



DARRYL ANDERSON CONSULTING PTY LTD

TOWN PLANNING & DEVELOPMENT CONSULTANTS

## **PART B**

### **MAJOR PROJECT APPLICATION NO. 08\_0234 CONCEPT PLAN**

**"RISE" BILAMBIL HEIGHTS  
TWEED SHIRE LOCAL GOVERNMENT AREA**



**PREPARED FOR:**

TERRANORA GROUP MANAGEMENT PTY LTD

**PREPARED BY:**

DARRYL ANDERSON CONSULTING PTY LTD

**JULY 2009**

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TOWN PLANNING & DEVELOPMENT CONSULTANTS

29 April 2009

Our Ref: TGM 04/66 Pt 8

Director General  
Department of Planning  
23 - 33 Bridge Street  
Sydney NSW 2000


Dear Sir

**Major Project Application No. 08-0234, RISE Concept Plan**

I certify that I have prepared the content of this Environmental Assessment and to the best of my knowledge:

- It is in accordance with the Environmental Planning and Assessment Act and Regulation.
- It is true in all material particulars and does not, by its presentation or omission of information, materially mislead.

Yours faithfully  
Darryl Anderson Consulting Pty Ltd



Darryl Anderson  
Director

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## DRAFT CONCEPT PLAN

### "RISE" BILAMBIL HEIGHTS – TWEED LOCAL GOVERNMENT AREA

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#### EXECUTIVE SUMMARY

The RISE site comprises a total of approximately 187 hectares of land and is located within the Bilambil Heights Urban Release Area, approximately six kilometres west of Tweed Heads. Access to the site is provided by Marana Street off Scenic Drive and Cobaki Road via Piggabeen with distributor road connections to the Pacific Highway via Kennedy Drive to the east.

The capital investment value of the project has been determined at \$141,518,631.

In summary, the Concept Plan proposes 1804 residential dwelling lots including 181 residential lots, 70 hillside housing homes, 160 resort apartments, 36 penthouses, 367 apartments, 176 villas and townhouses, 16 art shop houses (SOHO units), 100 retirement cottages, 486 retirement apartments, 12 retirement villas and a nursing home with 200 beds. It will also include a number of retail and community facilities including a supermarket, restaurants and retail space. Approval pursuant to Section 75O of the Environmental Planning and Assessment Act is sought for the components identified in the following table.

TABLE 1 – PROJECT SUMMARY	
COMPONENT	ANNEXURE
Land use consent for each precinct.	9
Proposed densities and yields in each precinct based on a subdivision under the Community Land Management Act.	9
General built form for the proposed buildings.	9
Proposed building heights.	8 & 9
Proposed first stage subdivision to create Lots 934 to 938.	10
Construction of all proposed roads including the Spine Road from Marana Street to Cobaki Road.	20
Construction of reticulated water and sewer including offsite works.	20
Construction of underground power and telephone infrastructure.	20
Upgrading of Cobaki Road from the Spine Road to Cobaki Parkway.	20
Upgrading of Marana Street.	20
Installation of traffic signals at Scenic Drive and McAllisters Road.	17
Bulk earthworks.	20
Vegetation rehabilitation.	16
Construction of all stormwater drainage and stormwater management infrastructure.	20 & 22
Construction of proposed sports park.	9

Following approval of the Concept Plan, Development Applications will be lodged for the various components. The Concept Plan contains sufficient details to ensure that it can be implemented by way of development consents.

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It is intended to undertake the development by way of a Community Title Subdivision with all open space and roads being community property with the exception of the Spine Road and the two public roads providing access to the adjoining Urban zoned land. The proposed active open space (Sports Park) area between Cobaki Creek and Cobaki Road will be dedicated to Tweed Shire Council as public open space and appropriately embellished.

The Concept Plan applies to that part of the site indicated on the plan showing Concept Plan boundaries as agreed by the Minister (**Annexure 2**) plus the full length of the Spine Road and any infrastructure located in the balance "Future Stage 2" land area required to support the Concept Plan.

Key issues relating to the Concept Plan include the timely and equitable provision of infrastructure including water supply, sewerage and road access. In this regard, sufficient capacity exists in the existing road and services network for the early stages of the development, however augmentation is proposed in respect of both water and sewer services to facilitate the latter stages. In addition, construction of the Spine Road, upgrading of Cobaki Road and construction of the Cobaki Parkway link from Piggabeen Road to Boyd Street Queensland will be required to facilitate the total project.

A detailed Ecological Analysis has been undertaken to identify the location of threatened species of flora and fauna and the urban footprint has been defined having regard to the constraints identified in that assessment and also having regard to the topographic features of the site, land slopes and visual issues.

The Concept Plan is consistent with the Far North Coast Regional Strategy and the recommendations in the State Significant Site Study, including alterations to the current statutory three storey building height limit to enable buildings up to eight stories to be approved, as proposed in the Concept Plan. The development will have significant social and economic benefits for the Tweed Shire in particular and the region in general including the creation of 1351 employment positions and an annual injection into the local economy of approximately \$134 million.

The project will also assist in delivering up to 1804 dwellings to meet the demand identified in the Far North Coast Regional Strategy of 19100 dwellings within the Tweed Shire by 2031.

The project will also facilitate development of other land within the Bilambil Heights Urban Release Area by providing the necessary infrastructure, particularly relating to road networks, water and sewer services.

In summary, the Concept Plan is consistent with the recommended zoning outcomes contained in the State Significant Site Study and is also consistent with the Far North Coast Regional Strategy, Tweed Shire Council's Development Strategies, contemporary urban design principles and urban consolidation objectives.

On 5 February 2009 the Department of Planning provided the Director General's Environmental Assessment Requirements for the RISE Concept Plan, together with advice in relation to the matters to be addressed in the State Significant Site Study for inclusion of RISE in Schedule 3 of the Major Projects State Environmental Planning Policy including appropriate zonings.

This Concept Plan Report forms Part B of the overall report with Part A comprising the State Significant Site Study.

The Concept Plan has been prepared based on a detailed analysis of the site's key opportunities and constraints and having regard to the Director General's Environmental Assessment Requirements.

The Concept Plan delivers positive urban design outcomes and provides a range of housing choices and approval of the Plan is considered to be consistent with the public interest.

Development Consent No. 96/519 for an integrated tourist resort remains in force over the subject site as does Development Consent No. DA05/1351 for a 76 lot residential subdivision over that part of the site adjoining Marana Street. It is intended that these consents would be surrendered following approval of the Concept Plan and subsequent Development Applications.

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**Annexure 1** shows the location of the RISE site in relation to the New South Wales/Queensland Border and the coastal city of Tweed Heads.

## **1.0 INTRODUCTION**

In August 2006 Darryl Anderson Consulting Pty Ltd prepared a State Significant Site Submission in respect of the Pacific Highlands Estate, as it was then known (now known as RISE). The Submission was lodged with the Department of Planning in August 2006. Following discussions with the Minister for Planning and officers of the Department of Planning, the State Significant Site Submission was amended (August 2007) such that the whole of the development shown on the Draft Structure Plan and the Proposed Zoning Map, is within the existing urban footprint identified within the Far North Coast Regional Strategy (except for the proposed Sports Park).

On 6 November 2008, the Department of Planning advised that the Minister will deal with rezoning and development of the site as a State Significant Site and the Minister has also authorised the preparation of a Concept Plan.

