation: Construction of a sewer pumping station on-site (Lot 53 - 200m²) and provision of a sewer rising main to connect the project to the existing gravity sewer reticulation in Bilambil Heights approximately two kilometres to the east of the site;

The subdivision will be constructed in one stage. The subdivision layout as exhibited is shown in Figure 4. A Development Application for the construction and operation of the proposed childcare centre will be lodged separately. The approval and construction of future dwellings will occur at a later stage. Refer to section 4.4 of this report for an outline of the changes made to the project by the proponent as part of the PPR and during assessment.



FIGURE 4 – Original subdivision plan as exhibited (EA).

2.2 PROJECT NEED AND JUSTIFICATION

The site is located within an identified Town and Village Growth Boundary of the *Far North Coast Regional Strategy 2006* and the project will provide additional housing and cater for expected population growth within the Tweed Shire.

The provision of reticulated sewerage to the village will also allow for a greater density of development on-site, and with this increase in population and associated activities, has the capability to transform Bilambil into a vibrant rural hub serving the scenic Tweed hinterland. Appropriate infrastructure will also be provided to service the site and potentially enable greater utilisation of other 2(d) Village zoned land within Bilambil. The redevelopment of the site for residential purposes constitutes a significant improvement over the existing land use as it allows for the sustainable use of land zoned for more intensive development, preserves a riparian corridor and protects the water quality and aquatic habitat of Bilambil Creek, and provides the necessary population and infrastructure to sustain Bilambil as an inland Village.

2.3 PROJECT AMENDMENTS

The Department has recommended conditions deleting one of the proposed residential lots to ensure both an adequate Asset Protection Zone and effective riparian zone are provided. The incorporation of Lot 1 into Lot 2 will serve to increase the average lot size and allow for continued ecological integrity of the riparian zone as well as providing an APZ on private property. The subdivision layout is shown in Figures 5A and 5B. However after assessment (and the deletion of Lot 1) it is recommended the subdivision now comprise 48 residential lots giving a total of 52 lots (refer to section 5 of this report).

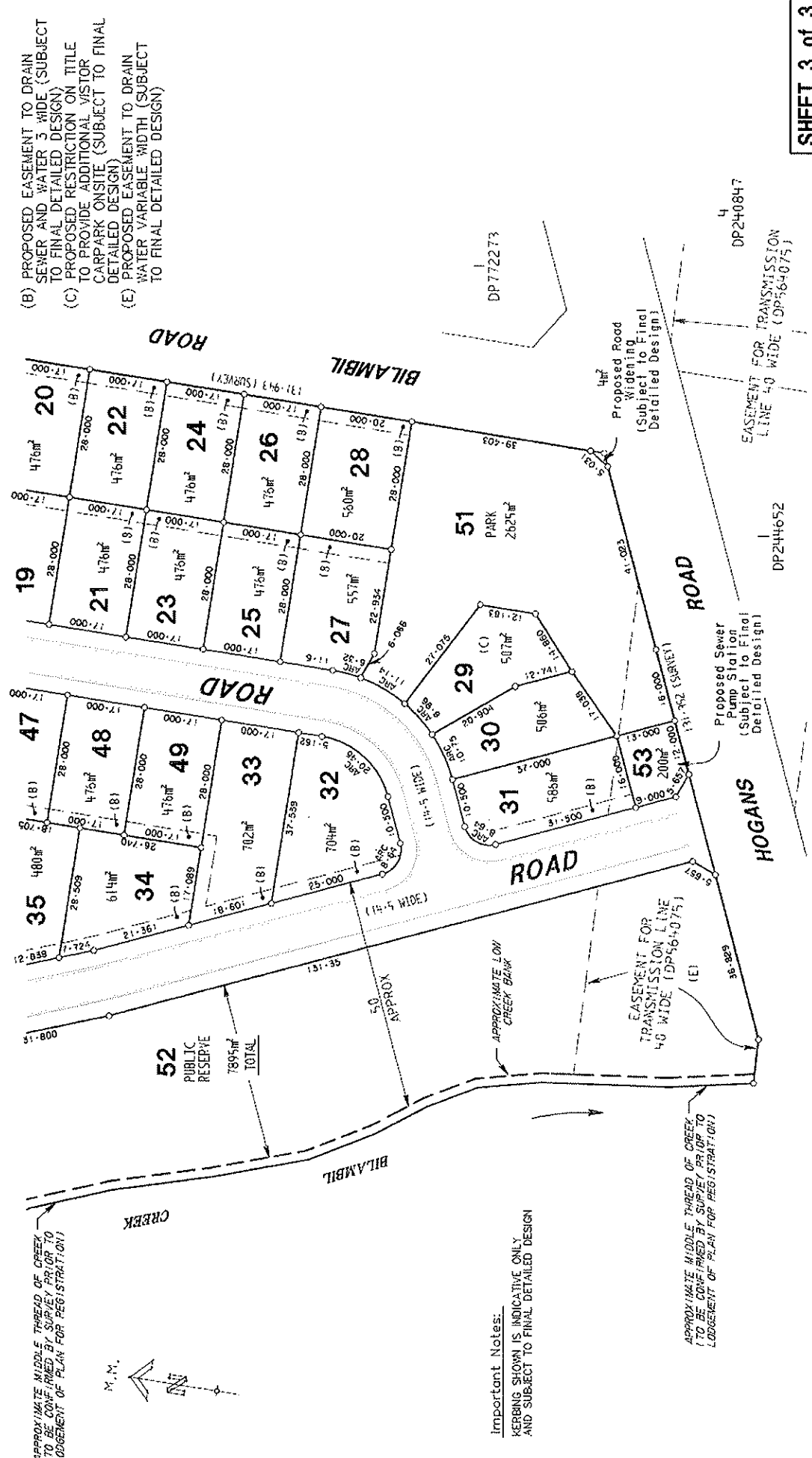
- (A) PROPOSED EASEMENT FOR ACCESS 2 WIDE & 4 WIDE (SUBJECT TO FINAL DETAILED DESIGN)
- (B) PROPOSED EASEMENT TO DRAIN SEWER AND WATER 3 WIDE (SUBJECT TO FINAL DETAILED DESIGN)
- (E) PROPOSED EASEMENT TO DRAIN WATER VARIABLE WIDTH (SUBJECT TO FINAL DETAILED DESIGN)



Important Notes:
KERBING SHOWN IS INDICATIVE ONLY
AND SUBJECT TO FINAL DETAILED DESIGN

SHEET 2 of 3

FIGURE 5A: Subdivision layout – northern part of site. Drawing No. 17154 D Revision G.



- (B) PROPOSED EASEMENT TO DRAIN SEWER AND WATER 3 WIDE (SUBJECT TO FINAL DETAILED DESIGN)
- (C) PROPOSED RESTRICTION ON TITLE TO PROVIDE ADDITIONAL VISITOR CARPARK ON SITE (SUBJECT TO FINAL DETAILED DESIGN)
- (E) PROPOSED EASEMENT TO DRAIN WATER VARIABLE WIDTH (SUBJECT TO FINAL DETAILED DESIGN)

SHEET 3 of 3

FIGURE 5B: Subdivision plan – southern part of site. Drawing No. 17154 Revision J.

3 STATUTORY CONTEXT

3.1 MAJOR PROJECT

The project was declared a project to which Part 3A of the Act applies under *State Environmental Planning Policy (Major Projects) 2005* (MP SEPP) (as was in force at the time) being a subdivision within the coastal zone of more than 25 lots (Schedule 2, clause 1(1)(j)(i) of the MP SEPP). Therefore the Minister for Planning is the approval authority.

3.2 STATEMENT OF COMPLIANCE

In accordance with Section 75I of the Act, the Department is satisfied that the Director-General's environmental assessment requirements have been complied with.

3.3 ZONING AND PERMISSIBILITY

The entire project site is zoned 2(d) Village under the provisions of the *Tweed Local Environment Plan 2000* (TLEP 2000) (refer to Figure 6). Subdivision is permissible with development consent in this zone. The proposed future use on this site of dwelling houses is permissible with consent where the lots are greater than 450m². The smallest lot proposed is 467m². The proposed future childcare centre is also permissible with development consent in this zone.

There is approximately 13.9 ha. of 2(d) Village zoned land in Bilambil – at 4.7 ha., this site encompasses approximately one third of that area.

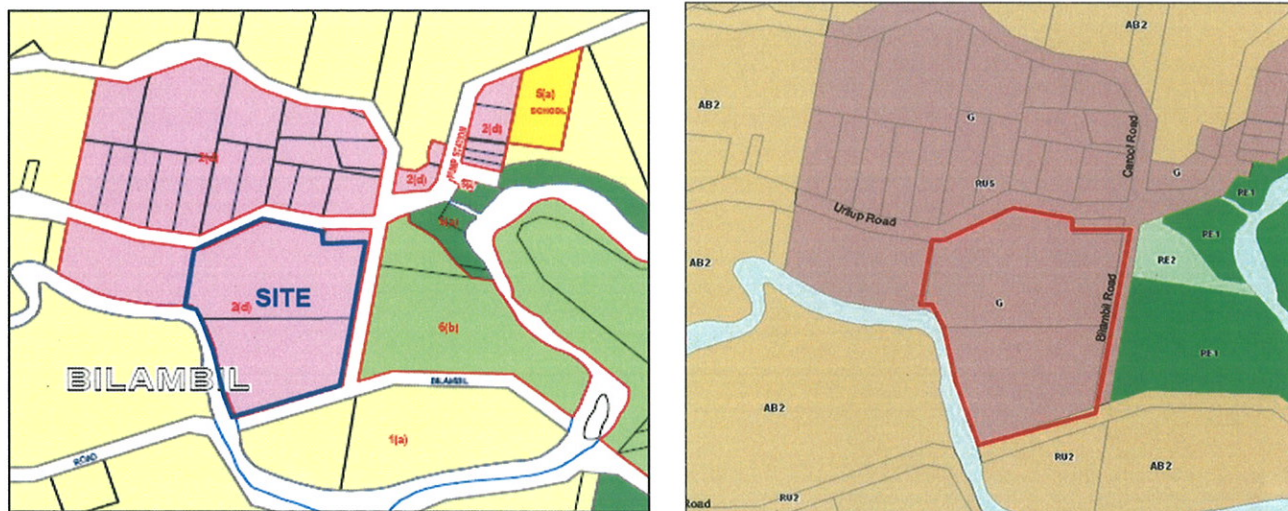


FIGURE 6: Left - Zoning plan from *Tweed LEP 2000*. Right - Zoning plan from *DRAFT TLEP 2010*. The subject site is proposed as RU5 and a minimum lot size of 450m² is specified for this land.

