

**MAJOR PROJECT ASSESSMENT:
12-Lot Residential Subdivision
Willow Ave, Bogangar
(08_0118)**



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

November 2010

ABBREVIATIONS

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

Cover Photograph: view of site looking west toward Cudgen Lake and adjoining property

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EXECUTIVE SUMMARY

KenMar Farms Pty Ltd (the proponent) has made an application to subdivide land for residential purposes at Willow Avenue, Bogangar. The land is legally described as Lot 4 DP876253 and is located immediately south of Cudgen Lake, approximately 10 km south of Tweed Heads in the Tweed local government area (refer Figure 1).

The proposal will create eleven (11) residential lots and one (1) residue lot. The residential lots range in area from 651m² – 1,201m² with the residue lot having an area of approximately 11.37 hectares. Each residential lot will be provided with all usual infrastructure services including reticulated sewer, water, power and telephone. No works are proposed on the residue lot aside from minor vegetation rehabilitation to be completed on the 7(l) Environmental Protection (Habitat) zoned land in accordance with an approved vegetation management plan. Willow Avenue is also proposed to be widened adjacent to Lots 1-11 and kerb and channel provided on this side of the road.

The proposal was declared to be a project to which Part 3A of the *Environmental Planning and Assessment Act 1979* (the Act) applies as it met the criteria of the 'incremental coastal subdivision' clause of the *State Environmental Planning Policy (Major Projects) 2005*, as was in force at the time. Specifically the proposal was classified as a residential subdivision of land into 25 or fewer lots in a sensitive coastal location, where adjoining land in the same ownership could be subdivided into more than 25 lots. This clause has subsequently been removed from the *State Environmental Planning Policy (Major Development) 2005*.

The Capital Investment Value of the project has been estimated at \$866,738. It will create at least two (2) construction jobs.

The Department placed the proposal on public exhibition for 31 days between 28 April 2010 and 28 May 2010. During this period a total of eleven (11) submissions were received, including three (3) from the general public and eight (8) from State Government agencies and Council. Submissions generally provided conditional support for the proposal while two (2) submissions from members of the public were in opposition. Key issues raised during public exhibition included:

- Subdivision design and layout
- Flooding and drainage
- Soil contamination
- Ecological issues

The Department has given due consideration to the issues raised in submissions and has required the proponent to respond to those issues by amending the proposal. During its assessment the Department has had regard to relevant statutory and non-statutory documents and has considered the merits of the proposal against the objects of the Act and the principles of ecologically sustainable development.

The Department has assessed the merits of the proposal and found the project to be generally consistent with the objects of the Act and the principles of ecologically sustainable development. The Department is satisfied that the impacts of the proposal have been addressed via the proponent's Statement of Commitments, and the Department has recommended appropriate conditions of approval to ensure potential adverse effects on the environment are appropriately mitigated.

In conclusion, the project is considered to be suitable for the site, in the public interest and should be approved, subject to conditions.

1. BACKGROUND

KenMar Farms Pty Ltd (the proponent) proposes to subdivide Lot 4 DP876253 at Willow Avenue, Bogangar to create eleven (11) residential lots and one (1) residue lot. The project location is shown in Figure 1 below.



FIGURE 1 Site locality

1.1 Site Context and Locality

The site is located on the far north coast of NSW, approximately 20 km drive south from Tweed Heads along Tweed Coast Road and approximately 1 km inland of Cabarita Beach. Cabarita Beach/Bogangar is described as a coastal village with a population of approximately 3,000 people (2006 Census) in a state of gradual transformation. A 3-4 storey, mixed-use development consisting of a supermarket, specialty shops and 40 residential units was approved in the centre of Cabarita Beach/Bogangar by the Department in December 2009 (07_0179). This built on a number of other recent developments including The Beach Resort, Cabarita Surf Life Saving Club and a mixed use development at 47 Tweed Coast Road. Existing businesses in Cabarita Beach/Bogangar consist of a variety of commercial and retail uses including cafés, specialty retail, tourist accommodation, fresh food produce, convenience outlets and professional services. Current built form is characterised by a range of building types from 1-4 storeys in height with taller buildings situated in the centre of the village around Tweed Coast Road.

The site is located at the western extent of housing of Cabarita Beach/Bogangar. The recently approved Kings Forest development lies to the north-west of the site across Cudgen Lake (06_0316). The site is within the coastal zone and is also defined as being within a sensitive coastal location as it is situated within 100m of Cudgen Lake and Cudgen Nature Reserve.

The surrounding built environment on the southern side of Tamarind Avenue/Willow Avenue is generally characterised by low density, detached dwellings of 1-2 storeys. A 3 storey tourist facility is located on the opposite side of the road. Agricultural land adjacent to Clothiers Creek Road comprises the remainder of the site boundary to the south and south-west.

1.2 Site Description

The site has an area of 12.31 hectares and is split by an open drainage canal. An easement to drain water approximately 33m wide encompasses the canal and burdens the site in favour of Tweed Shire Council. The canal conveys stormwater from Cabarita Beach/Bogangar upstream of Rosewood Avenue and discharges to Cudgen Lake via an approved water quality control pond adjacent to the Lake. The channel at Cudgen Lake is reduced to approximately 10m width.

The canal divides the site into three land parcels (refer Figure 3) - land proposed for residential development the subject of this application comprises Land Parcel A to the north, with the residue lot comprising Land Parcels B and C, south of the canal. Land Parcel A connects to Tweed Coast Road via Willow Avenue/Tamarind Avenue in the north.

Land Parcel A is generally cleared of vegetation and is dominated by low closed grasslands (pastoral grasses) and some scattered mature eucalyptus trees. However a narrow strip of high conservation value Swamp Sclerophyll Endangered Ecological Community (EEC) forms a steep riparian area (10% - 25%) immediately abutting the canal on Land Parcel A.

The land has been subject to episodic filling in the past and the site is generally flat, low-lying, and ranging in elevation from 0m AHD at the canal up to approximately 3.6m AHD in Land Parcel A. Minor gradients of 1% - 4% slope across the majority of Land Parcel A and fall to Willow Avenue. The elevation and topography of the site is consistent with the elevation and topography of the neighbouring properties along Tamarind/Willow Avenue (refer Figures 3 and 4). Site photos are displayed in Plates 1-4 below.

Cudgen Lake and Nature Reserve

The site is located within 100m of Cudgen Lake (and Cudgen Nature Reserve) to the north-east. Cudgen Lake is a barrier-dune lake system, lying between the older inland barrier sand dunes and the contemporary coastal dune system, which formed when the sea level rose some 6,000 years ago. The old drainage system was blocked by sand drift thereby forming the lake, with the creek being forced northwards to emerge at Kingscliff.

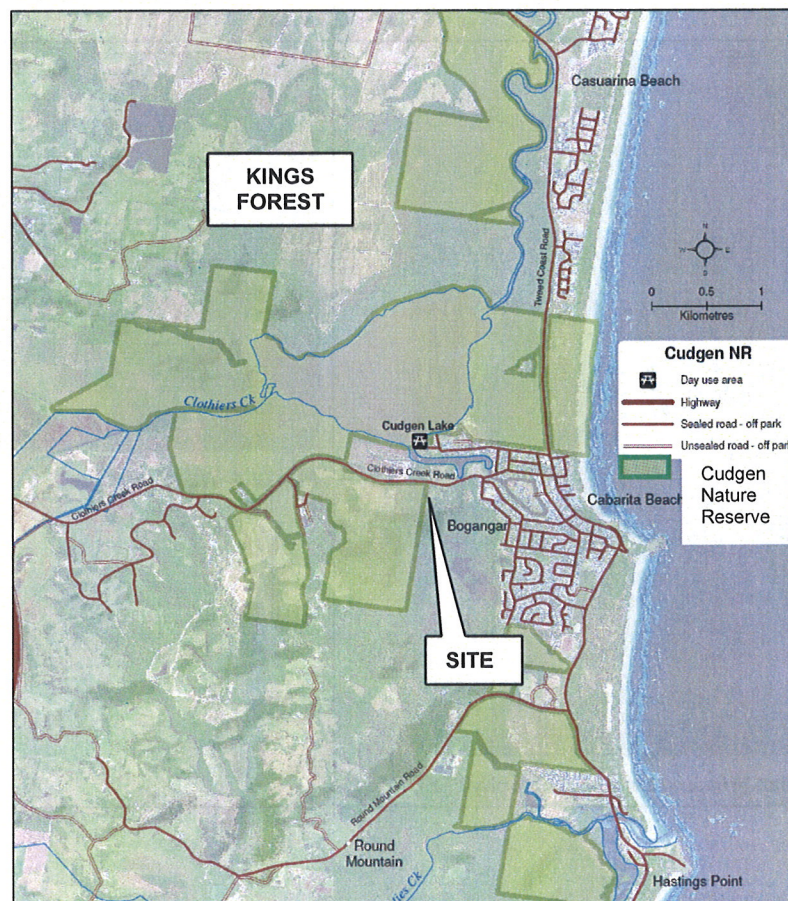


FIGURE 2 Plan of Cudgen Nature Reserve and site locality in relation to it

Cudgen Lake is a shallow (1 - 2 metres deep) tidal lagoon covering an area of approximately 160 hectares. It sits within the larger Cudgen Creek catchment (approximately 100 km² in area), and is fed by Reserve Creek and Clothiers Creek. The lake is contained within the Cudgen Nature Reserve, and is under the care and control of the NSW National Parks and Wildlife Service (NPWS). The Nature Reserve covers a disjointed area of 464 hectares and comprises separate parcels of land at Hastings Point in the south, behind Casuarina Beach in the north, and west to south-west of Cudgen Lake. A picnic/day-use area and access to Cudgen Lake and Nature Reserve is provided at the end of Willow Avenue.