A plan showing the Concept Plan boundaries as agreed to by the Minister is contained at **Annexure 2**.

On 5 February 2009, the Department of Planning provided the Director General's Environmental Assessment Requirements for the RISE Concept Plan and also provided the following advice in relation to listing the site as a State Significant Site in Schedule 3 of State Environmental Planning Policy (Major Projects):

*"In considering whether to include the site in Schedule 3 of the Major Projects SEPP, the Minister has requested that the Director General make arrangements for a State Significant site study to be undertaken (by the proponent) that will assess:*

- a. the State or regional planning significance of the site (having regard to the 'Guideline – State Significant Sites');*
- b. the suitability of the site for any proposed land use taking into consideration environmental, social or economic factors, the principles of ecologically sustainable development and any State or regional planning strategy;*
- c. the implications of any proposed land use for local and regional land use, infrastructure, service delivery and natural resource planning;*
- d. the likelihood of the proposed rezoning for residential and employment purposes achieving the desired outcomes of the State Government's draft and adopted regional and sub-regional strategies;*
- e. the recommended land uses and development controls for the site that should be included in Schedule 3 including zones (Standard Instrument zones) and provisions for height, FSR (or other density controls), and heritage-listings. Maps related to these provisions should also be provided;*

*The Department has reviewed the State Significant site study dated August 2007. It is recommended that the study be revised to more concisely cover the matters listed in this letter and be consistent with your Concept Plan proposal (e.g. in terms of the land covered and proposed uses etc). A combined report can be submitted for the application but it should be structured with separate sections clearly dealing with the State Significant site listing and the Environmental Assessment for the Concept Plan."*

This State Significant Site Study assesses items (a) to (e) above and is intended to facilitate rezoning of the site by way of a Listing in Schedule 3 of State Environmental Planning Policy (Major Projects). The Study comprises Part A of this Report. Part B of the Report comprises the Concept Plan.

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The Director General's Environmental Assessment Requirements are reproduced in **Table 2** indicating where each issue is addressed in this Report.

<b>TABLE 2 – DIRECTOR GENERAL'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS</b>	
<b>REQUIREMENT</b>	<b>SECTION</b>
<b>General Requirements</b>	
The Environmental Assessment (EA) for the Project Application must include:	
1. An executive summary;	Page 6
2. An detailed description of the project including the: <ul style="list-style-type: none"> <li>(a) strategic justification for the project;</li> <li>(b) alternatives considered; and</li> <li>(c) various components and stages of the project in detail (and should include infrastructure staging);</li> </ul>	Section 3.0
(3) A consideration of the following with any variations to be justified: <ul style="list-style-type: none"> <li>(a) all relevant State Environmental Planning Policies,</li> <li>(b) all applicable planning instruments, including relevant Council LEP and DCP instruments, and</li> <li>(c) relevant legislation and policies, including the <i>Far North Coast Regional Strategy</i>.</li> </ul>	Section 4.0
(4) A draft Statement of Commitments, outlining commitments to the project's management, mitigation and monitoring measures with a clear identification of who is responsible for these measures;	Section 20.0
(5) A detailed conclusion justifying the project, taking into consideration the environmental impacts of the proposal, mitigation measures to address these impacts, the cumulative impacts of the proposal, the suitability of the site, and whether or not the project is in the public interest;	Section 21.0
(6) Identify the development contributions applicable to the site and, if relevant, and any public benefits to be provided with the development, consistent with any development contributions plans prepared to date;	Section 15.0
(7) A signed statement from the author of the EA certifying that the information contained in the report is neither false nor misleading; and	Page 5
(8) A report from a quantity surveyor identifying the correct capital investment value for the concept plan.	Section 4.7
The EA must address the following key issues:	
<b>1. Urban Design and Built Form</b>	Section 5.0
(1) Demonstrate that the type, bulk, scale, size and design quality controls for future development, including road layouts, building style, building heights, and landscaping on the site will be able to respond to the location and sub-region appropriately.	
(2) Provide suggested new controls and urban design guidelines to regulate the development, including development controls and management arrangements.	
(3) Undertake a site analysis that identifies the relevant natural and built environmental features. The site analysis should form the basis for justifying the configuration of the development of the land and the mix of land uses.	
(4) Visual analysis of the proposal, including but not limited to projected view analysis, photomontages (local and context) with particular attention to development on the hilltop.	
(5) Strategic context and justification in terms of market demand including analysis of design with regard to the target market of proposed product.	

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TABLE 2 – DIRECTOR GENERAL'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS	
REQUIREMENT	SECTION
(6) Proposed staging and timing of the development.	
<b>2. Biodiversity and Threatened Species</b>	Section 6.0
(1) Address the impact of the development on existing native flora and fauna and their habitats, including identified threatened species, having regard to the Threatened Species Assessment Guidelines and recommend offset measures to avoid or mitigate impacts on threatened species and their habitat.	
(2) Address the Management of threatened species and natural open space areas.	
(3) Assess impacts of native vegetation clearing and provide details of any offset strategy or suitable mitigation measures.	
(4) Outline the management arrangements for ongoing control of weeds and pests.	
(5) Discuss as relevant the development of ecological corridors to link flora and fauna corridors both on and adjoining the site, as well as ecological buffers between land uses such as asset protection zones.	
(6) Assess any potential impact on surrounding waterways in terms of water quality and aquatic ecosystems. This should include but not be limited to: (a) Onsite pollution such as accidental spills and sewer overflows; (b) Stormwater management and treatment; (c) Risks such as weed invasion, encroachment and litter; and (d) Vegetated buffer zones.	
(7) Detailed plan for the control of environmental weeds and pest animal species.	
<b>3. Traffic and Transport</b>	Section 7.0
(1) Prepare a Traffic Management Plan that considers the traffic constraints of the site and surrounding locality	
(2) Prepare a Traffic Study in accordance with RTA's <i>Guide Traffic Generating Developments</i> that satisfactorily address:  (a) Impacts of the proposal on regional and local road networks; (b) Opportunities to minimise traffic on sensitive road frontages; (c) Proposed access and circulation; (d) Efficiency of emergency vehicle access/egress; (e) Proposed access from the wider road network as well the opportunities and constraints of alternative vehicular access points; (f) Proposed pedestrian and cycle access within and to the site that connects to all relevant transport services and key off-site locations and measures to promote the use of these; (g) Consideration of the capacity, limitations and constraints of the road network including the Kennedy Drive and Pacific Highway interchange and the Cobaki Parkway; (h) Consideration of traffic implications from a wider network perspective including history of current developer agreements for the provision and timing of roadworks and their relationship with the development of RISE Estate.	
(2) Identify package of public transport measures to support the proposed development and suggest appropriate funding mechanisms.	
(3) Provide a road network plan identifying the proposed road hierarchy including cycleways, footpaths and car parking. Plan should identify public, private roads and typical cross sections and long sections.	