3.3.1 Proposed Zoning

Council has recently placed its *DRAFT Tweed Local Environmental Plan 2010* on exhibition (Draft TLEP 2010). This plan proposes that the subject site retain its existing village zoning (RU5 Village) and does not intend to change the minimum lot size for land zoned RU5 Village. A comparison of the zoning provisions between the TLEP 2000 and the Draft TLEP 2010 is provided in Table 1 below.

Table 1: Zoning provisions for *Tweed Local Environment Plan 2000* and *DRAFT Tweed Local Environment Plan 2010*

TLEP 2000 – Zone 2(d) Village		
USES	PERMISSIBILITY	COMMENT
Dwelling houses	With consent	Dwellings may not be constructed on any lot less than 450m ² in size (sewered). This rises to a minimum lot size of 1,000m ² if unsewered (refer Table A5-9.3 of <i>Tweed DCP 2008 – A5 Subdivision Manual</i>).

Childcare centre	With consent	Allowed under Item 2 of the zone provisions
Environmental facility	Exempt development	Includes environmental management and bush restoration/riparian works adjacent to Bilambil Creek
Minor Council roadworks, works for sewer and water	Exempt development	Controlled by <i>Tweed DCP 2008 - A10 – Exempt and Complying Development</i> . Includes reconstruction of roads within existing alignment, construction of sewer, water extensions for pipes up to 250mm diameter; by, or on behalf of any authority.
DRAFT TLEP 2010 – Zone RU5 Village		
USES	PERMISSIBILITY	COMMENT
Dwelling houses	With consent	Minimum lot size for subdivision of 450m ² , maximum building height of 13.6m, maximum Floor Space Ratio of 2
Childcare centre	With consent	Allowed under Item 3 of the zone provisions.
Environmental protection works	Exempt development	Includes bush regeneration and rehabilitation works.
Council infrastructure development (local) / Public utility undertaking	Exempt development on any land (except environmentally sensitive or heritage conservation areas	Includes roads, supply of water, electricity, gas carried out by, or on behalf of any authority.

The Project is therefore permissible subject to the Minister's approval.

3.4 ENVIRONMENTAL PLANNING INSTRUMENTS (EPIS)

Under Sections 75l(2)(d) and 75l(2)(e) of the Act, the Director-General's report for a project is required to include a copy of, or reference to, the provisions of any State Environmental Planning Policy (SEPP) that substantially governs the carrying out of the project, and the provisions of any environmental planning instruments (EPI) that would (except for the application of Part 3A) substantially govern the carrying out of the project and that have been taken into consideration in the assessment of the project.

The Department's consideration of other relevant SEPPs and EPIs is provided in APPENDIX B.

3.5 OBJECTS OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

The objects of any statute provide an overarching framework that informs the purpose and intent of the legislation and gives guidance to its implementation. Therefore the Minister's consideration and determination of a project application under Part 3A must be informed by the relevant provisions of the Act, and in particular not be inconsistent with the stated Objects of the Act (refer to Section 5 of the Act).

In undertaking this assessment the Department has considered the Objects of the Act, and found the project to be generally consistent with them. In particular, the project allows for the redevelopment of a disused quarry site into a residential area and in doing so provides for: the protection of the environment by enhancing a riparian buffer to protect the values of Bilambil Stream and vesting that land to the public in perpetuity, the removal of non-native plant species and preservation of existing natives, a new connection to the sewerage system that will assist in the further development of Bilambil Village and the removal of septic tanks, new community infrastructure in the form of a playground, and a more suitable land use for a site that dominates the centre of the Village. These gains have been achieved with the assistance of the general public and Tweed Shire Council through submissions and on-site community meetings. In conclusion the project generally provides for an enhancement to the social, economic and ecological wellbeing of the Bilambil Village environment consistent with the objectives of the Far North Coast Regional Strategy.

3.6 ECOLOGICALLY SUSTAINABLE DEVELOPMENT (ESD) PRINCIPLES

With respect to ESD, the Act adopts the definition in Section 6(2) of the *Protection of the Environment Administration Act 1991*. The five accepted principles for ecologically sustainable development are the: integration principle; precautionary principle; intergeneration equity principle; biodiversity principle; and valuation principle.

Of particular relevance to this environmental assessment, the precautionary principle has been applied in the decision making process via a thorough and rigorous assessment of the environmental impacts of the project. The evaluation of environmental impacts is confirmed by studies, surveys, and calculations by qualified professionals. These reports have in turn been distributed to relevant agencies and other persons qualified to assess and comment on the adequacy of their conclusions.

The development of the site provides a better long-term use of the site than the existing disused quarry. The project enhances the long-term environmental management of the site through preservation of a dedicated riparian buffer to Bilambil Creek while also allowing for socio-economic development in the short-medium term by establishing a residential community in the heart of the village and setting aside land for community use (the integration principle).

The preservation and enhancement of the riparian zone adjacent to Bilambil Creek is entirely consistent with the biodiversity principle.

The Department has considered the principles of ESD and considers that the Project is consistent with those principles. Further assessment of the consistency of the project with the principles of ESD is contained within section 5 of this report.

3.7 NSW STATE PLAN 2010

The State Plan guides the future of NSW and how it will be delivered. By providing housing lots and conserving native vegetation through the enhancement of a riparian area, the project is consistent with the priority work areas identified in the State Plan, particularly the priorities to improve housing affordability and protect native vegetation, biodiversity, land and waterways.

3.8 FAR NORTH COAST REGIONAL STRATEGY 2006

The Regional Strategy is the overriding strategic planning document for the Region and aims to manage the Region's growth in a sustainable manner. The Regional Strategy is directly relevant in the consideration of this project as the site is located within an identified Town and Village Growth Boundary. The project will utilise this land to provide additional housing to cater for expected population growth within the Tweed Shire. Approximately 19,100 new dwellings will be required in the Tweed in 2031. By limiting growth to identified growth areas the Strategy seeks to ensure a more even spread of population across the Region, reduce pressure on ecologically sensitive areas, and strengthen the growth of other towns and centres away from the coastal zone.

The project will also enable infrastructure services to be extended to Bilambil and may provide opportunity for other properties in the Village to maximise the use of 2(d) Village zoned land to its potential. The project also excludes development from an ecologically sensitive riparian buffer that will be dedicated for the public benefit in order to enhance biodiversity in the area and protect Bilambil Creek and its water quality and aquatic habitat.

The redevelopment of this old quarry site in line with its land use zoning is consistent with, and supports the objectives of the Regional Strategy.

3.9 TWEED URBAN AND LAND RELEASE STRATEGY 2009

This document gives effect to the overall objectives of the Far North Coast Regional Strategy for the Tweed Shire. Based on its zoning capacity, Bilambil is identified as a 'Village' in the Strategy. Villages are described as possibly including a strip of shops, a childcare centre and school, between 750-5,000 dwellings, strategic bus services, local parks etc. The proposed development is consistent with the expectation of Bilambil as a Village.

4 CONSULTATION AND SUBMISSIONS

4.1 EXHIBITION AND NOTIFICATION

The Department exhibited the EA in accordance with section 75H (3) of the Act. The EA was exhibited for 32 days from 24 July 2009 to 24 August 2009. Notification of the exhibition was given in the following local papers:

- Tweed Daily News - 22 July 2009
- Tweed Sun - 22 July 2009
- Tweed Border Mail - 24 July 2009
- Tweed Link - 21 July 2009

The Project was publicly exhibited at the following locations:

- Department of Planning, Information Centre, 23-33 Bridge Street, Sydney.
- Department of Planning, Northern Region Office, 76 Victoria Street, Grafton
- Tweed Shire Council, Murwillumbah Office, Civic & Cultural Centre, Tumbulgum Road, Murwillumbah
- Tweed Shire Council, Tweed Heads Branch Office, Brett Street, Tweed Heads
- Nature Conservation Council of NSW, Level 2, 301 Kent Street, Sydney

The EA has also been made available for download on the Department's website.

Letters were sent to adjoining landowners and relevant government agencies, including Council, notifying of the exhibition and inviting a submission. A total of 49 unique submissions were received in regard to the project, comprising 42 submissions from the public (refer to section 4.2 below) and 7 submissions from public authorities (refer to section 4.3 below).

4.2 SUBMISSIONS FROM THE PUBLIC

As required by clause 8B of the Regulation, a summary of all public submissions received can be found in **Appendix C**. An assessment of the key issues raised by the public during exhibition is contained within Section 5 of this report.

Out of the 42 unique submissions to the project the Department received 41 letters of objection and 1 letter of support. Of these 41 objections, 24 expressed partial support for the redevelopment of the site for residential purposes but proposed downscaling the density of subdivision by increasing the area of proposed lots.

4.3 SUBMISSIONS FROM PUBLIC AUTHORITIES

Of the public authority submissions received, almost all were broadly in support of the application or raised no objection subject to further information requirements. Tweed Shire Council objected to the project. The following is a summary of submissions received from public authorities.

4.3.1 Tweed Shire Council

Tweed Shire Council was contracted by the Department to complete part of the assessment for this project. Specifically their part of the assessment related to:

- Stormwater - the adequacy of the proposed stormwater management regime, in regard to both stormwater quality and quantity;
- Subdivision design - The adequacy of the proposed subdivision design and particularly casual open space;
- Wastewater - The adequacy and appropriateness of the management regime proposed for wastewater/sewage;
- Transport - The adequacy of the proposed internal road design, and whether the proposed works to external roads are appropriate to manage the potential impacts of the project; and

- Earthworks/geotechnical - The adequacy of proposed management and mitigation of earthworks, and the impact of proposed earthworks on geotechnical issues, site stability, and the hydrological regime (including both construction and permanent stormwater management).

In addition to those matters listed above, the following is a summary of the submission received by the Department in respect of the entire project:

Following an approved request for an extension of time in which to make a submission on the project, the Department received Council's submission immediately following a full Council meeting on 15 September 2009. Councillors raised 18 further issues in addition to those matters raised by Council officers in their report to the Council meeting. Of particular note was the Councillor's request for a reduction in the number of lots to no more than 10, given the existing surrounding lot sizes and the unique rural character of Bilambil Village. Concern was also expressed over the potential impacts of the project on the:

- already degraded water quality and biota of Bilambil Creek (including the platypus); and
- need for a 50m sole-use environmental buffer.

Council also requested the Department ensure further consideration of other issues, such as:

- use of landscaping and vegetation to mitigate noise and aesthetic impacts;
- use of composting toilets instead of a reticulated sewerage system;
- community concern;
- flooding and climate change;
- traffic impacts on the capacity of Kennedy Drive;
- the suitability of any future use of Lot 50;
- strict building design guidelines to enhance village character; and
- the impact of the overhead electricity transmission lines.

Although Council officers raised a number of technical issues with regard to the project, it was noted that the project was consistent with the Residential 2(d) Village zoning applying to the site, and with Council's broader Strategic plans. Furthermore, it was noted that the project optimises the site density making efficient use of existing urban zoned land, minimising urban sprawl, and achieves sustainability principles.