The nature reserve is part of a remnant of native vegetation which is recognised as the only area large enough to be capable of providing long term protection to native plant and animal communities on the Tweed Coast. Nature conservation is the primary focus of management for the Reserve, with emphasis to be given to rehabilitation of disturbed lands and improvement of the Cudgen Lake ecosystem through an improvement in water quality.



PLATE 1 Canal near entrance to Cudgen Lake



PLATE 2 Site photo showing mostly cleared, level nature of site



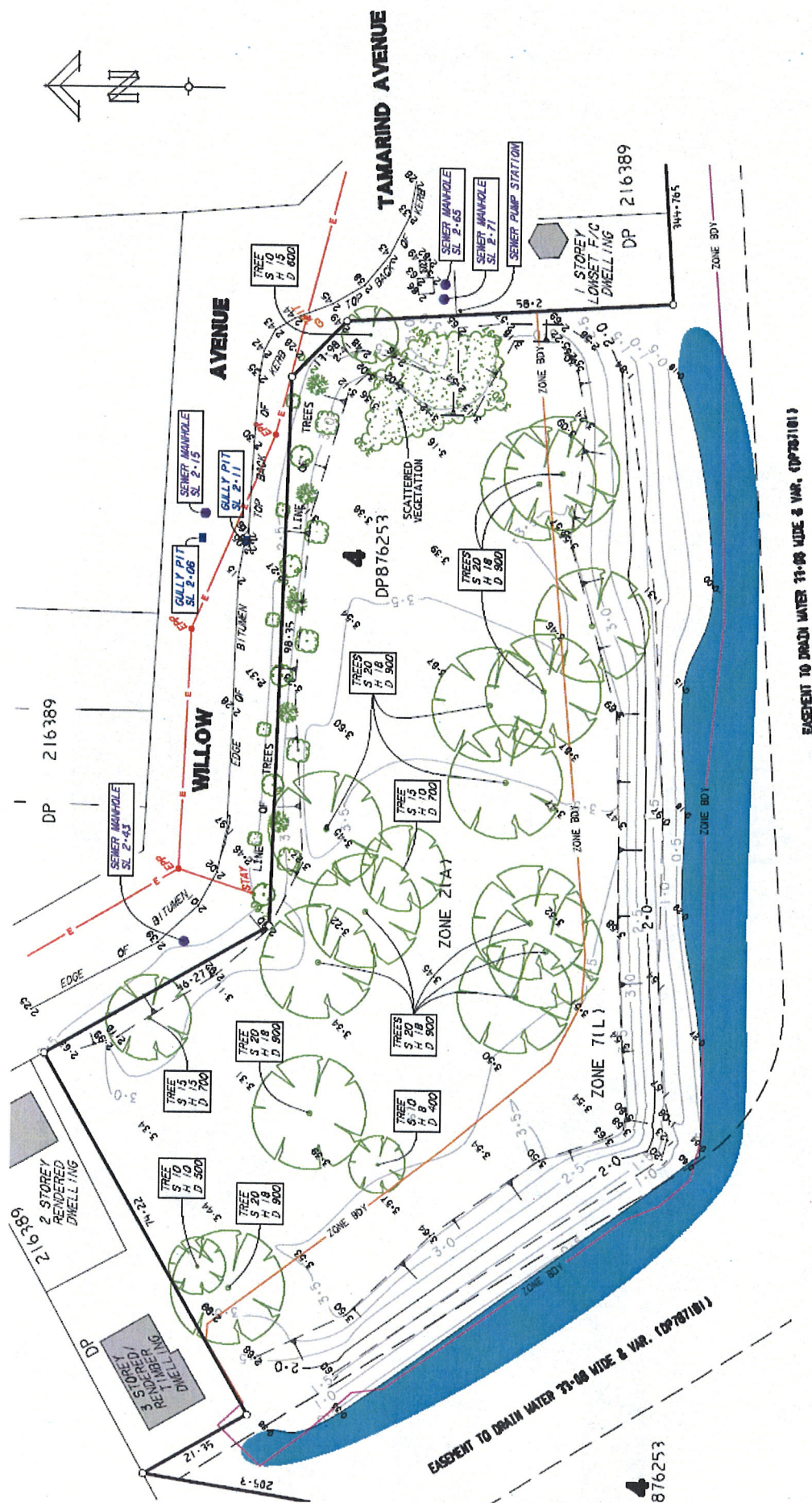
PLATE 3 Riparian area and Swamp Sclerophyll EEC



PLATE 4 Willow Avenue



FIGURE 3 Site Context. Inlay shows a close up version of the site and identifies the three different land parcels that constitute the site (Land Parcels A, B and C). Land Parcel A is the area subject to development (marked).



2. PROPOSED PROJECT

2.1 Project Description

It is proposed to create eleven (11) residential lots on Land Parcel A with areas ranging from 651m² to 1,201m². All usual urban services will be provided to the residential lots including underground water supply, reticulated sewer and telephone services. Overhead power lines exist within Willow Avenue and it is expected that they will be utilised to provide electrical power to the proposed lots.

Willow Avenue is also proposed to be widened adjacent to the frontage of Lots 1-11 and kerb and channel provided on this side of the road. It is also proposed to remove trees from a number of the residential lots to facilitate the siting of future dwellings. The plan of subdivision is shown in Figure 5 below.

No physical works or change of use is proposed within the residue allotment (Lot 12), with the exception of vegetation rehabilitation within the riparian area between the canal and the proposed residential lots.

The estimated capital investment value of the project is \$866,738 and it is anticipated that two construction jobs will be created.

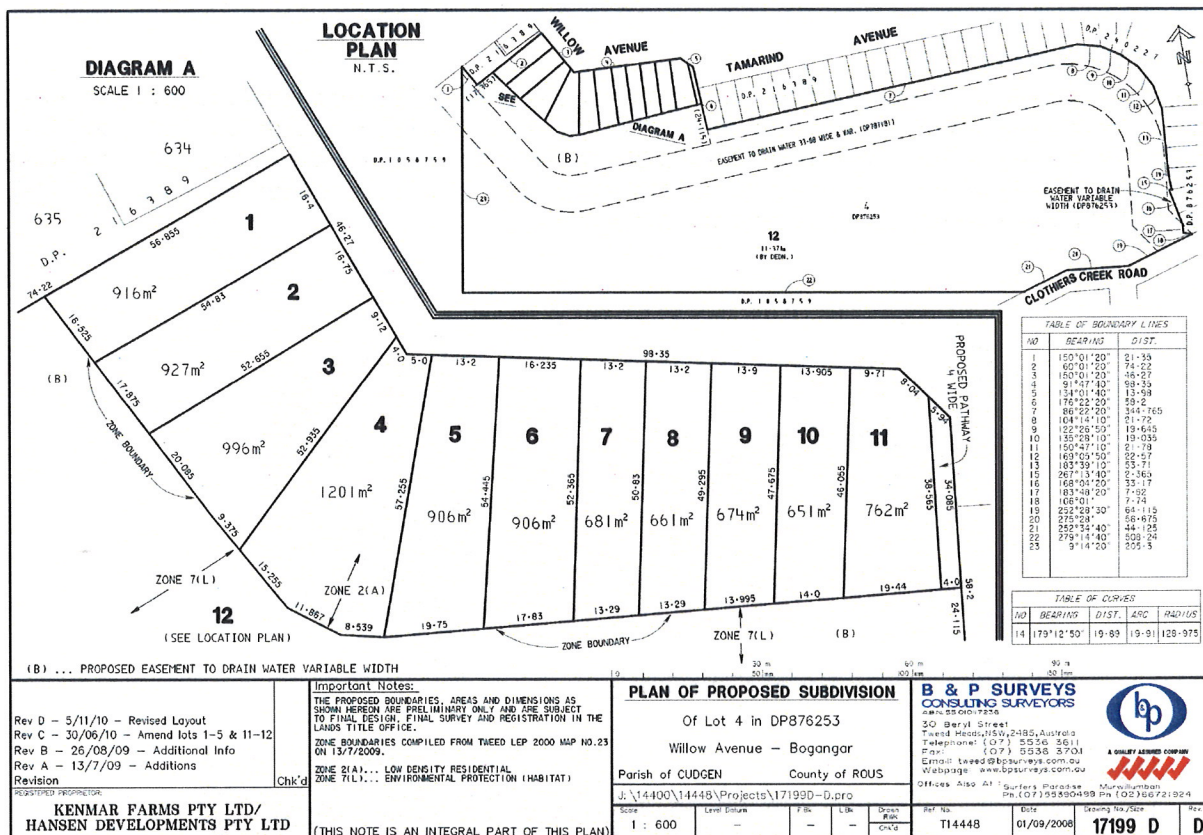


FIGURE 5 Final proposed plan of subdivision

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 make a contribution toward expected population growth within the Tweed Shire. The land was rezoned specifically to accommodate low-density residential housing by Tweed Shire Council via Amendment No. 7 to the *Tweed Local Environment Plan (TLEP) 2000* gazetted in 2005.