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TABLE 2 – DIRECTOR GENERAL'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS	
REQUIREMENT	SECTION
<b>4. Heritage</b>	Section 8.0
(1) Identify and assess the impacts of the proposal on any item of heritage significance.	
(2) The EA is to address the requirements set out in the draft <i>"Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation"</i> .	
<b>5. Utilities and Infrastructure</b>	Section 9.0
(1) Prepare a utility and infrastructure servicing report and plan for the site that includes (but is not limited to):	
(a) Identification and assessment of the capacity of existing utility and infrastructure servicing the site,	
(b) Identification and assessment of all necessary augmentation works to service the site and whether these works can sustain this and other development foreshadowed for the Bilambil release area,	
(c) How infrastructure will be managed by each stage of development.	
(2) Preparation of a Concept Stormwater Management Plan that outlines general measures for stormwater and effluent management in relation to climate, topography, soil types and local geology and identify potential risk issues. Measures to be incorporated on site, include (but not limited to) on site stormwater detention, water sensitive urban design measures, the impact on the quality of surface water and groundwater.	
(3) Identify the proposed sources of water supply for the development including any reliance on groundwater or local catchments including addressing water sustainability and efficiency principles.	
(4) Identify any risks of groundwater depletion or water table rise.	
<b>6. Ecologically Sustainable Development</b>	Section 10.0
Demonstrate how the development will commit to ESD principles in design, construction and ongoing operation phases.	
<b>7. Open Space and Community Facilities</b>	Section 11.0
Details of the proposed open space and community facilities and the ongoing maintenance of open space and such facilities. Provide details of any arrangements with Council for public use of such facilities.	
<b>8. Ownership and Management</b>	Section 12.0
Identify the proposed ownership and titling arrangements for each of the proposed land uses.	
<b>9. Bushfire</b>	Section 13.0
(1) Demonstrate compliance with the current version of <i>Planning for Bush Fire Protection</i> and <i>Australian Standard 3959 (Building in Bush Fire Prone Areas)</i> . The EA is to identify the ongoing management arrangements of any proposed APZs.	
(2) Provide a plan of management for any areas of hazard including maintenance of APZs.	
<b>10. Flooding</b>	Section 14.0
Assessment of any flood risk for the site should be conducted in accordance with the NSW Government's Flood Prone Land Policy as set out in the Floodplain Development Manual, 2005.	
<b>11. Planning Agreements and/or Developer Contributions</b>	Section 15.0
The environmental assessment should identify and address the additional demand created by the development on existing public facilities. The likely scope of any planning agreement and/or developer contributions between the proponent, Council and other agencies are to be detailed.	
<b>12. Site Preparation Works</b>	Section 16.0
(1) Provide a report that includes (but is not limited to):	

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TABLE 2 – DIRECTOR GENERAL'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS	
REQUIREMENT	SECTION
(a) a detailed survey showing existing and proposed levels and proposed quantities of cut and fill necessary for site preparation works, and  (b) details on the source of fill including types of materials and their source.	
(2) A geotechnical study to identify any constraints on the site including slope analysis.	
(3) Provide a preliminary Erosion and Sediment Control Plan.	
(4) Provide a contaminated land report that identifies and assesses any land contamination.	
<b>13. Subdivision</b>	Section 17.0
(1) Provide proposed plans of subdivision that identify all covenants, easements and notations proposed for each land title and, if relevant, how the subdivision is to be staged.	
(2) Provide a staging Plan that identifies the staging of the development and demonstrates how each precinct will be developed in a coordinated manner	
(3) Outline the long-term management and maintenance of any areas of open space or conservation, including the ownership and control, management and maintenance of funding public access revegetation and rehabilitation works and bushfire management.	
<b>15. Agriculture</b>	Section 18.0
(1) Consider potential impacts of the proposal on existing agriculture in the area.	
(2) Monitoring of the quality and volumes of any discharged water to ensure no reduction in quality and quantity to downstream agricultural users of the water.	
(3) Demonstrate consistency with requirements of the Northern Rivers Catchment Action Plan ( <a href="http://www.northern.cma.nsw.gov.au/region_catchment_action_plan.php">http://www.northern.cma.nsw.gov.au/region_catchment_action_plan.php</a> ).	
<b>Consultation Requirements</b>	Section 19.0
An appropriate and justified level of consultation should be undertaken with the following relevant parties during the preparation of the environmental assessment, having regard to any previous consultation:	
<i>(a) Agencies or other authorities</i>	
<ul style="list-style-type: none"> <li>• Tweed Shire Council;</li> <li>• Department of Water and Energy;</li> <li>• Department of Primary Industries;</li> <li>• Department of Environment and Climate Change;</li> <li>• Roads and Traffic Authority;</li> <li>• NSW Ministry of Transport;</li> <li>• Northern Rivers Catchment Management Authority;</li> <li>• NSW Emergency Service agencies, namely NSW Rural Fire Service, NSW Police Department, the Ambulance Service of NSW, the State Emergency Service; and</li> <li>• All utility providers.</li> </ul>	
<i>b) Adjoining Landowners</i>  Consultation with adjoining landowners is to be undertaken to discuss and address, where appropriate, the cumulative impact of new development upon the existing township including potential impacts upon existing and proposed regional and local infrastructure.	

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TABLE 2 – DIRECTOR GENERAL'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS	
REQUIREMENT	SECTION
(c) <i>Public</i>  Document all community consultation undertaken to date or discuss the proposed strategy for undertaking community consultation. This should include any contingencies for addressing any issues arising from the community consultation and an effective communications strategy.	
The consultation process and the issues raised should be described in the Environmental Assessment.	

## 2.0 PROJECT TEAM

Terranora Group Management Pty Ltd, the owner of the subject land, has instructed Darryl Anderson Consulting Pty Ltd in conjunction with the owner's Development Manager Steve MacRae Development Services to compile this Concept Plan in accordance with Part 3A of the Environmental Planning and Assessment Act, 1979 as amended in respect of the mixed residential, commercial and tourist community known as "RISE".

The Project Team appointed by Terranora Group Management comprises:

TABLE 3 – PROJECT TEAM		
Godfrey Mantle	Director Terranora Group Management Pty Ltd	Project Director and Owner
Steve Macrae	Director Steve Macrae Development Services Pty Ltd	Project Development Manager
Darryl Anderson	Darryl Anderson Consulting Pty Ltd	Statutory and Strategic Planning
Brian Toyota Graham Theideke	ML Design	Urban Design, Master Planning and Architecture
Adrian Day	Michel Group Surveyors	Surveying and Mapping
Keith Vinnicombe	VKL Pty Ltd	Engineering
Luke Rytenskild	CRG Pty Ltd	Traffic
Warren Barfett	EMF Griffith	Energy and Communications
Richard Moore	Green Globe / Earthcheck / EC3	Sustainability
Neil Sutherland Allan Genn	Gilbert and Sutherland	Environmental, Stormwater, Flooding, Rural Buffers and Contamination
James Warren	James Warren and Associates	Flora and Fauna
Robbie Marshall John Delaney	Cardno	Bushfire
Will Owen	Conics	Residential and Retail Assessment
Richard Anderson	LVO	Visual Impact Assessment
Tom Senti	TEDC	Social and Economic Impact Analysis
Jeremy Scott	Promedia	Community Consultation
Dr's Richard and Tim Robbins	Everick Consultants	Cultural Heritage Assessment

## 3.0 DETAILED DESCRIPTION OF THE PROJECT

### 3.1 Site Details and Project Description

RISE is located within the Bilambil Heights Urban Release Area within the Tweed Local Government Area. The site is located approximately 6km west of Tweed Heads and is accessed via Scenic Drive, Marana Street and Cobaki Road.