Council officers noted that while the project was not consistent with the current character of the area, this was largely due to Bilambil Village not being connected to reticulated sewerage. It was noted that the character of the Village was likely to change when reticulated sewerage is provided, as it will enable other existing property to be subdivided such that lot yields are optimised based on the minimum size of 450m². The character of the village could be enhanced if future building types are sympathetically designed.

Further discussion of the key issues identified by Council is contained within section 5 of this report.

4.3.2 Department of Industry and Investment (DII)

The Department of Industry and Investment raised no objections to the project and noted there was sufficient buffer to agricultural lands, the Bilambil cattle dip site, and that the adoption of a 35m buffer to Bilambil Creek will reduce the impact on aquatic habitat. DII stressed the importance of adopting best practice erosion and sediment control measures during bulk earthworks. This is discussed further in section 5 of this report and will be managed by way of a condition of approval.

4.3.3 Department of Environment, Climate Change and Water (DECCW)

The Department of Environment, Climate Change and Water provided advice stating they were generally in support of the project but noted the buffer to Bilambil Creek and Aboriginal cultural heritage as issues that required further consideration. Both issues are discussed in further detail in section 5 of this report.

4.3.4 Rural Fire Service (RFS)

The NSW Rural Fire Service raised no objections to the layout of the subdivision, and stated that Asset Protection Zones (APZ) required to mitigate risk from the enhanced riparian area post-construction (10m) could be achieved within the road reserve and within the local park that was originally located at the northern end of the riparian area (as exhibited in the Environmental Assessment). The local park has subsequently been shifted to the south east corner of the site, and the Department has recommended conditions requiring a 10m Asset Protection Zone to be provided in Lot 1 (as modified) – see discussion in section 5.11.

4.3.5 Northern Rivers Catchment Management Authority (CMA)

The CMA raised no objection to the carrying out of the project.

4.3.6 Roads and Traffic Authority (RTA)

The RTA advised that the roads affected by this project are local roads and referred all additional assessment to the Tweed Shire Council.

4.3.7 Land and Property Management Authority (LPMA)

The LPMA raised no objection in principle to the project but requested further detail from the proponent regarding the riparian buffer and vegetation management, the Vegetation Rehabilitation Plan, general weed control, stormwater management, sewerage issues and threatened species management. These issues are discussed in section 5 of this report and have been addressed through the Preferred Project Report or by way of condition on approval.

The LPMA also advised that existing land title for Lots 2 and 3 DP244652 extend out to the middle thread of Bilambil Creek (*ad medium filum aquae*) – this removed the need for the proponent to apply for tenure under the *Crown Lands Act 1989* to install a stormwater outlet on the Creek bank.

The LPMA also identified that the proposed construction of the sewer rising main may impact upon Crown lands – including Terranora Broadwater Foreshore Reserve, Gollan Drive and Broadwater Esplanade. A condition of approval will require the LPMA to be provided with a full assessment of the proposed route as it affects Crown lands. The proponent will require consent from the LPMA to construct the sewer rising main where it crosses Crown land.

The Department has fully considered the issues raised in submissions in its assessment of the project.

4.4 PROPONENT'S RESPONSE TO SUBMISSIONS

The Proponent provided a response to the issues raised in submissions. The response included a Preferred Project Report (PPR) which incorporated the following amendments:

- Total lots reduced from 56 to 53, including 49 residential lots;
- Reconfiguration of the lot layout and open space arrangements;
- Movement of the embellished open space (local park) from within Lot 52 (the riparian zone) to a new lot on the corner of Hogan's Road and Bilambil Road (Lot 51);
- Deletion of the Rights of Carriageway across Lots 11, 13, 15, 17, 19, 21, 23, 25, and 27 and their replacement with direct vehicular access for Lots 12, 14, 16, 18, 20, 22, 24, 26, and 28 to Bilambil Road;
- Replacement of the proposed general store with a proposed childcare centre (to be assessed under a future Development Application);
- Amended landscape concept plan; and
- Further detail regarding earthworks, particularly the proposed retaining walls adjacent to Lot 50 and ringing Lots 32-49 in the central part of the site.

As the changes to the nature of the project were not significant, it was not re-exhibited but was placed on the Department's website. A detailed discussion of the key issues with respect to the project and how they have been addressed is contained within section 5 of this report.

5 ASSESSMENT

Key issues considered in the Department's assessment of the Environmental Assessment and the Preferred Project Report and consideration of the Proponent's draft Statement of Commitments include the following:

- Subdivision design and layout;
- Noise;
- Village character;
- Earthworks and filling;
- Stormwater;
- Flooding;
- Geotechnical considerations;
- Flora and Fauna;
- Traffic – Roadworks and Access;
- Wastewater; and
- Bushfire

Some of these issues were resolved as part of the proponent's PPR, or were directly addressed via the Proponent's Statement of Commitments or the Department's recommended conditions of approval. Significant issues are discussed in detail, below:

5.1 SUBDIVISION DESIGN & LAYOUT

The site is subject to a number of relative constraints and design requirements, including those imposed by the overhead transmission line, the requirement to provide a buffer from Bilambil Creek to protect water quality, the need for an Asset Protection Zone to protect future dwellings from the threat of bushfire, and design and construction standards required by Council.

5.1.1 Open space

It was initially proposed to dedicate the Bilambil Creek foreshore area (originally Lot 54 – totalling 8,224m²) to Council as a Public Reserve, including an embellished Open Space Area of 1,530m². However Council advised the proponent that the proposed embellished Open Space area was inadequate in its proximity to the Creek, its slope, size and shape. Council's DCP Section A5 - *Subdivision Manual* calculates the provision of local parks in new subdivisions on a population formula – 11.3m²/person and outlines other development standards to be considered in its design. These standards refer to a minimum open space park of 2,500m², requires a road frontage >50% of the total perimeter, and specifies a 400m² central activity zone for a playground to be separated from neighbouring residential property. In addition the *Playground Audit for Tweed Shire Council 2009* specifies a risk management approach in providing for playgrounds, including a recommended 20m buffer for playgrounds from neighbouring residences and a 30m buffer from busy roads where possible.

In response to concerns raised by Council and the Department over the design and location of the local park, amendments to the PPR included Lot 51 (2,625m²) as an open space area to be embellished with children's playground equipment in the south-east corner of the site. The proponent has provided a suitable assessment to indicate Lot 51 is broadly consistent with the standards set out in Council's DCP Section A5 - *Subdivision Manual*. The Department notes that the revised design of the local park provides a greater road frontage perimeter (44.4%), increased opportunities for casual surveillance for parents to deter anti-social behaviour, provides for a more usable central activity zone, and a greater park area. The proposed location of the playground in the very south-east corner of the site abutting the intersection of Hogan's Road and Bilambil Road requires a design solution (e.g. impact barrier and appropriate landscaping) to mitigate the safety threat from these busy roads – the Department has recommended an appropriate condition to address this.

5.1.2 Buffer from Bilambil Creek

During the exhibition period DECCW, LPMA, and Council all submitted that the proposed buffer from Bilambil Creek was of an inadequate width to provide for the preservation of environmental integrity of the riparian vegetation and the Creek. It was submitted that a 50m vegetated buffer be retained and all structures, roads, walkways etc. be located outside of that.

However the DII (former Department of Primary Industries) and the LPMA (formerly the Department of Lands) in earlier consultation had previously agreed to a reduction in vegetated buffer width from 50m to 35m. The 15m wide road reserve would constitute the remaining width of the buffer and would also act as an Asset Protection Zone for future dwellings (where possible). Both the DII and the LPMA contended that appropriate revegetation strategies and pedestrian control would provide suitably improved outcomes for fish and aquatic habitat, and the preservation of the integrity of Bilambil Creek.

The basis for DECCW's objection to any reduced buffer width in this instance centres around the general guide of providing a 50m buffer from Environmentally Sensitive Areas, depending on the type and intensity of development and the characteristics of the waterway. This standard has been established through long-term ecosystem monitoring and scientific analysis, and is designed to mitigate edge-effects arising from residential development. Furthermore it is typically recommended that any perimeter road be located outside of the buffer due to issues arising from increased levels of pollutant runoff, and increased velocities and quantity of stormwater. However it is recognised that buffer widths may be varied on a case-by-case basis.

In this instance a 35m vegetated buffer is considered satisfactory because:

- recommended conditions will require an amended Vegetation Rehabilitation Plan to be submitted for approval that will ensure the riparian area is replanted with appropriate species, density and be subject to performance monitoring to ensure environmental objectives for the Creek are met;
- the impacts of pollutants from stormwater runoff will be managed by appropriate treatment devices and be consistent with the principles of Water Sensitive Urban Design;
- the development of a detailed Stormwater Management Plan (SWMP) will be required to be submitted and approved prior to the issue of a Construction Certificate. The SWMP will assess the impacts of stormwater over the whole site and in particular the effect of the proposed stormwater discharge from the project into Bilambil Creek, and will provide mitigation to ensure any environmental effects are adequately managed;
- bank stability will be ensured by revegetation and appropriate location and design of the main stormwater outlet;
- pedestrians will be excluded from the riparian area; and
- the project provides an improvement on the current land use in terms of water quality and provides a greater environmental buffer.

Further discussion in relation to the buffer width and provision of an Asset Protection Zone is discussed in Section 5.11 of this Report.

5.1.3 Lots along the Bilambil Road frontage

The original lot layout proposed Rights of Carriageway (ROC) servicing the lots backing onto Bilambil Road (Lots 12, 14, 16, 18, 20, 22, 24, 26 and 28) over those lots facing the internal road. This arrangement was not favoured in public submissions and had the effect of:

- providing smaller useable areas for all those Lots (if the ROC area were deleted from the lot area, the lots fronting the internal road would be under Council's minimum lot size of 450m²);
- added impacts on the streetscape of the internal road.

This situation is worsened by the fact that the front lots facing the internal road are additionally burdened by a 3.0m wide easement to drain sewer along their rear boundary, making their usable footprint very small.

However after discussions with Council and the Department, in its PPR, the proponent altered the design to provide those lots with direct vehicular access to Bilambil Road. Deletion of the access easements over the lots fronting the internal road will lead to a better planning outcome by:

- reducing traffic volumes by approximately 90 vehicles per day on the internal road;
- reducing the number of driveway penetrations and result in improved residential amenity and streetscape by enabling additional street tree planting;
- creating a larger useable area for each burdened lot; and
- re-orientating the development such that it opens out onto Bilambil Road rather than turning its back. This will have the effect of creating a 'softer' edge to the development.

Where driveways penetrate the acoustic mound and fence proposed along Bilambil Road, appropriate solid panel gates are proposed to mitigate potential road noise impacts. Furthermore, conditions will be placed on the approval to ensure appropriate landscaping is maintained and enhanced down the Bilambil Road frontage.