3. STATUTORY CONTEXT

3.1 Part 3A Project

The proposal was declared to be a project to which Part 3A of the Act applies on 14 November 2008. The declaration was made pursuant to clause 1(1)(j)(ii) of Schedule 2 of *State Environmental Planning Policy (Major Projects) 2005*, as in force at the time, being residential subdivision of land into 25 or fewer lots in a sensitive coastal location, where adjoining land in the same ownership could be subdivided into more than 25 lots. The Minister for Planning is the approval authority for Part 3A projects.

On 25 January 2010, the Minister for Planning delegated responsibility for the determination of certain project applications under Part 3A of the Act. In this instance, as there were less than 25 submissions objecting to the project and the project is not classified as critical infrastructure, the Deputy Director-General: Development Assessment and Systems Performance may make the determination.

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 Permissibility

The site is zoned 1(a) Rural, 2(a) Low Density Residential and 7(l) Environmental Protection (Habitat) under the *Tweed Local Environment Plan 2000* (TLEP 2000) (refer Figure 6). The proposed residential lots are wholly contained within the 2(a) zoned land (Land Parcel A) and are permissible with development consent. The residue lot of approximately 11.37ha is located on land zoned 1(a), 2(a) and 7(l) and is permissible with development consent.

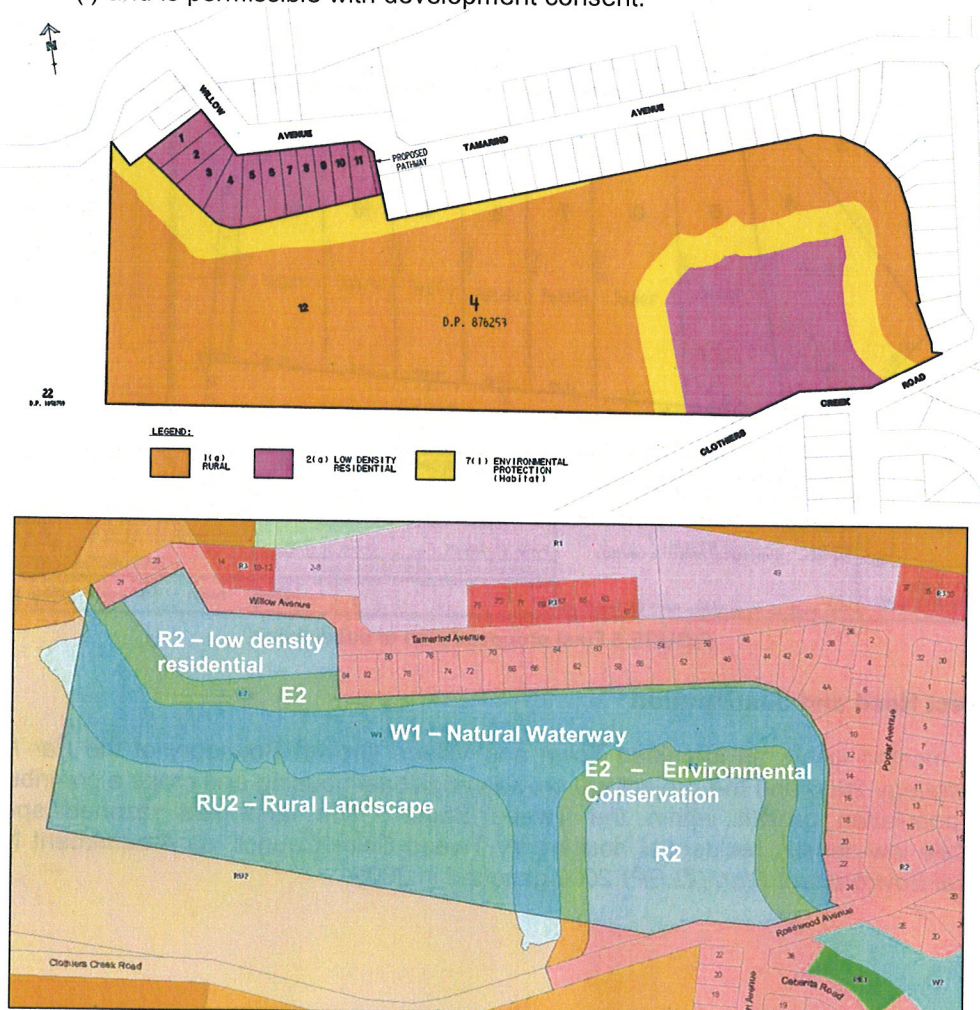


FIGURE 6: Above - Zoning plan from Tweed LEP 2000. Below - Zoning plan from DRAFT TLEP 2010.

Council has recently exhibited its *DRAFT Tweed Local Environmental Plan 2010* (Draft TLEP 2010). The proposal will continue to be permissible with consent under the new zoning.

3.5 Environmental Planning Instruments

Under Sections 751(2)(d) and 751(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 C.

3.6 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. The relevant objects are:

- (a) *to encourage:*
 - (i) *the proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and villages for the purpose of promoting the social and economic welfare of the community and a better environment,*
 - (ii) *the promotion and co-ordination of the orderly and economic use and development of land,*
 - ...
 - (vi) *the protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats, and*
 - (vii) *ecologically sustainable development, and*
 - ...
- (b) *to promote the sharing of the responsibility for environmental planning between the different levels of government in the State, and*
- (c) *to provide increased opportunity for public involvement and participation in environmental planning and assessment.*

The proposal allows for the protection and rehabilitation of the riparian margin of the adjacent canal and in doing so gives added protection to the water quality of Cudgen Lake. This land is zoned for environmental protection purposes and the rehabilitation plan together with suitable lot sizes and orientation will ensure that the Swamp Sclerophyll EEC and the shelter it provides as habitat will be appropriately preserved. This design will also ensure that impacts on Cudgen Nature Reserve are kept to a minimum and that the management objectives for the Reserve are not impacted upon. The land proposed for residential purposes will be used in a manner consistent with its zoning and therefore provides for an orderly and economic use and development of the land.

The proposal was placed on public exhibition and feedback received from affected persons, Tweed Shire Council and the DECCW during this process has been used to redesign the subdivision, particularly with regard to flood mitigation.

In conclusion the project generally provides for an enhancement to the social, economic and ecological wellbeing of the Cabarita Beach/Bogangar coastal village environment and is consistent with the objectives of the Far North Coast Regional Strategy.

3.7 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*. Section 6(2) of that Act states that ESD requires the effective integration of economic and environmental considerations in decision-making processes and that ESD can be achieved through the implementation of:

- (a) *the precautionary principle - namely, that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. In the application of the precautionary principle, public and private decisions should be guided by:*
 - (i) *careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and*
 - (ii) *an assessment of the risk-weighted consequences of various options,*

- (b) inter-generational equity—namely, that the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations,
- (c) conservation of biological diversity and ecological integrity—namely, that conservation of biological diversity and ecological integrity should be a fundamental consideration,
- (d) improved valuation, pricing and incentive mechanisms—namely, that environmental factors should be included in the valuation of assets and services, such as:
 - (i) polluter pays—that is, those who generate pollution and waste should bear the cost of containment, avoidance or abatement,
 - (ii) the users of goods and services should pay prices based on the full life cycle of costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste,
 - (iii) environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, that enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems.

The precautionary principle is of relevance to this environmental assessment, and has been applied in the decision making process via an undertaking of the 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.

Furthermore certain measures have been placed on the development to ensure that the risks from developing in a flood-prone area are satisfactorily addressed – including the requirement for emergency shelters, building design requirements and a minimum floor level.

The project also enhances the prospects for long-term biological and ecological integrity to be maintained within Cudgen Lake and Nature Reserve site through enhancement of the riparian buffer.

3.8 NSW State Plan 2010

The State Plan is the NSW Government's long term plan to deliver the best possible services to the people of NSW. It sets out the main areas where the community expects improvements and shows how those improvements will occur. 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.

3.9 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 development of this site is in line with its land use zoning and is consistent with, and supports the objectives of the Regional Strategy.

4. CONSULTATION AND SUBMISSIONS

4.1 Exhibition

Under Section 75H(3) of the Act, the Director-General is required to make the environmental assessment (EA) of an application publicly available for at least 30 days. After accepting the EA, the Department publicly exhibited it from 28 April 2010 until 28 May 2010 (31 days) on the Department's website.

Notification of the exhibition was given in the following local papers:

- Tweed Daily News - 22 April 2010;
- Tweed Sun - 21 April 2010;
- Tweed Border Mail - 22 April 2010;
- Tweed Link - 26 April 2010;

The Project was publicly exhibited at the following locations:

- Department of Planning, Information Centre, 23-33 Bridge Street, Sydney;
- Tweed Shire Council, Murwillumbah Office, Civic & Cultural Centre, Tumbulgum Road, Murwillumbah;
- Tweed Shire Council, Tweed Heads Branch Office, Brett Street, Tweed Heads; and
- Kingscliff Public Library, Turnock St, Kingscliff, NSW.