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The subject land comprises 187 hectares in varying zonings and includes an approved tourist resort and 76 lot subdivision. It is approximately six kilometres west of Tweed Heads and approximately six kilometres south of the New South Wales/Queensland state border. Elevations of the land range from approximately RL 3m AHD towards its northern boundary to approximately RL 216m AHD in the middle of the site and 180m ADH towards its southern boundary, adjacent to Marana Street.

The land has frontage to and access from Marana Street at its south eastern corner. Marana Street links to Scenic Drive which is a major distributor road connection to Tweed Heads in the east.

In the north, the property has frontage to Cobaki Road which is also a major road connection to Kennedy Drive and Tweed Heads and ultimately, via Piggabeen Road and the proposed Cobaki Parkway, to the Tugun Bypass at the proposed Boyd Street interchange. The connection from Piggabeen Road to the Boyd Street interchange through the Cobaki Lakes development has been partially constructed.

The following table describes the various lots to which this Concept Plan will apply:

<b>TABLE 4 – PROPERTY DESCRIPTION</b>			
<b>LOT NUMBER</b>	<b>DP NUMBER</b>	<b>AREA (HA)</b>	<b>OWNER</b>
32 & 33	DP 1085109	69.24	Terranora Group Management Pty Ltd
31	DP 850230	0.148	Terranora Group Management Pty Ltd
2	DP 867486	115.1	Terranora Group Management Pty Ltd
4	DP 822786	0.0103	Terranora Group Management Pty Ltd
1	DP 1033807	0.3579	Tweed Shire Council (closed road)
1	DP 1033810	2.025	Tweed Shire Council (closed road)
1	DP 595529	0.0772	Tweed Shire Council (water reservoir)
Crown road separating: Lot 2 Lot 33 Lot 2	DP 867486 DP 1085109 DP 555026	0.4264	Department of Lands
<b>TOTAL AREA</b>		<b>187.3848</b>	

An application to close and purchase the Crown Road reserve is currently being processed by the Department of Lands. Agreement has been reached between Terranora Group Management Pty Ltd and the owner of the adjoining Lot 2 DP 555026 to purchase equal areas of the road reserve on a longitudinal axis (see **Annexure 31**).

In correspondence dated 17 April 2009 the Department of Lands wrote to Terranora Group Management Pty Ltd offering to sell the closed road (see **Annexure 31**) the Department's offer has been accepted by Terranora Group Management.

The Recommended Zoning Plan and Concept Plan accommodate the longitudinal split.

Following investigations in relation to the site's geophysical and biophysical constraints and opportunities, a Draft Structure Plan has been prepared for the site. A copy of the Draft Structure Plan is contained at Page 22 of **Annexure 9**. The Draft Structure Plan indicates the proposed precincts within the existing urban footprint identified in the Far North Coast Regional Strategy 2006 – 2031.

The following table summarises the key elements of the Structure Plan (Note: each Precinct in the table is colour coded to the Structure Plan Precincts at Page 21 of **Annexure 9**).

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TABLE 5 – PRODUCT SUMMARY			
Precinct.	Product.	Number.	Description / Av GBA / Av GLA / Av GSA.
A-1	Community Hall.	1	500 GBA.
A-2	Village supermarket.	1	1200 GLA.
A-3	Village Shopping Centre.	1	600 GLA.
A-4	Boutique Hotel apartments.	160	Apartments.
A-5	Tavern.	1	600 GLA.
A-6	Hospitality Training School.	1	700 GLA.
A-7	Local Business Suites & Retail.	1	3700 GLA.
A-8	Medium Rise Apartments.	38	4 Storey apartment building.
A-9	Medium Rise Apartments.	23	5 Storey apartment building (retail on GF).
A-10	Medium Rise Apartments.	36	6 Storey apartment building (retail on GF).
A-11	Child Care.	1	400 GLA
A-12	Private community Club building.	1	350 GBA.
A-13	Private community lap pool.	1	25m lap pool.
A-14	Private community Tennis court.	1	Court with pavillion.
B-1	Retirement Living.	15	Cottages.
B-2	Retirement Living.	180	3 Storey apartments.
B-3	Retirement Living Club building.	1	800 GBA.
C	Council Regional Water Reservoir		Land transferred to council.
D-1	Res A Housing Lots.	80	575 GSA
D-2	2 / 3 storey Townhouses.	40	3 bed / 2 car Townhouses.
E-1	Res A Housing Lots.	24	650 GSA
E-2	3 Storey Boulevard Villas.	45	3 bed / media / study / 2 car Townhouses.
E-3	3 Storey Townhouses.	6	3 bed / media / study / 2 car Townhouses.
F	Nursing Home Land.	1	3 storey 200 bed Nursing Home site.
G-1	Retirement Living.	25	Cottages.
G-2	Retirement Living.	162	3 Storey apartments.
G-3	Retirement Living.	12	2 storey villas.
G-4	Retirement Living Club building.	1	800 GBA.
H-1	Res A Housing Lots.	34	650 GSA
H-2	Hillside Housing Lots.	2	650 GSA
I	Private School.	1	Land Area.
J	2 & 3 Storey Townhouses.	36	3 bed / study / 2 car Townhouses.
K	Council Regional Water Reservoir		Land transferred to council.
L-1	Hilltop Plaza Penthouses.	5	Penthouse apartments.
L-2	Hilltop Plaza Sub Penthouses.	31	Sub- Penthouse apartments.
L-3	Hilltop Plaza apartments.	12	Lower level apartments.
L-4	Hilltop Plaza apartment facilities.	1	780 GBA
L-5	Hilltop Plaza retail / restaurants/ studios/ art school.	1	1,472 GLA
L-6	Retail art shop houses (Soho units).	8	South side of Ridge.
L-7	Art studios & shops.	8	As above, Ground floor, with units over.
L-8	Art house apartments.	16	North side, 2 storey apartments over art shops.
L-9	Art Facility / café building.	1	200 GLA
L-10	Hill top apartments ( Nth Ridge).	137	Up to 6 storey over basement.
L-11	Hill top apartments ( Nth Ridge).	28	2 storey flanking basement.
L-12	Health Spa.	1	600 GLA.
L-13	Hillside Housing Lots.	30	600 GSA
L-14	Res A Housing Lots.	15	575 GSA
L-15	3 storey Boulevard Villas.	17	3 bed / study / 2 car Townhouses.

