



Planning &
Infrastructure

**TRANSITIONAL PART 3A PROJECT
ASSESSMENT**

***Project application for residential
subdivision, 'Altitude Aspire',
Area E Fraser Drive Terranora
(MP 09_0166)***



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

December 2013

ABBREVIATIONS

B24	Tweed Development Control Plan 2008, Section B24 – Area E
BWP	Broadwater Parkway
CIV	Capital Investment Value
Department	Department of Planning and Infrastructure
DGRs	Director-General's Requirements
Director-General	Director-General of the Department of Planning and Infrastructure, or his delegate.
EA	Environmental Assessment
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	Environmental Planning and Assessment Regulation 2000
EPI	Environmental Planning Instrument
LEP	Local Environmental Plan
MD SEPP	State Environmental Planning Policy (Major Development) 2005
Minister	Minister for Planning and Infrastructure
PAC	Planning Assessment Commission
Part 3A	Part 3A of the <i>Environmental Planning and Assessment Act 1979</i>
PEA	Preliminary Environmental Assessment
PFM	Planning Focus Meeting
PPR	Preferred Project Report
Proponent	Metricon Queensland Pty Ltd
ROTAP	Rare or Threatened Australian Plants
RtS	Response to Submissions
SEPP	State Environmental Planning Policy

Cover Photograph: The Existing Site at Fraser Drive Terranora

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EXECUTIVE SUMMARY

This is a report on a project application (MP09_0166) for residential subdivision, pursuant to Part 3A of the *Environmental Planning and Assessment Act 1979* (the EP&A Act), by Metricon Queensland Pty Ltd (the proponent). The proposal is for land located on the western side of Fraser Drive, Terranora comprising the eastern portion of a release area known as 'Area E', in Tweed local government area.

The proposal is for a 261 lot community title residential subdivision comprising 250 residential lots, four medium density lots, four public reserve lots, one drainage reserve lot, one reservoir site lot and one Community Title scheme lot. The proposal includes associated roads, stormwater, utility infrastructure and bulk earthworks.

The project is a transitional project under Part 3A of the Act because it is development as described under Schedule 2, 1 'Coastal areas' (1)(1)(b) in *State Environmental Planning Policy (Major Development) 2005* (as in force at the time). The CIV of the proposal is \$25 million and will create 50 full time equivalent construction jobs and up to 5 full time equivalent operational jobs.

The subject site is zoned as 2(c) Urban Expansion and partly as 7(a) Environmental Protection (Wetlands and Littoral Rainforests) in the *Tweed Local Environmental Plan 2000*. The proposal is permissible with consent and is generally consistent with local controls.

The Environmental Assessment (EA) was exhibited from 25 February until Monday 4 April 2011. The department received fifty-seven (57) submissions, including nine (9) submissions from public authorities and forty-eight (48) from the general public (38 objections and 10 letters of support).

The public mainly raised concerns about traffic and road safety, residential and visual amenity, density, view loss, geotechnical/landforming and ecological issues. Public authorities raised issues of detail, which, for the most part have been addressed in the revised project, the revised Statement of Commitments or dealt with by incorporating appropriate conditions. Other key issues considered in the department's assessment include infrastructure and stormwater, traffic and access, subdivision layout and design, ecological and vegetation management, contamination and the Planning Agreement with Council.

There have been significant on-going negotiations with the proponent and the Council regarding the final subdivision layout and final landform that will be acceptable on what is a mostly steep site, since lodgement of the EA in 2011. The PPR was lodged in October 2013. Significant revisions were made to the original proposal to ensure the revised project substantially complies with the structure plan adopted by Council for Area E.

The department has assessed the merits of the project and is satisfied that the impacts of the project meet appropriate standards and have been adequately addressed by the proponent's EA, PPR and Statement of Commitments. The department has recommended conditions which specifically target earthworks, infrastructure, and ecological management and public domain issues given the sloping and sensitive nature of the site. The recommended conditions will ensure a satisfactory level of environmental performance. The proposal is considered to appropriately respond to its surroundings, has adequately catered for the steep terrain and the local ecology so that it suitably complements the surrounding area. The project is consistent with the aims of NSW 2021, the objectives of the NSW Coastal Policy 1997 and the *Far North Coast Regional Strategy 2006-2031* as well as local planning controls.

The Planning Assessment Commission (PAC) is the approval authority for this application, under the terms of the delegation from the Minister as there were more than 25 submissions in objection to the application.

The department considers the proposal to be in the public interest and recommends that the PAC **approve** the project, subject to the recommended conditions.

CONTENTS

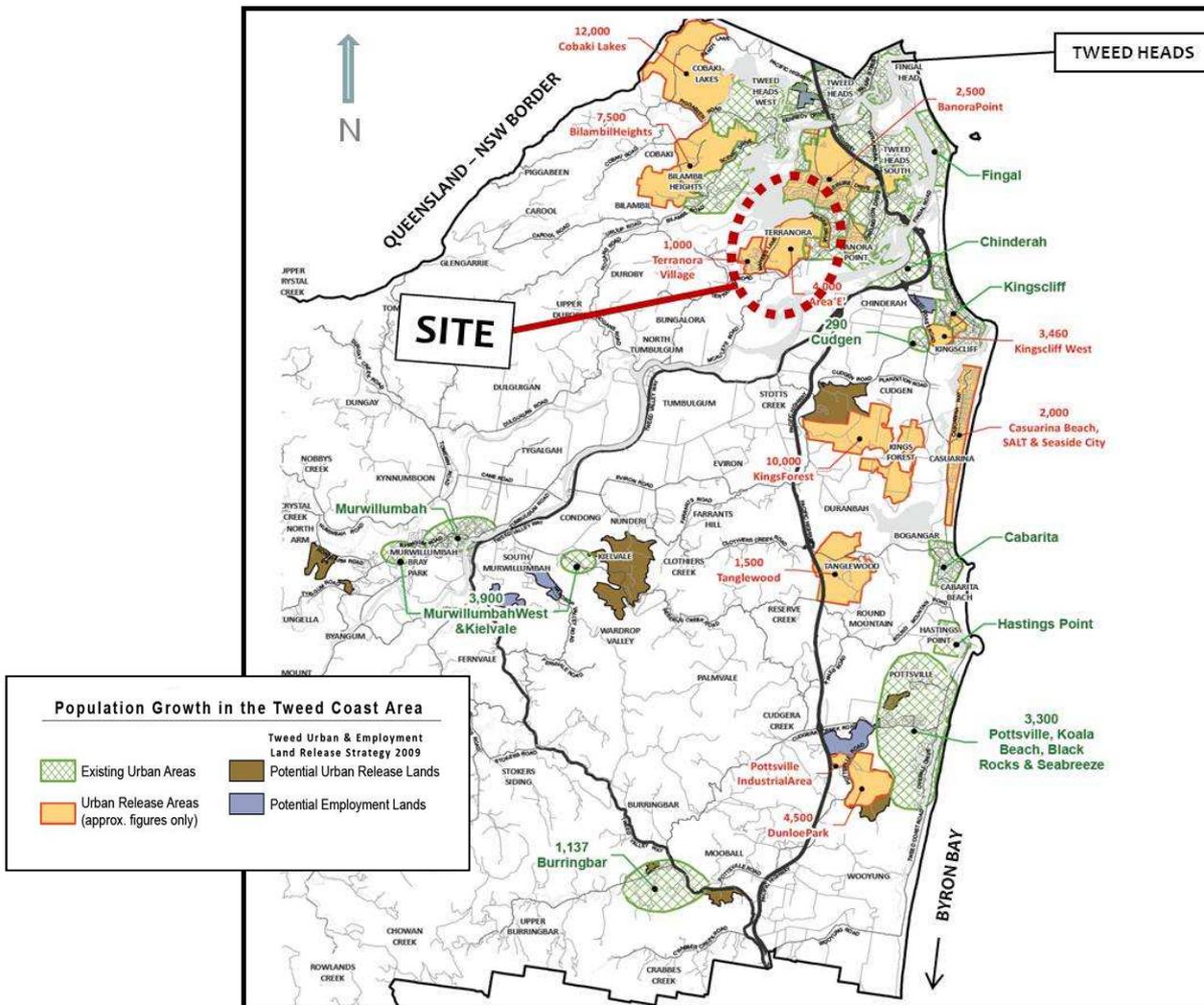
EXECUTIVE SUMMARY	3
1. BACKGROUND AND SITE	5
1.1 SITE LOCATION AND DESCRIPTION	5
1.2 SITE HISTORY & SURROUNDING LAND USES	5
1.3 THE SITE	6
2. PROPOSED PROJECT	9
2.1 PROJECT BACKGROUND	9
2.2 PROJECT DESCRIPTION – THE REVISED PROJECT	11
3. STATUTORY AND STRATEGIC CONTEXT	13
3.1 MAJOR DEVELOPMENT SEPP	13
3.2 APPROVAL AUTHORITY	13
3.3 PERMISSIBILITY AND ZONING UNDER TWEED LOCAL ENVIRONMENTAL PLAN 2000	13
3.4 ENVIRONMENTAL PLANNING INSTRUMENTS	14
3.5 OBJECTS OF THE EP&A ACT	15
3.6 ECOLOGICALLY SUSTAINABLE DEVELOPMENT	16
3.7 COMMONWEALTH ENVIRONMENTAL PROTECTION AN BIODIVERSITY CONSERVATION ACT 1999	16
3.8 STRATEGIC CONTEXT	17
3.9 STATEMENT OF COMPLIANCE	17
4. CONSULTATION AND SUBMISSIONS	18
4.1 EXHIBITION	18
4.2 PUBLIC AUTHORITY SUBMISSIONS	18
4.3 PUBLIC SUBMISSIONS	22
4.4 PROPONENT’S RESPONSE TO SUBMISSIONS AND PREFERRED PROJECT REPORT	22
5. ASSESSMENT	23
5.1 LANDFORMING AND EARTHWORKS	23
5.2 INFRASTRUCTURE PROVISION AND WATER CYCLE MANAGEMENT	29
5.3 TRAFFIC AND ACCESS	32
5.4 GENERAL SUBDIVISION LAYOUT AND STRUCTURE PLAN	35
5.5 OPEN SPACE, PUBLIC DOMAIN AND VISUAL IMPACT	37
5.6 ECOLOGICAL ISSUES AND SEPP 14 WETLAND	39
5.7 VOLUNTARY PLANNING AGREEMENT	44
5.8 LAND CONTAMINATION	45
5.9 OTHER ISSUES	47
6. CONCLUSION	49
7. RECOMMENDATION	50
APPENDIX A RELEVANT SUPPORTING INFORMATION	51
APPENDIX B CONSIDERATION OF ENVIRONMENTAL PLANNING INSTRUMENTS	52
APPENDIX C SUMMARY OF SUBMISSIONS	62
APPENDIX D DETAILS OF PREFERRED PROJECT REPORT	63
APPENDIX E SATISFACTORY ARRANGEMENTS CERTIFICATE	64
APPENDIX F RECOMMENDED CONDITIONS OF APPROVAL	65

1. BACKGROUND AND SITE

1.1 Site Location and Description

The site is legally described as Lot 1 DP 304649, Lot 1 DP 175235, Lot 1 DP 781687, Lot 2 DP 778727, Lot 1 DP 781697, Lot 1 DP 169490 and Lots 40 and 43 DP 254416, Fraser Drive, Terranora. The site is located within the Tweed Shire LGA, approximately 6 kilometres southwest of Tweed Heads and approximately 6 kilometres south of the Gold Coast Airport. The site has a total area of approximately 35.74 hectares, illustrated in **Figure 1**.

Figure 1: Project Location
(Source: Tweed Urban and Employment Land Release Strategy 2009).



1.2 Site History & Surrounding Land Uses

The site is known as ‘Altitude Aspire’ and is located within the ‘Area E Urban Release Area’ (‘Area E’), a large urban release area on the western side of Fraser Drive which extends west to Maher’s Lane, north to Terranora Broadwater and south to Terranora Road. Area E is currently planned to yield approximately 1,590 new homes, associated infrastructure and a town centre across three distinct precincts. This project is the first precinct to be developed under the recently adopted *Section B24 – Draft Area E Urban Release Development Code* of the *Tweed Heads DCP 2008* (‘B24’).

The site is located in the eastern portion of Area E with Fraser Drive forming the eastern boundary, beyond which is existing urban development comprising predominantly single, NSW Government
Department of Planning & Infrastructure

detached dwelling houses on lots of approximately 600m² to 1000m². Adjoining to the west is agricultural land that will form future precincts of Area E while to the north is Terranora Broadwater and a SEPP 14 wetland. To the south comprises the Parkes Lane/Market Parade rural residential precinct with allotments in the vicinity of 1000m² and larger. The site is located within a residential area with several large expanses of bushland surrounding the waterways, and has regional panoramic views towards Tweed Heads and the Gold Coast to the north and the Border Ranges to the west.

The site has previously been used for agriculture and grazing, with grazing land/abandoned crops dominating the site. A shed along the Fraser Drive boundary has recently been demolished and there are no other structures on the site. Many of the existing farm paddocks have been divided by vegetated windbreaks which still exist on the site.

1.3 The Site

The site is relatively steep and forms a natural amphitheatre shape, sloping towards the Broadwater. There is a change in elevation of approximately 86 metres from the southern boundary adjacent to Parkes Lane down to the wetland at or near sea level. Gradients are in excess of 25% in parts, particularly adjacent to the natural watercourse. An aerial photograph of the site is shown in **Figure 2** and the topography of the site is illustrated in **Figures 3 to 6** inclusive. A watercourse traverses the centre of the site, with several farm dams and remnant vegetation within this central drainage gully area.

Figure 2: Aerial Photograph of the site showing existing site features
(Source: B & S Surveys, 31/5/10 - EA)



The watercourse discharges to the SEPP 14 wetland adjoining to the north, which then drains to Terranora Broadwater via a network of existing natural watercourses. This watercourse largely divides the site into two distinct areas, being the eastern and western portions. The eastern portion adjoining Fraser Drive is the steepest part of the site with significantly sloping land of approximately 12-18 degrees and extremely sloping land (over 18 degrees) in parts. The western portion of the site comprises sloping land of approximately 6-12 degrees. The site contains six

vegetation communities and two degraded EECs, largely in the central drainage gully area and within the 7(a) zoned land along the northern boundary, which will form a conservation area.

Figure 3: Digital Elevation Model -existing site features and topography
(Source: Area E DCP)

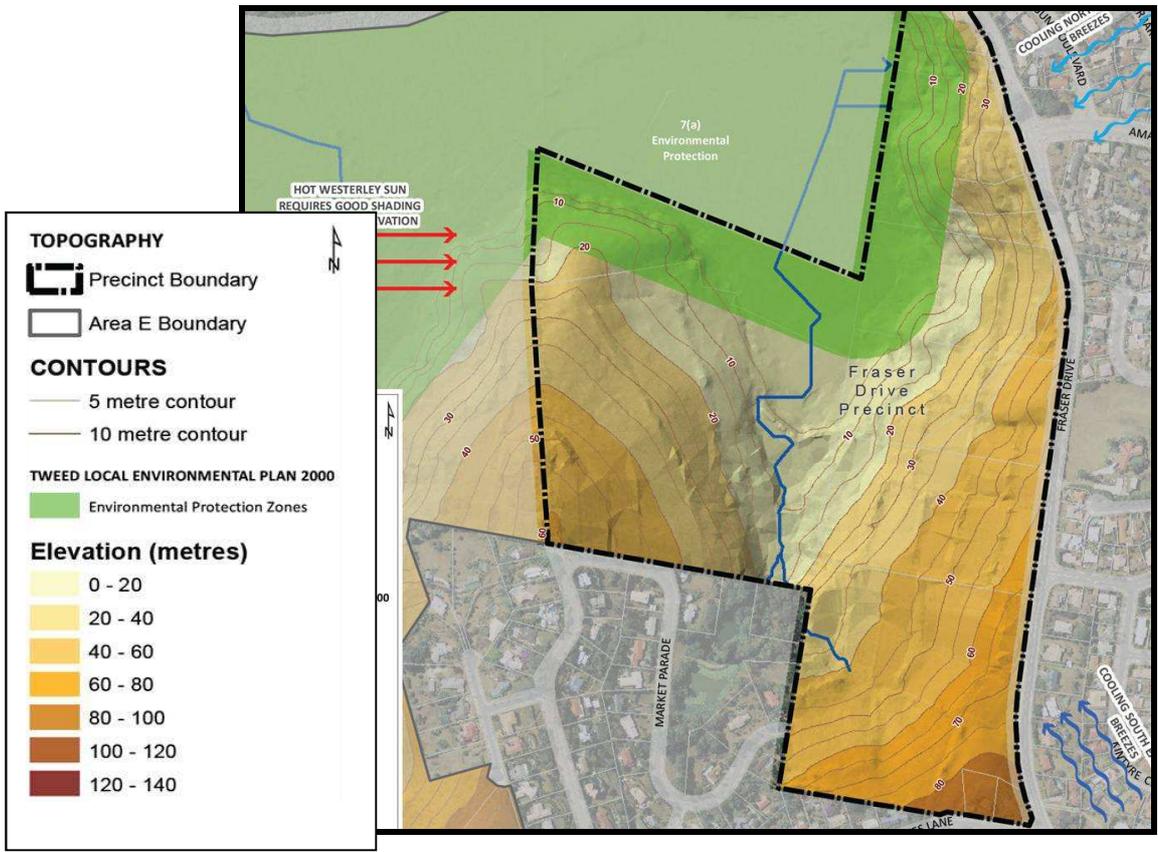


Figure 4: Looking East towards Fraser Drive from Parkes Lane (southern boundary)

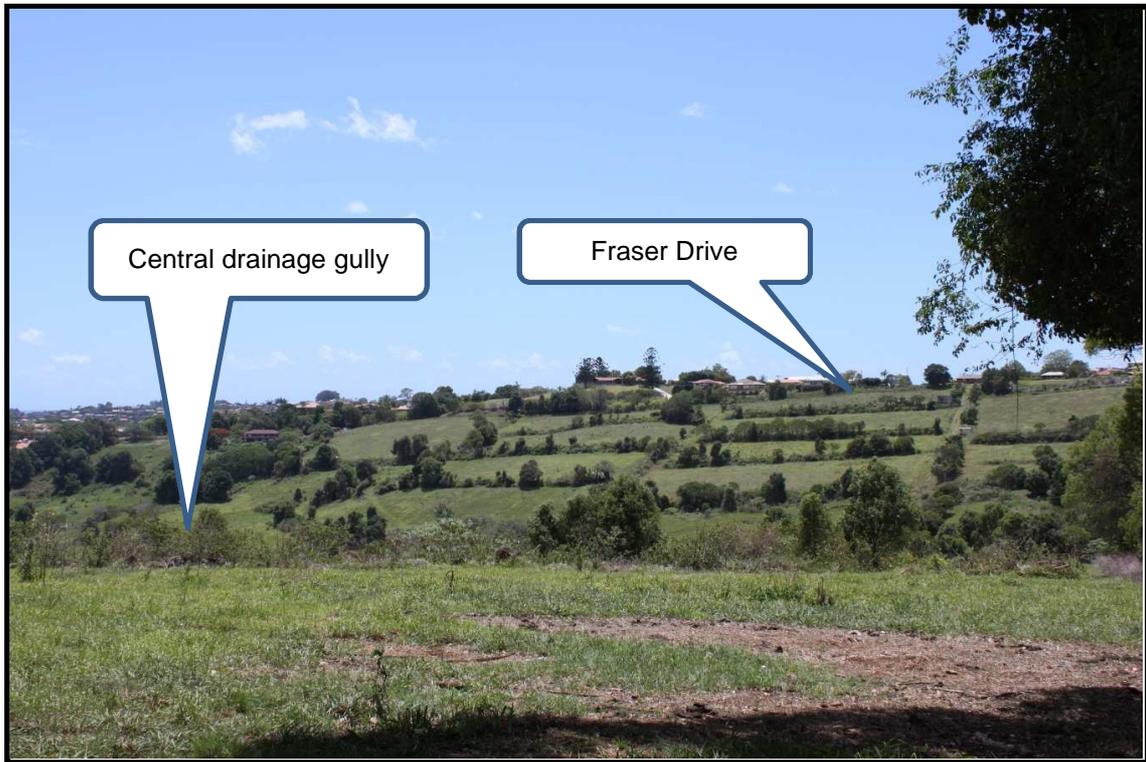


Figure 5: Looking North towards Terranora Broadwater and the SEPP 14 wetland from Fraser Drive (south-eastern corner of the site)

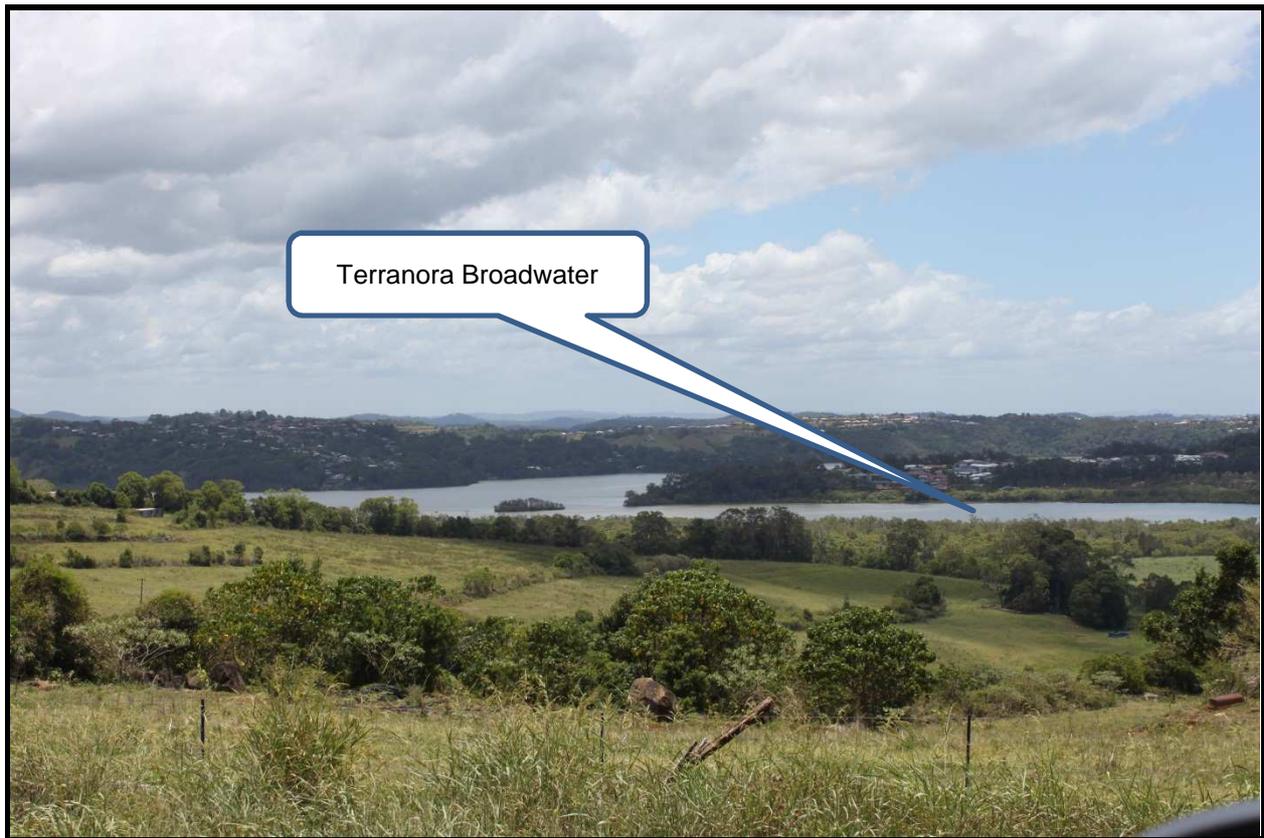
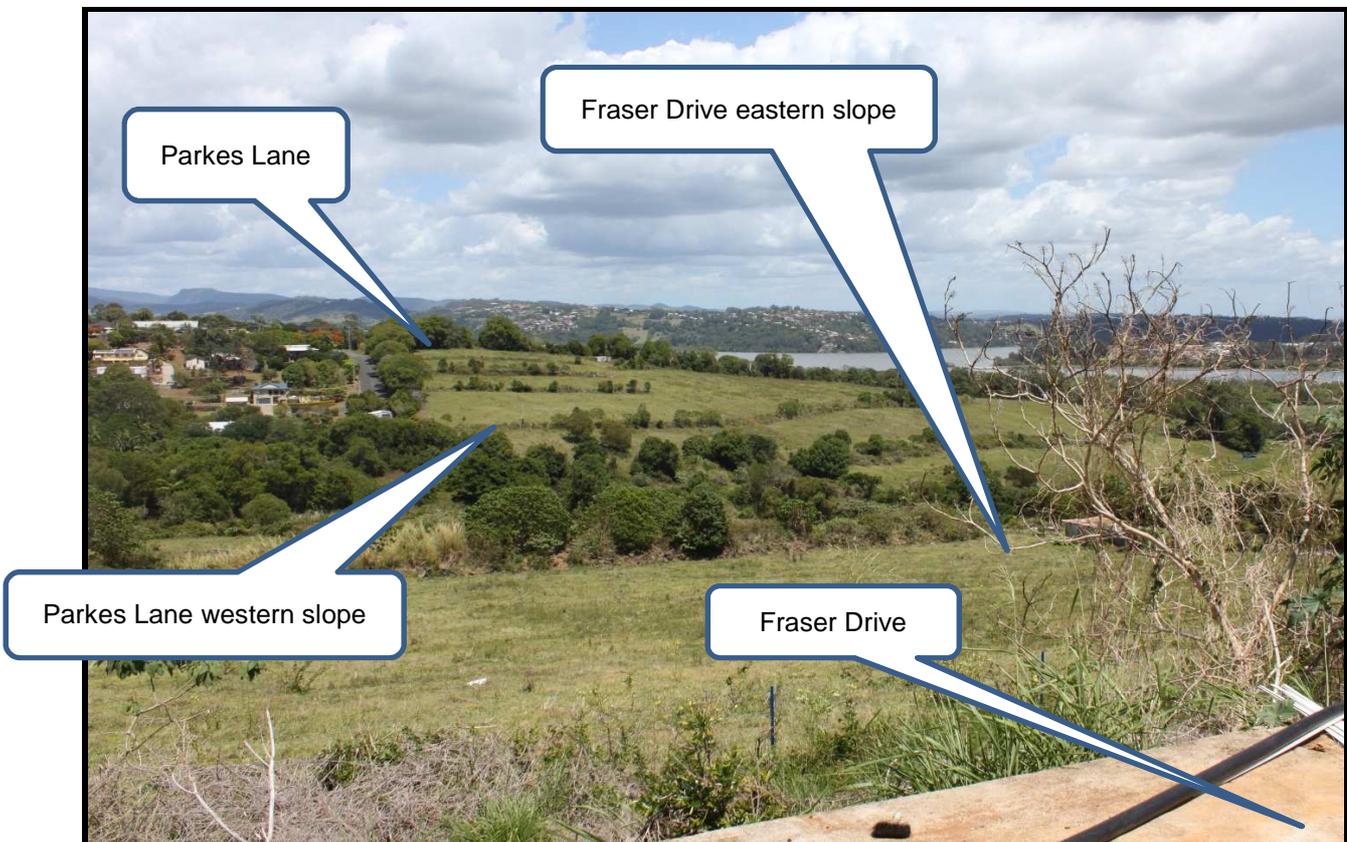


Figure 6: Looking West towards Parkes Lane ridge (Broadwater and SEPP 14 to right)



2. PROPOSED PROJECT

2.1 Project Background

The subject site is part of the broader area known as Area E and is subject to the provisions of *Tweed DCP 2008: Section B24 - 'Draft Area E Urban Release Development Code'* (Section B24). Section B24 provides an Indicative Structure Plan (CI 2.2), which is illustrated in **Figure 7** and discussed in detail in Section 5.