Letters were sent to adjoining landowners and relevant government agencies, including Council, notifying of the exhibition and inviting a submission.

A total of eleven (11) submissions were received by the Department during the exhibition of the EA – eight (8) submissions from public authorities and three (3) submissions from the general public.

A summary of the issues raised in submissions is provided below.

4.2 Public Authority Submissions

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.

4.2.1 Tweed Shire Council

Comment was sought from Council during the public exhibition of the EA. Council responded identifying a number of key site constraints and issues with the proposal, including:

- the provision of public road, drainage and sewerage infrastructure;
- potential for flooding on-site and additional impacts to flooding of adjoining land;
- additional regard to be had to the ecologically sensitive nature of the site and adjacent environmental protection zoning;
- The potential impact of dewatering on-site intercepting Acid Sulfate Soils on-site and consequently impacting upon Cudgen Lake;
- Council typically requires 5,000L rainwater tanks to be connected to the roofed area of new dwellings and plumbed so as to allow use for toilet flushing, laundry and gardening/external purposes;
- Concern over the proposed configuration of lots and their ability to provide minimum driveway widths and access to the adjacent sewer pump station;
- Council requested the submission of a statutory declaration from a person with suitable historic knowledge confirming that fill material on-site was not introduced from sand mining activities which may have contained potential radioactive materials; and
- Updated water quality monitoring provisions during construction to ensure sediment contaminated water does not have significant adverse effects on Cudgen Lake.

Council also proposed conditions to ensure that the development will be designed in accordance with Council's *Tweed Shire Council's Development Control Plan Part A5 - Subdivision Manual*.

Further comment was sought from Council in response to the proponent's PPR. Comments were received regarding subdivision design, flooding, and the adequacy of public infrastructure (stormwater, roads, water and sewage). Council also provided advice on Section 94 contributions payable under the Act and water and sewer contributions payable under Section 64 of the *Local Government Act 1993*.

Council raised additional concerns over the serviceability and long-term management of the 20-30m wide strip of land at the rear of the proposed residential lots (the 7(l) zone and riparian area) and requested the proponent provide access to the residue lot and minimum 9m lot frontages and appropriate visitor car parking and access consistent with *Tweed Shire Council's Development Control Plan Part A5 - Subdivision Manual* for each residential lot.

The proponent has responded to the concerns raised by Council and has amended the subdivision design to alleviate these concerns.

Further discussion on these issues is detailed in Section 5 of this report.

4.2.2 Department of Industry and Investment (DII)

DII provided comment supporting the provision of a riparian buffer to the canal and its potential positive effects on preserving fish stock and key fish habitat. DII also requested that best practice erosion and sediment control management techniques be employed to reduce the risk of adverse effects during the construction phase. Appropriate conditions can be placed on the approval to ensure these outcomes.

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

The DECCW's submission on the proposal during public exhibition sought alterations to the proponent's Statement of Commitments in regards to specific actions/outcomes in the Vegetation Management Plan (VMP), evidence of consultation with the relevant Aboriginal community, and further consideration of flood issues. Issues regarding the VMP and Aboriginal cultural heritage have been dealt with by way of an amended Statement of Commitments or conditions on approval. Flood issues are discussed in section 5 of this report below.

Further comment was sought from DECCW in response to the proponent's PPR. Comments were received specifically on the sensitivity of the site to current and projected flood regimes. DECCW sought a minimum floor level requirement of 3.92m AHD which takes into account the Practical Consideration of Climate Change (DECC, 2007) guidelines and the NSW sea level rise benchmark. DECCW also sought the proponent to provide further information to address the potential for isolation of the site by flooding in Willow/Tamarind Avenue, particularly in relation to the predicted increase in intensity and frequency of flooding as a result of climate change. Flood issues are detailed in section 5 of this report below.

4.2.4 Rural Fire Service (RFS)

The RFS reviewed the EA and provided the following comments:

- All residential lots shall be managed as an inner protection area (IPA) as outlined within Appendix 2 & 5 of *Planning for Bush Fire Protection* 2006 and the NSW Rural Fire Service's document 'Standards for asset protection zones';
- The revegetation of the residue lot shall not exceed the Landscape Concept Plan. A plan of management shall be prepared and implemented for the residue lot to ensure the bush fire hazard is not increased beyond that identified in the Landscape Concept Plan;
- Water, electricity and gas infrastructure is to comply with section 4.1.3 of *Planning for Bush Fire Protection* 2006;
- Landscaping of the site is to comply with the principles of Appendix 5 of *Planning for Bush Fire Protection* 2006. In this regard the linking of vegetation (on the eastern boundary of proposed Lots 11 and 12, and the north western boundary of proposed Lot 1) with the riparian area should be avoided; and
- Any future development application lodged within this subdivision under section 79BA of the *Environmental Planning & Assessment Act 1979* will be subject to requirements as set out in *Planning for Bush Fire Protection* 2006.

These comments have been reworded as recommended conditions and placed on the approval.

4.2.5 Northern Rivers Catchment Management Authority (CMA)

The CMA sought clarification regarding the potential for conflict between the proposed land use and the adjacent environmental protection zone. By referring to the *Living and Working in Rural Areas: A handbook for managing land use conflict issues on the NSW North Coast (2007)* the CMA sought the imposition of an adequate separation between the residential properties proposed and the riparian area/canal. The proposal generally accords with the principles of managing land use conflict outlined in this document by way of appropriate subdivision design and building envelope setback, the enhancement of the riparian buffer and controlled public access in this area, an awareness raising

program for new landowners regarding the sensitivity of the surrounding Cudgen Nature Reserve, and the physical separation of the development from rural land to the south achieved by the canal acting as a barrier.

The existing environmental protection zoning generally provides for a grassed buffer between the current extent of EEC vegetation (the top of the canal bank), across to the proposed residential lot boundaries/edge of residential zone of approximately 6-18m varying width. Moreover the long shape and general north-south orientation of proposed residential lots allows for flexibility in the positioning of the building envelope and so provides more scope to increase the 'real' buffer width between development and flora and fauna values. The remainder of the proposed residential lots will be managed as Asset Protection Zone.

4.2.6 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.

4.2.7 Land and Property Management Authority (LPMA)

The LPMA submission raised issues regarding:

- Avoiding the use of nearby Crown Land during construction;
- The adequacy of the Vegetation Management Plan (VMP) proposed. The LPMA sought the rehabilitation of Swamp Sclerophyll EEC and vegetation over the entire site (Land Parcels A, B and C) and a defined time period over which the VMP would be implemented. Specific performance measures and trigger values for intervention or corrective actions were also requested; and
- Amendments to the Statement of Commitments to include additional measures to mitigate or avoid impacts on Cudgen Nature Reserve – including an Information Kit for new residents and a possible restriction on domestic pets.

The majority of these recommendations were incorporated into a revised Statement of Commitments put forward by the proponent in the PPR. However the requirement for a specific restriction on domestic pets was deemed to be unnecessary and ineffective as the site is surrounded by development that currently has no such controls. The potential for physical harm to occur to koala (*Phascolarctos cinereus*) species is further limited by the adjoining canal acting as a barrier.

As an added precaution the Statement of Commitments requires the production and distribution of an information kit to new residents detailing the environmental sensitivity of the site and surrounding reserve. The Kit will warn of the potential damage that domestic pets can cause to local native fauna populations and will request that domestic cats are kept in doors overnight and that dogs are not left to wander unrestrained.

4.2.8 NSW Office of Water (NOW)

NOW's submission covered drinking water supply, surface water and groundwater. Drinking water supply and groundwater issues are not likely to be an issue on this site and can be covered off via recommended conditions on approval. Surface water issues are discussed in more detail in section 5 below.

4.3 Public Submissions

A total of three (3) submissions were received from the public - two (2) of which were in general opposition to the proposal, and one (1) providing conditional support. The key issues raised in these submissions are summarised in Table 1 below.

TABLE 1: Summary of Issues Raised in Public Submissions

Flooding
Particular concern was had over the impacts of any earthworks potentially exacerbating the effects of flood flow and flood levels in the area
Access to site from Willow Avenue during times of flood is already restricted during times of flood
Currently stormwater from Cabarita Beach/Bogangar drains to Cudgen Lake and exacerbates the flood problem

Impacts of climate change on intensity of rainfall, increasingly rapid rise in floodwaters, and flood frequency
Adequacy of current flood level
Existing landform
Legality of current fill material and existing earthworks/levels on-site questioned

The Department has fully considered all issues raised in submissions in its assessment of the project and further discussion of these issues can be found in section 5 of this report.

4.4 Preferred Project Report (PPR) and Further Information

The proponent provided a response to the issues raised in submissions via a PPR and further information. The response proposed the following changes to project:

- deletion of one (1) lot to achieve appropriate subdivision design;
- amended subdivision design to allow for adequate flood hazard planning; and
- revised Statement of Commitments.