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TABLE 5 – PRODUCT SUMMARY			
Precinct.	Product.	Number.	Description / Av GBA / Av GLA / Av GSA.
M-1	Retirement Living.	60	Cottages.
M-2	Retirement Living.	144	3 Storey apartments.
M-3	Retirement Living Club.	1	800
N-1	Res A housing Lots.	28	600 GSA
N-2	Villas.	32	3 bed / 2 - 3 Storey Villas.
N-3	Retail shops.	1	375 GLA
N-4	Hillside Housing Lots.	11	650 GSA
N-5	Midrise Apartments.	70	3 storey apartments over basement.
N-6	Midrise Apartments.	7	2 to 3 storey apartments flanking basement.
N-7	Private community Club building.	1	350 GBA.
N-7	Private community lap pool.	1	25m lap pool.
N-7	Private community Tennis court.	1	Court with pavillion.
O-1	Hillside Housing Lots.	27	650 GSA
U	Sports Fields.	1	Public Sports Field land and amenities.
Product mix summary.			
Residential Lots.		181	
Hillside Housing Lots.		70	
Hotel apartments.		160	
Penthouses.		36	
Apartments.		367	
Villas & Townhouses.		176	
Art shop houses ( Soho units).		16	
Retirement cottages.		100	
Retirement apartments.		486	
Retirement villas.		12	
Nursing beds.		200	
School area.		1	
Retail space ( Inc tavern ) GLA.		4,447	
Commercial space GLA.		5,300	
Health Spa GLA.		600	
Total residential dwellings.		846	ABBREVIATIONS:  GFA – Gross Floor Area GLA – Gross Leasable Area
Total Including Hotel units.		1,006	
Total Retirement dwellings.		598	
Total Nursing beds.		200	
		1,804	
Total commercial / retail GLA.		10,347	

The first stage of the Concept Plan involves a conventional land subdivision to create five lots as summarised in **Table 6**. The Plan of Subdivision is contained at **Annexure 10**.

TABLE 6 – FIRST STAGE SUBDIVISION		
LOT NO.	AREA	PROPOSED USE
934	4717m <sup>2</sup>	Low Level Reservoir
935	2407m <sup>2</sup>	Expanded High Level Reservoir
936	117.38ha	Future Urban Footprint for development of the various Precincts
937	66.8ha	Residue Stage 2 lot
938	4.513ha	Proposed Unstructured Open Space

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The Concept Plan involves subdivision of the land under the Community Land Development Act (Community Title) to create the various master lots and individual lots. All streets, parks and infrastructure will be Association Property (ie. Common Property) with the exception of the main Spine Road, linking Marana Street to Cobaki Road, and two roads that provide access from the Spine Road to the adjoining Urban zoned property Lot 2 DP555026, which will be public roads under the care, control and management of Tweed Shire Council.

The Concept Plan also includes the construction of buildings and infrastructure in each Precinct. Separate development applications will be lodged for each subdivision and building after approval of the Concept Plan.

Approval pursuant to Section 75O of the Environmental Planning and Assessment Act is sought for the components identified in the following table.

<b>TABLE 7 – PROJECT SUMMARY</b>	
<b>COMPONENT</b>	<b>ANNEXURE</b>
Land use consent for each precinct.	9
Proposed densities and yields in each precinct based on a subdivision under the Community Land Management Act.	9
General built form for the proposed buildings.	9
Proposed building heights.	8 & 9
Proposed first stage subdivision to create Lots 934 to 938.	10
Construction of all proposed roads including the Spine Road from Marana Street to Cobaki Road.	20
Construction of reticulated water and sewer including offsite works.	20
Construction of underground power and telephone infrastructure.	20
Upgrading of Cobaki Road from the Spine Road to Cobaki Parkway.	20
Upgrading of Marana Street.	20
Installation of traffic signals at Scenic Drive and McAllisters Road.	17
Bulk earthworks.	20
Vegetation rehabilitation.	16
Construction of all stormwater drainage and stormwater management infrastructure.	20 & 22
Construction of proposed sports park.	9

Following approval of the Concept Plan, Development Applications will be lodged for the various components. The Concept Plan contains sufficient details to ensure that it can be implemented by way of development consents.

### **3.2 Strategic Justification for the Project**

The Bilambil Heights Urban Release Area, of which the RISE site forms part, was identified in Tweed Shire Council's Residential Development Strategy in 1991 as an "existing urban area". That Strategy was endorsed by the Director General of the Department of Planning in accordance with Clause 38 of the North Coast Regional Environmental Plan, 1988.

Subsequently, the North Coast Urban Planning Strategy (Department of Planning, 1995) identified the Bilambil Heights Urban Release Area as a "committed urban area".

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More recently, the Far North Coast Regional Strategy 2006 – 2031, which was adopted by the Minister for Planning on 17 January 2007, identifies that part of the RISE site to which this Concept Plan relates (other than the Sports Park) as either within the "existing urban footprint" or as a "new release area".

On 17 December 1996, Tweed Shire Council adopted the Tweed Development Program. The Program documents the key strategic infrastructure required to serve the projected population to 2030 and co-ordinates the long term financing of key infrastructure with the release of land for urban development. Funding for much of the key infrastructure is sourced from developer contributions in accordance with various Section 94 Contribution Plans and Section 64 Water and Sewer Headworks Plans. Details of all current contribution plans are contained in Section 4.6.

The Bilambil Heights Urban Release Area has been zoned for urban purposes since approximately 1991, however because of the fragmented land ownership and infrastructure capacity constraints, the Release Area has not been developed, notwithstanding that Council has provided some key strategic infrastructure to service the area including:

- ♦ Additional treatment capacity at the Banora Point Sewerage Treatment Works.
- ♦ Additional capacity in the Kennedy Drive Sewer Rising Main.
- ♦ Additional capacity in the Murwillumbah Water Treatment Plant.
- ♦ Construction of the Piggabeen Road Deviation from Caramar Drive to Anconia Avenue.
- ♦ Funding of the Boyd Street (Tugun) Overpass over the Tugun Bypass (Pacific Highway).

Development of the RISE site, which is located on the western edge of the Bilambil Heights Urban Release Area, could be construed as being "*out of sequence development*" as the land to the east has not been developed. However, because the RISE site is the largest single parcel in the Release Area and because of fragmented ownership and numerous small allotments throughout the Release Area, development of the RISE site prior to the other sites to the east will enable key infrastructure to be provided which will ultimately benefit all other landowners within the Release Area.

In summary, as the site has been identified in three Urban Release Strategies and given that development of the site will facilitate development of other land by providing key infrastructure, it is concluded that the project is justified strategically.

### **3.3 Far North Coast Regional Strategy 2006 - 2031**

On 17 January 2007, the Far North Coast Regional Strategy was adopted by the Minister for Planning. The purpose of the Regional Strategy is to manage the region's expected high growth rate in a sustainable manner. The Regional Strategy will protect the unique environmental assets, cultural values and natural resources of the region while ensuring the future planning maintains the character of the region and provides for economic opportunities. In addition, future growth will be managed by preventing the spread of coastal development and encouraging the development of non-coastal centres – ensuring adequate land is available and appropriately located to sustainably accommodate the projected housing, employment and environmental needs of the region's population over the next 25 years.

The Regional Strategy identifies and promotes a settlement pattern that protects environmental values and natural resources while utilising and developing the existing network of major urban centres, reinforcing village character and requiring efficient use of existing services and major transport routes.

To accommodate the additional 60400 people anticipated to be living in the region by 2031, the Regional Strategy has set individual dwelling targets for each Local Government Area.

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The Strategy aims to achieve a more appropriate mix for future housing that reflects the region's changing housing needs (ie. 60% single dwellings and 40% multi unit) for the 51000 proposed dwellings within the town and village growth boundaries by 2031.

The Strategy indicates that in the Tweed Local Government Area there were 34650 dwellings existing in 2006 and an additional 19100 dwellings will be required by 2031 to accommodate the expected population growth.

As indicated on **Annexures 2 and 7**, the area proposed to be zoned R1 General Residential is consistent with the existing urban footprint shown on Sheet 1 of the adopted Far North Coast Regional Strategy.