Figure 7: Indicative DCP Structure Plan for the Site
(Source: Figure 2.2 of Section B24 DCP)



The original project (illustrated in **Figure 8**) comprised a 321 lot community title residential subdivision including one community association lot (Lot 711), two public reserves (Lots 436 and 710) and one drainage reserve lot (Lot 630) in 11 stages. The provision and dedication to Council of reticulated infrastructure, roads and public open space was also proposed.

Figure 8: Original Project (EA)

(Source: EA, prepared by Darryl Anderson Consulting Pty Ltd dated December 2010)



Following the public exhibition of the EA, and submissions from public authorities (outlined in **Section 4** of this report), the department requested key changes to the subdivision design to address a number of concerns, including:

- Lack of an adopted DCP for the strategic planning of the site;
- Housing density, neighbourhood facilities, orientation and design of lots;
- Visual impact of acoustic fence along Fraser Drive;
- The temporary connection to Fraser Drive and lack of certainty surrounding the future Broadwater Parkway design, location, funding and final alignment;
- Extensive and significant bulk earthworks inconsistent with Council's policies (A1, A5 & D6);
- Feasibility of design and delivery of trunk water and sewer supply infrastructure;
- Inadequate flora and fauna assessment/management, and wetland management;
- Lack of a 100 metre buffer to SEPP 14 wetland and EECs;
- Stormwater management features close to SEPP 14 wetland, discharges onto private land and suitability in terms of water quality and quantity;
- No specific actions to maintain or mitigate wetland hydrology;
- Acid sulphate soils and groundwater assessment required further consideration;
- Drainage reserve lacked a public interface due to lot layout;
- Limited direct access to Fraser Drive for pedestrians and cyclists;
- Insufficient APZs for Lots 1001 to 1020;
- Concerns with layout, location and amount of public open space areas; and
- Impacts on existing Fraser Drive driveways due to temporary access point to Fraser Drive.

A draft Preferred Project Report ('the PPR') and Response to Submissions was lodged on 29 April 2013, which included several changes as outlined in **Appendix D**. Further refinement of the project was requested by the department on 9 July 2013.

An addendum to the PPR was received on 15 August 2013, the details of which are also provided in **Appendix D**. Outstanding concerns regarding contaminated land were subsequently addressed by the submission of a *Sampling, Analysis and Quality Plan* ('SAQP') and *Remediation Action Plan*, prepared by Gilbert & Sutherland Pty Ltd dated October 2013, and a Section B Site Audit Statement ('the contamination information').

2.2 Project Description – the Revised Project

The project application seeks approval for a community title residential subdivision for 261 lots as a transitional Part 3A project. The project includes 4 new public reserve lots, a drainage reserve lot, a reservoir lot, a community association lot and associated access, stormwater, utility infrastructure, bulk earthworks and land forming. Key aspects of the layout as illustrated in the PPR ('the revised project') are shown in **Table 1** and **Figure 9** below. The CIV of the revised project' is \$25 million.

Table 1: Key aspects of the Project
(Source: Revised PPR, dated April 2013)

Aspect	Description
Project Summary	Project application for a residential subdivision
Residential	35.74 hectares of community title residential subdivision, constructed in 10 stages, to create approximately 261 lots, comprising 250 residential lots, 4 medium density lots, 4 lots for public reserves, 1 lot for drainage reserve, 1 lot for reservoir site and 1 community lot.
Public Open Space	Dedication to Council and embellishment of 4 public reserve lots - Lots 451, 712 & 819 (pocket parks) and 1001 (conservation area).
Recreation	A community association recreation facility on community lot (Lot 713)
Staging	Construction in 10 stages: Stages 1, 2, 3, 4, and 5 - generally residential lots with public reserve lot and reservoir lot in the eastern portion, Stage 6 – drainage reserve, Stage 7 – residential (with medium density) lots, public reserve lot and community lot, Stage 8 – residential and public open space lot, Stage 9 – residential (including medium density) lots, Stage 10 – conservation area.
Infrastructure	Construction of a priority controlled intersection to Fraser Drive and dedication of land and monetary contributions (under VPA) for future Broadwater Parkway. Construction of all internal roads, water and sewer services, electrical, telecommunications and other standard infrastructure.
Earthworks	Bulk earthworks in 2 phases, generally filling in the central drainage gully and cut in the higher slopes on eastern and western sides. A total cut volume of 408,600m ³ and a total fill volume of 355,100m ³ . A site area of 9.86% where cut/fill exceeds 5m from existing ground level.
Water management	Construction of all drainage infrastructure, including 4 stormwater bioretention basins within the central gully in a drainage reserve lot (Lot 610). A stormwater detention bund is proposed within 7(a) land to detain flows prior to discharge and will predominantly be dry, except following various rainfall events. Stormwater will be adequately treated in bioretention basins prior to discharge to the SEPP 14 wetland and Broadwater.
Conservation	Provision of a 100m buffer to the adjoining SEPP 14 wetland and Broadwater which will form a conservation area. The <i>Vegetation Management and Rehabilitation Plan</i> (VMRP) aims to direct the rehabilitation and management of the proposed Open Space and conservation area. The primary focus of the conservation area will be

3. STATUTORY AND STRATEGIC CONTEXT

3.1 Major Development SEPP

The proposal is a major project under Part 3A of the *Environmental Planning and Assessment Act 1979* ('EP&A Act') because it is development for the purpose of residential subdivision under clause 1(1)(b) of Schedule 2 of *State Environmental Planning Policy (Major Development) 2005*. The Minister for Planning and Infrastructure is the approval authority. Despite its repeal on 1 October 2011, Part 3A continues to apply to certain projects, 'transitional Part 3A projects', pursuant to Schedule 6A of the Act. This project application is such a project, since DGRs had been issued and an Environmental Assessment received before the 8 April 2011, the cut-off date for transitional Part 3A projects.

3.2 Approval Authority

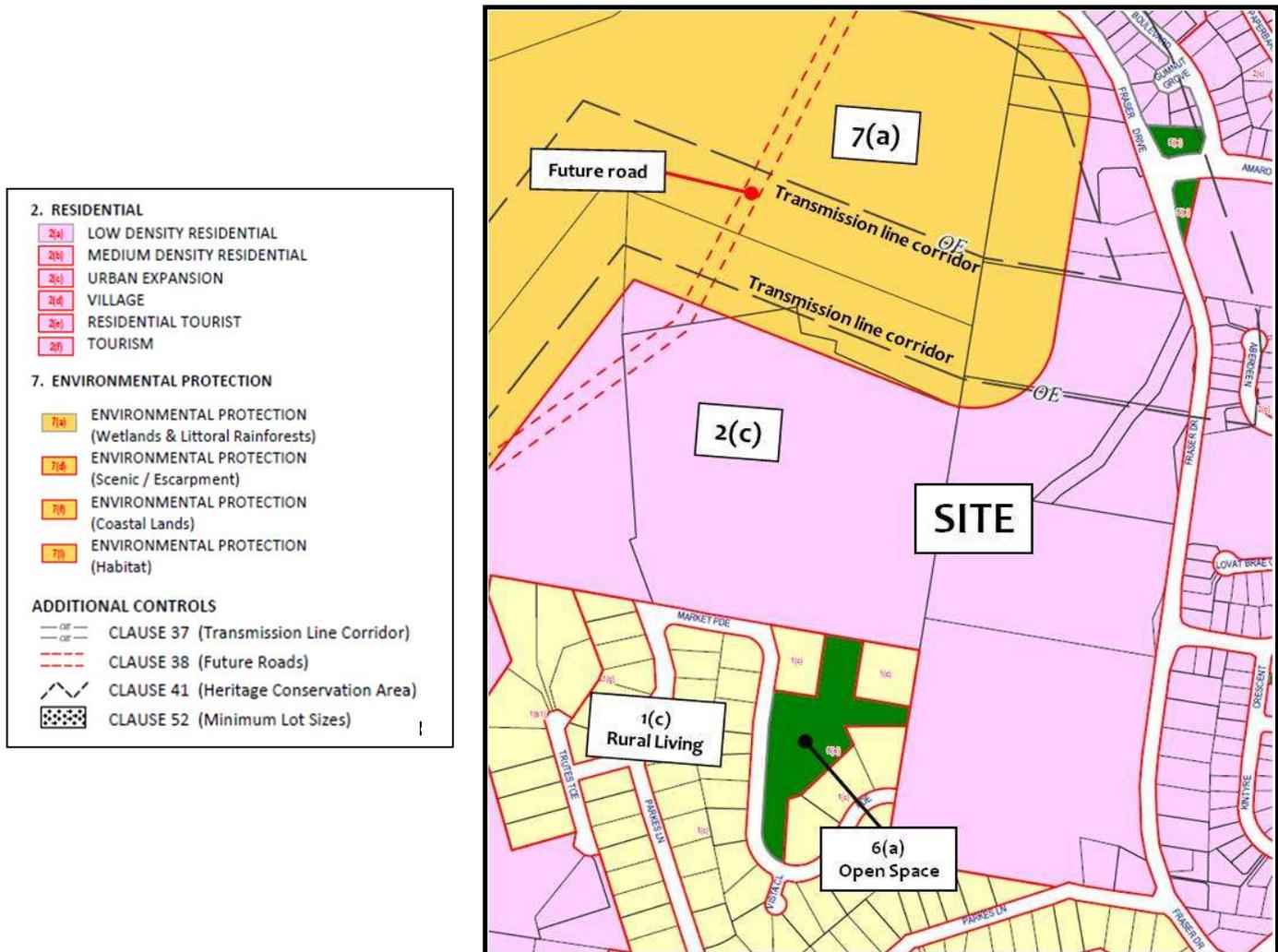
On 14 September 2011, the Minister for Planning and Infrastructure delegated his functions under section 75J of the EP&A Act to the Planning Assessment Commission ('PAC') where there has been 25 or more objections to the application, the local council has objected or there has been a reportable political donation in connection with the application, or to a previous related application. Based on the number of submissions received (more than 25 objections), the PAC is the determining authority for the Project Application.

3.3 Permissibility and Zoning under *Tweed Local Environmental Plan 2000*

The *Tweed Local Environmental Plan 2000* ('Tweed LEP 2000') is the principal environmental planning instrument applying to the site. The site is zoned part 2(c) Urban Expansion and part 7(a) Environmental Protection (Wetlands and Littoral Rainforests) as illustrated in **Figure 10**.

The project is permissible in the 2(c) zone, and the proposed lots exceed the minimum allotment size of 450m². A Recreation facility (indoor area of community facility) and recreation area (outdoor area of community facility), bushfire hazard reduction, roads, utility installations, public utility infrastructure, and environmental protection works are also permissible with consent. The proposed works within the 7(a) zone include a stormwater detention bund (works for drainage and landfill) which is permissible if consistent with Clause 8(2). The proposed bund is consistent with this clause as it complies with the zone objectives since it will not adversely affect the environmental value of the EEC (discussed in Section 5.6) or the visual amenity of the area and it will not have an unacceptable cumulative impact on the locality. The bund is required to be located there as it provides drainage and there is no other appropriate location.

Clause 53D of the Tweed LEP 2000 is a site-specific clause of the LEP relevant to the revised project as it applies to the entire Area E ensuring strategic issues are resolved prior to consent. This Clause requires that a DCP is in place, contaminated land issues are dealt with, wetlands will be restored and protected with breeding habitat for mosquitoes and biting midges minimised, stormwater is appropriately managed, and assistance provided towards the provision of the relevant infrastructure, facilities and services to satisfy needs that arise from development on land provided (refer **Appendix B** for consideration). This clause also requires consultation with relevant authorities with respect to whether contributions are required for regional transport infrastructure, and education, health and emergency services provided by the State. No contributions were required by the relevant authorities and the Director-General has provided certification with respect to the satisfaction of this clause (refer **Appendix E**). The revised project is consistent with the clause, subject to the recommended conditions, and the VPA.

Figure 10: Zoning of the Subject Site under Tweed LEP 2000(Source: www.tweed.nsw.gov.au/planningdocs)**3.4 Environmental Planning Instruments**

The EPIs relevant to the project include:-

- State Environmental Planning Policy (Major Developments) 2005;
- State Environmental Planning Policy (Infrastructure) 2007;
- State Environmental Planning Policy No. 71 – Coastal Protection;
- State Environmental Planning Policy No. 55 – Remediation of Land;
- State Environmental Planning Policy No.14 – Coastal Wetlands;
- North Coast Regional Environment Plan; and
- Tweed Local Environment Plan 2000.

The proposal is generally consistent with the requirements of the relevant EPIs, with the department's consideration of these relevant EPIs (including SEPPs) provided in **Appendix B**. Tweed DCP 2008, Sections A1 – Subdivision Manual and B24 – Area E have specific relevance to the project and are considered in this assessment.

Section B24 of the Tweed DCP 2008 has particular relevance to the revised project as it contains an Indicative Structure Plan for the entire Area E, which includes the subject site in Clause 2.2 and Figure 2.2. This Structure Plan indicates the location of low and medium density housing lots, large lots as well as public open space areas, roads and drainage features. This Structure Plan is discussed in more detail in Section 5.4 of this report.

3.5 Objects of the EP&A Act

Decisions made under the EP&A Act must have regard to the objects of the Act, as set out in Section 5 of the Act. The proposal complies with the objects as outlined in **Table 2**.

Table 2: Summary of Objects of the Act

Object	Reason for compliance/non-compliance
<i>(ii) The promotion and co-ordination of the orderly and economic use and development of land.</i>	The project is an orderly and economic use of land as it seeks to expand the urban area within an area planned for such development. The adoption of Section B24 for Area E in December 2011 highlights the Council's intention for this area to be developed as a new urban release area as outlined in the Regional Strategy.
<i>(iii) The protection, provision and coordination of communication and utility services.</i>	The proposal will upgrade utility services through the provision of additional infrastructure for the site and via contributions (in the VPA) towards infrastructure outside the site, including the future planned provision of Broadwater Parkway.
<i>(iv) The provision of land for public purposes.</i>	There are no changes proposed to existing public access to land at the foreshore.
<i>(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</i>	The project is located adjacent to a SEPP 14 wetland and the Terranora Broadwater, which comprise a sensitive coastal environment. The revised project proposes a 100m buffer from the development to the SEPP 14 wetland and Broadwater which will form a conservation area. The proposal also includes a <i>Vegetation Management and Rehabilitation Plan (VMRP)</i> which aims to direct the rehabilitation and management of the proposed Open Space and Conservation areas. The primary focus of the conservation area will be the retention and protection of existing native vegetation, the rehabilitation of degraded areas (including the degraded Freshwater wetland EEC), and the provision of offsets for the removal of small degraded patches of Lowland rainforest EEC from the development footprint. This VMRP ensures the project achieves this objective (discussed in Section 5.6).
<i>(vii) Ecologically sustainable development (ESD).</i>	The revised project is considered to adhere to the principles of ESD as it includes establishment of a conservation area to the north of BWP and contributions towards the acquisition and restoration of the SEPP 14 wetland adjoining the site in the VPA. The conservation area will be rehabilitated under the VMRP and will include offsets for the removal of EECs from the site. A buffer of 20 metres is provided to the Freshwater wetland EEC within the conservation area (further discussed in Section 5.6 of the report).
<i>(viii) The provision and maintenance of affordable housing.</i>	The proposal is considered to provide a positive social impact by providing additional affordable housing options within the local government area, by providing a range of housing lot sizes and housing types through the provision of some forms of medium density housing.

3.6 Ecologically Sustainable Development

The EP&A Act adopts the definition of Ecologically Sustainable Development (ESD) found in 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.

The department has considered the project in relation to the ESD principles:-

- a) *Integration Principle* - The environmental impacts of the development are appropriately mitigated as discussed in this report. The department's assessment has duly considered all issues raised by public authorities, and the proposal as recommended for approval will not compromise any particular stakeholder or hinder the opportunities of others.
- b) *Precautionary Principle* - The proposal presents no threat of serious or irreversible environmental damage to the site or the wider locality, and the EA and PPR are supported by technical and environmental reports which conclude that the proposal's impacts can be successfully mitigated. The known site constraints and hazards, including flooding and bushfire have been adequately mitigated. The revised project has adequately mitigated potential impacts from flooding, bushfires and any potential changes in sea level rising resulting from climate change.
- c) *Inter-Generational Principle* - The proposal represents a sustainable development of the site. The proposal will enable social renewal of the site and immediate locality, and provides a high quality residential development with open space for passive and active recreation for future users of the site. The proposed mitigation measures with respect to biodiversity conservation and threatened species (EECs) are satisfactory and are discussed in Section 5 of this report.
- d) *Biodiversity Principle* - Following an assessment of the Proponent's EA, PPR and other supporting documents it is considered with certainty that there is no threat of serious or irreversible environmental damage as a result of the proposal. The proposed removal of some of the existing vegetation will not affect any threatened or vulnerable species, populations, communities or significant habitats. The majority of the revised project is located on previously developed and disturbed land and would not result in any significant loss of any threatened or vulnerable species, populations, communities or significant habitats. The proposed lots have been designed to ensure adequate solar access is achieved and future housing will be subject to energy efficiency guidelines.
- e) *Valuation Principle* - The approach taken for this project has been to assess the environmental impacts of the proposal and identify appropriate safeguards to mitigate adverse environmental effects. The mitigation measures include the cost of implementing these safeguards in the total project cost.

The proposal is considered to be consistent with ESD principles since there will be limited vegetation removal, significant rehabilitation and restoration of the 7(a) land and adjoining SEPP 14 wetland (via the VMRP and the VPA) will be undertaken, and sustainable modes of transport are promoted by providing an integrated network of pathways and cycleways as well as a bus route throughout the site. The revised project will also achieve a high level of environmental management during construction, ensuring construction management is undertaken in accordance with Erosion and Sediment Control Plans. The department is satisfied the proposal will encourage ESD, in accordance with the objects of the EP&A Act.

3.7 Commonwealth Environmental Protection and Biodiversity Conservation Act 1999

The *Environment Protection & Biodiversity Conservation Act (1999)* ('EPBC Act') requires that a person must not, without an approval under the Act, take an action that has or will have, or is likely to have, a significant impact on a matter of National Environmental Significance (NES). There are no declared World Heritage Areas or Ramsar Wetlands in the locality or on the site and the site does not support any important population of any species listed in the EPBC Act (1999). The Grey-headed Flying Fox, however, is listed as vulnerable within schedules of the EPBC Act, and is considered a possible occurrence on the site. The ecological report concluded that the

project will not result in any significant impacts on the Grey-headed Flying-Fox. It is therefore considered that a referral to, and assessment by, the Commonwealth Department of Environment Water Heritage and the Arts (DEWHA) is not required as the project is unlikely to result in a significant impact on any NES matters.

3.8 Strategic Context

The department considers the proposal is appropriate for the site in a strategic context given:

- it is consistent with **NSW 2021** in that the project assists in achieving the 'Renovate Infrastructure' and 'Strengthen our Local Environment and Communities' strategies of this Plan by:
 - Contributing to the viability of nearby centres such as Tweed Heads, thereby building liveable centres (Goal 20) that are not only accessible and viable, but are great places to live and work;
 - Protecting the natural environment through the provision of the proposed conservation area on the site which will be rehabilitated and form a buffer zone to the SEPP 14 wetland and Terranora Broadwater (Goal 22);
 - Increasing opportunities for people to look after their own neighbourhoods and environments (Goal 23) by providing public open space areas and the proposed community recreation facility; and
 - Making it easier for people to be involved in their communities (Goal 24) through the public open space areas.
- it is consistent with the **Far North Coast Regional Strategy** which seeks to manage the Region's expected high growth rate of an additional 60,400 people by 2031 (requiring an additional 51,000 homes) in a sustainable manner since it is located within a future urban release area in the Town and Village Growth Boundary Map, around existing centres and towns, contained in the Strategy. The proposal will protect the unique environmental assets, cultural values and natural resources via the proposed conservation area and rehabilitation of the EECs on the site while ensuring that future planning maintains the character of the region and provides for economic opportunities through housing construction.
- it is consistent with the **Settlement Planning Guidelines: Mid and Far North Coast Regional Strategies** (August 2007) as it will recognise, protect and be compatible with the unique topographic, natural and cultural features essential to the area and reflects high quality design that is compatible with the local attributes. The provision of public open space and recreation areas encourages pedestrian movement and public access to community resources and public places reflecting the site's natural features and drainage and water quality requirements, nature conservation and biodiversity protection.
- it will provide contributions towards public infrastructure to cater for the increased demand for services required for the surrounding area and population as well as providing infrastructure within the site.
- it is consistent with the local planning imperatives, including Section B24 of the Tweed DCP 2008 as outlined in **Appendix B**.
- it creates new housing with the addition of 250 housing lots as well as 4 medium density lots to the area, in close proximity to existing services; and
- it will provide direct investment in the region of \$25 million, which would support 50 construction jobs and 5 new operational jobs.

3.9 Statement of Compliance

From 24 August 2012 by virtue of Schedule 6A of the Savings and Transitional arrangements under the Act for Part 3A, a statement of compliance under Section 75I of the Act is not required for a Transitional Part 3A project. Nevertheless, the Director-General's environmental assessment requirements have been complied with.