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:

- flooding
- stormwater
- ecology
- site contamination
- subdivision design and layout

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 Flooding

The site is located within the Cudgen Creek catchment immediately adjacent to the main drainage channel for Cabarita Beach/Bogangar and is within 100m of Cudgen Lake. The Cudgen Creek catchment is approximately 100km² in area and is bounded by the Burringbar Range to the west. Elevations in the catchment range from greater than 350m AHD to sea level. The catchment is approximately 20km long and drains to the ocean at Kingscliff. The upper catchment is relatively steep and heavily forested.

The canal is essentially fed by runoff draining catchments in the south-west (rural) and the smaller, urban catchment of Cabarita Beach/Bogangar to the south-east. This is effectively the southern sub-catchment of the Cudgen Creek catchment. The Lake has an area of approximately 160 ha and is fed from the west by Reserve and Clothiers Creeks and is minimally affected by tides and wave action, and therefore erosion. The upper sections of the catchment are a mixture of forested and agricultural land. The lower areas of the catchment contain agricultural land, sugar cane farms, forested and urban areas. Due to the shallow depth of the Lake and the wide floodplain downstream of the Lake, Cudgen Lake provides only minimal attenuation of flood flows.

Cudgen Lake lies less than 100m downstream (north) of the site, is approximately at 0m AHD and connects to the ocean via Cudgen Creek. Cudgen Creek flows for some 9km before it empties itself into the ocean at Kingscliff. Cudgen Creek estuary has been engineered with permanent rock groynes and training walls which in association with periodic dredging programs, maintains a permanently open entrance channel (refer Figure 8).

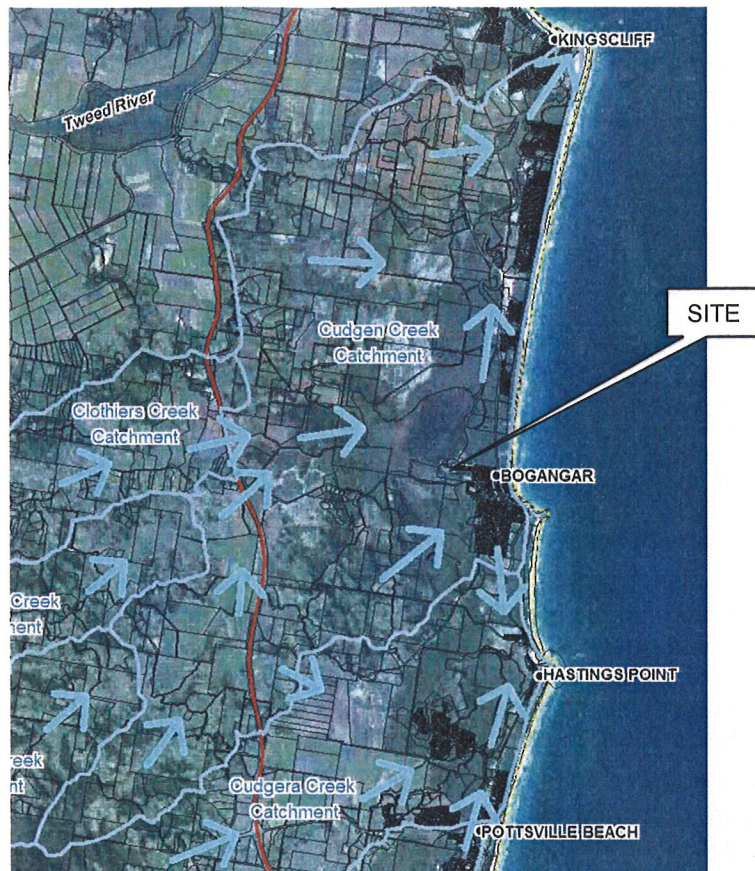


FIGURE 8 Catchment map

The site is subject to coastal flooding and the impacts of changes to rainfall events and sea level rise on the flood levels must be considered. Flooding in this locality is a significant concern historically and is only expected to get worse over time with the projected effects of climate change expected to exacerbate the existing impacts. The following is an extract from the *Tweed-Byron Coastal Creeks Flood Study* (BMT WBM, 2009):

"...[Currently] Parcels along Tamarind Avenue start to be inundated from backwaters from Cudgen Lake and the Cudgen Creek floodplain in events less than the 20-year ARI design event. In a 50-year ARI design event, the inundation also covers the area between Rosewood Avenue and Mimosa Avenue and into Hastings Road, with waters predicted to break out of the Friday Island canal across Rosewood Avenue. In a 100-year ARI design event, most of the area to the north of Rosewood Avenue is predicted to be inundated, with depths generally below 0.5m. Flood waters are also predicted to cross over east of Hastings Road towards commercial land in the Cabarita Beach CBD for this event. Clothiers Creek Road is predicted to be inundated at the creek crossing west of Cabarita Road from a 10-year ARI design flood event. Access to the Pacific Motorway via Clothiers Creek Road however is lost in flood events less than the 5-year ARI design event on the Tanglewood floodplain.

In a PMF event, peak flood levels are predicted to reach 5.7m AHD in this area, generating flooding for most of the area north of Sandalwood Drive and west of the Tweed Coast Road, (this floodplain area was filled for residential development)"

Flood parameters for the site are identified in Table 2 below:

TABLE 2: Summary of various flood levels determined applicable to the site. Note Council's figures are rounded up to the first decimal point (as per *Tweed DCP Section A3 – Development of Flood Liable Land, June 2010*).

	Current 100-yr ARI flood level (m)	2100 Projected equivalent flood level (m)	Flood planning Level (m): Plus allowance for freeboard	Probable Maximum Flood (m)
DECCW	2.92	3.42*	3.92	5.73
Council	3.0	3.2**	3.7	5.7
Opus Flood Modelling				
Proponent	2.94	3.42	3.44	-
Proposed fill level	3.44m			

* using 30% increase in rainfall intensity

** using 10% increase in rainfall intensity

The existing and projected flood levels identified in Table 2 above display the uncertainty when it comes to modelling the projected effects of climate change on such a site. The proponent contends that a flood planning level (FPL) of 3.44m is sufficient given that its own modelling approximately confirms the flood levels derived in the *Tweed-Byron Coastal Creeks Flood Study* (BMT WBM, 2009) which already takes into account the projected effects of climate change. This study comprises a detailed analysis of flooding under various scenarios for coastal catchments in the area.

However, the Department does not support the use of freeboard to effectively act as a climate change buffer. This is supported by DECCW's *Flood Risk Management Guide: Incorporating sea level benchmarks in flood risk assessments* (2010) which specifically states that while a small allowance for climate change exists within freeboard, it does not address all the uncertainty associated with climate change impacts. Therefore freeboard should not be used to allow for sea level rise impacts which must be quantified and applied separately.

Both the *Tweed-Byron Coastal Creeks Flood Study* (BMT WBM, 2009) and the proponent's flood study used similar high impacts climate change scenario (90cm rise in sea level by 2100 and 30% increase in rainfall intensity) and built these into their modelling. Council's FPL is lower than that calculated in the *Tweed-Byron Coastal Creeks Flood Study* (BMT WBM, 2009) (DECCW's stated position) due to a lower factor of rainfall intensity adopted. This year when updating its DCP A3, Council adopted a more conservative 10% increase in rainfall intensity (as outlined in the DECCW's *Practical Consideration of Climate Change* guideline for the area until 2070). Typically a 30% increase in rainfall intensity is applied as a sensitivity analysis to identify the projected effects of climate change.

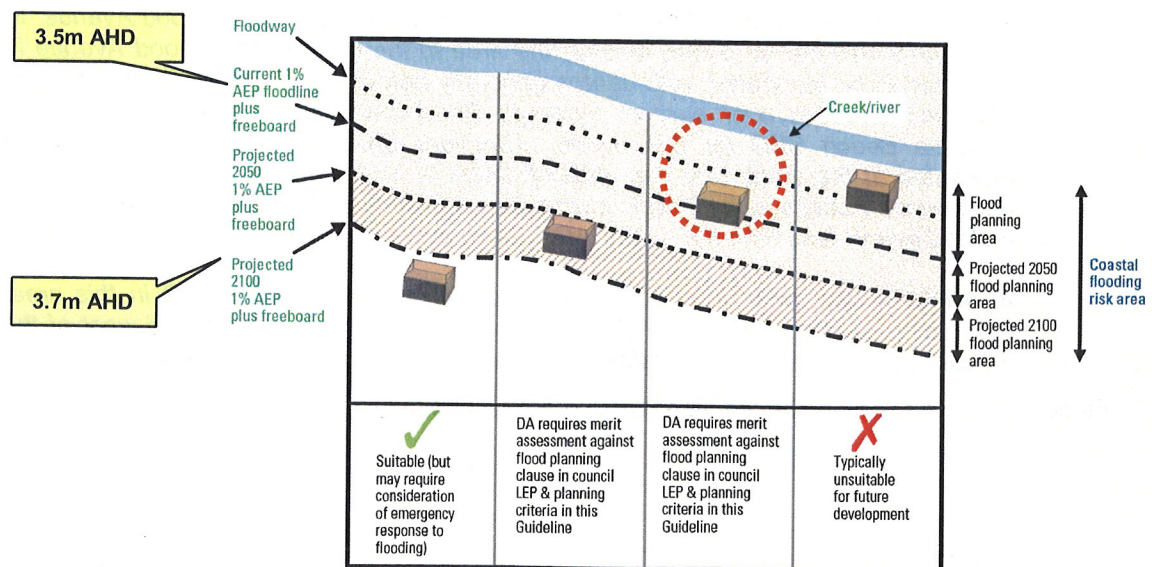


FIGURE 9: Extract from NSW Coastal Planning Guideline: Adapting to Sea Level Rise (August, 2010). Proposed development is located within the coastal flooding risk area (as circled) and therefore requires risk assessment.