Rezoning of the site as recommended in the State Significant Site Study and development of the site as proposed in the Concept Plan would be consistent with the settlement and housing provisions of the Far North Coast Regional Strategy in that it will provide approximately up to 1804 "dwellings" in a range of housing types to assist in meeting the identified demand for an additional 19100 dwellings within the Tweed Local Government area by 2031.

### 3.4 Demographics

The Tweed Shire has experienced a strong growth rate over the past fifteen years with the resident population increasing from 55953 persons in 1991 to 79321 persons in 2006. This represents an average annual growth rate of approximately 2.7% per annum. Population growth data for the Tweed Shire is summarised in **Table 8**.

TABLE 8 - TWEED SHIRE POPULATION GROWTH 1991 - 2006							
POPULATION					SHIRE WIDE AVERAGE GROWTH		
	1991	1996	2001	2006	1991-1996	1996-2001	2001-2006
Total	55953	63607	71618	79321	7654 (2.7%)	8011 (2.5%)	7703 (2.1%)

Source ABS

The annual growth rate is decreasing over time. This reflects the fact that the Tweed population is ageing and that most of the growth is from in migration. In the future the annual growth rate is likely to reduce slightly as the base population increases and the amount of in migration remains relatively constant.

#### Families and Households

Information provided in relation to dwelling occupancy rates by Tweed Shire Council Planning Reform Unit, based on the available 2006 Census data is as follows:

- ♦ Detached Dwelling – 2.60 people per dwelling.
- ♦ Medium Density Unit, Villa or Townhouse – 2.3 people per dwelling.
- ♦ Medium Density Apartment – 1.95 people per dwelling.

#### Likely Demographics and Community Context

In 2001 the Tweed LGA was divided into two Statistical Subdivisions known as Tweed (A) which included the Urban Centres of Tweed Heads, Tweed Heads South, Banora Point, Bilambil Heights and Kingscliff and Tweed (B) which included the Tweed Coast, Murwillumbah and the Rural areas.

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In the 2006 Census the boundaries of the Statistical Areas within the Tweed Shire were altered. Tweed (A) Urban Centres remained the same but Tweed Coast (Kingscliff to Pottsville) was separated from Murwillumbah and the Rural area.

**Table 9** below demonstrates that the demographics of the 2006 Tweed Coast and Rural Areas and the 2001 Tweed (B) statistical area are quite different to the Tweed (A) statistical area which contains the main established areas of the Tweed (ie. Tweed Heads, South Tweed, Banora Point, Kingscliff and Bilambil Heights).

<b>TABLE 9 – SUMMARY OF POPULATION AND HOUSING TWEED 2001- 2006</b>						
	<b>2001 CENSUS</b>			<b>2006 CENSUS</b>		
Criteria	Tweed A (Urban Centres)	Tweed B (Tweed Coast and Rural Areas)	Australia	Tweed A (Urban Centres)	Tweed* (Composite of Tweed Coast and Rural Areas)	Australia
0-14 Population cohort	17.2%	23.1%	20.8%	16.8%	21.3%	19.8%
+55 Population cohort	39.9%	25.1%	22%	39.6%	26.6%	24.3%
Couples with children	31.9%	42.6%	47%	32.5%	40.6%	45.3%
Couples without children	49.8%	38%	35.7%	48.9%	38.4%	37.2%
Detached dwellings	53.4%	82.1%	75.3%	54.2%	73.3%	74.8%
Single person households	26.9%	23.1%	22.9%	27%	22.3%	22.9%

\*Tweed Coast and Rural Area 2006 includes composite statistics of Tweed Coast and Rural Centres for comparison purposes with Tweed (B) Coast and Rural Areas 2001.

Major differences arise in Tweed A (Tweed Urban Centres) compared to Tweed B (Tweed Coast and Rural Areas) in the number of children 0-14 16.8% to 21.3% (2006), the ageing population 55+ 39.6% to 26.6% (2006) and the type of housing 54.2% detached housing to 73.3% (2006).

The RISE development is to be constructed on a greenfield site. The census data indicates that younger families with children are moving into areas with similar greenfield developments, for example the Tweed Coast (Kingscliff to Pottsville) and Rural Centres such as Murwillumbah. Conversely, the established urban areas of the Tweed are ageing and have a higher proportion of older persons.

### 3.5 Alternatives Considered

The alternative of implementing Development Consent No. 95/519 for the approved tourist resort has been carefully considered by the landowners, however in the current economic climate that consent is not considered to be commercially viable.

Development Consent No. DA05/1351 for a 76 lot residential subdivision could also be implemented however it only covers some 6.9ha of the total 187ha site area and is not seen as the most efficient means of developing the land.

A number of layout options have also been investigated in arriving at the final Concept Master Plan however because of the site's particular biophysical and geophysical constraints and the need to provide road connectivity from Marana Street to Cobaki Road, it is considered that the Structure Plan at **Annexure 9** achieves an optimal outcome for the site in terms of residential yields, the mix of land uses and the site's opportunities and constraints.

### 3.6 Components in Staging Including Infrastructure

Details of proposed staging are contained in **Annexures 9** and **20**.

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The staging of the RISE project will be particularly influenced by:

- ♦ Market forces.
- ♦ Infrastructure augmentation.

Comments regarding these main program controls are as follows:

### **Market Forces**

When the RISE Concept Plan submission was lodged in the second quarter of 2009, (in response to the Director General's Environmental Assessment Requirements) the economic climate of the region, state, country and the world in general, was and still is in crisis. This has been repeatedly reinforced by many authoritative persons during the past 9 month's period that includes the second half of 2008 and the first quarter of 2009.

This economic crisis affects the forward planning of RISE to the extent that it is somewhat difficult to accurately establish. This is because of the uncertainty as to whether Australia is now in recession and how long that recession may last.

The result is that it is difficult to confirm or even predict the likely time frames that may apply to the overall RISE project delivery or indeed that of each RISE precinct.

However, the applicant has created a bar chart staging program (Page 47 of **Annexure 9**) for the project, attempting to show the likely sequence of delivery of the various RISE precincts and the potential timing that may apply to those precincts. These are all dependant on the market forces that will inevitably evolve over time.

RISE has been designed to accommodate multiple product types and multiple staging.

This mix of housing types (low density and medium density residential, retirement living, nursing homes, retail, commercial, school and child care) will give RISE the advantage of being able to:

- a. Cater to a wide range of different markets as those market demands move and change over time.
- b. Deliver various Precincts in an orderly manner as the market forces demand.

RISE will therefore have the advantage of being able to cater to particular market demands at specific times during its delivery history.

### **Infrastructure**

The other primary control over staging and sequencing of RISE is the provision of infrastructure.

These infrastructure constraints are in three main categories:

- a. Traffic.
- b. Sewer.
- c. Town water supply.

Comments on these three main elements are as follows:

- a. Traffic.

The RISE project currently has available the use of 2,660 vehicle movements per day (VMPD) along the main control roads of Scenic Drive and Kennedy Drive.

As indicated in Section 7.2, only 68% of residential trips use Kennedy Drive and therefore the proposed development would need to generate approximately 3911 vehicle trips per day in order to generate 2660 vehicle trips per day on Kennedy Drive. This equates to approximately 640 equivalent dwellings.