5.2 NOISE

Traffic noise post-development and construction noise were both identified as issues during the assessment process. An *Environmental Noise Impact Report* was prepared by the Carter Rytenskiid Group, July 2009 and submitted with the EA. This report recognised and modelled the potential impacts of noise (on future residents and adjacent residents) and recommended a number of actions to mitigate those expected impacts.

Road traffic noise for future dwellings along the Bilambil Road frontage of the site was modelled on ultimate traffic volumes and found to exceed external noise criterion for the nearest building façades and outdoor areas. To mitigate these expected impacts the proponent has proposed to construct an acoustic barrier for ground level building façades and outdoor areas, and proposes acoustic treatments for first floor building façades be included in future dwelling construction. Such treatments include double glazed glass for windows, reinforced walls and ceilings and air conditioning to enable residents to achieve air flow while the windows are closed.

The acoustic barrier will be 1.8m high, comprising a 1m high earth bund and a solid, gapless fence 0.8m high. Detailed landscaping plans are required to be approved and will ensure that proposed driveways and vegetation along the Bilambil Road frontage will not adversely impact upon the efficacy of noise mitigation measures to protect the residential amenity of the affected properties. Where driveways penetrate the acoustic barrier, solid, acoustically rated gates will be used. As a condition of approval a Noise Monitoring Report will be required one (1) year after construction of the first potentially affected dwelling to allow for additional measures to be employed should the proposed measures be unsuccessful.

Noise generated during construction activities will be controlled by way of a Noise and Vibration Management Plan to be prepared (and approved) as part of the overall management of the site.

5.3 VILLAGE CHARACTER

While Bilambil Village can be characterised as a small rural-residential enclave at present, existing zoning allows for further development of the village (as discussed in section 3.3). The provision of reticulated sewerage to the village will allow for an intensification of development, and with this increase in population and associated activities, has the capability to transform Bilambil into a vibrant rural hub serving the scenic Tweed hinterland. One of the key issues raised in submissions was the desire to limit the density of future development on the site.

The Department notes these concerns, however, highlights that the size of the proposed lots is consistent with the existing and draft local environmental plan and is permissible with consent. Furthermore, the proposed subdivision is consistent with the overarching strategic land use documents that guide development and manage anticipated population growth in the Region by contributing to future housing stock in the Tweed.

Notwithstanding, to minimise the residual impacts of the proposal, the Department recommended modifications to design, scale and landscaping to allow for a Village design sensitive to the surrounding rural-residential land use. Particular regard has been had to ensuring the edges of

the development transition 'softly' into the surrounding village by use of staged vegetation management and requiring the provision of detailed landscape plans via conditions on approval.

There are additional environmental positives resulting from the connection of the village to a reticulated system (see discussion in section 5.10). Sewerage will also allow for other rural-residential properties in the area to subdivide and develop, and the retention of the RU5 Village zoning in the Draft TLEP 2010 provides for versatility of land use by permitting an array of activities, services and facilities including childcare centres, retail shops, and commercial activities. Some of these opportunities could be taken up by existing property owners in the area.

The incorporation of Lot 1 (for APZ purposes) into Lot 2 will serve to increase the average lot size from approximately 533m² up to 545m². The PPR also included a rearrangement of lots along the Urliup Road frontage to provide for generally increased lot sizes (450m² up to 600m²). These larger lots assist in maintaining the existing village character (though landscaping, greater building setbacks etc) and in doing so will create a softer transition from the neighbouring larger lot, rural-residential properties over Urliup Road to the village centre.

Future applications for development consent for the construction of dwellings and a possible childcare centre will be assessed against the surrounding character of the village. The desired character of the village is set by the objectives of the zone, as identified below:

Within the existing TLEP 2000, the primary objective of the 2(d) Village zone is -

- *to provide for residential development and a full range of services and facilities traditionally associated with a rural village which is of a design and scale that makes a positive contribution to the character of the village.*

Within the Draft TLEP 2010 (currently on public exhibition) the primary objective of this RU5 Village zone is -

- *To provide for a range of land uses, services and facilities that are associated with a rural village*

Overall, the Department is satisfied that the development of these two large sections in the heart of Bilambil will provide a density of residential development that will eventually support a range of land uses, services and facilities that will make a positive contribution to the character of the village.

5.4 EARTHWORKS AND FILLING

The subject site has been significantly disturbed by previous quarrying activities. In particular the site is characterised by an isolated rock outcrop rising to a maximum of 20m above the surrounding plain. The outcrop is essentially contained within the existing site boundaries. To achieve a suitable building platform and acceptable road gradients across the site, this outcrop needs to be nearly levelled. With the associated cut and fill required, it is estimated that approximately 19,000m³ of spoil will be required to be removed from the site (thus generating the need for a Heavy Haulage Contribution under Council's Section 94 Plan No. 4). The proposed earthworks result in a maximum grade of the finished lots of approximately 20%, with no access grades to any allotment exceeding 25%.

Conditions will be placed on the approval to ensure bulk earthworks are undertaken using the best practicable erosion and sedimentation control measures to prevent off-site effects. A detailed Site Management Plan (SMP) will be required to be submitted for approval prior to any construction certificate being issued. By controlling noise, vibration, complaints procedures, erosion and sediment controls, waste management, traffic and pedestrian movements; the SMP will ensure that environmental effects arising from the construction of the subdivision are not significant.

In addition, some bulk earthworks are required within the nominated Public Reserve (Lot 52) and riparian management area during the creation of a suitable building platform. There is potential for these works to affect the integrity of Bilambil Creek bank and water quality, particularly during construction. Conditions have been recommended that specify these works must be consistent with Council's controls for earthworks, the approved Vegetation Rehabilitation Plan, and occur no closer than 5m from the Creek bank.

With the exception of bulk earthworks around Lot 50 and the Hall, finished surfaces will match existing levels at the boundaries of the site. In addition, a 1m high retaining wall will be constructed around the central lots (Lots 32-49) in the project to reduce the excess spoil required to be removed from the site (a saving of some 9,800m³). A 1m high boulder retaining wall is also proposed behind Lot 2 to provide a defined edge to the existing open drain.

5.4.1 Retaining Wall to Lot 50

Council's assessment raised issue with the lack of detail provided for the retaining walls needed behind Lot 50, particularly their height, their impacts on drainage, adjacent property, and streetscape. Further detail was provided in Appendix D to the Addendum to the PPR – March 2010 and was considered to satisfactorily address earlier concern. The retaining walls will now begin 0.9m from the property boundary, and descend to Lot 50 in a stepped fashion, with each terrace no greater than 1.2m high, a total height for all terraces of no more than 5m, a consistent slope, and appropriate landscaping. Conditions will be placed on the approval to ensure this retaining wall has no adverse environmental effects.

5.5 STORMWATER

5.5.1 Permanent stormwater management

Quantity

Post-construction, the site can be divided up into three main catchments (see Figure 7 below). The majority of the site drains to the south-west and into Bilambil Creek (Catchment Area 'A'), Catchment Area 'B' is the next biggest catchment and drains north-east to an overland flow path east of Bilambil Road, while Catchment Area 'C' drains the remaining area to an existing vegetated swale to the north-west that eventually runs into Bilambil Creek.

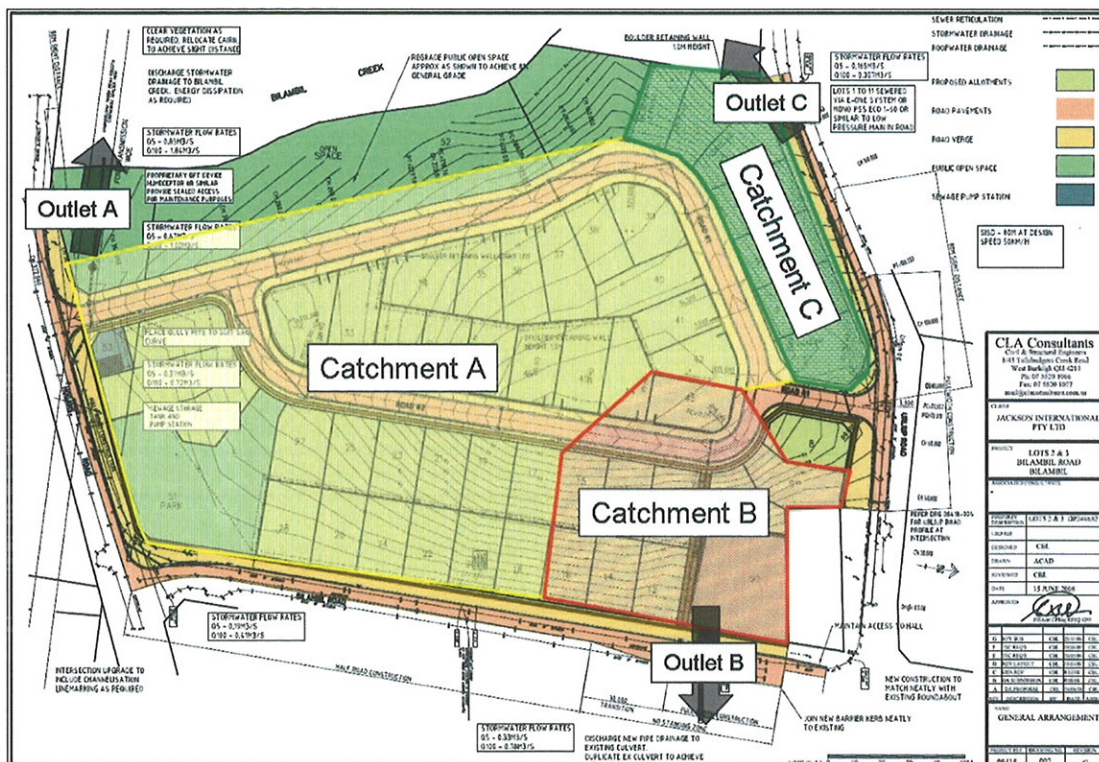


FIGURE 7 – Stormwater catchments and outlets

There is some loss of flood storage capacity due to the placement of fill to a depth of 0.70m on an area of approximately 1,350m² in the south-east corner of the site. This filling is necessary to attain the designated flood level across the entire site. The estimated loss of flood storage as a result of the fill in this location is 470m³.

Whilst there is an increase in peak flow rate caused by the project, the quantum of the increase is negligible when compared to the conveyance capacity of Bilambil Creek. The impact is further attenuated by the significant time lag between the almost immediate concentration of runoff from the site (approximately 15 minutes), and arrival of flows into the Creek from the wider catchment

(hours). In light of these minimal impacts, neither construction of a detention pond nor a wetland is necessary to compensate for the loss of flood storage or to attenuate flows.