The Department has weighed up the various scenarios, the context of the site and existing development surrounding the site, Council's current flood policy, and other approvals issued by the Department in the Tweed (e.g. 06_0316 Cobaki Lakes); and concludes that the most appropriate flood planning level for the site is 3.7m AHD. Further development applications for dwellings will be assessed against the provisions of the *Tweed Development Control Plan Section A3 – Development of Flood Liable Land* (June 2010) and any other local or regional flood policy relevant at the time of application. This assessment may identify the need for time or trigger limited conditions of consent to be imposed on new dwellings/buildings to ensure landowners are aware of the flood issues on-site and allow for mitigation measures to be implemented later on down the track.

Potential for flooding impacts on adjoining land

Modelling undertaken on behalf of the proponent concludes that the project will have no flooding impact on neighbouring properties in a Q100 flow, including with adjustments for climate change. Under minor flow scenarios (Q5 flows), the filling of the site is predicted to restrict the flow of water from Willow Avenue to the canal resulting in increased flows in Willow Avenue and an increase in the inundation area. To address this issue, the proponent has committed to ensuring that any fencing between lots is highly permeable with frequent openings. The Department supports this approach and has reflected this requirement in the recommended conditions.

The Department is therefore satisfied that the proposed development has limited impact on flooding levels on adjoining properties and public areas, subject to conditions.

Risk assessment

The *NSW Coastal Planning Guideline: Adapting to Sea Level Rise* (August 2010) identifies coastal flooding risk areas and defines certain areas where it is either unsuitable for development, suitable for development, or requires a merit-based risk assessment of the proposal (refer Figure 9). Key principles in planning for sea level rise include minimising the exposure of the development to coastal risks, and the implementation of appropriate management and adaptation strategies during development assessment. A risk assessment of the proposal against the relevant planning criteria is provided in Table 3 below.

TABLE 3: Assessment against planning criteria in *NSW Coastal Planning Guideline: Adapting to Sea Level Rise* (August, 2010).

Planning criterion	Proposal	Acceptable
Development avoids or minimises exposure to immediate coastal risks (within the immediate hazard area or floodway).	Due to previous filling and proposed earthworks the site is not located within the floodway and is therefore not at immediate risk from the coastal flood hazard. The proposed development is at the same level as the current 100-yr ARI event. A condition of approval will ensure that the minimum habitable floor level is above the projected 2100 flood planning area for the locality (3.7m AHD). Adequate construction design will also be required in order to withstand increased flood flows and allow floodwaters to permeate appropriately through the site. This will be enforced by way of restrictive covenants on each title at subdivision stage. Future DAs for dwellings/buildings will require consideration of this and current flood policy.	Yes - subject to a condition on the approval
Development provides for the safety of residents, workers or other occupants on-site from risks associated with coastal processes.	A condition will require a covenant placed on each new residential lot requiring a minimum habitable floor level of 3.7m AHD and other flood mitigation measures to reduce the severity of risk. This will improve the safety of future residents on-site.	Yes - subject to a condition on the approval
Development does not adversely affect the safety of the public off-site from a change in coastal risks as a result of the development.	Given the proposed nature of earthworks (restricted to building pads and perimeter drains only) and additional conditions requiring permeability of site fencing, it is considered unlikely that there will be additional risk caused by the development to public safety off-site as a result of this development.	Yes
Infrastructure, services and utilities on site maintain their	The sewer line and other utility/infrastructure services will be located in Willow Avenue. The function and performance of	Yes - subject to a condition

function and achieve their intended design performance.	the infrastructure will potentially be affected by flooding and sea level rise. Therefore a condition is recommended on the approval requiring measures that will be adopted to protect/relocate infrastructure and ensure their future viability.	on the approval
Development accommodates natural coastal processes including those associated with projected sea level rise.	The permeable design of the proposed development along with a finished floor level imposed of 3.7m AHD will ensure that natural coastal processes (including enhanced flooding as a result of climate change) will be accommodated.	Yes – subject to a condition on the approval
Coastal ecosystems are protected from development impacts.	The proposed development is far enough away from Cudgen Lake to ensure there are no adverse impacts on the ecological functioning of the Lake. Further, the proposed stormwater treatment devices and enhanced riparian area will provide a greater buffer to protect the water quality of the adjacent canal and Cudgen Lake.	Yes
Existing public beach, foreshore or waterfront access and amenity is maintained.	There is currently limited public access down to the edge of the canal. These accessways will be formalised via the approved VMP and Landscape Concept Plan. Formal access to Cudgen Lake and Nature Reserve is provided at the end of Willow Avenue. An accessway will also be created at the eastern edge of proposed Lot 11.	Yes

Based on the assessment above it is considered that there is no immediate risk to the proposed residential subdivision from flooding and sea level rise. A suitable floor level and requirements to ensure that building design is sufficient to withstand flood flows, and the development is permeable enough to have no further effect on the flood regime in the area will be placed as conditions on the approval.

5.2 Stormwater

The majority of overland flow from the site runs with the slight gradient north to Willow Avenue. The existing gully pits in Willow Avenue directly opposite the site discharge stormwater via a 300mm diameter stormwater pipe that runs north through lot 618 DP 508200 and into Cudgen Lake. Further gully pits drain Tamarind Avenue 6 properties to the east of the site via a 375mm diameter pipe that runs south into the canal. By providing greater areas of impervious surfaces (roofs, driveways, road widening etc.), the development will likely lead to an increase in stormwater runoff into what is an already stressed stormwater infrastructure service in Willow/Tamarind Avenue.

Aside from an extension to kerb and channel in front of the residential lots on Willow Avenue, the proponent proposes no new public stormwater infrastructure. Instead stormwater created by the development will be captured temporarily by rainwater tanks on each property and then discharged via gravel infiltration trenches at the rear of each lot, over a drainage easement and into the canal. Council expressed concerns that while this method of drainage is suitable for smaller rainfall events, major rainfall events would continue to discharge stormwater to the road reserve and thereby contribute to surface flooding. This would exacerbate the impact of local floods for residents and neighbours to an unacceptable level.

Subsequently the proponent redesigned the proposal by regrading lots where necessary and providing perimeter drains to drain stormwater toward the canal, and provided a surcharge flow path for stormwater to the east of the site to discharge directly to the canal in major events. This method would reduce stormwater flows to Willow/Tamarind Avenues and is considered a more satisfactory approach.

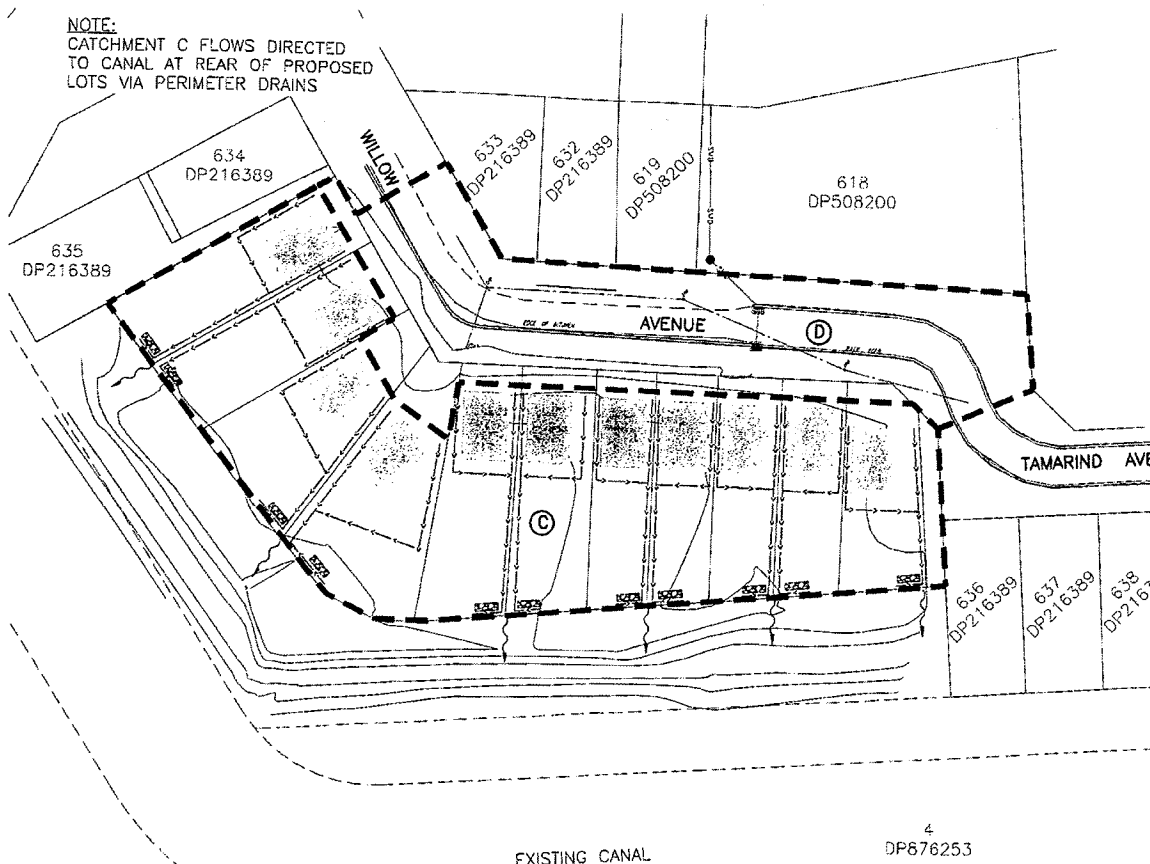


FIGURE 10: Revised Stormwater Management Plan

A recommended condition requires a detailed stormwater management plan to be approved prior to issue of a construction certificate to ensure that stormwater management issues are adequately addressed.