4. CONSULTATION AND SUBMISSIONS

4.1 Exhibition

Under Section 75H(3) of the EP&A Act, the Director-General is required to make the environmental assessment (EA) of an application publicly available for at least 30 days. The EA was publicly exhibited from 25 February 2011 until Monday 4 April 2011 as outlined in Table 3.

Table 3: Exhibition Details

Exhibition/ Notification	Appearing	From / to
Publicly exhibited on web site(s)	<ul style="list-style-type: none"> • Department of Planning, Information Centre, 23-33 Bridge Street, Sydney, NSW; • Tweed Shire Council, Murwillumbah Office, Civic & Cultural Centre, Tumbulgum Road, Murwillumbah, NSW; • Tweed Shire Council, Tweed Heads Branch Office, Brett Street, Tweed Heads, NSW; and • Kingscliff Public Library, Turnock Street, Kingscliff, NSW. 	25 February 2011 until Monday 4 April 2011
Newspaper notice	Tweed Sun Tweed Border Sun Tweed Daily News	24 February 2011 24 February 2011 26 February 2011
Written notices to	Landholders, public authorities, local community groups	21 February 2011

The Department received 57 submissions during the exhibition of the EA - 9 submissions from public authorities and 48 submissions from the general public and special interest groups. A summary of the issues raised in submissions is provided below.

4.2 Public Authority Submissions

Nine (9) submissions were received from public authorities, as outlined below.

Tweed Shire Council ('Council') had significant concerns with the original project, raising the following issues and recommending the proposal be deferred pending Council's approval of the Draft DCP:-

- DCP and LEP - The proposal was prepared without an adopted DCP which lacks strategic planning and poses a significant challenge to coordination, planning and delivery of key infrastructure. The proposal is inconsistent with Clause 53D of the Tweed LEP 2000 in that there is not an adopted DCP for the site;
- Urban design issues – shortage of medium density lots and lack of variety of housing typologies, neighbourhood facilities, orientation and design of lots and slope sensitive building design;
- Visual impacts and view loss - resulting from the proposed acoustic fence along Fraser Drive and the general inadequate assessment of the scenic impact on the area;
- Traffic and Access - The proposed 'temporary' connection to Fraser Drive and the lack of certainty surrounding the future Broadwater Parkway (design, location, construction) requires the development be capable of operating without Broadwater Parkway (including bus routes). This access point is to be dedicated as a public road. Internal and external connectivity of the road system is inadequate with connections to Market parade and Parkes Lane unacceptable, the road along the western boundary to be realigned to the boundary and there is poor connectivity to Fraser Drive. Road gradients and road widths are unsatisfactory and the road hierarchy is inappropriate. The location of the future Broadwater Parkway within the 7(a) land is prohibited and unacceptable;

- Earthworks - Non-compliance with bulk earthwork and lot grade criteria in Tweed DCP Sections A5, D6, D1 and A1 in that more than 10% of the site requires earthworks greater than 5m in depth, inter-allotment retaining walls are proposed greater than 1.2 metres and perimeter walls greater than 1.2 metres. Subdivisions should be designed to fit the topography rather than altering the topography to fit the subdivision. The central drainage channel ownership, use and maintenance is unclear and lots within the central area need to be removed. Filling for these lots may affect flooding on the site;
- Open space – developer contribution for structural open space unacceptable and casual open space is deficient by 5770m²;
- Infrastructure - Water and Sewer supply and capacity implications have not been adequately resolved;
- Section 94 implications and feasibility of design and delivery trunk infrastructure given the out-of-sequence development of the site. Planning should be coordinated with provision of future road networks, access point and stormwater treatment etc.
- Stormwater – no demonstrated lawful point of discharge for stormwater onto private land (Lot 227 DP 755740) and no water quality/quantity measures (SEPP 14 wetland);
- Inadequate ecological (threatened species and EECs) and wetland assessment and management are proposed (no adopted wetland plan for SEPP 14 wetland);
- The operation of the Community title subdivision should be provided; and
- The Living Design Guidelines are not supported as they are contrary to Council's DCP.

The Council did not support the revised project (PPR), due to numerous unresolved issues which were required to be addressed prior to determination. These issues included landforming, housing typology and lot layout, lack of agreement with respect to water and sewerage supply and mutually acceptable VPA, lack of a site audit statement, inadequate offsets for the loss of significant native vegetation and inadequacies of public open space at Lot 820.

The Council provided the following comments:

- Landforming and bulk earthworks – does not support the extensive use of retaining walls to create terraced lots (105 of 255 of lots or 41%) through stages 1, 2, 8 and 9, which is contrary to Section A5 and promotes an inappropriate structural system. Various concerns with accuracy of structural systems, phasing, cut/fill and sediment and erosion control plans for bulk earthworks.
- Traffic – some concerns with the road hierarchy plan and other design details and requested the 'temporary' intersection with Fraser Drive be retained as a permanent secondary access point and consultation with waste contractor with respect to suitable access within internal road network.
- Voluntary Planning Agreement ('VPA') – no agreed VPA with respect to monetary contributions, land dedication, carrying out of works and infrastructure provision.
- Infrastructure – proposed water supply and sewerage servicing unacceptable and places considerable obligations and financial risks onto Council. A 0.8ML reservoir must be provided on the highest point on the site with relevant conditions.
- Lot layout – several awkward shaped and insufficient street frontage lots (Lots 703, 810, 811, 812, 827 & 828).
- Community title – concern with draft Community Management Statement and requirement for future owners to be aware of the title.
- Removal of dams and EEC – not supportive of removal of dams and patches of EEC to fulfil open space requirements and lack of adequate offsets provided.
- Electricity easement - recommended relocation of the easement out of the SEPP 14.
- Biting insect plan - Significant revision required to address monitoring and maintenance of stormwater treatment devices, conditions recommended.
- Impact on SEPP 14 wetland – further details of the likely impact on the Freshwater Wetland EEC and SEPP 14 Wetland as a result of the proposed point discharge.
- Vegetation Management and Rehabilitation Plan ('VMRP') – revised VMRP to be provided or addressed in conditions;

- Open space – Reconfigure the proposed park on Lot 820 to improve its functionality, size, buffer areas, slope and potential view opportunities, and ensure compliance with the open space requirements of Section A5. Lot 610 should be a drainage reserve (not public open space), Lot 451 park should be integrated with the park on adjoining Council land and Lot 927 to be road reserve (not public open space);
- Contaminated land – a Site Audit Statement is required prior to any determination;
- Medium density Lot 701 – a road should form the edge to the public open space; and
- Housing mix – additional opportunities for multi-dwelling housing through minor amendments to lot sizes throughout various stages should be undertaken.

Recommended approval conditions were provided which addressed the above matters, with numerous issues to be addressed by deferred commencement.

The Council was referred the PPR Addendum, and generally supported the revised proposal subject to recommended conditions, with the following comments received:-

- Road hierarchy now consistent with Council's controls and the Fraser Drive connection (Road 1) has now been made a permanent public road;
- Retaining Wall Layout Plan is still inconsistent with Council's controls (Section B24);
- Earthworks Phasing Plan still does not incorporate Stage 5 earthworks into Phase 1 earthworks which are required to allow the required road connections between Market Parade (condition recommended);
- The Draft VPA is satisfactory and a commitment to enter into the VPA provided;
- Potential impact on hydrology of SEPP14 wetland and freshwater wetland adequately addressed (conditions recommended);
- Amended Landscape Masterplan satisfactory (conditions recommended);
- Water & Sewer Infrastructure - Lot 501 has been created for locating a water supply reservoir, however Council requires the Revised SOCs (Section 27) to be revised to include additional commitments with respect to adequate reservoir storage and site dimensions prior to granting approval. This has been addressed through the conditions of approval;
- Contaminated Land – considered further assessment was required, however, could be addressed in deferred commencement;
- Traffic Noise restriction on title needs to be amended (recommended conditions);
- Open Space provision is now adequate subject to recommended conditions;
- Revised Lot Configurations are satisfactory;
- Development contributions – relevant recommended conditions are to be imposed;
- Electricity Easement extinguishment in favour of location along Broadwater Parkway is supported in recommended conditions; and
- Vegetation Management & Rehabilitation and Biting Insect Management Plans were not revised as requested, conditions recommended.

Council considers the following issues are still unresolved:

- Removal of dams and associated native vegetation (including Lowland Rainforest Endangered Ecological Community) is still proposed within proposed Lot 610 Drainage Reserve and Lot 451 Public Reserve which is not supported.
- Lack of cross sections for medium density lots, on steep land.

These issues are further discussed in **Section 5** of this report.

Office of Environment and Heritage ('OEH') was generally supportive of the project but raised concerns in relation to impacts on and clearing of EECs, domestic pets, stormwater discharges to the adjoining SEPP 14 wetland, lack of a 50m vegetated buffer to the SEPP 14 wetland, the Broadwater Parkway (BWP) alignment through 7(a) land impacting on wetland areas and potential to affect water dependent communities. Heritage and archaeology were considered adequately addressed. OEH provided recommended conditions to be imposed, including a prohibition on cats on the site via a covenant to protect endemic native species and associated habitat.

OEH noted the revised proposal significantly increased buffering of the SEPP 14 wetland, and a conservation area was now proposed north of BWP, and supports the proposed location and amount of EEC offset in the conservation area. OEH was unclear of the impacts of the proposed detention bund within the EEC. These issues are further discussed in **Section 5.6** of the report and are adequately addressed in the recommended conditions.

Rural Fire Service ('RFS') was initially concerned with the proposed APZs for Lots 1001 - 1020 which were insufficient since the adjoining vegetation to west was incorrectly classified as Grassland/Grassy Woodland, when it is woodland vegetation. Vegetation classification and state of management for the adjoining property to the west also required further consideration. The revised proposal includes a road along this boundary and revised APZs for this western boundary (largely in road reserve), which resolve the concerns of the RFS. Subject to the recommended conditions of approval, there are no unresolved issues from the RFS.

Roads and Maritime Service ('RMS') generally supports the project, although was initially concerned that the temporary access to Fraser Drive for Stages 1-5 would impact on existing driveways accessing Fraser Drive, and that roundabout control of this temporary access should be considered for the initial stages. Car parking for the proposed Community Facility was inconsistent with the DCP. The RMS reviewed the revised project in the PPR and raised no concerns with the access point to Fraser Drive, concurred with the Transport report and was satisfied that the car parking for the community facility now complies with the DCP. It is considered that the internal road system complies with the Council's requirements subject to a condition being imposed to ensure a medium rigid vehicle can access all streets. Subject to relevant recommended conditions, there are no unresolved issues.

NSW Primary Industries - NSW Office of Water ('NOW') was generally supportive of the proposal, although concerns were raised with the preliminary nature of the acid sulphate soils (ASS) and groundwater assessments and the proposal to use existing drains through the SEPP 14 wetland for stormwater discharge. Recommended conditions requiring more detailed groundwater and ASS assessments and potential need for licences were provided. NOW reviewed the PPR, raising no issues and noted all of the NOWs recommended conditions have been incorporated into the revised SOCs. There are no unresolved issues.

NSW Primary Industries (Fisheries) raised objection to the original proposal as a result of the location of infrastructure within the buffer to the SEPP 14 wetland, the proximity of stormwater management features to the SEPP 14 wetland and the lack of any specific actions to maintain or mitigate changes to wetland hydrology due to stormwater management.

Fisheries considered the revised project and stated that while it was acknowledged that some of the stormwater management infrastructure had been relocated away from the habitat buffer (between BWP and the SEPP 14 wetland), the bund remains in this buffer area and should be removed. Further, there was concern with the use of former agricultural drains through the SEPP 14 wetland being used as the discharge point since it is unclear if these drains will require further maintenance to perform this task. This is undesirable in a SEPP 14 wetland. These issues are considered in the department's assessment in **Section 5**.

Land & Property Management Authority (now a division of the Department of Finance and Services) was generally supportive of the proposal, although the EA was unclear if any contributions to mitigate off site cumulative impacts were proposed or whether practical avenues were available to effectively contribute to off-site regional open space outcomes. The revised project does not provide access to crown land and public open space within the site is sufficient and is to be dedicated to the Council. There are no unresolved issues.

NSW Transport (now Transport for NSW) supported the original project, however, requested a shared mid-block access point for pedestrians & cyclists to Fraser Drive and a Transport Access Guide be provided for residents. These issues were resolved in the PPR and the Transport

Access Guide forms a commitment in the SOCs, which have been adopted. There are no unresolved issues.

Department of Education & Communities supported the original project and stated that a contribution towards the cost of providing primary education infrastructure would be of assistance. The DEC was referred the PPR for comment and stated that land for a new school site was not required but requested a voluntary planning agreement be developed seeking a special education contribution towards the construction of new education facilities. Subsequent correspondence from the DEC indicated that it did not expect that a VPA for the minor contribution would be a viable option and understood it would be unreasonable to seek a VPA. A VPA is not sought for this small contribution. There are no unresolved issues.

4.3 Public Submissions

The Department received 48 public submissions, including three submissions from special interest groups during the exhibition period of the EA. These special interest groups included Tweed Heads Environment Group Inc, Friends of Terranora and Banora Point & District Residents Association Inc. Of the 48 public submissions, 35 (72.9%) objected to the project, 10 (20.8%) supported the project and 3 (6.3%) did not object but raised concerns. The key issues raised in public submissions are listed in **Table 4**

Table 4: Summary of Issues Raised in Public Submissions to the EA

Ref.	Issue	%#	Refer*
A	Adverse traffic impacts along Parkes Lane and Market Parade, all access should be from the proposed Broadwater Parkway.	39.6%	PPR Appendix15 Key issue 5.3
B	Density and lot sizes out of character with existing rural/residential neighbourhood, no integration with housing in Market Pde & Parkes Lane.	37.5%	PPR Appendix 12 & 21 Key issue 5.4
C	The alignment, construction, timing and funding of Broadwater Parkway is unknown, which is required for access.	37.5%	PPR Appendix15 Key issue 5.3
D	Extensive landform changes and cut/fill, huge retaining walls, significant earthworks required to achieve flat lots, walls will block views and disregard for Council policy.	27%	PPR Appendix11 Key issue 5.1
E	Acoustic wall along Fraser Drive will result in adverse visual impact, view loss, and will increase noise impacts.	20.8%	PPR Appendix 7 & 12 Key issue 5.4 & 5.9
F	The lack of an adopted DCP, needed to guide development for Area E, represents ad-hoc planning and is inconsistent with CI 53D of LEP	18.8%	PPR Appendix 1 Key issue 5.4

Proportion of submissions raising issue

* Reference to response to issue.

A full summary of the issues raised in the public submissions is provided at **Appendix C**.

4.4 Proponent's Response to Submissions and Preferred Project Report

The Proponent has provided a response to the issues raised in submissions, including a PPR (refer to **Appendix A**) dated 29 April 2013 and an addendum to the PPR dated 15 August 2013 and additional contamination information in October 2013. These responses were made publicly available on the Department's website.

5. ASSESSMENT

The Department considers the key environmental assessment issues for the project to be:

- Land forming and Earthworks;
- Infrastructure and Water Cycle Management;
- Traffic and Access;
- General Subdivision Layout, Housing Typologies, Structure Plan, Density and Built Form;
- Open Space, the Public Domain and Visual Amenity;
- Ecological Issues and the SEPP 14 Wetland;
- Voluntary Planning Agreement ('VPA'); and
- Land Contamination.

5.1 Landforming and Earthworks

Council's bulk earthworks and landforming controls, and good subdivision practice aims to ensure subdivision design maintains and respects the natural landforms of the site and visual character of the undulating landscape by reducing bulk earthworks and site benching. The Coastal Design Guidelines of NSW (2003) also emphasise the need to respect the existing character of the area when designing subdivisions. Development should be built to the sloping site conditions rather than reconfiguring the sloping site to accommodate buildings or works, earthworks are to be minimised and undertaken within the building footprint rather than at property boundaries, and the natural topographic features are to be maintained. Council's controls do not permit batters and retaining walls for the purpose of creating terraced lots. Council's policies arise from previous experience with subdivisions on sloping sites in the Tweed and the resultant dominance of tall retaining walls, which have led to poor amenity and visual outcomes. There are four key components to this issue, including:

- Earthworks and cut/fill;
- Terracing and retaining walls;
- Structural systems; and
- Perimeter walls.

The department has undertaken an assessment of each issue to ensure the final subdivision layout results in an appropriate design sympathetic to the existing landform and sloping site conditions.

Earthworks and Cut/Fill

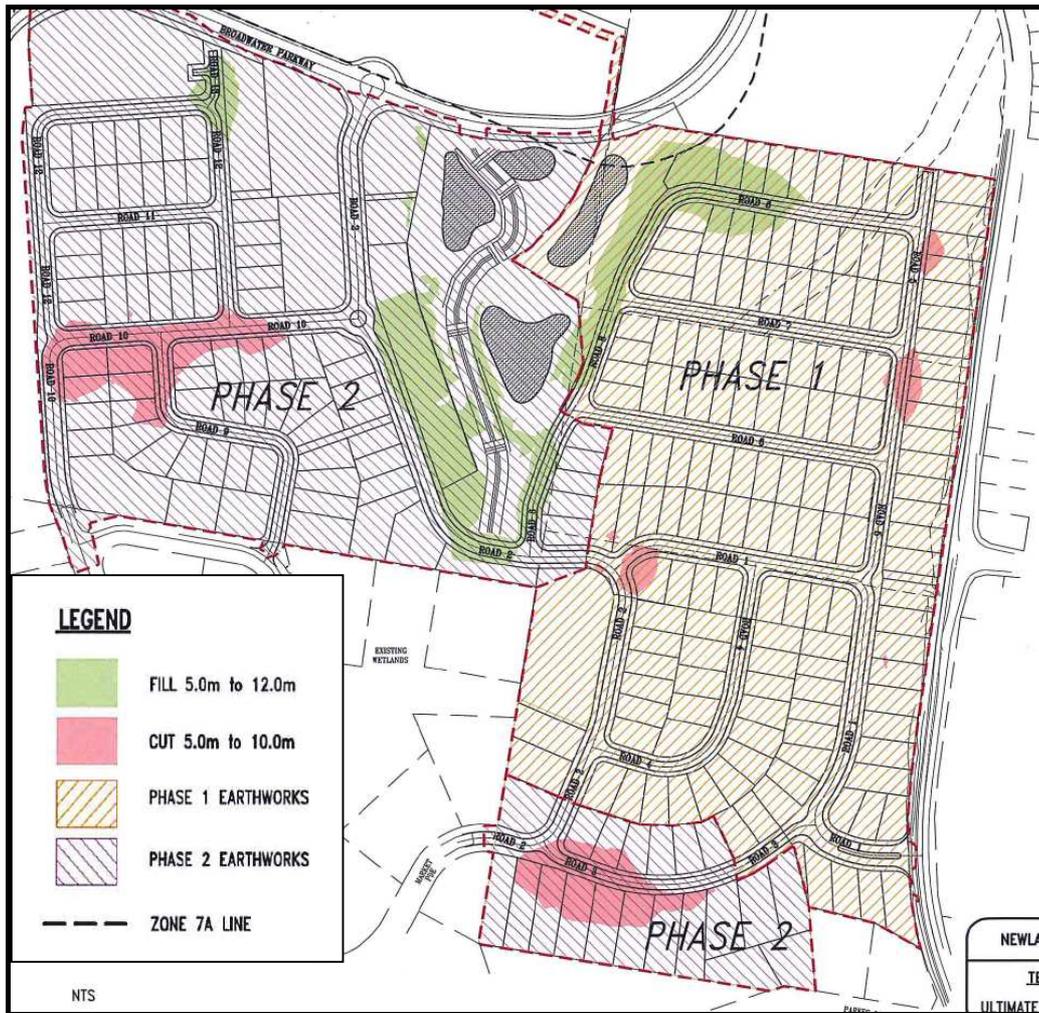
Cut or fill areas with finished surface levels that depart from natural surface levels by more than 5 metres are not permitted to exceed 10% of the site area (Tweed DCP 2008 - Section B24). The original project proposed 17.8% of the site propping earthworks more than 5 metres above natural ground level, while the revised project proposes 9.86% of the site area, consistent with the controls (illustrated in **Figure 11**).

The revised proposal involves significantly less bulk earthworks than the original proposal, which proposed a total cut volume of 521,800m³ and a fill volume of 496,100m³ over three phases. By comparison, the revised proposal involves a total cut volume of 408,600m³ (113,200m³ less than original project) and a total fill volume of 355,100m³ (141,000m³ less than original project) over two phases. The revised proposal now involves generally balanced earthworks on the site as there is no material proposed to be removed from the site, with 22,700m³ and 30,800m³ being the differences between the cut and fill volumes for Phases 1 and 2 respectively. While these are only approximate quantities, it is considered that in general this represents a balanced approach to earthworks and there should be no exporting of material from the site.

The original earthworks phasing plan indicated the major trunk drainage system within the central drainage area would be constructed (or at least partially) in Phase 3. The central drainage works are fundamental to the water quality and quantity controls for the site. The revised project now

involves two earthworks phases, with Phase 1 incorporating the construction of bioretention basin B for stormwater quality treatment of early civil works construction and the bund along the northern boundary to facilitate stormwater detention. The earthworks outlined in Phase 1 include works within C4 and C5 catchments (including the Fraser Drive access point). The majority of these areas drain to bioretention Basin B, although some drain to basin A, which is not proposed to be constructed until Phase 2 earthworks. This may result in some areas of Stage 4 draining to the central drainage channel without the construction of Basin A, however, this area is proposed to be a park and other areas of Stage 4 can be diverted to basin A during construction.

Figure 11: Earthworks Phasing Plan
 (Source: Appendix C of the PPR Addendum)



In general, the revised project provides a more site-responsive subdivision, generally designing to the sloping site rather than modifying the slope and benching for terraced lots, which previously represented the majority of lots in the original project. The peppering of lot/housing types throughout the site, reflective of site conditions, results in an improved urban design outcome for the site and results in greater compliance with Council's controls. The natural contours of the site are generally maintained, with the major earthworks now confined to filling the lower portions of the site within the central drainage channel and cutting some of the upper portions of the site. Some alterations to the natural contours are still proposed around Stages 1 and 2 for terraced lots which result in the need for retaining walls (discussed below).

Terracing and Retaining Walls

Council's controls permit inter-allotment walls and perimeter retaining walls to a maximum combined height of 1.2 metres, however, the walls are not permitted for the purpose of creating terraced lots ((Cl 2.5(2) of B24). The original project proposed numerous side inter-allotment

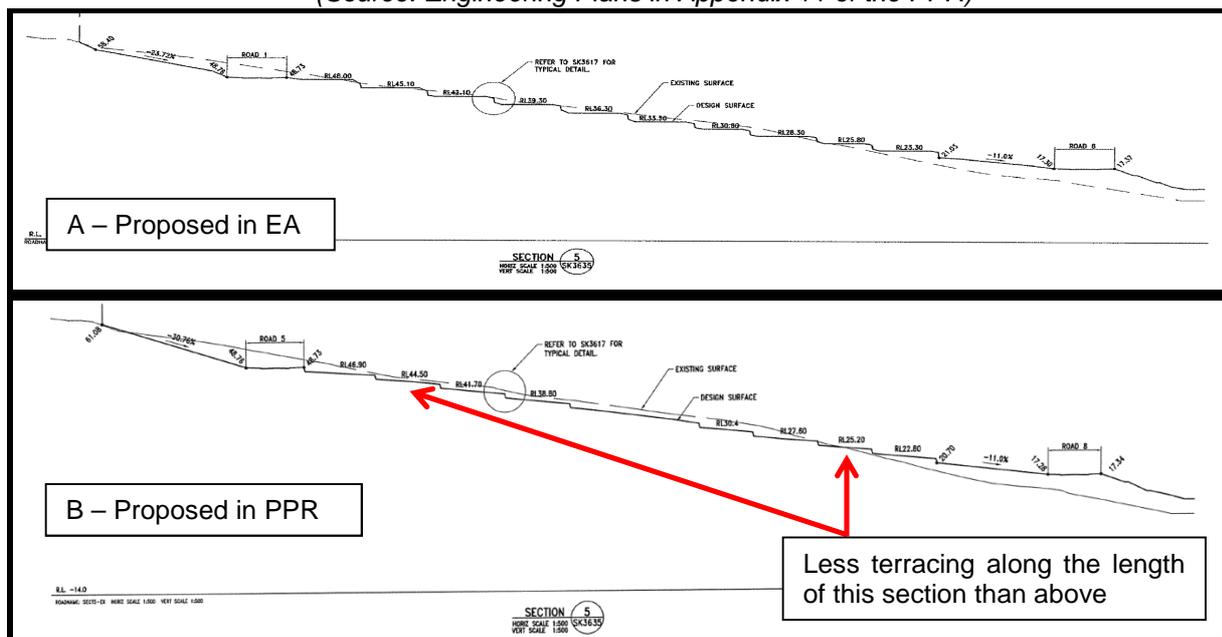
walls and batters with the resulting level difference between building pads being 2.5 to 3 metres which were intended to create terraced lots for 'slab-on-ground' construction. This extensive terracing of lots and the construction of retaining walls (greater than 1.2m) in the original project was proposed for the vast majority of lots. This landforming approach was contrary to the controls, was not supported by the Council and would lead to an unacceptable outcome.