While the piped road drainage systems would be sized for the Q5 storm event, Council's Design Specification D5 – *Stormwater Drainage Design* also requires consideration of the major storm event, and the provision of adequate Q100 flow paths to a lawful discharge point, including inter-lot systems. Submissions from both Council and the proponent consider that detailed design, sizing and final layout of the stormwater system should occur prior to the issue of construction certificate – this has been enforced by way of condition on approval.

In addition, Council's assessment of the pre-development and post-development contours confirms that the proposed earthworks do not serve to concentrate flows on to adjacent property and that there is no impact on upstream properties. Therefore matters associated with stormwater quantity in regards to the project have been adequately addressed.

Quality

In order to achieve required water quality prior to discharge into the site's legal point of discharge - Bilambil Creek - the proponent proposes to utilise end-of-line proprietary Oil and Grit Arrestors (Humeceptor or equivalent) at Outlet 'A'. Such a device is proposed to be installed within Lot 55, just upstream of the proposed outlet into Bilambil Creek. Recommended conditions on the approval will ensure that this is installed to achieve water quality objectives to the satisfaction of the Certifying Authority. This treatment device will serve the majority of the site and therefore have the largest effect on stormwater quality overall.

The small areas of Catchment Areas 'B' and 'C' do not justify an end-of-line proprietary Oil and Grit Arrestor. Instead, grass swales between the proposed Urliup Road stormwater outlet (outlet 'C') and Bilambil Creek should provide appropriate infiltration, pollutant and nutrient removal to achieve acceptable water quality discharging into the creek. Catchment Area 'B' will flow via a new piped drainage system to an existing culvert under Bilambil Road.

Conditions are recommended on the approval requiring the proponent to design and install an integrated stormwater management system that achieves both stormwater quality and quantity objectives to the satisfaction of the Certifying Authority prior to the issue of Construction Certificate. A detailed Stormwater Management Plan will require the proponent to design the stormwater management system to ensure that the average annual load of key stormwater pollutants and flows are no greater than pre-development conditions. A Stormwater Monitoring Plan is also recommended to ensure there are no adverse effects on Bilambil Creek and that measures put in place to effectively manage stormwater are working satisfactorily. Furthermore, it is recommended that a condition be imposed requiring the stormwater outlet in the south-western corner of the site to be located and designed to minimise impacts on ecology, scour and erosion of the Creek bank.

5.5.2 Temporary stormwater management during construction works

The recommended conditions of approval require the proponent to provide a detailed Site Management Plan to the Certifying Authority for approval prior to obtaining any construction certificate for the commencement of works. This will ensure that site-generated sediment laden stormwater will be adequately controlled throughout the duration of bulk earthworks and subdivision construction.

5.6 FLOODING

According to Tweed Shire Council's *DCP 2008 - A3 Development of Flood Liable Land*, the Design Flood Level (100-year ARI flood) for the site is RL 3.5m AHD, which is based on historical flood levels in the area. Council's Tweed Valley Flood Study (2005) models a 36-hour duration flood in the Tweed Valley, which results in a peak 100-year Average Recurrence Interval (ARI) regional flood level of RL 2.5m AHD.

Only a small part of the subject site adjacent to Hogan's Road is flood liable, with the majority of the site already being above RL 4m AHD. The small portion of the site below RL 3.5m AHD will be filled, with no significant impact on flood storage anticipated. The proposed residential lots will be constructed with a minimum lot level of RL 4.4m AHD, to provide freeboard above the Design Flood Level and to balance cut and fill earthworks for the project.

The *Tweed Valley Flood Study* (2005) also predicts a Probable Maximum Flood (PMF) level for the subject site of RL 5.0m AHD. The proponent has worked on an assumed PMF level of RL 5.5m AHD to account for some additional flood gradient to the site. Tweed Shire Council DCP-A5 and Council's Flood Risk Management Policy require that all residential lots in new subdivisions have adequate high level road and/or pedestrian access (evacuation route) to land above the PMF level. The project complies with the PMF requirement with vehicular and pedestrian access provided to Carool Road approximately 2m above the 100-year ARI level.

5.6.1 Climate Change

Tweed Shire Council is currently in the process of investigating the impacts of climate change in terms of potential flood impacts as part of an update to the *Tweed Valley Flood Study*. In accordance with the latest DECCW Floodplain Risk Management Guidelines and sea level rise benchmarks, Council's draft study has modelled a high impact climate change scenario with 0.91m sea level rise and 30% increase in rainfall intensity. Draft results of that study indicate an impact of the order of a 1.5m increase in the peak flood level for the 100-year ARI event, when considering the 36-hour duration regional Tweed Valley event.

The proponent does not consider it appropriate to apply this impact to the historical flood level (i.e. RL 3.5m AHD), but rather this impact should be superimposed on the modelled regional flood level (i.e. RL 2.5m AHD). Thus in considering the impact of climate change, the anticipated flood level would increase from RL 2.5m AHD (modelled) to RL 4.0m AHD. This would provide a minimum freeboard of 0.4m to the lowest lots, with an additional 0.5m freeboard requirement to habitable floor levels for future residential development. In lieu of a flood model for the shorter duration Bilambil Creek flood event, this approach is considered satisfactory, and the minimum fill level of RL 4.4m AHD provides a conservative design approach to account for potential increases in flood levels due to climate change.

5.7 GEOTECHNICAL ASSESSMENT

A Geotechnical Engineering Assessment report for the project was undertaken by Border Tech for the purposes of determining the suitability of the site for the proposed project and submitted as part of the EA. As stated in section 5.4, significant bulk earthworks are required to be undertaken on-site (including disposal of some 19,000m³ of excess spoil off-site) to establish a suitable building footprint.

The report notes that the south-western portion of the site contains existing uncontrolled fill material, as defined in AS 2870 – 1996 '*Residential Slabs and Footing – Construction*'. Boreholes undertaken in this area indicate that this fill material appears to be well compacted and may not require removal and replacement, however it is recommended that the material in question is further inspected. This inspection will be undertaken after the site has been stripped.

In conclusion, and subject to conditions placed on the approval, the proposed residential subdivision is a suitable and feasible land use for the subject site in terms of geotechnical considerations.

5.8 FLORA AND FAUNA

Previous uses and activities on the site have removed the majority of native vegetation and habitat. As a result the site is highly disturbed and largely infested with exotic weed species. As can be seen in Figure 8, patches of forested vegetation occur along the property boundaries with the interior of the site largely cleared. Earthworks and site preparation will be largely undertaken in this central part of the site that is currently dominated by low-growing, mixed, exotic weed species – very poor quality habitat for fauna species.

A detailed flora and fauna survey was undertaken and an assessment report was submitted as part of the EA (*Amended Flora and Fauna Assessment for Lots 2 & 3 DP244652, Urliup Road, Bilambil*, prepared by James Warren & Associates, and dated May 2009).

5.8.1 Flora

Five vegetation communities and 95 flora species were recorded during the survey. The majority of these species were exotic weeds with one specimen of a threatened flora species recorded - the Rough-Shelled Bushnut tree (*Macadamia tetraphylla*). This species is listed as Vulnerable under the NSW *Threatened Species Conservation Act 1995* and the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*. It is threatened by both habitat loss through urban development and weed encroachment. To ensure the tree's ongoing viability, it is proposed to translocate it into the riparian zone. To manage this process the proponent has provided an appropriate Translocation Plan which will manage the movement of the tree, propagation of additional specimens, provide performance criteria to meet, and allow for monitoring and maintenance over time. This will be ensured via a specific condition of approval.

The other key area of concern is the riparian zone along the margins of Bilambil Creek in the western part of the site. This area (Lot 52 – 8,160m²) will be dedicated to Council as a public reserve and appropriately managed (and enhanced) as a lowland rainforest community through the implementation of a *Vegetation Rehabilitation Plan*. This enhanced riparian zone will also serve to provide a greater buffer to the stream and contribute toward a positive effect on water quality of Bilambil Creek and the Terranora Broadwater.

The Camphor laurel (*Cinnamomum camphora*) is recognised as a weed in both NSW and Queensland as it is an aggressive invader that out-competes and displaces native species. Its shallow root system also poses a threat to stream bank stability and undercutting of these trees by erosive forces can lead to siltation of watercourses and a deterioration of water quality. As these trees also provide some value for fauna habitat, their removal and control must be carefully managed. The proponent has committed to the staged removal and control of Camphor laurel in the riparian zone through the actions of the *Vegetation Rehabilitation Plan* – this will be ensured through conditions of approval. Camphor laurel trees on the Uriup and Bilambil Road margins will be retained for landscaping purposes in the short-medium term to provide a vegetated edge to the project. These will be removed in the longer term by implementation of the *Vegetation Rehabilitation Plan*.

A recommended condition of approval will also ensure that no earthworks are undertaken within 5m of the high bank of Bilambil Creek.

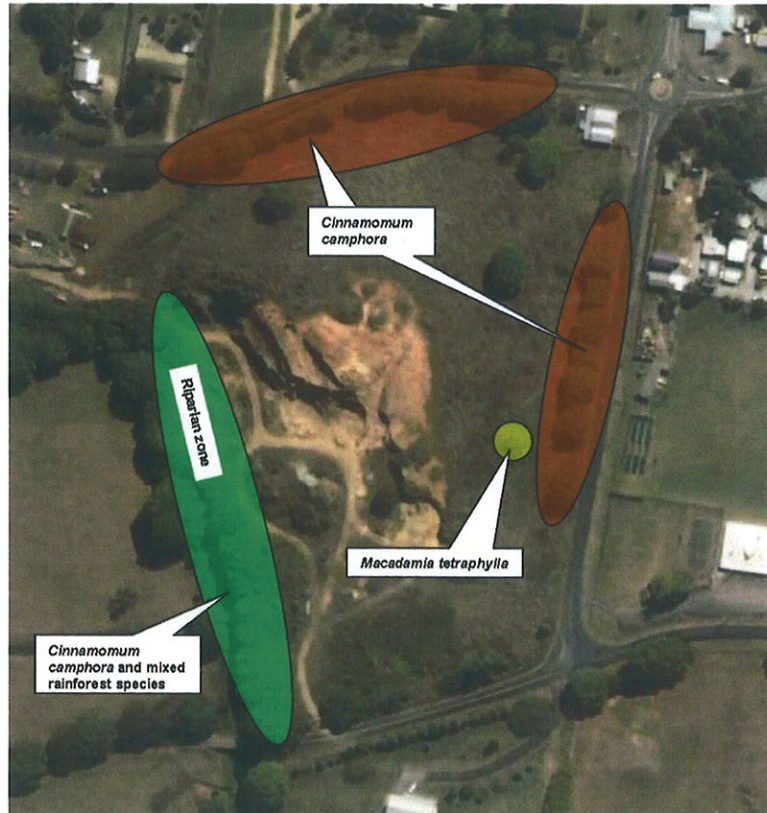


FIGURE 8: Vegetation communities

5.8.2 Fauna

A detailed habitat assessment and fauna survey was undertaken over the site for amphibians, reptiles, birds and mammals. Due to the highly disturbed nature of the site, the suitability for native fauna occurring is greatly reduced. One (1) amphibian species, the Common Eastern Froglet (*Crinia signifera*), and twenty-one (21) bird species were recorded on-site.