This count of VMPD comes from the allowance granted to the site under the existing Resort Consent approval issued by Tweed Council in 1998 ( this Consent is currently valid) plus the traffic allowances and restrictions confirmed by Tweed Shire Council's 'Tweed Roadwork's Contribution Plan' and Council resolutions.

This VMPD allowance provides RISE with the ability to develop the equivalent number of dwellings, retail and commercial components in the early stages of the project (approximately 30% of the project) before the proposed Spine Road is constructed.

Construction of the Spine Road will then trigger the upgrading of Cobaki Road and the construction of Cobaki Parkway to the Boyd St overpass.

The project would not be economically viable if it has to bear the cost of construction of the Spine Road up front in the development program, because it also triggers the construction and upgrading of the other two roads.

b. Sewer.

The RISE project has available to it a certain amount of sewerage capacity at the Marana St precinct. This capacity can also be augmented. This augmented capacity will allow certain early Precincts of RISE to be developed before the major internal sewer main, regional pump station, and rising main along Cobaki Road to the Gollan St Bridge is required. It is planned that the new sewer main system would be constructed when (i) the Spine Road is built, or (ii) when demand requires.

c. Town water.

The RISE project has a certain capacity of town water available to it from the existing Council water reservoir, located near the Hilltop Plaza Precinct L on site. The capacity available to RISE from this existing reservoir will service the early Precincts of RISE before augmentation of the town water system is required.

RISE will accommodate the augmentation of the existing Council 1.1 megalitre Hilltop reservoir in Precinct K up to a 7.0 megalitre reservoir (approximate volumes) as part of the development of the Hilltop Plaza and Arts Precinct L of the project.

The Civil Engineering Report at **Annexure 20** contains details relating to infrastructure staging. The following tables summarise staging requirements.

TABLE 10 – POTABLE WATER SUPPLY				
Capacity of Existing Infrastructure	Future Infrastructure	Timing of Construction of Infrastructure	Management of Staged Infrastructure	Responsibility for Providing Infrastructure
1. External				
(i) Sufficient capacity at low level Snowgum Reservoir for Stage 1	(i) Water treatment plant at Bray Park upgrade to 100ML/day now under construction by TSC via DSP charges.	(i) Completed by Dec 2009	(i) No impact on management	Tweed Shire Council
(ii) Rising main/pumps to 1.1ML reservoir. Sufficient capacity of Reservoir to service Precinct B.	(ii) TSC to build new rising main to 1.1ML Reservoir.	(ii) TSC planning immediate upgrade of rising main to 1.1ML Reservoir. Easement already exists for this main.	(ii) Construction in accordance with DSP & TSC Infrastructure Planning.	Tweed Shire Council

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**TABLE 10 – POTABLE WATER SUPPLY**

Capacity of Existing Infrastructure	Future Infrastructure	Timing of Construction of Infrastructure	Management of Staged Infrastructure	Responsibility for Providing Infrastructure
Rising main to 1.1ML Reservoir currently under sized for existing connections.	(iii) RISE to construct new 7ML Reservoir in two halves. Decommission 1.1ML Reservoir when one half of 7ML Reservoir built.  (iv) TSC to upgrade Snowgum Pump Station to match design flow requirements.  (v) Capacity upgrade will provide for other Bilambil Heights Urban Release area.  (vi) TSC to upgrade water conveyance from Bray Park to Snowgum Reservoir. TSC to construct additional low level Reservoir on site purchased from RISE in Precinct C.	(iii) Commission 1st half of 7ML Reservoir by commencement of demand from Precincts A, D or F of RISE (Actual Precincts may change depending on market demand).  (iv) Immediate upgrade planned by TSC with rising main upgrade.  (v) As required by DSP & demand.	(iii) Progressively build infrastructure ahead of demand.	Terranora Group Management Pty Ltd  Tweed Shire Council  Tweed Shire Council  Tweed Shire Council
2. Internal				
(i) No existing reticulation	(i) Construction of reticulation mains  (ii) Construction of booster pump station	(i) Progressively on a stage by stage basis by RISE.  (ii) To be available by demand by Precincts H or L (Actual Precincts may change depending on market demand).	(i) Design overall system to ensure that reticulation main will have capacity for stages to be serviced.  (ii) Design overall system to ensure that reticulation is sized to have capacity on a staged basis.	Terranora Group Management Pty Ltd  Terranora Group Management Pty Ltd

**TABLE 11 – SEWERAGE**

Capacity of Existing Infrastructure	Future Infrastructure	Timing of Construction of Infrastructure	Management of Staged Infrastructure	Responsibility for Providing Infrastructure
1. External				
(i) Limited external sewer reticulation capacity exists for RISE early Precincts to Peninsular Drive pump station	(i) Upgrade existing pump station in McAllisters Rd & augment flat sections of Peninsular Drive gravity sewer	(i) With development of Precinct B (or the first Precinct to be developed).	(i) All work required with construction of Precinct B (or the first Precinct to be developed).	Terranora Group Management Pty Ltd
(ii) Banora Point Waste Water Treatment Plant	(i) Designed for staged upgrade to services DSP for Bilambil Heights Urban Release Area	(i) As set out in DSP.	(i) Management of upgrades by TSC.	Tweed Shire Council
(iii) Gollan Drive PS to Banora Point WWTP. Existing capacity as part of Bilambil Heights / Cobaki Lakes DSP	(i) Upgrade PS at Gollan Drive as required by DSP	(i) As set out in DSP.	(i) Management of upgrades by TSC.	Tweed Shire Council

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TABLE 11 – SEWERAGE				
Capacity of Existing Infrastructure	Future Infrastructure	Timing of Construction of Infrastructure	Management of Staged Infrastructure	Responsibility for Providing Infrastructure
(iv) Conveyance from RISE to Gollan Drive, no existing infrastructure	(i) Regional pump station & rising main to Gollan Drive	(i) First developer in Cobaki Lakes / Bilambil Heights Urban Release Area to build off-sets against Sec 64 charges.	(i) Management by TSC as DSP infrastructure.	Terranora Group Management Pty Ltd or Leda Developments
	(ii) Rising main from RISE to regional pump station	(ii) By RISE developer after Precinct B. (or the first Precinct to be developed).	(ii) Managed by RISE developer. Top up water required to minimise septicity.	Terranora Group Management Pty Ltd
2. Internal				
(i) No existing infrastructure	(i) Pump stations, rising mains & gravity sewers	(i) As required to meet development	(i) Early stages water injection will be required & temporary rising mains of smaller diameter required to minimise septicity.  Design overall system to ensure adequate capacity for development.	Terranora Group Management Pty Ltd

TABLE 12 – RECYCLED STORMWATER SYSTEM				
Capacity of Existing Infrastructure	Future Infrastructure	Timing of Construction of Infrastructure	Management of Staged Infrastructure	Responsibility for Providing Infrastructure
No capacity exists	(i) Storage tanks & storage ponds	(i) In accordance with staging	(i) Sized for ultimate design capacity.	Terranora Group Management Pty Ltd
	(ii) Stormwater treatment plant	(ii) With first development stage after Precinct B. (or the first Precinct to be developed).	(ii) Construct for ultimate capacity.	Terranora Group Management Pty Ltd
	(iii) Recycled stormwater reservoir	(iii) With first development stage after Precinct B. (or the first Precinct to be developed).	(iii) Construct ultimate capacity.	Terranora Group Management Pty Ltd
	(iv) Recycled stormwater booster pump station	(iv) With first development stage after Precinct B. (or the first Precinct to be developed).	(iv) Construct ultimate capacity.	Terranora Group Management Pty Ltd
	(v) Community tanks, pond storage, pumps & rising mains to treatment plant.	(v) With first development stage after Precinct B. (or the first Precinct to be developed).	(v) Construct ultimate capacity.	Terranora Group Management Pty Ltd
	(vi) Reticulation mains	(vi) Stage by stage.	(vi) Design mains for ultimate capacity.	Terranora Group Management Pty Ltd