The revised project significantly reduces the number of retaining walls, to a maximum height of 1.2 metres, and significantly reduces the terracing of the site to create flat lots as illustrated in **Figure 12**. There is still, however, some terracing of lots proposed. While the PPR indicates that the finished landform mimics the existing topography and there are no sharp changes of gradients, there are still some 54 lots which require 1.2m maximum height retaining walls in Stages 1, 2, 3, 4 and 6 for which terraced lots are created.

These terraced lots include 18 lots in Stage 1 (Lots 101, 102, 104 – 107, 109 - 116, and 118 - 121), 17 lots in Stage 2 (Lots 206 - 209, 211 – 215, 220 – 224 and 226 - 228), 8 lots in Stage 3 (Lots 305 – 307 and Lots 309 – 313), 9 lots in Stage 4 (Lots 440, 441, 442, 444, 445, 446, and 448 - 450) and 2 lots in Stage 6 (Lots 601 and 607). The concern with allowing such terracing and the construction of the retaining walls on these lots is that the subsequent lots will still have a side slope and there is potential for additional/secondary cut/fill and retaining walls for future dwellings on these lots under Section A1 (1.2m) and/or the Housing Code (600mm). There would be no merit assessment of the cumulative impacts of the terraced lots and retaining walls (maybe up to 3 per allotment) of up to 3 metres high may result on these lots.

Figure 12: Earthworks Changes to reduce Terracing in the Revised Proposal

(Source: Engineering Plans in Appendix 11 of the PPR)



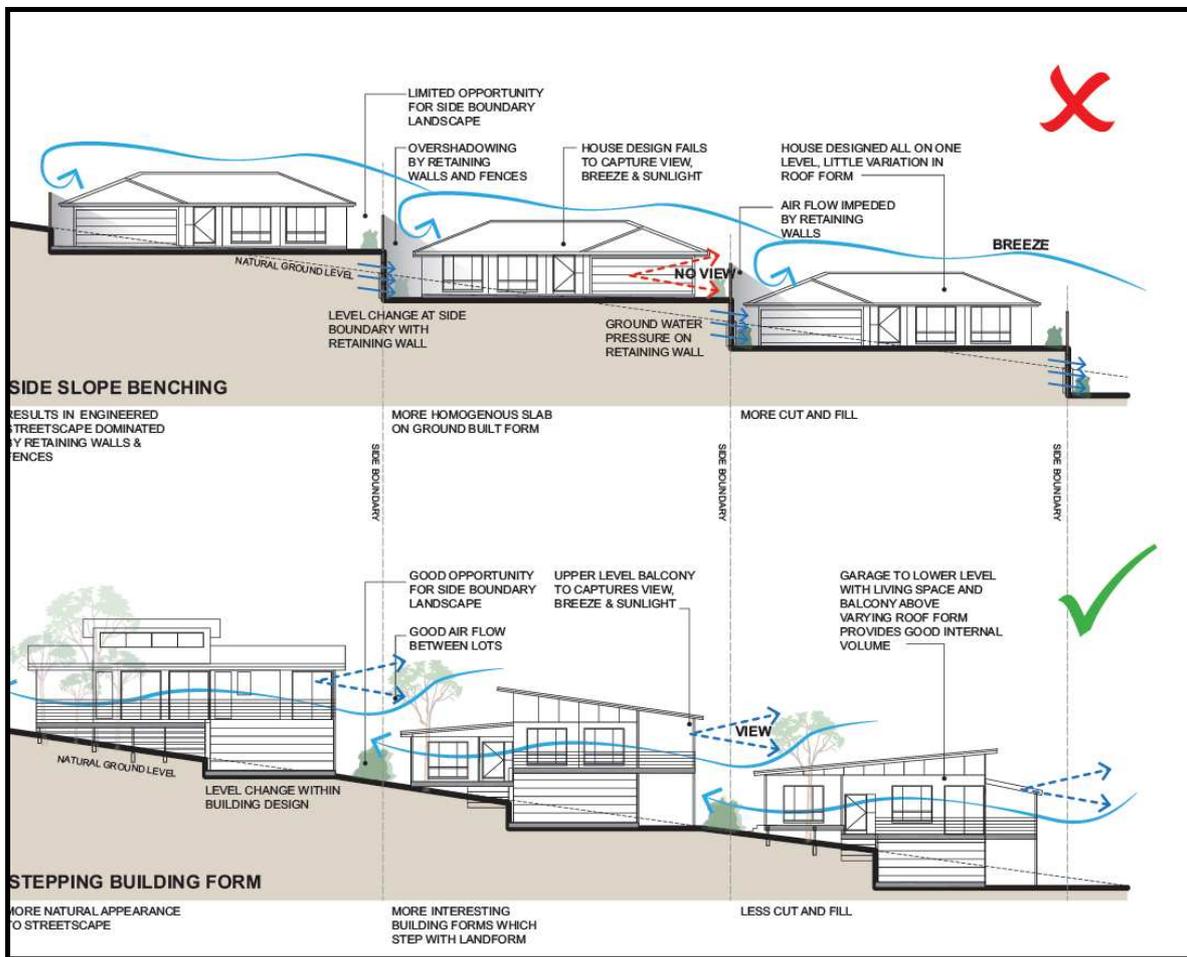
Council concurs with these concerns, stating that it would not approve such retaining walls. Despite continued requests from Council and the department to remove them, the Proponent has consistently sought to keep these retaining walls on the basis that they are needed for the viability of the project and to provide lots for slab-on-ground construction.

The Council maintains its opposition to these retaining walls following the PPR Addendum (which proposed no changes to the retaining walls), although the Council acknowledged that there had been some improvements to obtain a variety of sloping site conditions for future houses which was encouraged to meet the future desired character of the subdivision. It was further noted by the Council that the indicative display village now incorporated a variety of lots with a variety of slopes which is also encouraged.

The Council reiterated that the proposed retaining walls to create terrace lots should not be approved. Council recommended a condition should be imposed which creates a Restriction on Title to ensure future purchasers are aware of the type of home that should be constructed on certain blocks with respect to the structural systems plan (discussed below).

It is considered that the retaining walls in Stages 1, 2, 3, 4 and 6 as shown on the Retaining Wall Plan (SK 3617 Revision E) cannot be supported since they are proposed for the purpose of creating terraced lots contrary to the DCP, and will result in poor urban design outcomes for future housing including limited solar access, views and natural ventilation as outlined in **Figure 13**. This illustration shows the stepping building form which the DCP encourages, which represents the majority of lots in the revised proposal, and the side slope benching which is not acceptable, which represented the vast majority of lots in the original proposal. The retaining walls proposed in Stages 1, 2, 3, 4 and 6 are likely to result in these negative urban design outcomes and are therefore not supported. The remainder of the site retains the general contours of the site without terracing or need for retaining walls.

Figure 13: Subdivision design for sloping sites (rather than benching for flat lots)
 (Source: Figure 2.7 of Section B24 DCP)



Accordingly, the retaining walls on these lots are not supported and it is recommended that the retaining walls not form part of any approved plans for the project. There are no design changes required in this part of the subdivision, except that these lots will require a different structural system for future housing than the currently proposed single slab on ground and stepped slab on ground (as appropriate to each lot). Future retaining walls may be approved in future (separate) applications for dwelling houses and/or under the Housing Code with the restriction on retaining walls in this project ensuring the overall height of permissible walls in the future is lowered. No retaining walls that create terraced lots in Stages 1, 2, 3, 4 and 6 will be approved in this project.

There is also some terracing of lots proposed in Stages 8 and 9 on the western side of the site, for which retaining walls are proposed to be constructed. While this is contrary to the provisions of Section A5, a concession for 'slab-on-ground' construction within this area is considered warranted since this is the flatter part of the site. Small inter-allotment walls at this location have less impact since flat lots would be created with no side slope and therefore there would be no reason for further retaining walls to be provided. This would allow for some slab-on-ground construction to occur on the site with minimal amenity impacts for future housing.

The department considers that the Proponent's concerns regarding the need to keep the retaining walls to maintain the viability of the project are not justified. Tweed DCP 2008 (Council's consolidated DCP) came into force in 2008, prior to the project being lodged and declared a Part 3A project in September 2009. Tweed DCP 2008 comprises three sections which are specifically relevant to the issue surrounding cut and fill at Area E:

- Section A1 applies to dwellings post-subdivision and between 2008 and October 2012, the DCP had cut and fill controls which stated "*the retention of the existing topography means that buildings in the streetscape retain a consistent relationship to the natural topography*" with the primary objective "*to retain the existing landform*". This section of the DCP underwent an overhaul in October 2012 where the cut and fill controls were specifically strengthened and adopted on 18 April 2013 to read as they read today.
- Section A5 applies to the subdivision of land and has accompanying Design Specifications (D6 Site Regrading). This section of the DCP has not changed since November 2008. Section A5.4.6 – Landforming specifically states "*Natural topography is an important characteristic of an area. The extent of landform change to render a site suitable for subdivision should be kept to a minimum. Site regrading should be sensitive to existing landforms and topography (of both the subdivision site and neighbouring areas) so that the natural setting may be preserved to the greatest extent possible. The subdivision should be designed to fit the topography rather than altering the topography to fit the subdivision.*" One of the key site regrading acceptance criteria specifically states "The use of high earthworks batters and retaining walls to achieve flat building platforms should be avoided".
- Section B24 – Area E is a site specific DCP formed to set the criteria for the site it was considered by Council on 13 December 2011. As can be seen from the above, this section did not present any new subdivision design or landforming controls, but reinforced the importance of the natural topography at Area E.

Based on the above, it is clear that the controls for subdivision design and landforming on the site were available to the Proponent prior to lodgement of the application. As such, any feasibility studies for development of the site should have taken these controls into account.

Structural Systems

A Structural System Plan, illustrated in **Figure 14**, has been provided which outlines the dwelling type and appropriate structural system/s nominated to each lot, demonstrating the nexus between slope, allotment size and appropriate dwelling type. This is a fundamental issue for this project given the vision for the area involves an emphasis on working with the landform, thereby accommodating appropriate building types on appropriate parts of the site to reduce bulk earth works. The original project proposed extensive earthworks and inter-lot retaining walls to create terraced lots to produce a significantly higher proportion of the site for 'slab-on-ground' housing construction, which was clearly inconsistent with the planning controls.

Figure 14: Structural System Plan

(Source: Local Office Architecture Plan SK0002 Issue D, Annexure H of PPR Addendum)



The revised project provides for 28 lots designed for single slab-on-ground (11%) and 56 lots designed for stepped slab-on-ground with a minimum 500mm step in slab (22%). While both of these lot types will require some earthworks, there is a significant reduction from that proposed in the original project. This structural system is restricted by the Retaining Wall plan not forming part of this approval. The majority of the site will comprise 'stepped slab on ground' (37.7%), part slab, part platform (18%) and pole design/platform system or split level construction on various slopes. Pole construction will largely be confined to the very steeply sloping land along the Market Parade and Fraser Drive frontages. These proposed structural systems will allow future dwellings to take up the level change within the building footprint, due to the number of different structural systems being proposed. This represents a more appropriate response to the steep landform of the site and will reduce the extensive bulk earthworks originally proposed. The exception is those lots which rely on the retaining walls which will require a change to the proposed structural system for future housing.

Perimeter Walls

Pre development levels must be preserved at external (perimeter) boundaries of a subdivision, preferably without the use of boundary (or within 3m of the boundary) retaining walls exceeding 1.2 metres in height. The proposed earthworks have been designed to minimise disturbance to the existing surrounding lots given the 3 metre high perimeter retaining walls and batters along the Fraser Drive and southern site boundary adjoining Market Parade, have been removed. There are now no retaining walls proposed along the northern boundary to Lot 1 DP 798632 or to adjoining properties to Parkes Lane on the southern boundary of the site.

Proposed Road 10 is located along the western side boundary, adjoining Lot 1 DP 175234. The consent from this adjoining owner has been provided on the basis that the Proponent enters into an agreement with this adjoining owner with respect to finished road levels and lot heights, enabling either party to proceed with road construction and dedication of their portion, with such agreement to be finalised prior to any works commencing. This requirement forms a recommended condition.

Concluding Comments

Landforming and earthworks for the project have been substantially reduced from the original proposal, and now generally comply with the intent of the planning controls. Cut and fill areas with finished surface levels that depart from natural surface levels by more than 5 metres now represent less than 10% (9.86%) of the site area and generally a balanced earthworks approach to the site is now proposed with minimal material to be removed in accordance with the controls. The large batters and high perimeter retaining walls have been removed from the project, minimising disturbance to the surrounding lots and respecting the natural landform. The proposed structural systems plan is generally satisfactory, reflecting the more balanced earthworks approach, however, requires some amendments to remove the reliance on retaining walls to create terraced lots.

A major residual concern, however, are the proposed inter-allotment retaining walls to create terraced lots, particularly in the eastern portion of the site (as outlined above). These are proposed to create flatter lots in a generally sloping landscape. These inter-allotment retaining walls will result in significant level changes between lots with resulting amenity impacts, are contrary to the planning controls and do not respect the natural landform. Both the department and the Council have continued to raise concerns with these walls and accordingly recommend such walls are excluded from this approval. Relevant conditions have been recommended which require the removal of these walls from the earthworks plans and the structural systems plan.

5.2 Infrastructure Provision and Water Cycle Management

Stormwater and Drainage

The site occupies the lower portion of the catchment and drains to a well-defined central drainage channel within the site that conveys discharge from the upstream catchment to the site's northern boundary and into Lot 227 to the north. Stormwater runoff and drainage must only be discharged from a subdivision at a 'lawful point of discharge' ('LPD') as outlined in Section A5 of the Tweed DCP 2008, or an easement must be obtained over the affected land.

This issue was raised in particular by an objector, the owner of Lot 227, who considers that consent to discharge water across this adjoining lot should be obtained prior to approval of the subdivision.

The revised project identifies that the site currently discharges onto Lot 227 to the north and Lot 1 to the east (refer **Figure 15**). The Council considers that the existing drain onto Lot 227 is relatively well defined, links to other drains on Lot 227, and is an existing drainage point established during prior agricultural uses.

Council's controls require that a LPD must be on or immediately adjacent to the site and may be either a natural watercourse or waterway to which the development site naturally drains or a LPD agreed to by Council (i.e. an existing constructed public drain). Essentially, an LPD needs to satisfy two criteria:

- that this drain is a watercourse or waterway to which the development site naturally drains; and,
- that in discharging to this watercourse, the project will not adversely impact on the capacity of the watercourse or the receiving land.

In relation to the first criterion, the Council is of the opinion that Lot 227 contains a watercourse. An extract from the relevant topographic map (provided by Council) does indicate a watercourse on Lot 227 (shown as a thin blue line on the map), illustrated in **Figure 15**. The NOW indicated that there was a constructed watercourse/drain observed along the boundary of Lot 227 and Lot 1, located a number of metres north of the tree line observable on aerial images of the site. The NOW also stated that there was no flow observed within this watercourse, that significant areas of standing water were observed on the southern side of this drain and it was apparent the constructed drains within Lot 227 have not been maintained and have ceased to function. The NOW was of the opinion that significant reforming of the drains may be required for them to operate effectively.

Further consideration of this issue found that NOW does not have a definition for the term 'watercourse', but rather relies on the ordinary dictionary definition as the *Water Management Act 2000* only defines a river. Various dictionary definitions of 'watercourse' include an artificial channel for flow of water and/or any flowing body of water.

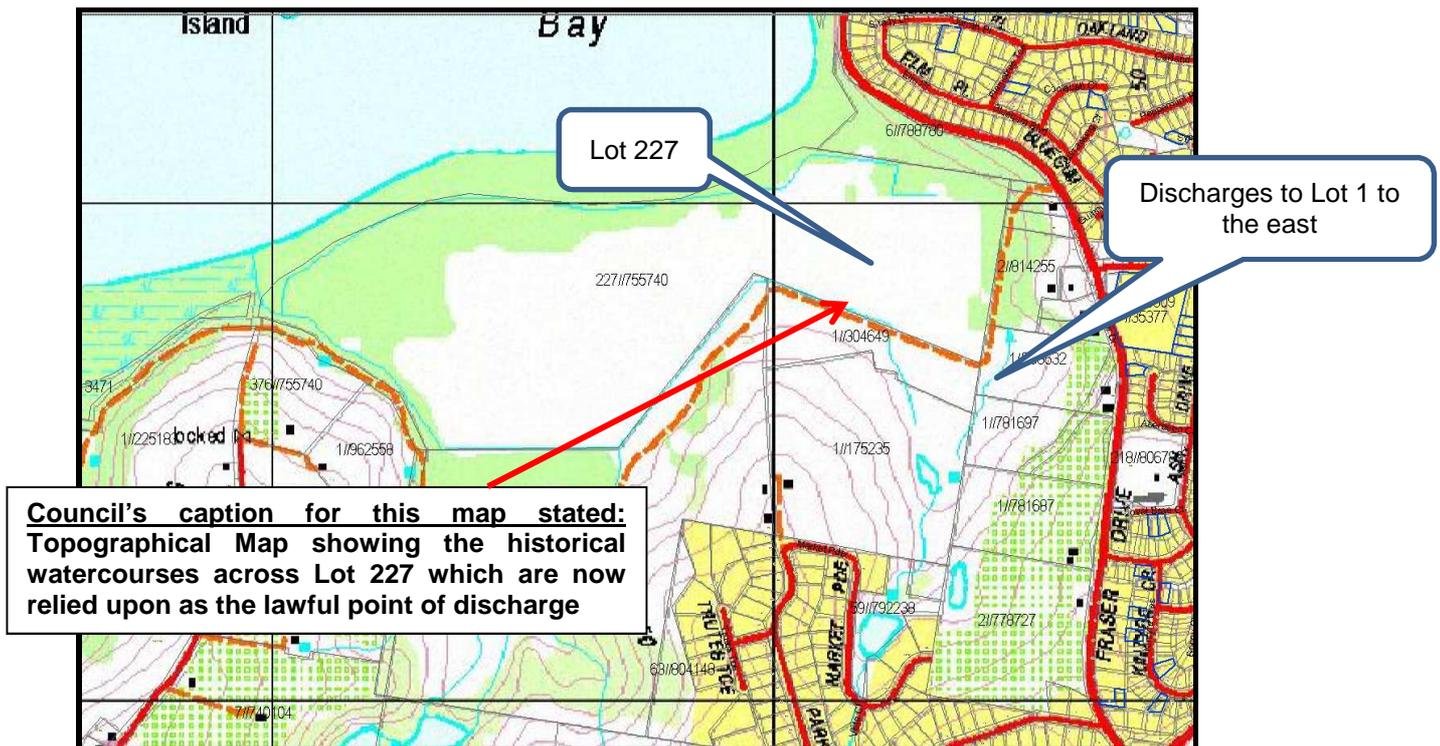
Having considered the advice from Council and NOW, it is concluded that the watercourse/drains on Lot 227 are sufficient to satisfy the definition of a watercourse, in that they are for the flow of water, albeit subject to modification. This is particularly relevant in the current instance given limited flows of water are envisaged to enter this watercourse as outlined below. It is further considered that these drains are likely to be adequate for this function given the limited water that is likely to flow through them from the revised project. If upgrade works to this drainage prove necessary, further environmental assessment and development consent will be required.

In relation to the second criterion, the provision of water quality and quantity controls proposed on the subject site will ensure that the project will not result in a significant increase in flows when comparing pre and post development flows onto Lot 227. The modelled peak flows at the LPD including with the proposed development indicate that the development would lead to an increase in peak discharge at the LPD. Therefore flow mitigation measures are required and have been subsequently incorporated. The revised project provides flow attenuation using an online end-of-line surface detention basin ('the bund') between the future BWP and the northern site boundary (discussed in Section 5.6 of this report). The bund overlaps a Freshwater Wetland EEC and therefore maintenance of the existing hydraulic regime within this area is a design objective.

For a range of stormwater events, the modelling provided demonstrates that there will be no worsening up to the 100 year ARI storm, with the exception of the 1 year ARI event, which shows a minor increase, which the Council considers is not significant. Therefore, the pre and post development flows to the LPD are considered to be the same.

After thoroughly considering the hydrological and stormwater reports and Council's engineering advice, it is considered that this 'drain' is a watercourse and there will be limited additional impacts to the downstream property in terms of water quality and quantity. A LPD onto Lot 227 has been established and therefore an easement is not required for the project.

With respect to flooding, the central drainage channel is appropriately sized to contain flood events up to the 100 year ARI and all residential lots are elevated above the design flood event of RL 2.9m AHD (including climate change level).

Figure 15: Topographic Map showing watercourse on Lot 227 supplied by Council

In relation to maintaining the hydrologic regime of the wetland and EECs, outlets from the detention area have been modelled at multiple locations along the bund, corresponding with depressions in the natural topography to ensure this regime is maintained. Although the peak flood levels during a local storm event will be increased when compared to existing conditions, the increase will be temporary and only for a short duration (approximately 9 hours) following each storm event. Furthermore, the peak flood levels within the bunded detention area are significantly lower than regional flood levels. The minor changes to the hydrologic regime during local events are within variance of hydrologic conditions currently experienced in the EEC.

Stormwater management measures are proposed within the central drainage corridor for treatment of site runoff and flow control purposes. Stormwater will be captured and re-used from roof areas in lot-based rainwater tanks (5kL size) and used for toilets, washing machines and irrigation. All stormwater from the urban areas will be captured and treated in the four (4) bioretention basins located in the central drainage channel (offline with respect to the external catchments), which will collect and treat the first flush of stormwater runoff (Q3 month storm) prior to discharge to the SEPP 14 wetland, north of BWP. These basins would generally be dry which will assist in minimising biting midges, however, during (and for a short period after) wet weather, the basins may contain water to a ponding depth of up to 200mm. The Council had concerns with some of the detailed aspects of the stormwater system, which are addressed in the recommended conditions. Relevant water quality objectives have been considered and incorporated into the proposed stormwater system. It is considered the stormwater management for the site is satisfactory subject to these recommended conditions.

Water and Sewer

The Council and the Proponent have been in protracted negotiations regarding the water supply and sewer servicing of the subject site. Initially, this infrastructure was to be included in the VPA, however, various options were explored before it was decided to remove it from the VPA and to provide recommended conditions. The original and revised proposals for this infrastructure were unacceptable to the Council and placed considerable obligations and financial risks onto Council.

The provision of a 0.8ML reservoir to be constructed on the highest point of the site (approx. 90m AHD) to provide the peak hour demand to the subject site was Council's recommended resolution to the water supply for the site. The PPR Addendum proposed Lot 501 as a proposed Water Reservoir site and a revised SOC which undertakes to prepare a comprehensive water and sewer strategy prior to the issue of the first subdivision Construction Certificate. While the Council supported this approach, the Council considered that further commitments were required to reflect the various requirements of this reservoir site, including the need for adequate reservoir storage and mains of adequate size to deliver the required flow of water at the peak hour rate as well as a booster pump for high level zones above 55m AHD, and adequate lot size for maintenance, servicing and access to the reservoir and any pipeline works. Conditions of approval have been recommended to incorporate the Council's requirements for the design of the water reservoir site.

In relation to sewer servicing, Council, following discussions with the Proponent has recommended conditions requiring the provision of a Regional Sewer Pump Station (No 3027) to accept flows from the remaining portions of Area E, Terranora Village and from the existing un-sewered areas of Parkes Lane and Market Parade. Various other conditions are recommended supporting this overall strategy.

It is considered that the proposed infrastructure servicing of the subject site is satisfactory subject to the recommended conditions.