The National Parks and Wildlife Service Key Habitats and Corridors database (as accessed in May 2008) revealed two habitat corridors within the area of the site. The site occurs adjacent to the Bilambil Sub-regional Corridor which links Cobaki and McAlister's road to the north with Duroby Creek to the south-east. The MacPherson Range – Cobaki Regional Corridor lies approximately 1.2km to the north-west of the site and links Mt Tomewin in the west with McAlister's Road and eventually Cobaki and Terranora Broadwaters east of the site. The site is not part of the above described corridors and will not contribute toward a reduction in the overall effectiveness of these corridors. As discussed above, only very poor quality vegetation will be lost as a result of undertaking the project. The implementation of the *Vegetation Rehabilitation Plan*, particularly within the riparian zone adjacent to Bilambil Creek will actively enhance habitat for native fauna species in this locality in the long-term.

An assessment of available habitat concluded that ten (10) locally occurring, threatened fauna species were possibly occurring on-site from time to time. The site is also lacking in koala feed trees or any evidence of koala activity to be considered of significance in terms of koala habitat, and therefore a Koala Plan of Management is not required.

No species listed as threatened under the *Fisheries Management Act 1994*, or matters of National Environmental Significance under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* will be affected by this project.

Tweed Shire Councillors (in their submission endorsed 15 September 2009 at Council meeting) and members of the public raised concern over the potential impacts of the project on the Platypus (*Ornithorhynchus anatinus*). While protected under the general provisions of the National Parks and Wildlife 1974 the platypus is not listed as a threatened species in either State or Commonwealth legislation and no individuals were observed during the fauna survey undertaken by the proponent. The project is unlikely to result in increased impacts on the platypus or its habitat due to the rehabilitation of the riparian zone (providing enhanced habitat), provision for exclusion fencing in the *Vegetation Rehabilitation Plan*, and a condition on approval as a precautionary measure that requires detail of appropriate measures to reduce the impact of the development on native fauna in the Creek.

The proponent completed all required statutory tests of significance and concluded that the potential impacts of the project on those species were not significant. The Department concurs with this assessment and recommended conditions of approval will ensure that effects on fauna during construction are appropriately controlled, and that a suitably rehabilitated riparian zone will encourage additional native fauna to populate the area around Bilambil Creek in the long-term.

5.9 TRANSPORT

5.9.1 Road works and Traffic

The site has three road frontages - Urliup Road to the north, Bilambil Road to the east, and Hogan's Road to the south. Access to the site is proposed to occur via new intersections with Urliup Road and Hogan's Road. Intersections will be required to be constructed to appropriate standards via conditions of approval. In addition a number of modifications are required to these roads in order to achieve the required sight distances for vehicles entering and exiting the site. This will require 0.8m to be taken off the crest of Urliup Road and some minor vegetation removal in the vicinity of Urliup Road and Hogan's Road. Bilambil Road will also be required to be upgraded to meet Council's standards (including kerb and channel, drainage, full road width pavement, footpaths). These upgrades are reflected in the recommended conditions of approval.

As the site is not located within the identified Kennedy Drive Catchment Area, any vehicle trips generated by the project will have a negligible impact on the capacity of the Kennedy Drive road bridge.

Safe and efficient pedestrian access to Bilambil Road will be facilitated via the proposed street network and dedicated pedestrian links. This will provide easy access for future residents should

Bilambil Road be included in any future extension of public transport services to the area by the local operator.

5.9.2 Access

The proponent initially proposed a series of easements for rights of carriageway for those lots backing onto Bilambil Road (Lots 12, 14, 16, 18, 20, 22, 24, 26, and 28) to be accessed off the internal road. This arrangement was initially favoured due to Bilambil Road being classed as a 'designated road' under the provisions of the TLEP 2000. The TLEP 2000 controls development near designated roads by ensuring they do not detract from the scenic attractiveness of the Tweed, protect the efficiency and operating capacity of the road, and reduce the impact of traffic noise from the road on adjacent development.

Following advice from Council that they had no issue with providing direct access to Bilambil Road for those lots, the proponent submitted a revised PPR. The revised PPR allowed for direct access for Lots 12, 14, 16, 18, 20, 22, 24, 26, and 28 to and from Bilambil Road. The project for direct access for these lots to and from Bilambil Road will lead to a better planning outcome because:

- There will be reduced traffic impacts on the internal road and a negligible increase in traffic generated for Bilambil Road;
- Noise issues will be addressed through suitable design of an acoustic barrier and landscaping along the Bilambil road frontage;
- Removal of the initially proposed easements will provide those lots on the eastern side of the site with a larger useable footprint; and
- Streetscape on the internal road will be improved by a reduction in driveway penetrations and enabling additional street tree plantings.

All lots will be required to provide suitable driveway access and parking arrangements in accordance with Council's *DCP 2008 A5 – Subdivision Manual* and Design Specifications.

5.10 SEWERAGE

Bilambil Village is currently not connected to Council's reticulated sewerage system. This lack of sewerage infrastructure has served to hinder the development of the Village to its full potential (as zoned) as all properties presently utilise on-site sewage management/septic tanks. Furthermore a recent study of the health of Cobaki and Terranora Broadwater ecosystems (*Cobaki and Terranora Broadwater Ecosystems Health Monitoring Program 2009 Technical Report*, IWC) showed that all creeks in the catchment (including Bilambil) showed elevated nitrogen levels, probably linked to septic tanks, other on-site wastewater treatment systems, and livestock. Therefore any removal of septic tanks in other properties as result of this project and their replacement with reticulated sewerage would result in a positive effect on the water quality of both Bilambil Creek and the downstream receiving environment of Terranora Broadwater. The proponent has also committed to ensuring the neighbouring village hall will be connected to sewerage reticulation required to service the subdivision. Council has indicated they will enter into discussions with the proponent about the possibility of extending the reticulation to enable connection of the remaining properties in Bilambil prior to construction commencing.

Council's *DCP 2008 – A5 Subdivision Manual* states dwellings may not be constructed on any lot less than 450m² in size unless they are provided with reticulated sewerage. This rises to a minimum lot size of 1,000m² if it is proposed to retain on-site sewage treatment (as in Bilambil presently) (refer Table A5-9.3 of *Tweed DCP 2008 – A5 Subdivision Manual*). In this instance the provision of sewerage reticulation to the site is a critical argument in favour of the proposed lot sizes – all of the proposed residential lots are below 1,000m².

The nearest sewerage system connection point to Bilambil Village is at Peninsula Drive, Bilambil Heights (Pump Station 2038). However this pump station was indentified in Council's *Sewerage Overflow Abatement Strategy* as the highest risk pump station because it has very little capacity for storage in the event of a pump station failure - potentially leading to overflows into the Terranora Broadwater, possibly affecting oyster leases nearby. While Council is in the process of procuring a generator for this site, non-power supply related failures still leave this station as a major risk. Accordingly, Council has begun a sewer flow gauging study of this catchment and hopes to be able to quantify works needed to reduce the risk of overflow and identify any

upgrading works that may be required to enable this project and other potential connections in the area to proceed without increased risk. If this pump station is found to be unavailable, the project will need to provide a connection to Pump Station 2018 at Gollan Drive, Tweed Heads West.

The Statement of Commitments regarding sewerage reflects this investigation and includes further details regarding the connection point, rising main alignment, and required information.

The provision of sewerage reticulation and sewage management for the site will be subject to the approval of Council and conditions of approval will ensure that all necessary components of the system are constructed prior to the issue of subdivision certificate. All arrangements to certify that this will occur are to be approved to the satisfaction of Council prior to the issue of the first construction certificate.

5.10.1 Pressure Sewer System

Proposed finished contours on-site indicate that a number of lots on the northern end of the site at Urliup Road may not be able to be serviced by conventional gravity means. To facilitate sewerage reticulation for these lots it may be necessary to provide a pressure sewer system.

While it is Council's preference that developments are generally serviced by gravity means to a central pump station, it is recognised that in some instances this is not feasible and a pressure sewer system is required. It may also be that the most effective way to provide a sewerage system to the whole village may be an extension of this system using a pressure sewer system. The installation and maintenance of a pressure sewer system requires set up and ongoing costs, particularly associated with the maintenance and replacement of the pumps.

Typically where a subdivision is to be seweraged by a pressure sewer system, Council will take a capital contribution at subdivision stage to provide for the installation of pressure sewer pumps on each property at the time the house is being constructed. The person subdividing will provide the rising main and connection points as part of the subdivision works. These units will be Council's property and hence, responsibility to maintain. Council also requires a Positive Covenant to be placed on the affected lots that will permit Council access for the installation, maintenance and replacement of the pump station equipment, the provision of electricity by the householder, the placement of the control box and alarm system on an exterior wall of the dwelling.

The capital contribution for each lot is calculated as follows:

Table 2: Capital contribution for pressure sewer system

Component	Cost (\$)
Cost of Pump Station Unit	5,985
Allowance for Price Fluctuations (AUD, Inflation)	1,047
Cost of MDPE Class 12.5 32mm dia. pipe	200
Cost of installation – Plumbing	2,200
Cost of installation – Electrical	1,700
Sub Total	11,132
Engineering Supervision and Coordination - 20%	2,226
Administration - 13%	1,447
CONTRIBUTION REQUIRED PER LOT	14,805

This capital contribution is separate to the Section 64 Developer charges under the *Local Government Act 1993* that apply for the provision of sewer headworks and requires a separate specific condition including the positive covenant requirement.

5.11 BUSHFIRE

Section 4.1.3 of *Planning for Bushfire Protection 2006* states the proponent should ensure that the provision of an APZ will not diminish the ecological integrity of the adjacent bushland. In addition, Council's DCP Section A5 - *Subdivision Manual* states that Asset Protection zones are not permitted on environmentally sensitive land. Therefore the APZ in this instance should be provided on private property and outside the riparian buffer.

As a result of the park being relocated to the south-eastern corner of the site at the PPR stage, an APZ was proposed burdening Lot 52 (riparian buffer) in order to protect any future dwelling on Lot 1. The Department was not satisfied with this approach and after further discussion with the proponent a subsequent plan was submitted that provided a 10m APZ within an enlarged Lot 1 (Proposed Subdivision Plan, Sheet 2 of 3, Drawing No. 17154 D, Revision J). However while enabling the accommodation of the APZ on private property, the proposed modification to Lot 1 was at the expense of the riparian buffer. The plans submitted further reduced the width of the buffer in this location to approximately 30m, and decreased the total area of Lot 52 from 8,160m² to 7,895m². The Department considers the proposed further reduction to the riparian buffer to be an unsatisfactory outcome as the 35m buffer plus the road is an established compromise between the proponent, Council, the DII, and the LPMA.