5.3 Ecological Issues

Vegetation

As discussed earlier, the site is split by the canal into three distinct land parcels (refer Figure 3). Whilst the appropriate residential zoning exists on Land Parcel B, residential development is only proposed on Land Parcel A at this time. No change of land use will occur on Land Parcels B and C, and as such the Department supports the proponent's contention that at this stage there is no reasonable nexus between the project (and potential environmental impacts) which is the subject of this application and any requirement to carry out vegetation management on the residue lot. Land Parcels B and C are likely to be the subject of development applications in the future and the Department considers it reasonable to defer vegetation management on these parcels until such time as they may be actively impacted by development.

Figure 11 depicts the location of Swamp Sclerophyll EEC as it occurs over the site. Of particular note is the remainder of Land Parcel A which constitutes pastoral grasses and some scattered eucalypts. Aside from the largest community identified in Land Parcel C, the Swamp Sclerophyll EEC largely occurs within the confines of the 7(l) Environmental Protection (Habitat) zoning and the banks of the canal. A buffer of varying width (5-20m) exists from the top of the bank/edge of vegetation to the zone boundary. The generally north-south orientation of proposed residential lots allows for building envelopes to be situated closer to Willow Avenue, thereby increasing the buffer distance in most places by some 30m. Conditions on approval will ensure that all residential lots are managed as an Asset Protection Zone consistent with the standards of the NSW RFS's *Planning for Bush Fire Protection* guidelines (2006). While this is not strictly consistent with the desired 50m buffer width to sensitive ecological areas, in this instance the Department considers this a reasonable outcome given the existing zoning and limited developable area available to the proponent.

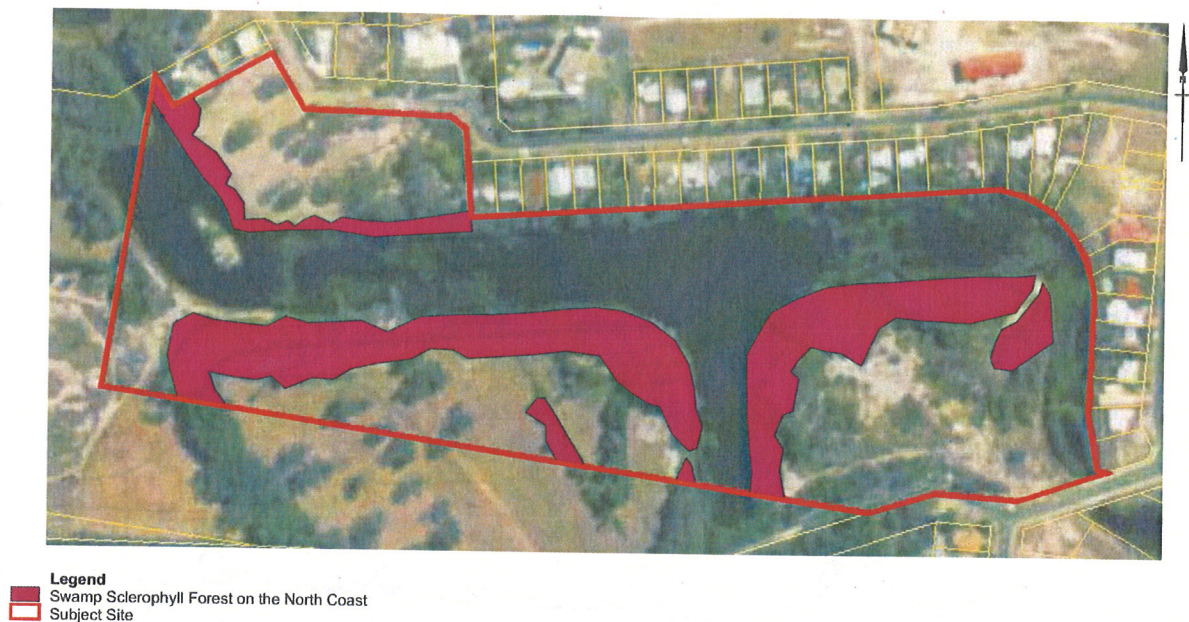


FIGURE 11: Plan of site identifying Swamp Sclerophyll Endangered Ecological Community (EEC) on the North Coast

The residential development footprint will be confined to that part of Land Parcel A dominated by pastoral grasses and scattered mature eucalypts. Some of these eucalypts will be required to be removed to provide suitable areas for potential building envelopes. A comprehensive Vegetation Management Plan (VMP) will ensure that the mature eucalypts to remain will be clearly marked and protected from harm during construction works. As some of the individual trees are considered to have a moderate conservation value in terms of providing potential habitat for fauna, the VMP will require that these trees are retained where possible or replaced. Furthermore the production of this VMP will ensure the proposed development will not adversely affect the long-term viability of the Swamp Sclerophyll EEC and allow for its rehabilitation over a defined time period.

The VMP will require:

- Protection of the Swamp Sclerophyll EEC vegetation during any construction works;
- Enhancement planting within the 7(l) Environmental Protection (Habitat) land to enhance the buffer between proposed residential lots and the EEC;
- Retention and/or replacement of Koala food trees;
- Restoration of the EEC;
- Consistency with the Landscape Concept Plan;
- Weed control;
- A maintenance and monitoring programme; and
- Restrictions on domestic animals.

The VMP is to be completed prior to the issue of a Construction Certificate for the subdivision.

An information kit will be provided to new owners with specific details regarding the environmentally sensitive nature of the site, the adjacent EEC, and Cudgen Lake and Nature Reserve. The kit will raise awareness on the potential impacts of domestic pets on native fauna and will encourage residents to control their pets by keeping them fenced and on leashes at all times.

Fauna

Given the site's proximity to the biologically diverse Cudgen Nature Reserve and its existing vegetation, it is possible that fauna species may traverse the site from time to time. The proposed rehabilitation of the riparian area will provide further good quality habitat for native species. The proponent's fauna survey found two (2) species listed under the *Threatened Species Conservation Act 1995* on the site, being the:

- Osprey (*Pandion haliaetus*); and the
- Rose-crowned Fruit-dove (*Ptilinopus regina*).

Neither of these birds were found to nest on the site and with the retention of Swamp Sclerophyll EEC and surrounding vegetation as habitat, and the small size of the proposed development; the Department is satisfied adverse effects on these species will be minimal.

There is anecdotal evidence from local residents that koalas have been spotted traversing the site. However no core koala habitat is identified on the site and the few potential koala feed trees identified within the development footprint will be retained where possible and/or replaced. The presence of the canal on one side and established residential areas on the other means it is unlikely that koalas (or other land based mammals) use the site as a habitat corridor. Recommended conditions of approval will require the proponent to ensure a qualified fauna handler is on-site at times when the mature eucalypt trees are brought down.

5.4 Site contamination

The site is believed to have been dominated by virgin coastal swamp heath when the land was originally purchased in the late 1950s as part of the development of Cabarita Village. Initial filling of the site was undertaken in conjunction with the excavation of the adjacent canal in the early 1960s and this included the construction of a roadway to access Cudgen Lake (now Tamarind and Willow Avenues). Further filling of the land with excess spoil was undertaken in 1998-99 (under Development Consent 97-251) when a sediment and erosion control pond was excavated to the immediate south-west of the residential site. This pond was constructed in order to treat water flowing from the canal (and the 'Friday Island' development), and thereby further protect the water quality of Cudgen Lake. Conditions of consent ensured that earthworks were undertaken in an appropriate manner to minimise the potential for ASS runoff. Approximately 2.5 vertical metres of fill has been placed over this time, and all of it sourced from below original ground level in the adjacent canal – where no evidence of contaminating activities has been uncovered.

A Stage 1 Preliminary Contaminated Land Assessment was undertaken as part of the EA and completed in accordance with SEPP 55 and the relevant guidelines. This assessment found no trace of heavy metal or pesticide contaminants on-site.