5.3 Traffic and Access

The road hierarchy and layout (outlined in **Figure 16**), refined following agency comments, is clear and logical and supports the existing and future proposed surrounding road layout. The road layout generally provides for regular shaped lots with adequate road frontages. The orthogonal street pattern enhances through connections, legibility and provides only a single cul-de-sac. Council is satisfied that the road layout is consistent with the planning controls.

Broadwater Parkway ('BWP') is the primary road for Area E, linking Mahers Lane in the west to Fraser Drive in the east. The revised project provides an alignment for BWP through the site in accordance with Section B24 outside the 7(a) zoned land, providing a public interface to the environmental protection land to the north, and forming the primary public transport route for Area E. The VPA provides for the dedication of this land to the Council for the full extent of the BWP road reserve through the site as well as monetary contributions towards the costs of construction (on a per lot basis). Funding and timing of construction of BWP is dependent on other S94 contributions and therefore Council does not expect this road to be constructed in the short to medium term. There is no construction of this road proposed under this project, consistent with Council's advice.

A connection to Fraser Drive (Road 1) is proposed as a Neighbourhood Connector along the eastern boundary of the site, which was originally proposed as a temporary access point until the BWP was constructed. Following further consideration of this issue, the Council requested that this access point be provided as a permanent secondary access point to provide for a more even distribution of traffic throughout the surrounding road network. The PPR Addendum is now consistent with this advice and Stage 11 has now been deleted.

Figure 16: Road Hierarchy Plan

(Source: Drawing SK3628 Rev D, Bradlees Civil Consulting, Appendix 11 of PPR)



Road 1 provides access for Stages 1 to 4 of the project and is of sufficient width for a bus route (9 metre carriageway) and provides priority for traffic over Road 3, Road 5 and other connecting roads. The Fraser Drive access intersection is a priority 'T' intersection with acceleration and turning lanes with line marking used to delineate allowable traffic movements in accordance with the Revised Transport Assessment. Roundabout control was also considered, however, was not deemed feasible due to resumption of land from existing properties on the east of Fraser Drive being required. Detailed design of the connection point to Fraser Drive via Road 1 will need to have regard so as not to block access to No 26 Fraser Drive, located opposite this proposed entry point. A condition is recommended to address this issue.

In general the internal road network has been designed in accordance with the structure plan with the maximum road grade provided for access streets being 16%, neighbourhood connector roads being 12%, with the majority of road grades being 12% or less. The primary (or long) streets of the subdivision generally follow the contours (Roads 1, 2, 5, 8, 10 and 12) while the secondary (or short) streets are perpendicular to the contours in accordance with B24. The exceptions to these controls are Roads 6 and 7 in the eastern portion and Roads 11 and 12 in the western portion of the site. These roads were to follow the contours, to minimise cross contour road designs, however are now perpendicular to the contours. The proposed road alignments do allow a north-south aspect for the allotments and maximises the visual aspect of the allotments with views towards the Terranora Broadwater. The final road layout also facilitates stormwater runoff conveyance to the central drainage channel by providing constructed overland flow paths (road reserves) that do not intersect allotments and four (4) way intersections have been avoided.

The Council has agreed that the proposed road alignments in an east/west direction are appropriate for this project.

The alignment of Road 9 was significantly improved in the revised project due to its connection with Market Parade and the deletion of a cul-de-sac, as it initially resulted in several irregularly shaped lots (discussed in Section 5.4). This has now been addressed with more conventionally shaped lots.

Connectivity and Public Transport

Connectivity is achieved for pedestrians and cyclists throughout the site and to adjoining areas via a network of 1.2 metre wide footpaths within the road reserve of all access streets and neighbourhood connectors, and pathways through the public open space areas. Designated pathways between lots (Lots 707/812 & 706/813, Lots 128 & 129) also provide linkages to surrounding areas including future Area E to the west and Fraser Drive and beyond to the east. A proposed right of way for public access is now also proposed through Lot 713 (Community Facility) on the subdivision plan to ensure a through site connection is provided for the public (not just Community Association members).

Connections to all roads surrounding the site has been provided including Fraser Drive, Market Parade, Parkes Lane and the future planned BWP when constructed. Roads 10 and 12 are proposed straddling the western site boundary (Lot 1 DP 175234), allowing for future road connection to the remainder of Area E. The existing cul-de-sac configuration of Market Parade will connect to the project via a collector street (Road 2), which will continue to the future BWP. A connection to Parkes Lane will also be provided through Road 10 and maintain the Collector Road standard through to BWP.

The main collector roads within the project include Roads 1, 2 and 10 have been designed to accommodate a bus route, with bus shelters proposed in the Transport Report. Future extension of existing bus services has been investigated and a Transport Access Guide has been developed for future residents. Contrary to Council's requirements, Stage 5 of the project is still not proposed to be completed in the Phase 1 earthworks which will result in a gap in the bus route connections for the early stages of the subdivision (Market Pde extension missing). The road connection to Market Parade is considered important from a traffic perspective and is critical to introducing public transport to the initial stages of the development. Inclusion of Stage 5 into Phase 1 (at least the component that allows for construction of the road connection) is therefore required via a condition of approval as suggested by the Council, and which the department also considers necessary. This condition has been recommended accordingly.

A parking assessment of the proposed community facility demonstrates that sufficient vehicle and cycle parking is provided to cater for the facility in accordance with the DCP.

The traffic generated by the revised project will be readily absorbed into the surrounding road network with minimal impact, including connections to both Market Parade and Parkes Lane, which are not expected to exacerbate traffic volumes. There may be some additional traffic along Parkes Lane following completion of Stages 8 and 9, prior to the construction of BWP, as future residents may use Parkes Lane to access Fraser Drive in the absence of BWP. With the construction of BWP, however, there is likely to be less traffic on Market Parade and Parkes Lane given access to Fraser Drive would be through the site to BWP.

The RMS is satisfied that the revised project generally addresses the traffic and road safety impacts for the project. Some concern was raised with the use of a medium rigid vehicle (8.8 metre design vehicle) instead of a heavy rigid vehicle (12.6 metres) design, likely to be used for garbage collection and furniture deliveries. However, the department and Council are satisfied with this issue as the design is consistent with Council's road standards.

Subject to the recommended conditions, the department considers the proposal is satisfactory with respect to traffic and access.

5.4 General Subdivision Layout and Structure Plan

The Structure Plan for Area E (Section B24) provides for the general layout of the proposed subdivision and is illustrated in **Figure 7** in Section 2 of this report. The vision for Area E is for a subdivision design to include a range of lot sizes accommodating a range of building typologies, with an emphasis on working with the landform, thereby accommodating appropriate building types on appropriate parts of the site to reduce bulk earth works.

Lot Layout and Medium Density Lots

The lot layout generally results in satisfactory lot configurations and road frontages, given the revised lot layout in the PPR Addendum which reconfigured Lots 810, 827 and 828 as well as the park now at Lot 819 (refer to Section 5.5). Lot 811 does not comply with the minimum 9 metre road frontage and a 'Restriction on Use' is proposed for this lot requiring a visitor car park to be provided on the lot at dwelling stage. Council also considers that lot configurations are now satisfactory subject to the recommended condition for Lot 811.

The revised project largely complies with the density projection requirements for the site as outlined in **Table 5** below, with the number of transitional and large lot residential lots and the suburban lots generally complying with the projections. Importantly, all lots adjoining Market Parade and Parkes Lane, required to be large lots (i.e. >1200m²), are of sufficient size to allow the transition from the adjoining large lot residential along Market Parade and Parkes Lane to the smaller lots proposed within the site. There are some inconsistencies with the planned density targets which are predominantly in the lack of any neighbourhood housing lots and less medium density lots being provided.

Table 5: Residential Density

(Source: Table 2.1 – Residential Density Targets of Section B24)

Housing/lot type	DCP (includes land outside site)	land Provided
Transitional (>1200m ²) & Large Lot (>800m ²)	30 (transitional & large)	29
Suburban lots (450m ² -800m ²)	229	221
Medium density lots (medium density – 1 unit/333m ² of site area)	55 (small lot & medium density lots)	4 (1 unit/333m ² of site area = 53 dwellings)
Neighbourhood Planning Housing	32/10	Nil
Total lots	346	254 (residential lots)

These inconsistencies were justified due to topographical constraints and drainage corridor requirements, limiting the feasibility to develop neighbourhood housing in the north-western area of Stages 2 and 3 and any further medium density lots. While there are fewer medium density lots proposed than required, the overall density of the project adequately provides for a mix of residential lot sizes, which are appropriately located on the site, to allow for housing choice in the area. A peppering of housing types was considered necessary by the Council, which was addressed in the revised project. Dual occupancy lots are now shown on various appropriate lots throughout the site. The project is generally consistent with the overall planning intent for the area as outlined in the Structure Plan.

The location of medium density lots (Lots 701, 711, 925 and 926,) on land described as moderate to steeply sloping is not ideal. The location of these lots directly adjoining areas of public open space is also inconsistent with the controls which require a public road interface to public open space areas to reduce the 'privatising' of public land and the creation of the 'back fence' streetscape to the public open space. The site is relatively steep and there is minimal land that, without bulk earthworks, is flat, therefore the location of medium density development on this site is challenging. The location of the medium density lots at the entry point to the subdivision, close

to the public open space and the community facility and located along the collector roads has obvious connectivity, useability and public transport advantages.

The proposed internal layout of the medium density lots (outlined in Annexure 21) provides for private open space and internal driveways to generally border the public open space areas which will provide some separation between uses. The proposed fencing to these lots comprises a timber fence with aluminium infill's which reduces the potential impact of a back fence streetscape to the public open space areas, and provides a landscaped edge with low height, open form fencing allowing privacy for the residences as well as open vistas to and within the public open space areas. The revised proposal also includes a cycle /pedestrian along the boundary of Lot 701 to further minimise any adverse impacts between the private land and public open space areas (shown in Section 13 of the Landscape Master Plan). It is considered that the location of the medium density lots is satisfactory with the detailed design of the proposed medium density development to be subject to separate applications to the Council.

As required by Council, the previously proposed Lot 927 is now part of the road reserve as Section B24 requires this to be a landscaped buffer. Also, Lot 611 has been incorporated into Lot 610 and the larger lot now is to be dedicated as a drainage reserve.

Landscape Buffers and Solar Access

Five metre wide landscape buffers are provided along Fraser Drive and the proposed BWP. The original project included this landscape buffer to be dedicated to Council along the Fraser Drive boundary, however, Council was concerned that the land was very steep and difficult to maintain, and the area was not usable as a cycleway/walkway or casual open space. The relatively wide road reserve which currently exists in this location would be sufficient for a cycleway/walkway. The revised project now proposes a five metre wide 'Restriction on Use' to be imposed on all lots abutting Fraser Drive excluding any buildings within the rear five metres of the lots, ensuring this landscaped buffer is achieved along Fraser Drive. This is a recommended approval condition. A five metre wide landscaped buffer is proposed largely within public land adjoining BWP (along Lots 925, 926, 712, 610 and 611).

The Structure Plan provides for the orientation of lots to provide good solar outcomes to maximise energy efficiency, with housing lots with an east-west orientation providing a significant opportunity for a northerly aspect over the majority of lots to the rear, integrating with outdoor rooms to capture the elevated views afforded from the site. Since the project involves a modified road layout and orientation in Stages 1, 2, 3 and 9, the proposed lots within these stages are generally orientated north-south providing adequate opportunity to maximise solar access to future dwellings. The Proponent has demonstrated that such a road and lot layout still provides adequate solar outcomes to these proposed lots.

Community Title Subdivision and Community Facility

The subdivision is a community title subdivision, although all roads, footpaths and pathways and public open space areas will be dedicated to the Council for use by the general public. A single storey community facility building is proposed near the BWP entry in Stage 7, comprising a multi-purpose room, resident's lounge, gym, amenities, outdoor deck and terrace areas with BBQs, pool and spa and a tennis court. This facility is for the members of the community association only and will be controlled by the Owner's Corporation. The building comprises two pavilion-style forms and is to be constructed of recycled timber weatherboard panels of various sizes with splashes of colour and windows.

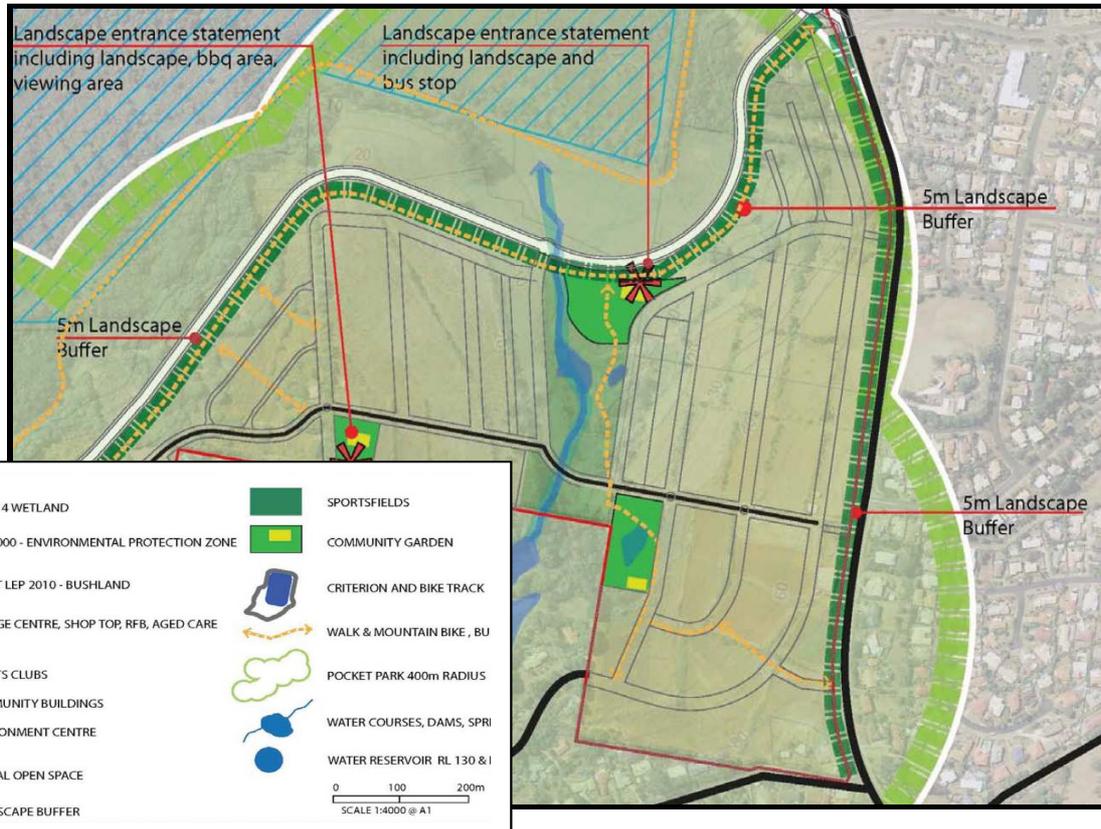
A draft Community Management Statement ('CMS') has been prepared for the community title subdivision, with several provisions relating to the site in general as well as the community facility. Recommended conditions of approval have been included to control the use of the community facility on Lot 713 and require the submission and approval of a final CMS prior to the issue of any subdivision certificate.

5.5 Open Space, Public Domain and Visual Impact

Open Space and Public Domain

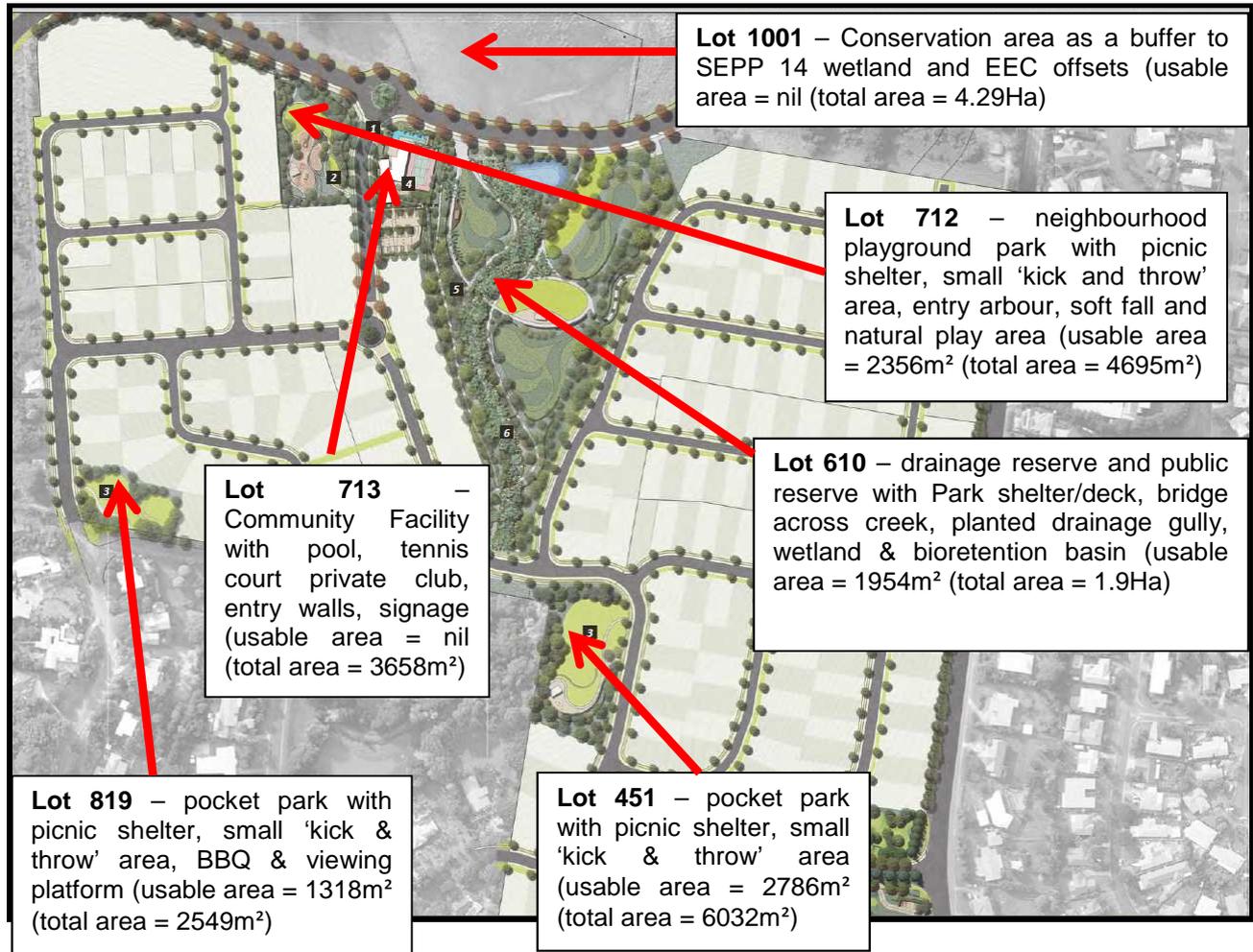
The revised proposal generally provides open space areas in accordance with the structure plan (refer **Figure 17**) and includes four (4) open space lots, being Lot 451, Lot 712, Lot 819 (formerly Lot 820) and Lot 1001 comprising the conservation area. A drainage reserve lot (Lot 610) is also proposed which has some ancillary functions as open space.

Figure 17: Open Space Requirements of Section B24 for the Site
(Source: Figure 2.10 of Section B24 DCP)



The Council was initially concerned that some of the open space areas were inconsistent with Section A5 (the intent was for entire parks to comply). It was considered that Lot 610 should be a drainage reserve and the park at Lot 820 resulted in awkward shaped lots surrounding this park. While the Council was satisfied with the park at Lot 712 and most of the Park on Lot 451, it was considered that a youth precinct could be incorporated into Lot 712 and Lot 451 could be linked with the park on the adjoining site. The Council considered that Lot 927 (landscaped buffer) should be a road reserve. The revised project addressed these concerns and now provides open space generally in accordance with the Structure Plan. The department has also recommended a condition of approval to require a youth precinct within Lot 712 in accordance with Council's requirements.

The project attempted to provide calculations of the 'usable areas' of casual open space under Council's controls in Section A5 in terms of slopes, size and layout of public open space. However, the Council has acknowledged that the areas do not necessarily comply with these controls but are satisfied that adequate casual open space has now been provided. The topography of the site and the residential yields expected have combined to provide the casual open space which is currently proposed. The proposed casual open space areas are therefore considered to be adequate to cater for the future population of approximately 692 people and will be suitably embellished as outlined in **Figure 18**.

Figure 18: Landscape Masterplan showing Open Space on the Site*(Source: Appendix D of the PPR Addendum)*

These open space areas will be dedicated to the Council and are adequate for the projected population on the site. Monetary contributions will be provided in the VPA for the structured public open space which cannot be provided on the site largely due to the slope of the land, which is satisfactory to Council and in accordance with the Structure Plan. Street tree planting has been provided for in the Landscape Masterplan and will be required to be undertaken for each stage of the subdivision. More detailed plans will be required as recommended in the conditions for the embellishments and landscaping of these areas. The proposed community facility is only for members of the community association and therefore has not been included in the open space calculations. The department has recommended relevant conditions in accordance with Council's advice.

Visual Amenity and View Loss

The most significant concerns with respect to visual amenity relate to the extent of earthworks on the visual qualities of the site, local area impacts of the project on scenic amenity and key landscape elements and impacts on views from key vantage points, particularly from Fraser Drive. The finished grades of the development now follow much closer to the existing grades. Only parts of the site will be modified for slab-on-ground construction, and areas of extensive earthworks (greater than 5 metres) will be limited. Earthworks will also be minimised around critical landscape elements and external property boundaries. The proposed earthworks are largely within the site, generally maintaining the regionally significant natural ridge elements of the landscape.

The more significant visual impact to the area will be minimised as the project is located below the main ridge lines (defined by Terranora Road and Fraser Drive) and below existing development, therefore not impacting on existing vegetation along the ridge. The project has a similar appearance to surrounding residential development in that it comprises detached residential houses on sloping ground and will not have a detrimental impact on the existing character of the area, with slab-on-ground construction proposed for only a small number of lots. The built form, when viewed from surrounding sites, will appear as a logical extension to the existing residential development to the east of the site. The revised project forms two clusters of lots that are separated by open space and interspersed by vegetation, thereby reinstating the “green fingers” of vegetation through the valley of the site. The large areas of open space proposed will maintain some of the existing landscape character of the site, with the retention of the central drainage gully providing connectivity to open space beyond the site. The large spaces between houses and street tree planting will also reduce the visual impact of the project.

A timber and wire mesh screen fence along the Fraser Drive boundary is proposed, which will allow for vegetation to grow over it, reducing the visual impact of the fence along Fraser Drive for residents and pedestrians. The fencing to the public open space areas where it adjoins residential (medium density) lots is to comprise an aluminium and timber fence such that open vistas can be obtained throughout the public open space areas. This will also reduce potential for ‘back fence’ streetscapes to the open space areas as well as provide privacy to the residential lots through landscaping.

The most significant views in the local area are from Fraser Drive across the site to the Broadwater and some views between houses on Parkes Lane. The Fraser Drive view is locally significant and will largely be retained over the proposed lots. The proposed acoustic wall adjoining the Fraser Drive boundary has been removed, reducing visual impact and view loss for residents and pedestrians along Fraser Drive. The fencing proposed along this boundary and the proposed restriction on building within the rear 5 metres of lots will reduce the visual impact of the project and maintain view lines to the Broadwater. Views from Parkes Lane will be obstructed by the proposed water reservoir on Lot 501 and future housing on Lot 502, which is not a locally significant view, and is envisaged by the planning controls. Future houses will be subject to the DCP controls. The department therefore considers that the visual impact of the project is acceptable and view loss will be minimised, with appropriate conditions of approval recommended.