To achieve a suitable outcome for bushfire safety and environmental integrity, the Department has recommended conditions to modify Lot 1 as it appears on a previous version of the subdivision layout plans (Proposed Subdivision Plan, Sheet 2 of 3, Drawing No. 17154 D, Revision G). Therefore as it would not be practicable to accommodate a 10m APZ and retain a building footprint on Lot 1 (as proposed in this plan), a recommended condition of approval specifies that Lots 1 and 2 are amalgamated to provide sufficient space for both an APZ on private property and a dwelling. This will also ensure that the landowner benefiting from the APZ will be charged with maintaining that APZ. Maintenance of the APZ will be ensured by way of a positive covenant imposed under s.88B of the *Conveyancing Act 1919*.

In addition to increasing the effective width of the riparian zone in this location, there are additional environmental gains from consolidating these two lots. Lot 1 is the smallest residential lot and consolidating it with Lot 2 will make it the biggest residential lot and will have the effect of increasing average lot size across the site. Having a larger lot on this corner of the site will further soften the transition between the subject site and neighbouring rural property.

6 CONCLUSIONS AND RECOMMENDATION

The Department has assessed the Project on its merits and considered the submissions received from public agencies and the general public. The key issues raised in those submissions related to the design and layout of the subdivision, provision of sewerage reticulation, impacts on village character, flora and fauna, impacts on Bilambil Creek, and flooding. The Department has considered the issues associated with the project and a number of conditions are recommended in conjunction with the Proponent's Statement of Commitments to ensure the effects of the project are avoided or mitigated by using methods of current best practice, and to ensure the project has minimal impacts. The resulting development is considered by the Department to be a good environmental outcome for the site and a significant improvement on the existing land use.

The project will allow for the:

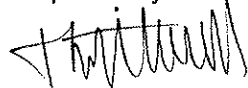
- redevelopment of an incongruous land use (quarry) in the heart of Bilambil as a residential hub by creating 48 lots;
- extension and revitalisation of the Village centre by creating one (1) lot for commercial/retail use adjacent to the existing Community Hall and one (1) lot for a new playground;
- dedication to Council (and rehabilitation) of the riparian zone adjacent to Bilambil Creek (Lot 52), thereby providing positive biodiversity and water quality outcomes to be preserved in perpetuity; and
- connection of the Community Hall to reticulated sewer and possible future connections for other properties in Bilambil. This will enable further development of the Village and contribute to improved water quality outcomes by removing the need for septic tanks.

The Department recognises the concerns of local residents and Council with regard to the proposed density of development on the site, however, notes that the proposal is consistent with the existing and draft local environmental plans and is permissible with development consent. Furthermore, the project is in line with the priorities of the NSW State Plan 2010 and conforms with the growth strategy outlined in the *Far North Coast Regional Strategy 2006* and Tweed Shire Council's *Urban and Land Release Strategy 2009*.

The proposal will provide opportunities for infrastructure services to be extended to other parts of Bilambil and may provide opportunity for other properties in the Village to use the 2(d) Village zoned land to its maximum potential. The project also excludes development from an ecologically sensitive riparian buffer that will be dedicated for the public benefit in order to enhance biodiversity in the area and protect Bilambil Creek and its water quality and aquatic habitat.

The Department has undertaken a thorough merit assessment of the proposal within this context and considers that the site is suitable for the proposed land use and is in the public interest. Consequently, the Department recommends that the project be approved, subject to the conditions of approval and the Proponent's Statement of Commitments.

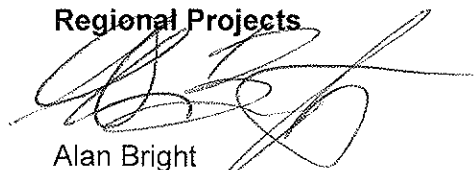
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APPENDIX A. ENVIRONMENTAL ASSESSMENT

See the Department's website at <http://majorprojects.planning.nsw.gov.au>

APPENDIX B. ENVIRONMENTAL PLANNING INSTRUMENTS

To satisfy the requirements of section 75(2)(d) and (e) of the Act, this report includes references to the provisions of the environmental planning instruments that substantially govern the carrying out of the project and have been taken into consideration in the environmental assessment of the project.

The provisions, including development standards of local environmental plans, and development control plans are not required to be strictly applied in the assessment and determination of major projects under Part 3A of the Act. Notwithstanding, these standards and provisions are relevant considerations as the DGRs require the Proponent to address such standards and provisions. In summary, the relevant EPIs for this project include:

- *State Environmental Planning Policy (Infrastructure) 2007*

The Infrastructure SEPP aims to provide efficiency in the delivery of essential services and facilitate the delivery of infrastructure across the State. In particular the Infrastructure SEPP provides for development relating to road infrastructure facilities, sewage reticulation systems, riparian zone and stream bank management activities and stormwater management systems to be undertaken without consent or as exempt development complying with specific standards. Development for the purposes of sewage reticulation systems, stormwater management systems, roads and other infrastructure essential for the operation of a subdivision may be carried out by, or on behalf of a public authority without consent on any land. However approval will be required for sewerage, stormwater and water supply activities pursuant to section 68 of the *Local Government Act 1993*.

- *State Environmental Planning Policy (Major Development) 2005*

The MD SEPP applies to the project as discussed in Section 3.1.

- *State Environmental Planning Policy No. 55 – Remediation of Land*

SEPP 55 requires a consent authority to consider the potential for a development site to be contaminated and therefore whether it is suitable for the use for which development is proposed. If the land is unsuitable, remediation must take place before the land is developed. As the project involves a change in land use and requires bulk earthwork activities to be undertaken, the proponent has undertaken a Detailed Site Investigation providing appropriate recommendations for the treatment of the site. Therefore the requirements of SEPP 55 have been considered in the assessment of the project.

- *State Environmental Planning Policy No. 71 – Coastal Protection*

SEPP 71 applies generally to land within the coastal zone. Clause 8 of the policy sets out matters for consideration by a consent authority when determining a development application to which the policy applies. In particular, the project provides for the retention and enhancement of the riparian management corridor adjacent to Bilambil Creek and may enable existing properties to convert from septic tanks to reticulated sewage. The relevant matters for consideration as set out in SEPP 71 have been considered in the assessment of this project.

- *North Coast Regional Environmental Plan*

The North Coast Regional Environmental Plan (NCREP) is now considered a deemed SEPP (as of 1 July 2009). The assessment of the project has had particular regard to the relevant provisions of the NCREP including the protection of coastal water quality, the

enhancement of the natural environment, the enhancement of visual quality, and maximising the density of dwellings without adversely affecting the environment.

- *Tweed Local Environmental Plan 2000 and DRAFT Tweed Local Environment Plan 2010*

See discussion in Section 3.3 of this report.

Further detail regarding the assessment of the project against the relevant aims, objectives and provisions of these EPIs can be found in section 5 of this report.

OTHER PLANS AND POLICIES

The Project has also been considered against the following non-statutory documents:

- *Tweed Shire Council Development Control Plan 2008*
The Tweed DCP (and its supporting documents) sets out the relevant standards and controls relating to subdivision within the Tweed Shire (Section A5). Particular regard has been had to the requirements for providing open space (parks) and development design and construction specifications. Where relevant these specifications will be enforced by way of conditions attached to the approval.
- *NSW Coastal Policy 1997*
The project is consistent with the Coastal Policy. The subject site is not visible from the coastline and is unlikely to have impacts upon coastal processes.
- *NSW Coastal Design Guidelines and North Coast Urban Design Guidelines*
The project is consistent with these guidelines. The subdivision layout addresses orientation and existing environmental constraints.

The Department considers that the Project is generally consistent with the objectives, policies and other relevant provisions of the above documents.

APPENDIX C. SUMMARY OF PUBLIC SUBMISSIONS

1	Density and Character
	<ul style="list-style-type: none">• Bilambil Village is essentially rural in character. The proposed development is not in keeping with the existing character of the area and will significantly affect the character and amenity of the Village. While on the whole residents are not opposed to change and development of a kind, they are mostly opposed to the number of lots proposed. Most are suggesting a reduced density of lots from current (56 lots) to somewhere between 5-30 lots.• Would prefer to see larger blocks in keeping with surrounding lot size.• Lot sizes are too small and proposed easement arrangements provide further impediments to building. Easements providing access to rear lots backing onto Bilambil Road are not desired and have the effect of minimising the potential buildable area. Actual lot size will be smaller than that stated, particularly for Lots on the eastern side of the development with shared access easements.• This subdivision will occupy more than 50% of 2(d) Village zoned land remaining in area. As a result such a development will substantially alter the character of the local Village. Refer to development at Mount Billinga Circuit nearby for another example of inappropriate development.• While zoning allows for blocks as small as 450m², this must be justified in context of village character. Larger rural-residential blocks (4,000m² plus) would provide a more suitable transition between rural and urban land use and be more appropriate for the area. Larger blocks would also allow for on-site sewage treatment systems to be provided, thus negating the need to connect to Council's system.• The ability to build a three storey house on 450m² blocks of land is out of keeping with rural character of Village.• No variable development or individual architectural design possible in such a high density development, resulting in homogenous design and visually dull character.• Social impacts from closeness of housing and noisy air conditioners, easements (including ongoing maintenance of shared land) and parking conflict. Privacy issues with two storey homes. Suggests removing Lots 13, 15, 17, 19, 21, 23, 25, 27, 29 and 31 to reduce these issues.• Bilambil Village should be allowed to grow naturally, organically over time rather than have an immediate city-like cluster forced upon it.
2	Socio-economic
	<ul style="list-style-type: none">• Issues with 'affordable/low cost housing' attracting a lower socio-economic group leading to an increase in theft/crime.• Impacts on Tweed and Caldera scenic routes/drives – tourism impacts e.g. Tweed's only winery, eco-resorts, access to coastal hinterland.• Cost of housing appears to be significantly more than urban zoned land in the Tweed Shire (c. \$250,000 vs. c. \$185,000). Is this affordable housing?• Currently no infrastructure to support high density development in the area – e.g. public transport, sewerage, telecommunications and internet.• Lack of public transport means residents will be forced to have a car to access facilities and employment not provided in Bilambil Village. This is an additional cost and contradicts the idea of affordable or low-cost housing.• Lack of facilities in the area to cater for increase in young families e.g. doctor, pharmacy, bus service. Target market for this development would appear to be young families, so facilities should be designed around their needs.• Lack of facilities for teenagers has already led to anti-social behaviour as a result of boredom in local area e.g. graffiti, hoons, vandalism etc... Problem already exists in Bilambil Heights and it is contended that this development will exacerbate issue.