Sand mining

The sand dunes adjacent to Cudgen Creek and the area to the east towards Cabarita Beach have been mined extensively for mineral sands (heavy, black sands containing Zircon and Rutile) between the 1930s and 1980s, resulting in a highly disturbed environment (refer Figure 12). Bulldozers and dredges were most commonly used when mining became industrial in the 1950s and 1960s, leaving the beach, berm and dunes a wasteland.

Mineral sands contain small amounts of naturally occurring radioactive material (NORM) - mainly uranium and thorium and their natural decay products. Council expressed concern in its submission over the potential for radioactive material to be present on the site as a result of past sand mining activities and requested a statutory declaration to confirm its presence or absence. Consequently the proponent submitted a Statutory Declaration stating that to the best of its knowledge, no sand mining had been undertaken in the immediate vicinity of the proposed residential development. Furthermore no excavation works are proposed in the application that would likely result in any radioactive material be uncovered.

Although not specifically tested for, the likelihood of a persistent radioactive contamination legacy resulting from historical mineral sands mining in the Cabarita area is highly unlikely to represent a Significant Risk of Harm to future residents. This is primarily due to the lack of sand mining in the immediate vicinity of proposed residential development, and the relatively clean nature of the 2.5m of fill already on-site. No recommended conditions of approval are proposed.

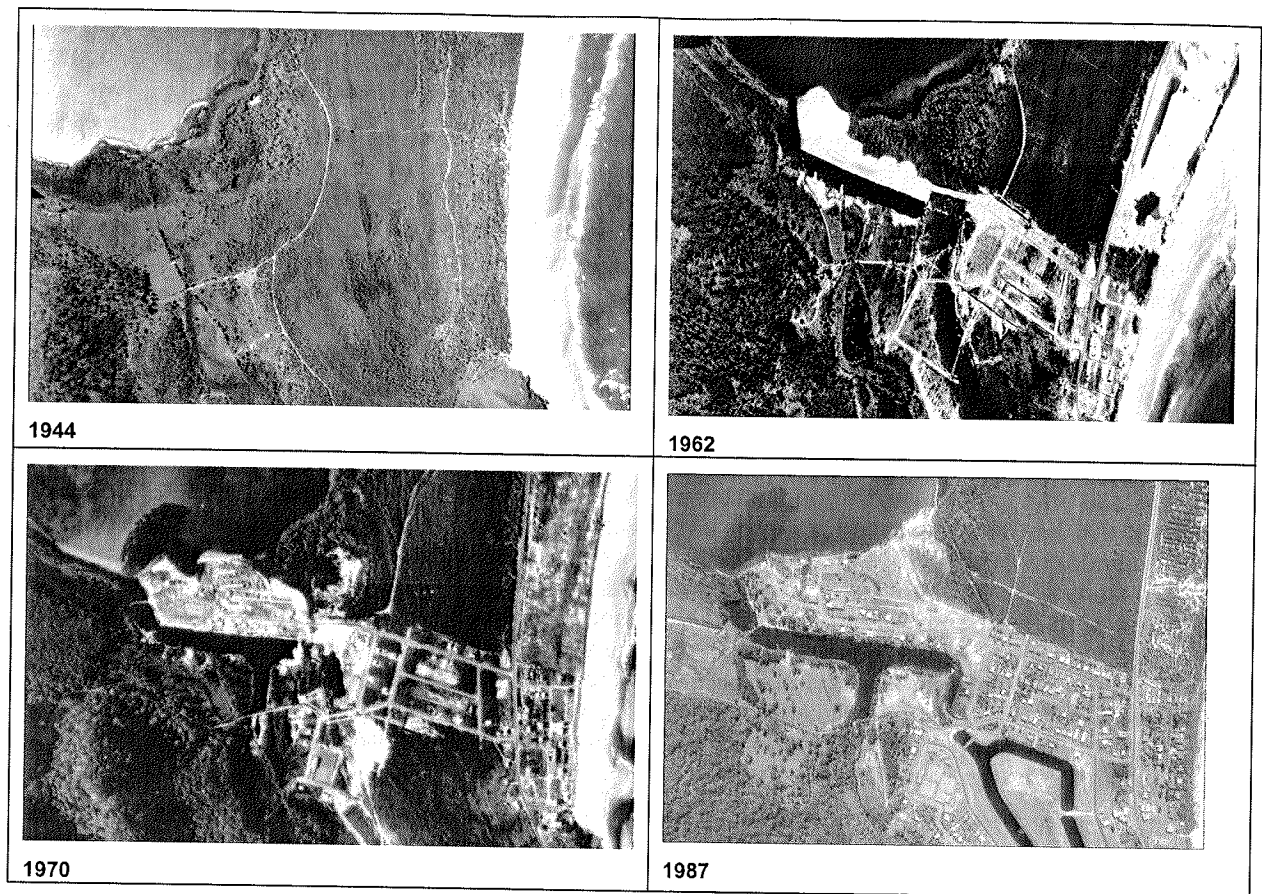


FIGURE 12 Aerial photographic history of the site

5.5 Subdivision Design and Layout

The issue regarding minimum lot sizes in rural areas has been discussed in section 3.4 of this report.

The proponent submitted a revised plan of subdivision in response to concern expressed by Council over the residential lot frontages being too narrow to allow for adequate driveways (9m). This had the effect of reducing the number of residential lots proposed from 12 to 11 and ensured a 9m road frontage was available for all residential lots. Recommended conditions of approval will ensure that the final subdivision design is completed to a standard consistent with *Tweed Shire Council's Development Control Plan Part A5 - Subdivision Manual*.

A further result of this redesign was the creation of an access pathway on the eastern edge of the residential lots (adjacent to the sewer pump station) that allows access for maintenance purposes to the riparian area behind the residential lots and also serves to act as a buffer to the sewer pump station. This would effectively minimise the capacity for complaints to arise from proximity of new residents to the sewer pump station. The pathway would also act as a stormwater overland flow path, re-directing overland flows from Willow Avenue to the canal and thereby negating any additional impact of excess stormwater from the development on the infrastructure capacity of Willow Avenue. The provision of a detailed Stormwater Management Plan prior to the issue of a construction certificate will further ensure a suitable outcome for stormwater management is achieved. The pathway is proposed to be dedicated to Council at no cost.

6. RECOMMENDATION

The Department has assessed the project on its merits and considered the submissions received from public agencies and the 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, 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:

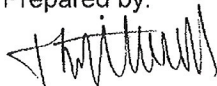
- creation of eleven (11) residential lots and one (1) residue lot;
- enhancement of Swamp Sclerophyll EEC adjacent to the canal; and
- appropriate utilisation of residential zoned land.

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 project excludes development from an ecologically sensitive riparian buffer that will maintain biodiversity in the area and protect Cudgen Lake 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.

Prepared by:



Tom FitzGerald
A/Senior Planner
Regional Projects

Endorsed by:



Joanna Bakopanos
Team Leader
Regional Projects


Mark Schofield
A/Director
Regional Projects
20/11/10

David Kitto
A/Executive Director
Major Projects Assessment


2/12/10
Deputy Director-General
Development Assessment & Systems Performance

APPENDIX A ENVIRONMENTAL ASSESSMENT

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

APPENDIX B PROPONENT'S RESPONSE TO SUBMISSIONS

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

APPENDIX C CONSIDERATION OF 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 No. 1 – Development Standards*

Although not a consideration for this application, the provisions of SEPP 1 have been taken into account by the Regional Office as it relates to Tweed Shire Council's DA10/0099. Further discussion of this can be found in section 3.4 of this report.

- *State Environmental Planning Policy No. 44 – Koala Habitat Protection*

SEPP 44 aims to encourage proper conservation and management of natural vegetation areas that provide habitat for koalas. The SEPP applies to development in the Tweed Shire on land parcels of more than one hectare. In accordance with the SEPP, the existence of Core Koala Habitat must be determined before development consent can be given. No core koala habitat has been found on the site.

- *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. The proponent has undertaken a Preliminary Site Investigation confirming that contamination is unlikely to be an issue given that the project involves minimal earthworks and the site has been the subject to authorised filling in the past. 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 maintenance of the existing predominantly residential character of the Willow Avenue/Tamarind Avenue area, provides for the retention and enhancement of the riparian area adjacent to the canal thereby contributing to improved water quality outcomes for Cudgen Lake, and has made allowance for the projected effects of climate change. 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, minimising the risks to people and property from coastal processes, the retention and regeneration of natural areas, and provides for the orderly release of appropriately zoned urban land.

- *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 ensuring the development design and construction specifications required by this document are adhered to where relevant. 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 canal estate adjacent to the site was constructed prior to the NSW Coastal Policy being made and prior to *State Environmental Planning Policy No. 50 – Canal Estate Development* being gazetted. The impacts of coastal flooding and climate change have been given a high priority in the consideration of this proposal and issues can be satisfactorily addressed by way of conditions on approval. As an infill subdivision within the identified growth boundary the proposal promotes compact urban development and also avoids detrimental effects on environmentally sensitive areas.

- *NSW Coastal Design Guidelines and North Coast Urban Design Guidelines*

The project is consistent with these guidelines. The subdivision layout blends in with the surrounding environment and allows for environmental constraints (bushfire, EEC) to be accommodated.

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

APPENDIX D RECOMMENDED CONDITIONS OF APPROVAL