5.6 Ecological Issues and SEPP 14 wetland

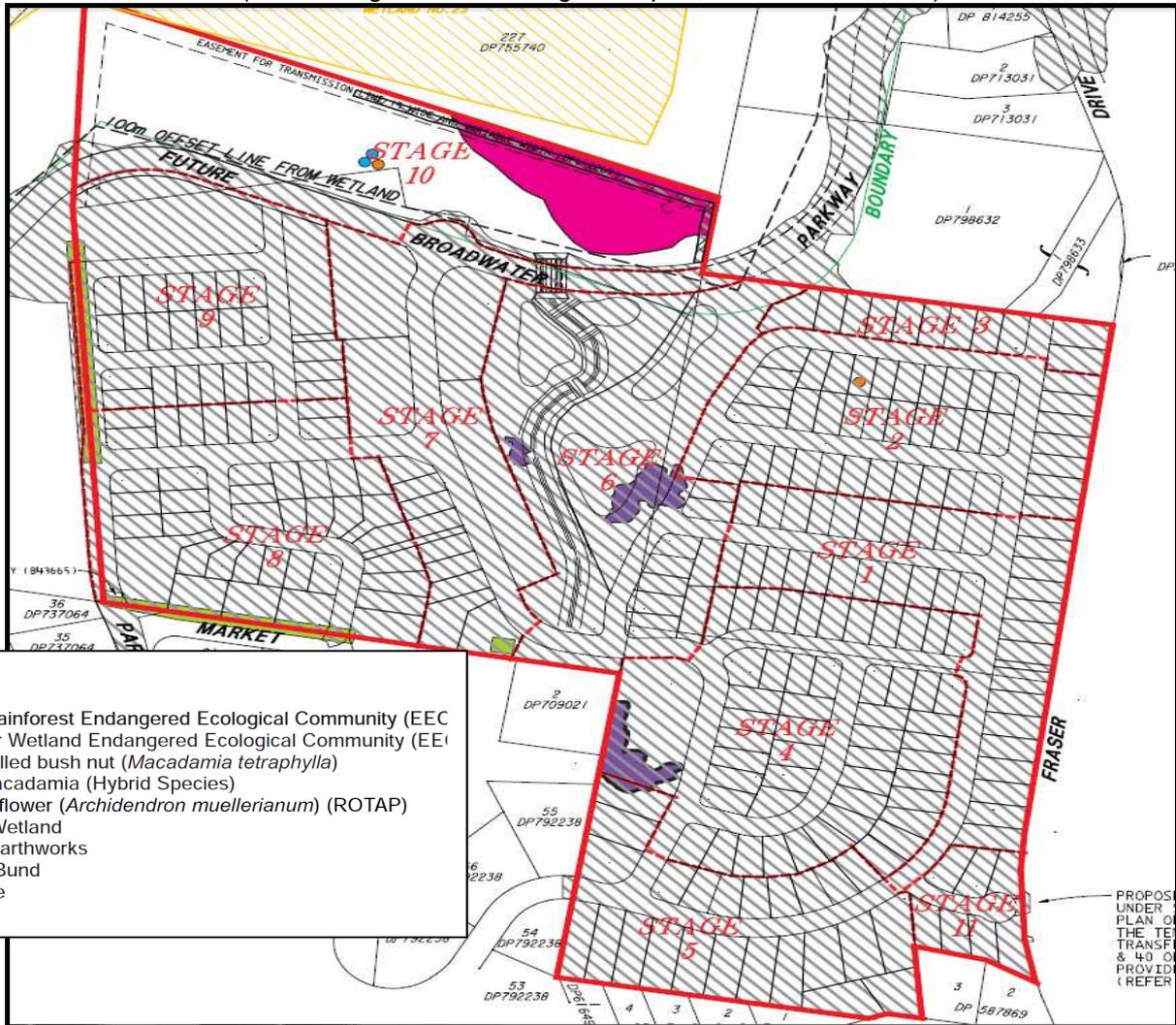
The majority of the site has been cleared of natural vegetation and largely comprises grazing land and abandoned cropland. Wetland No 23 listed under *State Environmental Planning Policy No 14 – Coastal Wetlands* (‘SEPP 14’) occurs adjacent to the northern boundary of the subject site. A 100 metre wide vegetated buffer, being the 7(a) zoned land, is provided to this wetland.

The site contains two Endangered Ecological Communities (‘EECs’) comprising the *Freshwater Wetlands on Coastal Floodplains of the NSW North Coast, Sydney Basin and South East Corner bioregions EEC* (‘Freshwater Wetland EEC’) and the *Lowland Rainforest in NSW North Coast and Sydney Basin Bioregion EEC* (‘Lowland Rainforest EEC’) (illustrated in **Figure 19**). Two stems of the Rough-shelled Bush Nut (*Macadamia tetraphylla*), a threatened species and Veiny Lace Flower (*Archidendron muellerianum*), a ROTAP (Rare or Threatened Australian Plants) species also occur on the site. The Rough-shelled Bush Nut will be retained and translocated to the conservation area while the Veiny Lace Flower is located within the proposed conservation area and will be retained.

In summary, the site consists of highly disturbed land with small patches of degraded native vegetation, including EECs. The revised project has generally been designed to utilise existing cleared and disturbed areas within the site, including a realignment of the future BWP within the 2(c) zoned land and outside the conservation area in the 7(a) land. However, there will be some

vegetation loss as a result of the project, mostly within the disturbed vegetation in the cleared areas of the site, and some loss of EECs as outlined below.

Figure 19: Significant Vegetation on the Site
 (Source: Figure 10 of Ecological Report, Annexure 9 of PPR)



Impacts on SEPP 14 wetland and Corridor Values

The stormwater from the project will be diverted to the central drainage channel, where water quality treatment will be undertaken in a series of bio-filtration basins (outlined in Section 5.2), while detention of stormwater in the bund will occur in the conservation area. This water quality treatment process will ensure only treated stormwater will be diverted to the SEPP 14 wetland for discharge to Terranora Broadwater. The proposed conservation area will provide a 100 metre buffer zone to the SEPP 14 wetland.

The proposed bund will result in this area being subjected to short periods (up to 3 hours based on hydrograph analysis) of increased depth of inundation. The potential impact of the bund on this EEC was further considered in the PPR Addendum with reference to previous studies. The ecological report concluded that the hydrological changes will not increase or decrease the total volume of water discharging to the wetland, but will change the timing of those waters by a matter of hours. The soil:plant:water relationship will remain within the natural bounds and will have no significant adverse ecological impacts on either the Freshwater Wetland EEC or on the adjacent SEPP 14 wetland. An existing electricity easement (to service the larger Area E) is also located in this buffer zone/conservation area. Potential future relocation may occur to align with the future BWP.

The site is located within the Tweed Regional Corridor to the north and the Terranora Sub-regional Corridor to the south. The conservation area, buffering the SEPP 14 Wetland, will be retained and revegetated to ensure the effectiveness of these corridors. The central drainage channel is identified as a wildlife corridor in the DCP and the riparian areas of the drainage line will be revegetated with aquatic habitat and a faunal underpass constructed to facilitate fauna movement under BWP. The proposed revegetation and regeneration works in accordance with the Landscape Plan within passive open space areas and the proposed EEC offsets within the conservation area will effectively link areas of native vegetation, thereby retaining the corridor values of the site.

The department considers that there will be minimal impacts to the SEPP 14 wetland as a result of the project, subject to the imposition of relevant conditions for the treatment of stormwater and rehabilitation works. The VPA provides for monetary contributions to be paid to Council towards wetland acquisition and rehabilitation costs. Furthermore, the corridor values of the site will be retained by the proposal as the central drainage area and the conservation area will remain as vegetative linkages to the corridors surrounding the site

Removal of Dams and EECs

There are several farm dams and degraded patches of EEC located throughout the site, largely within proposed Lot 451 and the proposed drainage reserve on Lot 610, which are proposed to be filled in and EEC removed under the proposal. The ecological value of these dams was considered to be low (demonstrated in further ecological advice provided), since there was no potential habitat for the Comb-crested Jacana (*Irediparra gallinacean*), a water bird, and the dams are weed infested. The Council, however, supported the retention of these dams and EEC patches given they were generally to be located within open space and drainage reserves and expressed concerns with the revised project that such removal was still proposed. Council did acknowledge, however, that the retention of the dams would limit compliance with the design in the Structure Plan under Section B24, having regard for the topography and stormwater management requirements.

OEH considers the offsets proposed (discussed below) to be satisfactory, provided the department is satisfied that the loss of these EECs is unavoidable in the context of stormwater management requirements, and the revised stormwater management system will achieve the stated water quality and quantity objectives. The department is satisfied that such losses are unavoidable if the Council's vision outlined in the Structure Plan in Section B24 is to be realised on the site and that future housing to be provided in accordance with the strategic plans. Given these constraints on the design and topography, the retention of these dams and EECs would significantly restrain compliance with the Structure Plan under Section B24.

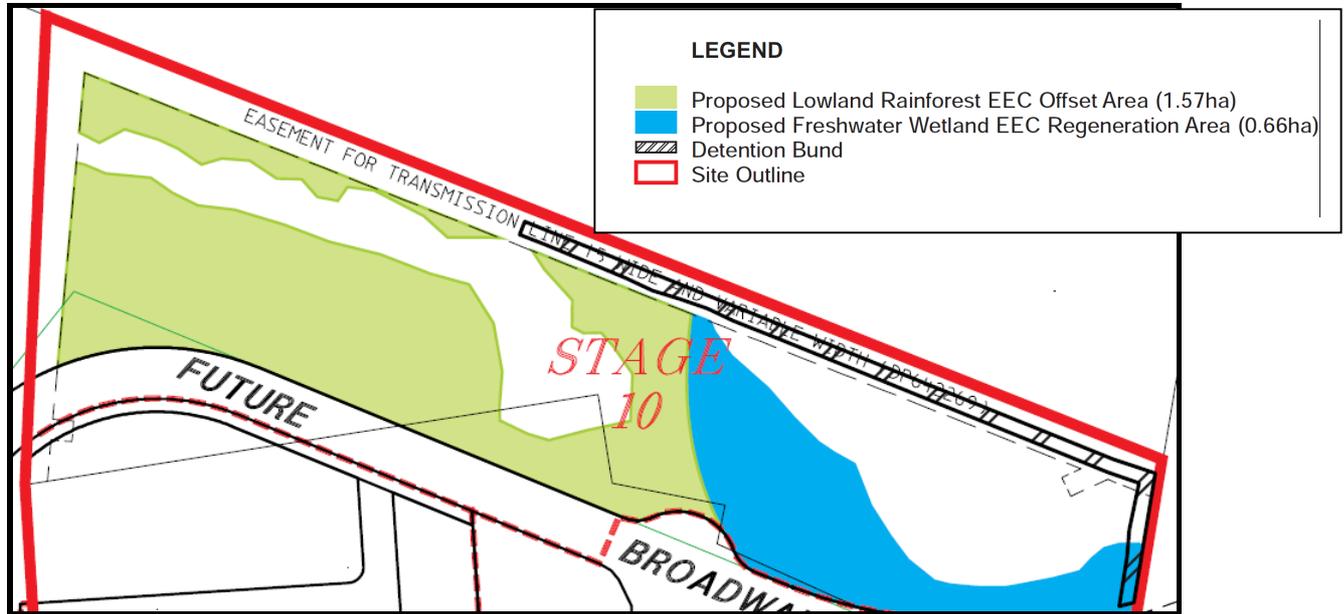
To mitigate for the loss of small isolated and degraded patches of EEC, the project involves the rehabilitation of the existing habitat areas and the creation of additional habitat within the proposed conservation area (**Figure 20**). In relation to the Freshwater Wetland EEC on the northern boundary, a small area of approximately 0.11 hectares will be removed for the proposed stormwater detention bund (discussed above). An offset of 0.66 hectares, a replacement ratio of 6:1, for this EEC is proposed within the conservation area, with a 12 metre wide vegetated buffer. The Council has accepted this small loss of Freshwater Wetland EEC on the basis that a condition is imposed restricting the loss of such EEC to 0.11Ha, which is contained in the recommended conditions.

There will also be an unavoidable loss of 0.36 hectares of the Lowland Rainforest EEC comprising all of the degraded patches of this EEC occurring within the central drainage channel and proposed public open space in Stage 4 (Lot 451) (purple patches in Figure 19). The offset for the removal of this EEC includes planting of 1.57 hectares within the conservation area, a replacement ratio of 4.4:1. A minimum buffer of 20 metres (includes BWP) is provided around the conservation area. OEH is satisfied with the proposed offset areas for EEC removal.

It is considered that the offsets proposed in the conservation area are satisfactory to compensate for the loss of the small and degraded patches of EEC throughout the proposed development footprint. Furthermore, the proposal would achieve conservation of important species as outlined in the VMRP (discussed below).

Figure 20: Proposed Offsets for EEC Removal from the Site

(Source: Figure 14 of Ecological Report, Annexure 9 of PPR)



Vegetation Management and Rehabilitation Plan

The *Vegetation Management and Rehabilitation Plan* ('VMRP') aims to direct the rehabilitation and management of the casual open space areas, stormwater treatment areas and the proposed conservation area (within the 7(a) land). The Plan envisages that the actions, monitoring and management of the conservation area will take five years, following which it will be dedicated to Council as a rehabilitated public reserve (proposed Lot 1001).

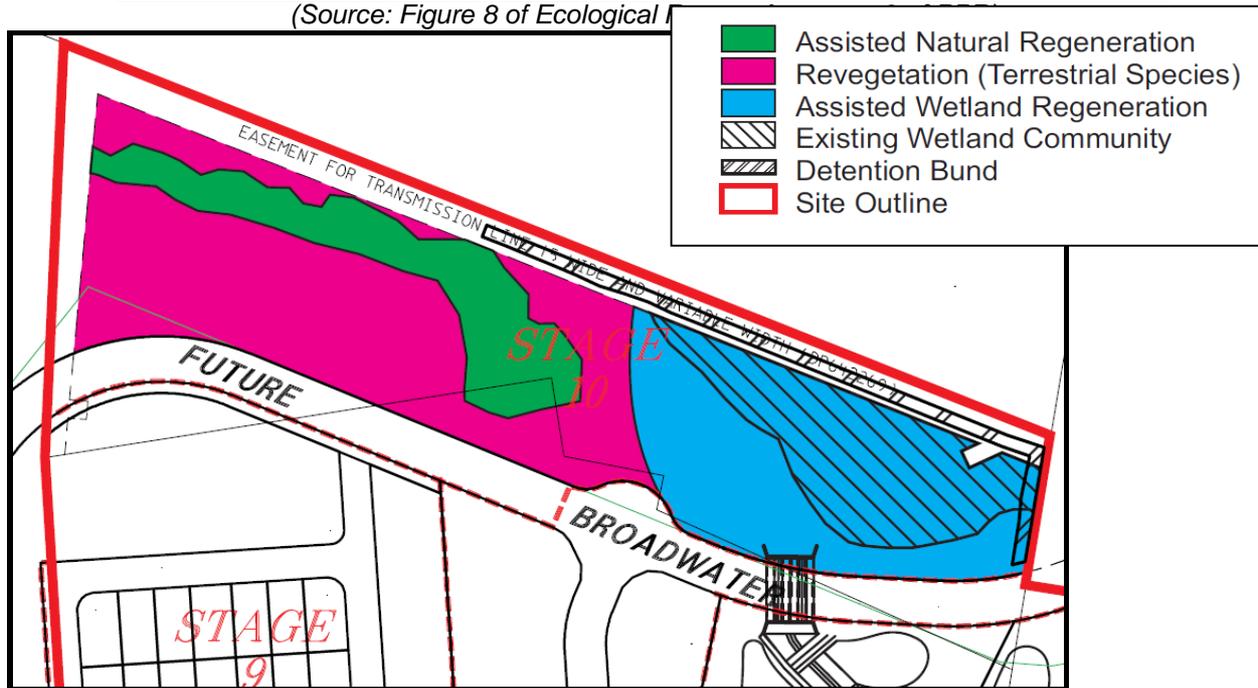
The primary focus within the conservation area (**Figure 21**) is the retention and protection of existing native vegetation, the rehabilitation of degraded areas (including the degraded Freshwater wetland EEC), and the provision of offsets for the removal of small degraded patches of EECs from the development footprint. The VMRP proposes a combination of assisted natural regeneration to the areas of tall open moist sclerophyll forest in the north-eastern corner of the site and the Freshwater Wetland EEC, and revegetation works to offset the loss of the Lowland rainforest EEC from the development footprint. The implementation of the VMRP is provided in the SoCs.

The VMRP does not propose any rehabilitation in the public open space areas with the exception of landscape plantings, revegetation with lawn grasses and maintenance (i.e. mowing). These areas will also form a fauna movement corridor between land to the south and the SEPP 14 Wetland to the north, with BWP designed to consider fauna movements.

Revegetation works will be completed both within and surrounding the stormwater devices and will include aquatic species within the treatment areas and wetland trees, shrubs and groundcovers planted in the surrounds. The proposed works within the public open space and stormwater treatment areas are outlined in the Landscape Plan, recommended as an approval condition. The Council had some concerns with the VMRP to improve its implementation and monitoring which are addressed in the recommended conditions as requested by Council.

Figure 21: Proposed Rehabilitation in the Conservation Area within the Site

(Source: Figure 8 of Ecological



It is considered that, with the implementation of the Revised VMRP, the project will improve the ecological values of the site and provide for improved long-term conservation of the EECs. OEH reviewed the revised project and considered some of its previously raised concerns had been addressed, noting the significantly increased buffering of the SEPP 14 wetland area following the removal of stormwater treatment and other infrastructure.

The loss of vegetation has been minimised as far as practicable given the location of the majority of the development footprint in the cleared areas of the site and the VMRP will ensure an improved outcome for conservation of natural vegetation on the site. The department considers that the removal of EECs is required for the project, with satisfactory offsets and vegetation management given the conservation area will be dedicated to the Council. Further rehabilitation works of the SEPP 14 wetland will occur with contributions under the VPA. The construction of freshwater wetland systems (i.e. creating aquatic habitat) in the form of stormwater retention, filtration and sedimentation areas and the water quality assurance measures to improve the quality draining into the SEPP 14 Wetland are further measures that improve and /or maintain the ecological values on the site.

It is therefore considered that the proposed development provides adequate measures to mitigate any negative impacts on biodiversity during the construction and operational phases.

Biting Midges and Mosquitoes Control

All wetland areas and land zoned for environmental protection in Area E are to be managed to restore freshwater wetland values and minimise breeding habitat for saltwater mosquitoes and biting midges. A *Biting Insect Management Plan* ('BIMP') has been provided to address these issues. The VMRP also includes measures to restore and manage the Freshwater Wetland EEC habitat located within the conservation area on the site, to ensure that a freshwater habitat is restored reducing habitat for the biting midges and mosquitoes. The VPA provides monetary contributions towards the acquisition and future restoration works to the SEPP 14 wetland to restore the freshwater wetland regime.

The stormwater filtration basins are proposed to be 'dry', in that they will drain to ensure biting insect breeding conditions are minimised. The revised proposal provides recommendations on measures that individual residences can undertake to reduce the biting midges activity. These

recommendations have been incorporated into the Draft Community Management Statement, which is a recommended approval condition. The SoCs also includes complying with the recommendations of the BIMP. The council required some changes to the BIMP, to ensure a commitment by the proponent to manage these lands under the Plan until dedication to Council, which has been included in the recommended conditions.

Concluding Comments

The loss of vegetation has been minimised as far as practicable given that the majority of the development footprint is in the cleared areas of the site and the VMRP will ensure an improved outcome for conservation of natural vegetation on the site. The department considers the removal of EECs is acceptable and required for the project, with satisfactory offsets and vegetation management in the conservation area to be dedicated to the Council being provided.

The SEPP 14 wetland is unlikely to be adversely affected by the proposal due to the construction and operation of the water quality control measures within the central drainage channel to improve the quality draining into SEPP 14 wetland. Further rehabilitation of the SEPP 14 wetland will occur with contributions under the VPA. The department also considers the corridor values of the site will be retained by the proposal as the central drainage and conservation areas will remain as vegetative linkages to the corridors surrounding the site. The removal of dams is considered necessary for the proposal to achieve the yield and layout envisaged under the local planning controls and the Regional Strategy. The dams and surrounding vegetation (including EECs) are degraded and their removal has been adequately compensated for in the proposed conservation area.

Overall, the department considers that the proposed development provides adequate measures to mitigate any negative impacts on biodiversity during the construction and operational phases of the project such that the ecological values on the site will be improved and /or maintained.

5.7 Voluntary Planning Agreement

In November 2011, the Council publicly exhibited *Draft Section 94 Contribution Plan No. 31 – Terranora Area E* ('Draft Area E S94 Plan). Council resolved not to proceed with the Plan due to legislative obstacles, however, stated that this Draft Plan is to be used as the basis for negotiations with Proponents of Area E projects for the purpose of reaching agreement on a Voluntary Planning Agreement ('VPA') to fund the necessary infrastructure.

The Council and the Proponent have agreed in principle to enter into a VPA for the revised project. There have been protracted negotiations between the Proponent and the Council with respect to the VPA, with the Council recently resolving to remove the water and sewerage infrastructure from the VPA. Water and sewerage for the site are to be addressed in recommended conditions (refer to Section 5.2 of this report).

Following these negotiations, the final draft VPA provides for the following:-

- a) Contributions (Part A of the Table in Schedule 1) (via monetary development contribution) for each residential lot required immediately prior to the issue of each Subdivision Certificate for each residential lot, covering:
 - i. Road construction – the construction of Broadwater parkway and Mahers Lane within Area E;
 - ii. Flood mitigation works – flood mitigation for Area E;
 - iii. Flood mitigation (land) – purchase of easement over Lot 227 DP 755740 for flood levee;
 - iv. Environmental land purchase – purchase of Lot 227 DP 755740, buffer areas, and habitat areas, and additional areas "outside urban footprint" in DCP B24;
 - v. Wetland and habitat restoration – wetland and habitat restoration on lands identified in Council's endorsed Wetland and Habitat Restoration Plans as at the date of this Agreement;

- vi. Structured public open space – in accordance with DCP B24 as per the published draft in existence as at the date of this Agreement; and
 - vii. Structural public open space (land) - in accordance with DCP B24 as per the published draft in existence as at the date of this Agreement.
- b) Dedication of land (Part B of the Table in Schedule 1) for the BWP road reserve as a public road - dedication of an area of land as a public road that is generally consistent with the area identified as such in Sheet 1 of Schedule 3.

The Council and the Proponent have now agreed on the terms of the VPA, which is now being finalised, and is satisfactory to Council, subject to finalisation and advertising.

The Revised SoCs include a commitment to enter into a VPA in general accordance with the Draft prior to the issue of a Subdivision Certificate for the first residential lot. This SOC is unacceptable as the timing is unsatisfactory given the necessity to have finalised the VPA prior to construction commencing to ensure the full financial liability is known before work commences. This would avoid the possible scenario that works could be completed without a VPA in place, thus placing undue pressure on either party to finalise the agreement to enable the issuing of a subdivision certificate. Relevant conditions have therefore been recommended to enter into the VPA in the terms of the offer prior to the issue of the first Construction Certificate which will prevail over the SOC.

5.8 Land Contamination

The site has been used previously for agricultural uses, which is an activity listed in Table 1 of the *'Managing Land Contamination Planning Guidelines'* prepared by the Department of Urban Affairs and Planning and the Environmental Protection Authority in 1998 ('the Guidelines'). Therefore, land contamination must be considered. The main focus of the agricultural activities was the numerous sheds and water pipe infrastructure along the eastern boundary of the site adjoining Fraser Drive as illustrated in **Figure 22**.