	<ul style="list-style-type: none"> • What study has been done on the impact of the number of extra students expected for Bilambil Public School? • Development should enhance quality of life without ruining the environment, and not focus solely on economic growth. The village character of this part of the Tweed Shire sets the Shire apart from others.
3	Flooding
	<ul style="list-style-type: none"> • The proposed development changes flood regime in the area by raising average ground level. This will have the effect of diverting flood flows into other areas and giving rise to unintended adverse effects offsite. • Proposed development will become an island during floods with severely constrained access in or out. • Impacts of increased flooding on properties downstream as a result of increased surface runoff from proposed subdivision (particularly Lot 1 Hogan's Road immediately south of site). There have been four floods since 1999 (included photos). Climate change will also exacerbate this problem so must be addressed adequately. • Residents on western side of Hogan's Road causeway will be adversely affected by a rapid release stormwater system during times of flood. Particularly affected will be the two lots immediately south of the site and the sports fields. Concern expressed that the sports fields will be severely effected more often (and therefore become unusable) if development goes ahead. • Increased surface runoff from hard surfaces will hit Hogan's Road bridge during flood conditions and will back up, thereby flooding critical road accessways (e.g. Bilambil road, Hogan's Road) making them more susceptible to being impassable at critical times. • What impact will tidal influences of Bilambil Creek have during peak flow conditions? Will a coincident high tide have the effect of prolonging flooding? • TLEP 2000 – Part 7, Clause 34 has an objective to minimise the adverse effect of flooding on the community. Development must also be consistent with Tweed Shire Council's recently updated flood study and subsequent policy.
4	Bilambil Community Hall
	<ul style="list-style-type: none"> • Noise – e.g. compressors for cold rooms, delivery vehicles, rubbish and recycling collection. Noise from events at the community hall will adversely impact on residents of proposed Lots 9, 10, and 11. Frequency of delivery vehicles has been understated at twice a week – probably more like daily. Ensure that the Community Hall can operate as it currently does without new operating restrictions requested by new residents. • Impacts of fill and retaining wall on boundary between community hall and proposed development may cause additional stormwater runoff onto hall site. This could lead to effects on the piles/foundations of the community hall.
5	Site contamination
	<ul style="list-style-type: none"> • There may be impacts of former cattle dip site adjacent
6	Stormwater
	<ul style="list-style-type: none"> • Contaminated stormwater from site should be treated prior to discharge into Bilambil Creek. Current Project is not as good as what was previously proposed (settling pond) in removing nutrients. Insufficient treatment of stormwater prior to discharge will contribute unnecessarily to poor water quality of the receiving environment (Bilambil Creek, Terranora Broadwater). • Current land use provides ample open space/undeveloped area to absorb and filter runoff before it enters the Creek. Proposed land use would arguably worsen the

	<p>situation by providing more paved/hard surfaces, rooftops and roads – therefore less filtration and natural treatment of stormwater.</p> <ul style="list-style-type: none"> • Open drain on western boundary of Lot 2 should be piped to minimise safety risk to children. • Provide an ecological assessment of the effects of the stormwater discharge into the Bilambil Creek receiving environment. • Densely developed and covered lot areas will not provide enough soft landscaped area to absorb any stormwater. This will result in additional runoff and greater discharge into the Creek in peak rainfall events. This will have the effect of turning the Creek into a high flow drain and significantly reduce its ecological value. • All homes should be required to have rainwater tanks plumbed to reduce runoff and flooding impacts (BASIX). This would require an appropriately designed and clad roof (i.e. colour bond or zincalume steel).
7	Water quality
	<ul style="list-style-type: none"> • Concern over impacts on water quality of an already distressed receiving environment. Bilambil Creek given a 'C' rating in the <i>2009 Report Card for the Waterways and Catchments of Cobaki and Terranora Broadwaters</i> (Tweed Shire Council and partners, 2009) • No access to Creek from development. Provide full fencing along bank to minimise access, help prevent accidents, and control rubbish entering Creek. • Buffer zone not sufficient to address water quality issues. Width not consistent with environmental law. Buffer should be 50m and not include proposed road or playground/open space. How will maintenance of this area be provided for? Developer should pay for riparian maintenance for 5-10 years post development. • Water must be of sufficient quality to conserve the habitat of platypus inhabiting the Creek.
8	Sewerage
	<ul style="list-style-type: none"> • School and residents should be allowed to connect to any proposed system. Request for Council to undertake a commitment in negotiating with the developer to supply adequate pipes to cater for the entire village to be seweraged. • The proposed route of the pipeline over steep terrain on land prone to slippages. Proposed route has not been considered and include with assessment to allow public a chance to assess it – the proposed route may have its own environmental effects which would need to be addressed. • Investigate alternative sewer treatment mechanisms on-site e.g. Bio-cycle. On-site sewage treatment could provide additional benefits by watering the adjacent sports fields. • Noise and visual effects of sewer pump station need to be addressed. • Pump station is located on area of development most flood prone – should be relocated elsewhere. Has potential to flood and spill into Bilambil Creek adding health and safety issues and adverse effects on the water quality of the receiving environment.
9	Road network and parking
	<p>PARKING</p> <ul style="list-style-type: none"> • Inadequate provision for overflow parking for visitors within development. This will result in spill over on-road parking to adjacent streets. Already inadequate provision for roadside parking on Bilambil Road, particularly during sports/cultural events. Concern that the Project will exacerbate the existing parking issue. <p>PEDESTRIAN FOOTPATHS</p> <ul style="list-style-type: none"> • Inadequate footpaths in the area. There is no safe provision for pedestrians/prams/wheelchairs on the internal roads.

	<ul style="list-style-type: none"> • Extend footpath further along Uriup Road to development boundary. • No pedestrian crossings provided, especially if playground is proposed across Bilambil Road. <p>TRAFFIC</p> <ul style="list-style-type: none"> • Increased traffic in local area from more residents and two car families. Lack of viable public transport alternatives may also increase locally generated traffic e.g. increased visitor pick-ups. • Impact of proposed development on capacity of Kennedy Drive. Cobaki Bridge at Kennedy Drive is operating at capacity and requires additional lanes to cater for all proposed development in the area (e.g. Rise Estate, Terranora E, Bilambil Heights etc..). This should be completed before construction of any development. • Safety of Bilambil Road is questionable already, how will it cope with increased traffic? • How will the traffic conditions be managed? What signs will be provided? • Residents directly across from Uriup Road access to the development raised concerns over noise, traffic volumes, impacts to their existing outlook, and lack of a footpath and safety issues. <p>ROAD DESIGN</p> <ul style="list-style-type: none"> • Remove 1.5m from the crest of Uriup Road in this location to address sight distance issues. Proposed 800mm is not enough. • Hogan's Road and proposed internal road intersection requires adequate sight distance to the west (when exiting the proposed development at this point). Consider removal of proposed internal access onto Hogan's Road. • Internal roads need to be wide enough to allow for garbage trucks, recycling trucks, fire service and parking. <p>PUBLIC TRANSPORT</p> <ul style="list-style-type: none"> • No public bus service. Request for a subsidised 24-hour public bus service to provide accessibility to facilities, entertainment and other social and educational activities elsewhere in the Tweed Shire or Gold Coast. • No designated bus stop provided on Uriup or Bilambil Roads.
10	Electricity Transmission Line
	<ul style="list-style-type: none"> • Adverse potential impacts on Lot 34.
11	Playground
	<ul style="list-style-type: none"> • Should be provided for in a more central area within subdivision so as to reduce danger from being adjacent to Road. • Locating the playground near the Creek in a secluded area would increase risks from stranger danger and drowning. A better suited area would be adjacent to the Community Hall and provide synergies with any future bus stop/school bus stop and the commercial land use. This would require removal of the commercial/retail lot (Lot 53). • Providing a playground over Bilambil road on Council owned land (the sports ground) is not suitable. Children within the development will have no dedicated play area on site and be forced to cross an increasingly busy Bilambil Road to play.
12	Planning
	<ul style="list-style-type: none"> • Inconsistent with Tweed Local Environment Plan 2000 (TLEP). TLEP states that development should be consistent with character of surrounding locality. High density, low cost housing like that proposed is not consistent with surrounding area. • 2(d) Village zoning should "provide for residential development and a full range of services and facilities traditionally associated with a rural village which is of a design and scale that makes a positive contribution to the character of the village" (TLEP 2000) . Development should not detract from the village feel and amenity, and indeed

<p>should provide a positive contribution to the village character. This Project is inconsistent with the objective of 2(d) Village zoning as Project is more urban in nature, and provides no further services that aren't there already (a convenience/general store is already provided in the village).</p>
<ul style="list-style-type: none"> • The artists representation of development is misleading in terms of the nature and scale of development proposed. • Other land within the Tweed Shire will provide enough housing to meet State Government policy (Terranora E, Cobaki, Kings Forest amongst others). The development of this village is unnecessary.
<p>13 Noise/light</p>
<ul style="list-style-type: none"> • Adverse impact of noise/light spill on new residents from existing activities at the sports club over Bilambil Road. Proposed mitigation includes acoustic barrier and double glazing on upper storey windows. Air conditioning provided as windows will not open. Concern expressed over who will bear responsibility for maintaining the 1.8m high acoustic mitigation barrier e.g. graffiti, damaged panels? • Noise/light/parking issues for the new development should not restrict the ability of the sports club to operate as it currently does. • Existing rural noises (e.g. calving, tractors, livestock) are likely to cause issues for new residents.
<p>14 Visual</p>
<ul style="list-style-type: none"> • Visual impact of noise/acoustic wall – will have an effect on scenic quality of village and flow on tourism impacts for people doing the popular scenic drive. • The desire to provide for low cost housing will result in aesthetically displeasing dwelling design.
<p>15 General</p>
<ul style="list-style-type: none"> • Impact of high density development on historic values of Bilambil village. • Air conditioning of houses in the face of prevailing SE winds is energy inefficient and increases the carbon footprint of the development. • Impact of increased pets on surrounding area (e.g. dogs chasing cows and calves, impact on native fauna) needs to be addressed.
<p>16 Retail store</p>
<ul style="list-style-type: none"> • Shops in nearby neighbourhoods are empty and unable to be leased. Existing general store and proposed development adds nothing new. Therefore viability of proposed shop/retail facility is questionable. • Alternative commercial/retail uses could include: boutique shop (e.g. local wines, cheese, coffee, produce), restaurant, art gallery, arts and crafts.

APPENDIX D. PROPONENT'S RESPONSE TO SUBMISSIONS

See the Department's website at <http://majorprojects.planning.nsw.gov.au>

APPENDIX E. INSTRUMENT OF APPROVAL