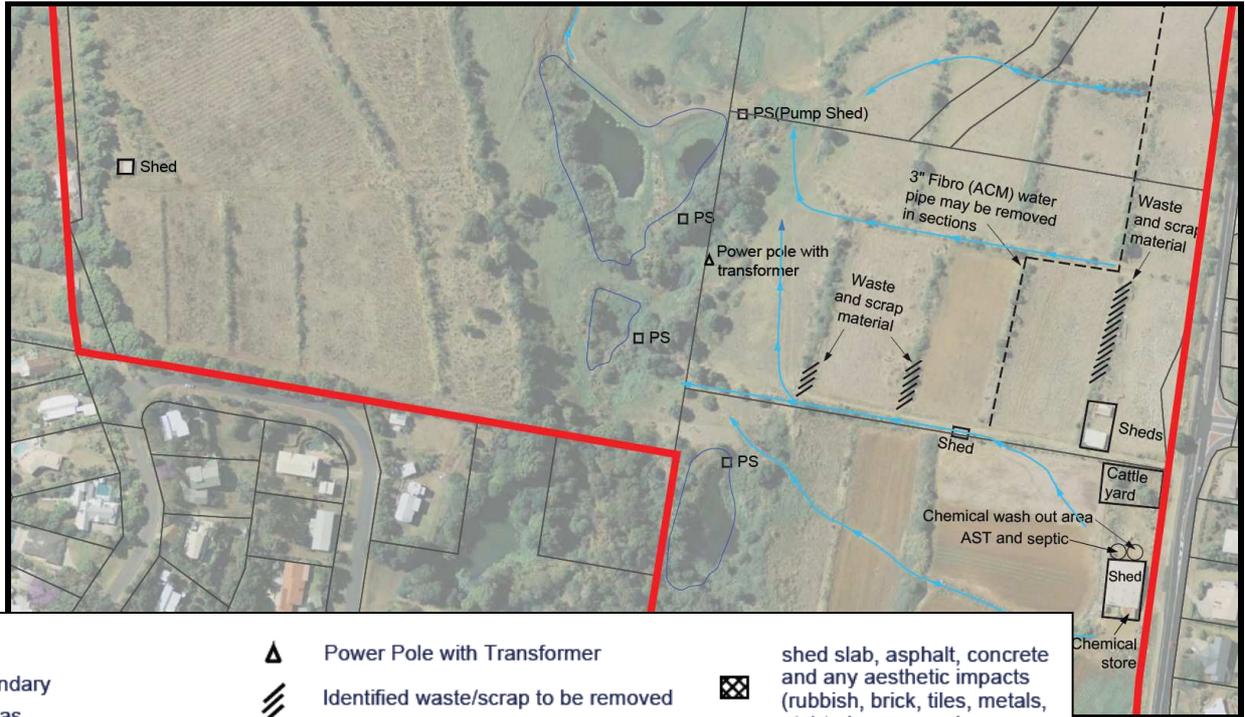
The *Local Environmental Study* conducted for the rezoning of the site prepared by Parsons Brinckerhoff Australia Pty Ltd, March 2004 stated (CI 3.6.9) that a full and further assessment of identified and potential sources and receptors of contaminants must be undertaken to fully assess potential contaminant issues at the site. Clause 53D of Tweed LEP 2000 also contains certain requirements which are to be satisfied prior to granting consent to development on the site, including the identification, implementation of a testing regime, assessment and monitoring of contaminated land.

Similarly, *State Environmental Planning Policy No 55 – Remediation of Contaminated Land* ('SEPP 55') requires remediation of contaminated land to reduce the risk of harm to human health or any other aspect of the environment. Clause 7 of SEPP 55 requires the consent authority to consider whether the land is contaminated and if the land requires remediation to be made suitable for the purpose for which the development is proposed to be carried out, and whether it is satisfied that the land will be remediated before the land is used for that purpose. Before granting consent for a change of use on land which has previously been used for a purpose in Table 1 of the Guidelines, the consent authority must consider a report specifying the findings of a preliminary investigation of the land carried out in accordance with the contaminated land planning guidelines.

The *Soil Contamination Assessment for Area E Properties Terranora*, prepared by Gilbert and Sutherland (G&S) dated October 2003 ('the G&S 2003 Site Assessment'), which can be considered to be a preliminary investigation under the Guidelines, identified potentially contaminating activities associated with historical agricultural practices. Potential site contaminants therefore may include organochlorins, organophosphates, arsenic, cadmium, lead, mercury and zinc.

Figure 22: Areas of Potential Contamination on the site

(Source: SAQP & RAP by G&S October 2013)



LEGEND

- Site Boundary
- Dam Areas
- ← Surface Water Drainage
- PS Pump Shed
- ACM watermain
- ▲ Power Pole with Transformer
- Identified waste/scrap to be removed
- Shed All sheds to be removed including any waste inside or nearby
- Rock walls to be managed in accordance with RAP
- Sheds shed slab, asphalt, concrete and any aesthetic impacts (rubbish, brick, tiles, metals, etc) to be removed.
- Identified potential ACM to be investigated and remediated



The G&S 2003 Site Assessment, which collected a total of 534 samples from the site, does not meet the requirements of the current regulatory guidance, particularly with respect to the National Environmental Protection Council's (NEPC) 2013 revision to the *National Environmental Protection (Assessment of Site Contamination) Measure (NEPM)* and associated guidelines. While no contamination that would pose a significant risk to human health or the environment was identified in the G&S 2003 Site Assessment, further site assessment is required and proposed to meet the NEPC 2013 Guidelines.

A *Sampling, Analysis and Quality Plan (SAQP)* has therefore been prepared by G&S dated October 2013 to investigate areas of the site which have not been targeted to date, to assess for all potential contaminants of concern and confirm that the previous data is acceptable for use, by re-sampling a proportion of the areas (at a rate of approximately 5% of the previous samples). The objectives of the SAQP are to identify any data gaps in the existing assessments and define what additional sampling, analysis and quality assurance is necessary to confirm the suitability of the site for its proposed residential use, or the remedial works required to ensure that the site is suitable for residential use.

The data gaps relate primarily to the lack of focussed sampling in and around potential hotspot sources including the various sheds, waste stockpiles and cattle yard which existed on the site (Figure 22). Also, there has been no investigation of the dam sediment, the transformer or any fibro materials that may contain asbestos within the eastern portion of the site adjoining Fraser Drive. The SAQP must be implemented prior to earthworks which would disturb and potentially translocate contamination.

A RAP has been prepared by G&S dated October 2013, which identifies a scope of works for the removal of fibrous cement guttering and water main which may be constructed from asbestos containing material ('ACM'), the removal of the rock walls throughout the site and for the remediation of soil aesthetics. An unexpected findings protocol is provided for guidance in the event that further items of potential contamination are discovered during the earthworks program. Any remedial works required would be undertaken in accordance with the provisions of this RAP.

A Section B Site Audit Statement has been provided by an accredited Site Auditor which confirms that the site can be made suitable for residential uses as well as a park, recreational open space and playing fields if the site is remediated in accordance with the RAP (subject to compliance with the SAQP). The Site Auditor is satisfied that based on the extent of investigations conducted and the associated findings, that there is sufficient information available to conclude that the site can be made suitable for the proposed land uses if it is remediated in accordance with the RAP, including conducting additional investigations as described in the RAP and the SAQP.

The Site Auditor further stated that this procedure of conducting additional investigations as part of remedial works is not unusual and that 'remedial investigations' are a common component for remedial projects. The Site Auditor is satisfied that the appropriate and logical time to conduct most of the remedial works required is as part of the site redevelopment.

The department is satisfied that, subject to the recommended conditions requiring the implementation of the SAQP and the RAP as well as the requirement for the relevant Site Validation and Section A SAS following remediation, that the issue of land contamination has been adequately addressed by the Proponent.

5.9 Other issues

Cultural Heritage

An Aboriginal cultural heritage assessment was carried out where the majority of the site was found to be highly disturbed and field survey was impeded by low surface visibility. The Tweed Byron Local Aboriginal Land Council ('LALC') supported the recommendations of this assessment, noting the likelihood of Aboriginal objects being located within the site as being 'very

low.' Small crop terraces dating from the mid- 20th century were identified throughout the site, however, are not of local, regional or State significance. There were no Aboriginal objects or places identified within the site. OEH acknowledges that the Aboriginal cultural heritage assessment has been undertaken in accordance with the appropriate guidelines and consultation requirements. OEH also provided recommended approval conditions, which have been included in the SOCs with this issue satisfactorily addressed.

Bushfire

The amended Bushfire Report addresses the revised proposal and in particular the previous concerns of the RFS in relation to asset protection zone ('APZ') requirements on the western boundary of the site. The revised project provides APZs along the northern boundary (within the future road reserve for BWP) and along the western boundary of the site (within the proposed road reserve of Road 10), which represent the bushfire hazards to the site. The RFS is satisfied that their original concerns have been addressed subject to the public reserve lots (excluding Lot 1001) being managed as an Inner Protection Area (IPA). Conditions of approval are recommended which specify the entire site, including reserves proposed Lots 451, 610 and 611, and excluding Lot 1001, shall be managed as an Inner Protection Area (IPA). The department concludes that these measures and recommended conditions are adequate to mitigate against bushfire hazard for the proposed subdivision.

Acid Sulphate Soils and Groundwater

Acid Sulphate Soils ('ASS') have been assessed and are present within the lower central floodplain area below RL 5m AHD where stormwater treatment measures (bioretention basins) and the future BWP are proposed within Stages 6, 7 (in lower part of the site) and 10. An Acid Sulfate Soil Management Plan ('ASSMP') will be required prior to earthworks commencing in accordance with the NSW ASSMAC Guidelines. Strategies and measures for the management of groundwater during the bulk earthworks associated with the proposal are provided in the ASSMP, included in the SoCs. NOW has reviewed the revised proposal and has recommended conditions relating to groundwater management and licensing. These have been incorporated into the SoCs.

Soils

The site contains Class 6 agricultural lands, associated with the Carool soil landscape comprising mostly krasnozem, highly productive soils, which largely occur within the eastern portion of the site (Stages 1, 2, 3 and 4). The Soil Preservation Management Plan ('SPMP') establishes procedures to ensure all krasnozem soils encountered on Class 6 lands during earthworks are appropriately managed, preserved and reused on the site. Conditions of approval are recommended to ensure compliance with the *Soil Preservation Management Plan* ('SPMP') for every stage of the project. There is unlikely to be any significant soil removal from the site since the revised project generally has a balanced earthworks regime.

Geological Stability

Geological instability appears to be confined to the area within and adjacent to the main drainage gully as well as the drainage gully in the far northern portion of the site. This is the location of a distinct contact zone between the volcanic clay soils and the underlying Neranleigh Fernvale geology. The Geotechnical Report concludes that the site is suitable for the proposed development providing the recommendations of the report, including repairs to the landslip areas and the guidelines for hillside construction are followed. The recommendations of the Geotechnical Assessment have been included in the SoCs. A further condition of approval is recommended requiring more detailed investigation at the interface between the two geological units prior to the commencement of earthworks for each stage of the subdivision. The department concludes that these measures and recommended conditions are adequate to mitigate against geological issues for the project.

Acoustic

The amended Acoustic Report modelled road traffic noise levels in the absence of the originally proposed acoustic barrier along Fraser Drive. There were significant visual and view loss concerns raised in relation to this proposed acoustic barrier in this location and therefore it has been removed from the revised proposal. This report concluded that there were 31 lots within Stages 1, 2, 3 and 11 (now part of Stage 1) adjoining Fraser Drive which would be affected by road traffic noise and would require further acoustic assessment in accordance with the internal sound requirements of the Infrastructure SEPP. This acoustic assessment is to be undertaken when architectural plans are available for each dwelling. To ensure purchasers of noise affected lots are aware of the need to obtain their own Acoustic Assessment to accompany a Development Application, a Restriction on Use is proposed in the Acoustic Report, which has been included in the SOCs at Clause 19 (with updated lot numbers to reflect revised proposal). The department concludes that these measures and recommended conditions are adequate to mitigate against acoustic impacts for the project.

6. CONCLUSION

The revised project, with a construction investment value of approximately \$25 million, will provide benefits in assisting housing supply on the North Coast of NSW while achieving other key priorities outlined in the Regional Strategy such as protecting native vegetation, biodiversity, sensitive lands and coastal waterways. The project will also provide construction employment opportunities and provide the local area with an increased housing choice.

Importantly, the project design and recommended conditions of approval will ensure the protection of sensitive vegetation and species habitat.

The revised project provides for land forming and earthworks which generally maintain the existing topography, and more closely matches likely structural systems for future housing with the natural landform. The recommended conditions ensure that earthworks and landforming, particularly retaining walls and terracing, are carried out in accordance with the engineering reports and Council's planning controls. Therefore, conditions have been imposed to restrict construction of retaining walls which create terraced lots. Infrastructure and Water Cycle Management is satisfactory, subject to recommended conditions relating to the construction, timing and contributions of such infrastructure.

The internal road layout is clear and legible and promotes connectivity for pedestrians, cyclists and traffic and promotes sustainable modes of transport. The subdivision layout is generally in accordance with the structure plan adopted by Council and provides a well-connected and logical layout with a variety of housing choice. There are several areas of open space to be dedicated to the Council for active and passive outdoor recreation and the public domain areas will be adequately landscaped for future residents. Subject to recommended conditions relating to fencing and planting, the visual amenity of the area will not be adversely affected by the project.

The proposed conservation area in the northern area of the site will form a buffer to the adjoining SEPP 14 wetland, will provide offset planting for loss of EEC in the development footprint and will allow for connectivity of vegetation throughout the area. Relevant conditions have been imposed to ensure the rehabilitation and restoration of the wetland areas adjoining the SEPP 14 wetland. An offer to enter into a VPA has been provided and will allow for monetary contributions and the dedication of land for the provision of roads, flood mitigation works, structured open space, infrastructure and the acquisition and rehabilitation of the adjoining SEPP 14 wetland and other environmental land.

The development of the proposal over 10 stages allows a measure of flexibility in the project's implementation, including a staged road hierarchy. This will allow for the implementation of

infrastructure such as public parks, bus routes, and roads to appropriately match the accumulating needs of the development of the staged lots.

The department has considered the public and agency submissions as well as the key issues raised and has recommended appropriate conditions to the project approval to ensure adequate safeguards to minimise project impacts. The proposal generally complies with Tweed LEP 2000 and Tweed DCP 2008, in particular Sections A1 and B24 and will be consistent with State environmental planning policy objectives.

On these grounds, the department considers the site to be suitable for the proposed development given its specific purpose in the Regional Strategy is for a proposed future urban release area and that the project is in the public interest. Consequently, the department recommends that the project be approved, subject to the planning conditions in the recommendation.

7. RECOMMENDATION

The department considers the land to be suitable for the proposed subdivision and urban use and recommends the project be granted **approval** under Section 75J of the *Environmental Planning and Assessment Act 1979*, by the Planning and Assessment Commission, subject to the recommended conditions provided at **Appendix E**.

Prepared by:
Kim Johnston
Contract Planner
Industry, Social Projects & Key Sites

Endorsed by:



Sally Munk
A/Team Leader
Industry, Key Sites & Social Projects

 17.12.17

Chris Wilson
Executive Director
Development Assessment, Systems and
Approvals

APPENDIX A RELEVANT SUPPORTING INFORMATION

The following supporting documents and supporting information to this assessment report can be found on the Department of Planning and Infrastructure website at the following link:-

http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=3509.

1. Director-General's Environmental Assessment Requirements
2. Environmental Assessment
3. Submissions
4. Proponent's Response to Submissions
5. Preferred Project Report

APPENDIX B CONSIDERATION OF ENVIRONMENTAL PLANNING INSTRUMENTS

State Environmental Planning Policy (Major Development) 2005

The proposal is a major project under Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act) by virtue of it being development of a kind described in Schedule 2 of State Environmental Planning Policy (Major Development) 2005 namely clause 1(1)(b) – residential subdivision that is wholly or partly in a sensitive coastal location outside the metropolitan coastal zone into more than 100 lots (as in force at the time the proposal was declared a major project). Therefore the Minister for Planning and Infrastructure is the approval authority. On 23 September 2009 the Department of Planning advised that the proposal was a project to which Part 3A applies.

State Environmental Planning Policy (Infrastructure) 2007

The Infrastructure SEPP requires the consent authority to ensure that new development does not compromise the effective and ongoing operation and function of classified roads, and to also prevent or reduce the potential impact of traffic noise and vehicle emission on development adjacent to classified roads.

Clause 104 of this Policy provides that certain developments specified in Column 1 of the Table to Schedule 3 of the Policy requires referral to the Roads and Traffic Authority and the consent authority must take into account any submission that the Roads and Traffic Authority may provide within a prescribed timeframe. Schedule 3 includes subdivisions of land involving 200 or more allotments, among other things. Therefore, as this proposal involves more than 200 lots, referral to the Roads and Traffic Authority for comment is required under this Policy. The project was referred to the RMS for comment in the public exhibition period for the project and their submission has been duly considered in this assessment (refer to Section 4 of this report).

The Transport Report, prepared by Bitzios Consulting dated April 2013, considered the traffic and transport aspects of the proposal, including the potential road traffic noise and access to Fraser Drive for the project. The RMS considered this report in their assessment of the project. These issues are considered in detailed in the Key Issues (Section 5) section of this report. The Department considers the potential impact of traffic noise and potential impacts to the adjoining arterial road have been adequately considered within section 5 of this report

State Environmental Planning Policy No. 71 – Coastal Protection

State Environmental Planning Policy 71 - Coastal Protection ('SEPP 71') applies to the site as it is located within the coastal zone of NSW. The project is consistent with the aims of this Policy (Clause 2) in that the project:-

- protects and manages the natural, cultural, recreational and economic attributes of the coast by reduces impacts to the natural coastal environment, including vegetation, does not adversely affect Aboriginal Cultural heritage items and provides several areas of public open space within the site;
- does not alter existing foreshore access arrangements;
- protects native coastal vegetation as well as the marine environment of the Terranora Broadwater and the SEPP 14 wetland due to the location of the proposed conservation area as a buffer zone to these areas and the rehabilitation of this area in the VMRP;
- does not result in any significant adverse impacts to the scenic amenity of the coast given it is located below the main ridgelines in the area preserves existing vegetation within the site and provides earthworks and landforming which generally maintains the existing topography of the site;
- does not have any adverse impacts on the beach environment, beach amenity or rock platforms given the distance to these environments;
- is considered to accord with the principles of Ecologically Sustainable Development for the reasons set out in section 5 of this report;
- proposes development that is consistent with the bulk and scale of the surrounding area, interspersed with areas of open space and drainage areas; and
- encourages a strategic approach to coastal management by complying with the major

objectives and controls of the Tweed DCP 2008.

It is considered that the project is consistent with relevant matters for consideration (Clause 8) as outlined in the aims of the Policy and considered in Section 5 of the report. The recommended conditions of approval and the SOCs further ensure the project is consistent with this Policy.

State Environmental Planning Policy No. 55 – Remediation of Land

SEPP 55 aims to promote the remediation of contaminated land for the purpose of reducing the risk of harm to human health or any other aspect of the environment. SEPP 55 requires the consent authority to take into consideration possible site contamination prior to granting consent. This consideration must be based on a preliminary investigation of the land carried out in accordance with the Contaminated Land Planning Guidelines. The Council has also adopted a Contaminated Land Policy which contains details of the information required to be submitted with applications for development.

The Proponent submitted a Soil Contamination Assessment (Annexure 28 of the PPR) which included field work and appropriate sampling and testing of soils together with a site history. This Assessment concluded that the site is suitable for the proposed development. The Department is satisfied that site contamination has been adequately addressed and the objectives of SEPP 55 have been satisfied.

State Environmental Planning Policy No.14 – Coastal Wetlands (SEPP 14)

SEPP 14 aims to ensure that identified coastal wetlands are preserved and protected in the environmental and economic interests of the state. While the site does not contain any listed wetlands, SEPP 14 Wetland No 23 is located immediately adjoining to the north and downstream of the site. No development is proposed within the mapped wetland. The proposed stormwater management for the site ensures there will be no adverse impacts to this adjoining SEPP 14 wetland as outlined in Section 5 of the report. The VPA also provides for contributions for the acquisition and rehabilitation of this adjoining SEPP 14 wetland. Therefore the project is considered to be consistent with this policy.

State Environmental Planning Policy (North Coast Regional Environmental Plan) ('NCREP')

The *North Coast Regional Environmental Plan*, a deemed SEPP, aims to develop regional policies that protect the natural environment, encourage an efficient and attractive built environment and guide development into a productive yet environmentally sound future. The NCREP implements these aims through specifying regional policies for the control of development in the region. The assessment of the project has adequately considered the relevant provisions of the NCREP including the protection of coastal water quality, the enhancement of the natural environment, provision of affordable housing for the region, avoidance of bushfire hazard, provide the economic and timely provision of utility services to residential areas and to prevent environmental degradation caused by excessive and/or contaminated stormwater runoff. The revised project is consistent with these objectives as outlined in section 5 of the report. The Revised project provides updated consultant studies and plans that will ensure the natural and built environments achieve the objectives of this Plan.

Far North Coast Regional Strategy

The Far North Coast Regional Strategy, 2006 - 2031 ("the Regional Strategy") was adopted by the Minister on 17 January 2007 and represents a 25-year land use strategy. The site is identified as a proposed future urban release area on Sheet 1 of the Town and Village Growth Boundary Map contained in the Strategy. The revised project assists in providing some of the additional 51,000 additional homes which will be needed for the projected 60,400 more people expected to be living in the region by 2031. The project is therefore consistent with the Strategy.

Tweed Local Environmental Plan 2000 ('Tweed LEP 2000')

The subject land is zoned 2(c) Urban Expansion and 7(a) Environmental Protection (Wetlands and Littoral Rainforests) under the provisions of the Tweed LEP 2000. The permissibility of the project is outlined in Table 2 of this report.

The project is consistent with the objectives of the 2(c) zone in that the proposed development will provide for the residential development of appropriately zoned land and has been designed with

regard to the site constraints and can be adequately serviced (subject to the recommended conditions). The sensitive environmental areas within and outside this zone are protected from any significant adverse impacts of development by safeguards proposed by the project as outlined in Section 5 of this report. The project is compatible with the surrounding environment and will allow for a proposed community centre to provide for the recreational needs of the future resident population.

While development will generally not occur on the 7(a) zoned land, the development will not impact on the achievement of the objectives of these zones, due to proposed revegetation of the conservation area on this portion of the site which aims to protect and conserve the adjacent wetland and its scenic amenity.

The revised project is considered to be consistent with the following clauses of the LEP:-

- Availability of essential services (CI 15) – a water and sewerage supply is to be provided (subject to recommended conditions), this is addressed in Section 5 of this report and the Statement of Commitments.
 - Height of buildings (CI 16) – maximum height of 2 storeys has been complied with by the proposed community centre (1 storey).
 - Social impact assessment (CI 17) - It is considered the proposal will have a positive social impact on the area given there will be additional housing opportunities created and the community centre and open space areas will provide areas for social interaction.
 - General (Subdivision) (CI 19) – subdivision requires consent, which is currently sought.
 - Development in Zone 7 (a) Environmental Protection (Wetlands and Littoral Rainforests) and on adjacent land (CI 25) – the objective is to ensure that wetlands and littoral rainforests are preserved and protected in the environmental and economic interests of the area. Consent is required to clear vegetation from, drain, excavate or fill land within 7(a) following a consideration of various environmental impacts. These issues have been addressed in Section 5 of this report.
 - Development adjoining waterbodies (CI 31) – this clause aims to protect and enhance scenic quality, water quality, aquatic ecosystems, biodiversity and wildlife habitat corridors, provide adequate public access to waterways and minimise the impact on development from known biting midge and mosquito breeding areas. The project has duly considered these issues and outlined in Section 5 of this report.
 - Flooding (CI 34) - considered in the Proponent's EA and PPR and it is considered that this issue has been adequately addressed.
 - Acid sulfate soils (CI 35) – the project has considered acid sulphate soils as outlined in the PPR, with an Acid Sulphate Soils Management Plan being provided. This issue is adequately addressed in Section 5, the recommended approval conditions and the SOCs.
 - Electricity transmission line corridor (CI 37) – no development proposed within this corridor.
 - Future road corridors (CI 38) – The project has been designed to take into account the future alignment and location of BWP. The project is consistent with this clause.
 - Remediation of contaminated land (CI 39) - The project is consistent with this Clause.
 - Bushfire Protection (CI 39A) – The project has considered the potential bushfire hazard on the site and it is considered this clause is adequately addressed in Section 5, the recommended conditions of approval and the SOCs.
 - Development of land within likely or known archaeological sites (CI 44) - The potential for cultural heritage sites is low (Annexure 6 of the PPR), adequately addressed in Section 5, recommended conditions and SOCs.
 - Development in the vicinity of heritage items, heritage conservation areas, archaeological sites or potential archaeological sites (CI 45) - No heritage items, heritage conservation areas, archaeological sites or potential archaeological sites exist on the site based on Schedule 2 of Tweed LEP 2000; Schedules 1 and 2 of NCREP and the findings of the Cultural Heritage Assessment.
 - Specific provisions for Terranora Urban Release Area E (CI 53D) – this clause provides additional matters for consideration, prior to granting consent to development within Area E, outlined below. The project is consistent with this clause:-
- **Objects (CI 53D(2))** - A DCP (no effect yet) has been adopted by the Council for Area E and the issues relating to contaminated land have been considered under SEPP 55 and in Section 5 of this report. The project includes the restoration of the conservation area which will act as

buffer to the adjoining wetlands to the site and urban stormwater will be adequately managed under the project. These issues are discussed in Section 5 of this report. The Department considers that subject to the recommended conditions of approval and the SOCs, the project satisfies these objects.

- **Matters prior to grant of consent (CI 53D(3))** - Section B24 of Tweed DCP 2008 has been adopted by the Council but will not formally take effect until the contributions framework is adopted. The revised project, however, is generally consistent with this Section as outlined in Section 5 and below. The issue of land contamination has been adequately considered in the PPR and Section 5 of the report. The freshwater wetland EEC on the site will be restored and rehabilitation to restore freshwater to the wetland, which will reduce biting midges. The stormwater and hydrological reports have adequately considered stormwater quality parameters.
- **Matters prior to subdivision of land (CI 53D(4))** - The potential for site contamination has been adequately considered in the PPR (Appendix 28) and Section 5 of the report. The Department considers these matters are adequately addressed in the recommended conditions of approval and the SOCs.
- **Minimum Lot Size (CI 53D(5))** - The minimum lot size proposed in this subdivision is 484.3m², which complies with the Tweed LEP 2000 for permissible uses

Draft Tweed Local Environmental Plan 2010

This Draft Plan was publicly exhibited between January 2010 and April 2010. Under the provisions of the Draft Plan, it is proposed to rezone the current 2(c) Urban Expansion land to R1 General Residential and that part of the site currently zoned 7(a) to E2 Environmental Conservation. The current minimum lot size of 450m² will be retained and therefore the proposed subdivision is permissible with consent under the draft Plan. Development for the purpose of roads (and ancillary drainage/water quality structures) together with environmental protection works are permitted in the proposed E2 zone. The proposed maximum building height is 13.6 metres and a maximum floor space ratio of 2:1. The project is consistent with the exhibited Draft Plan.

Tweed Development Control Plan 2008

Requirement	Project Response	Comply
Section A5 – Subdivision Manual & D6 – Site Regrading		
A5.4.6 Landforming		
Table A5-3 Site Regrading Acceptance Criteria		
<p>A. <u>General Criteria</u> - perimeter levels - pre development levels preserved at external (perimeter) boundaries, preferably without use of boundary (or within 3m of boundary) retaining walls > 1.2m high.</p>	<p>There are no longer perimeter walls or batters proposed.</p>	<p>Yes</p>
<p>B. <u>Mass Landform Change Criteria</u> - proportion of subdivision site with cut or fill areas with finished surface levels that depart from natural surface levels by >5m not >10%.</p>	<p>Site area with fill/cut>5m = 9.43%</p>	<p>Yes</p>
<p>C. <u>Shape/Surface Criteria</u> - finished landform site shape should mimic existing, local surrounding natural topography. Except Note 1, no sharp changes of gradient (associated with batters or retaining walls) permitted at/near inter lot boundaries or within lots. Batters and retaining walls not permitted for purpose of creating terraced lots. Sharp changes of gradient permitted at road and public land boundaries (Note 1: A retaining wall or batter of maximum "combined height" of 1.2m at or adjacent to inter lot boundaries may be permitted to ease lot gradients, where lot longitudinal or cross gradient would exceed 10% in the absence of such retaining wall or batter).</p>	<p>There are still some lots which have been terraced to create flat lots, however, there are conditions recommended to be imposed which restrict construction of retaining walls to create terraced lots.</p>	<p>Yes (subject to conditions)</p>
<p>D. <u>Plans Criteria</u> - site regrading plans specified in D13.</p>	<p>Provided at Annexure 11 of the PPR.</p>	<p>Yes</p>
<p>E. <u>Retaining walls & batters</u> - combined height of retaining walls or cut/fill batters on lot boundary not exceed 1.2m (perimeter boundary), within subdivision (side & rear - 1.2m/street bdy - 1.8m above street level, 2.4m below street level), where used to create level difference between adjacent lots or lot/road and retaining wall located in lower lot, top of batter or retaining wall min 0.5m horizontally from boundary. Use of high earthworks batters and retaining walls to achieve flat building platforms avoided.</p>	<p>There are still some lots which have been terraced to create flat lots. See above.</p>	<p>Yes (subject to conditions)</p>
A5.4.7 Stormwater Runoff, Drainage, Waterways and Flooding		
<p>Water sensitive urban design (WSUD)</p>	<p>Cannot be accommodated on the site.</p>	<p>Yes</p>
<p>Erosion and sediment control</p>	<p>Provided in the SOCs.</p>	
<p>Permanent stormwater quality facilities</p>	<p>Provided as bioretention basins in central drainage gully.</p>	
<p>Drainage and Lawful point of discharge - Stormwater runoff and drainage must only be discharged from a subdivision at a "lawful point of discharge". This must be on or immediately adjacent to the development site and may be a natural watercourse or waterway to which the development site naturally drains. A "lawful point of discharge"</p>	<p>A LPD has been provided. Peak flow rates are attenuated to ensure no adverse impact on downstream aquatic environments, watercourses and property. The central drainage gully traversing</p>	

<p>agreed to by Council (i.e. existing constructed public drain). Attenuation of peak flow rates - Waterways; water bodies; riparian areas and riparian vegetation</p> <p>Buffers between subdivision, other specified land uses to minimise land use conflicts.</p>	<p>the site conveys flows (including ARI 100 year event) through the site. The watercourse and riparian areas are clearly identified and assessment of environmental values provided. A buffer is provided to the SEPP 14 wetland and conservation area.</p>	
A5.4.8/ A5.4.9 Urban Structure and Neighbourhood and Town Structure		
<p>Highly interconnected neighbourhoods, shape defined by acceptable walking distance Town/neighbourhood centres - community focus; min 60% of dwellings within 500-850m radius of existing/potential neighbourhood or town centre Interconnected, easily navigable and logical street network with strong links between town/neighbourhood centres to make walking and cycling pleasant, efficient and safe Range of residential densities increasing towards centres; 15 dwellings/hectare (excluding parks) within a 5 minute walk or 450m of a centre. Local traffic movements focused onto local streets rather than arterial roads. Provide perimeter blocks generally 70-120m deep x 120-240m long</p>	<p>Section B24 provides the structure of the subdivision. The revised project is generally consistent with this structure. Discussed in detail in Section 5.4 of the report.</p>	Yes
A5.4.10/ A5.4.11 Movement and Open Space Networks		
<p>No more than 15% of lots fronting cul-de-sac.</p>	<p>Only Lot 925 (medium density lot) fronts a cul-de-sac.</p>	Yes
<p>Max cul-de-sac length 100m (max 12 dwellings), clear view for full length of cul-de-sac</p>	<p>Complies, cul-de-sac only 75 metres long for 7 lots.</p>	
<p>Linking access for pedestrians and cyclists</p>	<p>Provided – see Section 5.3 of report).</p>	
<p>Bus route/stops should be located at an average spacing of 300 – 400m.</p>	<p>Provided – see Section 5.3 of report).</p>	
<p>Street design to achieve target street speeds.</p>	<p>Design speed of 50kph proposed for internal roads.</p>	
<p>Cycleway network required.</p>	<p>Provided – see Section 5.3 of report).</p>	
<p>Dedication of environmentally sensitive areas.</p>	<p>Existing environmentally sensitive areas (i.e. SEPP 14) external to the site, however, VPA provides contributions for acquisition and rehabilitation of wetland. Offsets for removal of EECs on the site will be undertaken in buffer area to this adjoining SEPP 14 wetland in the conservation area on the site.</p>	
<p>Casual parks – 1.13 hectares/1000 population (11.3m²/person). Desirable minimum area 2500m² – 4000m²</p> <ul style="list-style-type: none"> - 95% of residences within 400m walking distance of casual parks. - Land form of casual park - <8%. - Access from more than one local road. - Road frontage – 50% of perimeter. 	<p>Provided – see Section 5.5 of report. A network of pathways and cycleways are proposed, linking all stages to the central open channel and adjacent park land (refer to Landscape Masterplan). The usable area of the public open space areas are less than 8% slope, parks accessed from multiple road</p>	

<p>- Embellishment</p> <p>Sports playing field – 1.7 hectares/1000 persons (structured or active open space). Minimum residential lot size of 450m² and 10 x 15m building envelopes for dwellings. Dual occupancy lots minimum 900m² or 1000m² for corner lots. Solar access Generally rectangular shaped lots. East – west lots must have a minimum width of 14 metres.</p>	<p>with a minimum of 50% of perimeter as road frontage. Embellishments shown in concept on Landscape Masterplan, details to be provided via conditions. Payment of contribution in the VPA. All lots >450m² (smallest @ 484.3m²). Dual occupancy lots not indicated. Complies - see Section 5.4 of report). Complies - see Section 5.4 of report). Complies – all lots generally 15m to 17m wide.</p>	
A5.4.13 Infrastructure		
All lots created in urban areas for private occupation must be fully/individually serviced with sealed road (kerb and gutter) frontage, water supply, sewerage, underground electricity and telecommunications.		
Section B24 - Draft Area E Urban Release Development Code		
Part 2 - Subdivision		
Urban Footprint and Design Principles (CI 2.2)		
1. Development within identified urban footprint must address design principles of Code.		Yes
2. Development of land identified as Topographically Constrained - consult with Council.		Yes
3. This Code does not support urban development outside urban footprint.		
Design Principle 1: Environment (CI 2.3)		
1. Environmental protection areas, wildlife corridors, vegetative links retained & protected.		Yes
2. Suitable buffering/ongoing management of high environmental quality land.		
3. Adequate buffer (min 20m, may include road reserve) retained around edge of environmental protection area.		
4. Demonstrate works identified within Council approved Wetland Restoration Plan and Habitat Restoration Plan will be undertaken.		
5. Any wetland on site managed to restore freshwater wetland values and minimise breeding habitat for saltwater mosquitoes and biting midges.		
Design Principle 2: Landscape Character and Views (CI 2.4)		
1. Consistency with visual strategies in a visual impact assessment.		Yes
2. Not obstruct identified key view lines.		
3. Undulating and vegetated valley character maintained as an important part of the sites' visual character in terms of regional inward views.	The revised project has provided a visual impact assessment and it is considered that the proposal will not have an adverse visual impact.	Yes

<p>4. Achieve outcomes of the Tweed Scenic Landscape Strategy.</p> <p>5. Identify remnant vegetation including existing paddock windbreaks and retain or interpret these important elements of the sites' visual character (adapt existing vegetated wind break lines as street trees, maintain mature trees to assist in visually defining identified character zones and preserving habitat).</p> <p>6. Building design and structural system reduces need for benching and significant cut and fill thereby maintaining topographic integrity and visual character.</p> <p>7. Identification and retention of significant vegetation (including non-native species) that contributes significantly to the landscape character of the locality.</p> <p>8. Significant landscape features including overland flow paths, dams, native vegetation and other significant stands of vegetation identified and retained.</p>	<p>The key view lines are retained by the proposal, and views from Fraser drive are maintained for residents and pedestrians.</p> <p>This issue is considered in detail in Section 5.5 of the report.</p>	
<p>Design Principle 3: Landforming (CI 2.5)</p>		
<p>1. Maintain integrity of ridge lines, valleys and natural topographic features as an important part of the locality's character;</p> <p>2. Batters and retaining walls not permitted for purpose of creating terraced lots, as per DCP A5;</p> <p>3. Demonstrate preservation and future productive use of Class 6 soil.</p>	<p>The ridge lines, valleys and natural topographic features are generally maintained.</p> <p>Still some terracing proposed in Stages 1, 2, 3, 4 and 6 (discussed in Section 5.1 of the report).</p> <p>Class 6 soils will be preserved and re-used on the site as outlined in the report.</p>	<p>Yes</p> <p>No</p> <p>Yes</p>
<p>Design Principle 4: Road Layout, Traffic and Transport (CI 2.6)</p>		
<p>1. Traffic study must demonstrate proposal is accommodated by existing or alternative proposed road networks (before BWP construction).</p> <p>2. Traffic Study for any variations to external connections or increase in dwelling targets.</p> <p>3. Investigate any changes to public transport services, bus route (with bus stop locations) required.</p> <p>4. Road layout compliments topography – primary/long street follows contour, secondary/short street perpendicular to contour.</p> <p>5. Road layout - clear & legible, provides long views to Terranora Broadwater, other green or landmark vistas, and provides for regular shaped lots.</p> <p>6. Road forms edge to natural and environmental protection areas - public interface to buffers and environmental protection areas, avoids rear of properties to these areas.</p> <p>7. BWP - public domain treatments, address pedestrian movement, efficient vehicle movement, establish key entry statement, journey to overall character/appearance Area E.</p> <p>8. Suitable locations and attractive bus shelter designs determined to encourage use.</p>	<p>The proposed road layout is generally consistent with the layout in the structure plan, with long roads following contours and short roads perpendicular. There are some variations to this layout (around roads in Stages 1, 2 and 3 in the eastern and Stages 8 and 9 in the west) which have been considered adequate by Council. A bus route has been provided, with bus stops, and future changes to the bus services in the area have been considered.</p> <p>The traffic study has demonstrated that the Fraser Drive entry can accommodate the full project without BWP and is therefore now a permanent access point. The majority of open space areas and environmental protection areas are bordered by roads, with the exception of lots 701, 711 and 925, which are medium density lots. It is considered that these proposed lots, with open form fencing, will not adversely impact on the use or visual amenity of the</p>	<p>Yes</p>

	public open space areas. This issue is further discussed in Section 5.3 of the report.		Yes
Design Principle 5: Open Space (CI 2.7)			
1. Structured open space.		There are no areas of structural open space planned for the site in the Structure Plan. Contributions in the VPA are proposed for such areas.	Yes
2. Large open space areas & smaller pocket parks (structure plan) - combination of active and embellished structured and casual open space including community gardens. Detail design (embellishments - lighting, paths, viewing platforms, furniture, landscaping, play equipment, shelters, bbqs.) with applications that include open space land.		A public domain plan was not provided with the application and is addressed in the conditions. In general, the public open space areas are provided in accordance with the structure plan with proposed embellishments shown in concept.	Yes (condition)
3. Integrate walking/cycling paths connecting key open space and environmental protection area.		Pathways are provided throughout the site, including within the road, through parks and drainage reserve.	Yes
4. Open space areas surrounded by a public interface (predominately roadways) and an adjacent ring of medium density development;		The majority of public open space is surrounded by roads.	Yes
5. Allocate areas for urban agriculture and community gardens.		Community gardens are not shown on the plans, but could be incorporated on Lots 610 and 712. Class 6 soils could be used.	(condition)
6. Adequately service proposals with structured open space.		A contribution for structured open space is provided in the VPA.	Yes
Design Principle 6: Dwelling and Allotment Mix (CI 2.8)			
1. Density Projection Plan with lots sizes - transition lots (>1,200m ²), large lots (> 800m ²), suburban blocks (450-1000m ²), small lots (<450m ²).		A density projection plan has been provided which is generally consistent with this DCP. There are some variations which are considered acceptable. This issue is further discussed in Section 5.4 of the report.	Yes
2. Satisfy density yield targets (Table 2.1), justify departures. Total - 363 lots			
- Transitional & large lot residential (Lots >800m ² or 1200m ² for Trans) - 47 lots			
- Suburban lot (Lots 450 - 800m ² - 1 dwelling/650m ² of site area) - 229			
- Small lot & medium density (Lots 250-450m ² , 333m ² of site area) - 55			
- Neighbourhood Planning Housing - 32			
3. Demonstrate dwelling type and likely structural system/s (nexus between slope, lot size and appropriate dwelling type).		A structural system plan has been provided and is further discussed in Section 5.1 and 5.4 of the report.	Yes
4. Allocation of transition lots (min lot size 1200m ²) to interface areas.		The lots proposed adjoining the existing large lot residential to the south along Market Pde and Parkes Lane are a minimum of 1200mm ² .	Yes
5. Any architectural guidelines must be consistent with objectives and design principles and development controls within Part 4 of B24 or provide justification for variations.		There are no architectural guidelines proposed for the project, Section A1 of the DCP will prevail.	Yes
Design Principle 7: Urban Design, Streetscape & Public Domain (CI 2.9)			
1. Prepare a public domain plan for the open space areas (embellishments).		A public domain plan has not been prepared, but	Yes

	forms a condition.	
Design Principle 8: Solar Orientation for Lots (CI 2.10)		
1. Demonstrate 75% of all new lots meet AMCORD optimum solar orientation guidelines (oriented between 20-30 degrees of N/S or E/W).	The proposed lots comply with this requirement. Only a single cul-de-sac is proposed within Stage 11 when BWP is constructed.	Yes
2. Avoid cul-de-sacs and road alignments which result in irregular shaped lots.		
Design Principle 9: Hazards and Resilience (CI 2.11)		
1. Required Asset Protection Zones within lot, not on public land (except roads).	APZs and a perimeter road have been provided, RFS satisfied. Flood planning level is RL 5.7m AHD, no development below this level.	Yes
Design Principle 10: Infrastructure (CI 2.12)		
1. Comply with Demand Management Strategy adopted by Council - minimum sized rainwater tanks connected roof areas, reduced infiltration gravity sewers.	Council satisfied subject to conditions/SOCs with respect to Lot 501.	Yes
2. Land affected by potential water infrastructure not for any other purpose.		
3. NBN CO's Specifications required.	Subject to conditions.	Yes
4. Demonstrate the presence of a lawful point of discharge.	This has been demonstrated.	Yes
Part 4 - Residential		
Cut and Fill (CI 4.2)		
1. Natural ground levels maintained except where land reforming necessary to allow building - excavation limited to width of building footprint (not width of site).	Natural landform generally retained.	Yes
2. On sloping sites excavations must not be made for contiguous slab on ground construction if lot has slope >6 degrees or 10%. Design on sloping sites should reference sloping design principles and sloping sites matrix.	There are some sites for slab-on-ground construction, which is acceptable.	Yes
3. Level change to be taken up within building design, rather than at property boundaries.	Level changes are largely within lots, not at side boundaries or the perimeter.	Yes (generally, subject to conditions)
4. All proposed site works (cut, fill, benching and retaining walls) documented.	All site works are documented in Annexure 11 of the PPR.	Yes
5. All excavation, cut and fill to comply with Section A1. Cut allowances may be increased to full level (2.7m) where design relates to slope (stepping slabs, drop edge beams, post & beam within building envelope).	The structural system plan generally demonstrates that compliance can be achieved.	Yes
6. Where cuts >1.0m should be retained and backfilled to wall of dwelling with retaining wall designed and constructed to specification of a certified structural engineer. Any cut and fill outside building envelope would be controlled by +/-1.0m control.	This will form a condition.	Yes
7. Site cut & fill within building envelope - obscured by cladding, screening, landscaping.	Assessed with future DA's for houses.	N/A
8. Where possible, use of stone found on site in retaining walls.	Assessed with future DA's for houses.	N/A

APPENDIX C SUMMARY OF SUBMISSIONS

Issue	Proportion of Submissions (%)
Adverse traffic impacts along Parkes Lane and Market Parade, all access should be to BWP	39.6% (19)
Density and lot sizes are out of character with the existing rural/residential neighbourhood, no integration with housing in Market Pde & Parkes Lane	37% (18)
The alignment, construction, timing and funding of BWP is unknown, which is required for access	37% (18)
Acoustic wall along Fraser Drive will result in adverse visual impact, view loss, and will increase noise impacts	20.8% (10)
Extensive landform changes and cut/fill, huge retaining walls, significant earthworks required to achieve flat lots, walls will block views and disregard for Council policy	27% (13)
The lack of an adopted DCP, needed to guide development for Area E, represents ad-hoc planning and is inconsistent with CI 53D of LEP	18.8% (9)
Stormwater concerns resulting from earthworks and managing stormwater discharge of into Trutes Bay, Terranora Broadwater and SEPP 14 wetland	12.5% (6)
No DCP variations for retaining walls, garage setbacks showed be allowed	10.4% (5)
Increased noise for existing residents (including construction noise)	10.4% (5)
Terranora Road and Fraser Drive need to be upgraded, increased traffic on these roads	8.3% (4)
Ecological disturbance to existing species on the site	8.3% (4)
Concerns with the lack of open space, adequacy and useability, lack of children's play areas	8.3% (4)
Temporary access point via a ROW to Fraser Drive is unsatisfactory as it will be the only access until Stage 5, conflicts with Parkes Lane	8.3% (4)
House designs without eaves do not represent an energy efficient design	8.3% (4)
The proposed community centre encourages exclusivity, with no use by existing residents	8.3% (4)
Sewer/water connection should be provided for adjoining properties	8.3% (4)
Adverse visual impact in the area due to the loss of rural outlook	8.3% (4)
Loss of property value due to traffic, noise and loss of rural views	6.25% (3)
Visual Impact Assessment inadequate	4.2% (2)
There is no public transport in the vicinity of the site	4.2% (2)
Road layout – should follow land contours, instead of up/down slope, a parallel feeder road may be preferred	4.2% (2)
The provision of other Infrastructure is unclear	2% (1)
The proposal is within a prolific mosquito breeding area and will increase exposure	2% (1)
Adverse privacy impacts for existing properties, garages abutting boundaries	2% (1)
Rainwater tanks too small, will be full most of the time due to high rainfall, double tank size needed	2% (1)
Parkes Lane located on a shared boundary should form part of common infrastructure as it also forms a key part of a transport link through to BWP	2% (1)
The use of greywater should be encouraged	2% (1)
Lack of adequate consultation with Aboriginal groups with respect to Cultural Heritage	2% (1)

APPENDIX D DETAILS OF PREFERRED PROJECT REPORT

CHANGES IN DRAFT PPR DATED APRIL 2013

- A reduction in the total number of lots to 263 (original proposal involved 321 lots).
- Deletion of the proposed temporary sales office/display home on proposed Lot 1103;
- Widening of the central drainage corridor;
- Relocation of the future Broadwater Parkway road reservation predominantly into the 2(c) zoned land (to be constructed by the Council in the future (contributions and land dedication in this project only);
- Relocation of the proposed extension of Parkes Lane such that the street is located on the common boundary of the Altitude Aspire site and adjoining Lot 1 DP 175234;
- Provision of a perimeter road on the eastern side of the central drainage corridor;
- Reconfiguration of the Community Association Lot and redesign of the proposed community recreation facility proposed for this lot;
- Increasing the size of the lots abutting Parkes Lane and Market Parade to provide transition lots from the adjoining larger rural residential lots along the southern boundary;
- Creation of medium density lots located at Lots 701, 711, 925 and 926;
- Reconfiguring and increasing casual open space areas;
- Reconfiguration of street layouts to achieve general consistency with Section B24, of Council's DCP in relation to road grades and widths, including connection to Parkes Lane and Market Parade;
- A reduction in landform alterations, minor alterations to lot types and provision of a structural systems analysis to match housing type to landform;
- Inclusion of landscaped buffers to Broadwater Parkway and Fraser Drive; and
- Revised plans and specialist reports as identified in the Annexures.

CHANGES IN FINAL PPR DATED AUGUST 2013

- Reduction in the total number of lots to 261 (from 321 Lots) ;
- Inclusion of proposed Lot 501 as a reservoir site;
- Reconfiguration of the proposed Lot 820 (now Lot 819) park to improve its shape and usability;
- Reconfiguration of proposed Lots 810, 811, 827 and 828 to provide lots of a regular size and configuration;
- Retention of Lot 701 (Medium density lot) with appropriate retaining walls, fencing and pathways to delineate the public/private interface as indicated on the amended Landscaping Plans;
- Nomination of potential dual occupancy allotments (24);
- Lot 610 dedicated as a drainage reserve rather than public reserve;
- Stage 11 deleted and included in Stage 1;
- Designation of the access road to Fraser Drive (Road 1) as a permanent secondary access point;
- Amended subdivision layout plans, landscape master plan, road hierarchy plan, ultimate earthworks phasing plan, cut and fill plans, density projection and structural systems plans, medium density plans and solar orientation plan and addendum to ecological report;
- Revised Statement of Commitments;
- Draft Voluntary Planning Agreement; and
- Revised Draft Community Management Statement.

APPENDIX E SATISFACTORY ARRANGEMENTS CERTIFICATE



Director-General's Certificate

Satisfactory Arrangements for the Provision of Infrastructure, Facilities and Services

In accordance with the provisions of Clause 53D(5) of the *Tweed Local Environmental Plan 2000*, I certify that satisfactory arrangements have been made to contribute to the provision of infrastructure, facilities and services referred to in subclause (2) (e)(i) to (iv) in relation to regional transport infrastructure, education, health and emergency services facilities and services provided by the State in respect to the following:-

- MP 09_0166 – Residential Subdivision at Lot 1 DP 169490, Lot 1 DP 175235, Lot 1 DP 304649, Lot 1 DP 781687, Lot 1 DP 781697, Lots 40 & 43 DP 254416 and Lot 2 DP 778727 Fraser Drive Terranora ('Altitude Aspire')

SHaddad

Sam Haddad
Director General

Date: 18 | 10 | 2013

APPENDIX F RECOMMENDED CONDITIONS OF APPROVAL