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TABLE 13 – ROADS				
Capacity of Existing Infrastructure	Future Infrastructure	Timing of Construction of Infrastructure	Management of Staged Infrastructure	Responsibility for Providing Infrastructure
1. External (i) Capacity exists for 2660 traffic movements per day on Kennedy Drive	(i) Cobaki Parkway	(i) After existing capacity used in Kennedy Drive	(i) TSC D/A control	Leda Developments or if not, Terranora Group Management Pty Ltd based on Tweed Shire Council acquiring the Cobaki Parkway road corridor.
	(ii) Connection from RISE to Cobaki Parkway upgrade to Cobaki Rd.	(ii) After existing capacity used in Kennedy Drive	(ii) TSC D/A control	
2. Internal (i) No existing infrastructure	(i) Spine Road	(i) After existing capacity used in Kennedy Drive	(i) Not staged TSC D/A control	Terranora Group Management Pty Ltd
	(ii) Internal roads	(ii) Stage by stage	(ii) TSC D/A control	

The roles and responsibilities of the developer in relation to infrastructure are also addressed in the Draft Statement of Commitments at Section 20.0.

The key infrastructure thresholds for the project are:

- Upgrading of Cobaki Road and construction of Cobaki Parkway when total external trip generation reaches approximately 3911 vehicles per day.
- Progressively build potable water supply infrastructure ahead of demand.
- Progressively build sewerage infrastructure including;
  - a) upgrade the existing pump station in McAllisters Road and augment flat sections of gravity sewer;
  - b) upgrade Gollan Drive pump station and construct sewer rising main from site to Gollan Drive.
- Construct the Cobaki Road sports park.

## 4.0 STATUTORY PLANNING CONTEXT

### 4.1 State Environmental Planning Policies

#### 4.1.1 State Environmental Planning Policy No. 71 – Coastal Protection

The southern part of Lot 33 DP 1085109 is located within the coastal zone and therefore the relevant provisions of this Policy apply to development of the site. In particular, Clause 18 applies as the proposal will ultimately involve a subdivision of land within a residential zone into more than twenty five lots.

Therefore, prior to granting development consent, the applicant would need to prepare and submit a Development Control Plan for approval by the Minister or alternatively, the Minister would need to waive the requirement for a Development Control Plan. However, by declaring the site a State Significant Site, the provisions of State Environmental Planning Policy (Major Projects) will prevail over State Environmental Planning Policy No. 71 and therefore a Development Control Plan would not be required. This Concept Plan, in effect, serves the same purpose as a Development Control Plan.

Matters for consideration in Clause 8 of the Policy are addressed in the following table:

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TABLE 14 – STATE ENVIRONMENTAL PLANNING POLICY NO. 71	
CLAUSE 8 MATTERS FOR CONSIDERATION	COMMENT
a) The aims of this Policy set out in Clause 2.	The proposal is consistent with the aims of the Policy.
b) Existing public access to and along the coastal foreshore for pedestrians or persons with a disability should be retained and, where possible, public access to and along the coastal foreshore for pedestrians or persons with a disability should be improved.	The subject land does not have frontage to foreshore reserve and therefore this consideration is not relevant.
c) Opportunities to provide new public access to and along the coastal foreshore for pedestrians or persons with a disability.	See Above.
d) The suitability of development and its type, location and design and its relationship with the surrounding area.	Development of the subject land as proposed is consistent with the zone objectives as recommended in the State Significant Site Study, the provisions of Council's Tweed Development Control Plan 2007 and is also consistent with ESD principles and urban consolidation objectives.
e) Any detrimental impact that the development may have on the amenity of the coastal foreshore, including any significant overshadowing of the coastal foreshore and any significant loss of views from a public place to the coastal foreshore.	The RISE site does not have frontage to the coastal foreshore or any significant water body. The proposed unstructured Sports Park area (Precinct Q) has frontage to Cobaki Creek and a nominal 50m ecological buffer is proposed to the Creek.
f) The scenic qualities of the NSW coast, and means to protect and improve these qualities.	As Above.
g) Measures to conserve animals (within the meaning of the Threatened Species Conservation Act, 1995) and plants (within the meaning of that Act) and their habitats.	As indicated in the Ecological Assessment Report at <b>Annexure 16</b> , all high conservation value areas containing the majority of threatened species on the site will be zoned Environmental Conservation and created as common property under the Community Scheme for management by the Community Association.
h) Measures to conserve fish (within the meaning of Part 7A of the Fisheries Management Act, 1994 and marine vegetation within the meaning of that part) and their habitats	Appropriate measures will be implemented to ensure that water quality does not have a negative impact on fish and marine vegetation within Cobaki Creek, including the creation of a 50m ecological buffer between the sporting facilities and the Creek bank.
i) Existing wildlife corridors and the impact of development on these corridors.	The proposed Concept Plan will maintain and enhance existing wildlife habitat areas and wildlife corridors as indicated in <b>Annexure 16</b> .
j) The likely impact of coastal processes and coastal hazards on development and any likely impacts of development on coastal processes and coastal hazards.	The site is elevated, well removed from the coastal foreshore and is not subject to coastal processes.
k) Measures to reduce the potential for conflict between land based and water based coastal activities	Not applicable.
l) Measures to protect the cultural places, values, customs, beliefs and traditional knowledge of aboriginals.	A Cultural Heritage Assessment has been undertaken by Everick (see <b>Annexure 18</b> ) and that Report concludes that the site does not have cultural values and does not contain any Aboriginal relics.
m) Likely impacts of development on the water quality of coastal water bodies.	Appropriate water quality control measures are proposed to ensure that water quality in Cobaki Creek is not diminished including the provision of a 50m ecological buffer.
n) The conservation and preservation of items of heritage, archaeological or historic significance.	There are no items of environmental heritage identified in the North Coast Regional Environmental Plan, Tweed Local Environmental Plan 2000 or the Everick Cultural Heritage Report existing on the site.
o) Only in cases in which a Council prepares a draft Local Environmental Plan that applies to land to which this policy applies, the means to encourage compact towns and cities.	Not applicable.

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TABLE 14 – STATE ENVIRONMENTAL PLANNING POLICY NO. 71	
CLAUSE 8 MATTERS FOR CONSIDERATION	COMMENT
<p>p) Only in cases in which development application in relation to proposed development is determined;</p> <p>i) The cumulative impacts on the proposed development on the environment;</p> <p>ii) Measures to ensure that water and energy usage by the proposed development is efficient.</p>	<p>The RISE Concept Plan has achieved Green Globe Certification and seeks to achieve significant environmental protection of high conservation value areas together with rehabilitation of those degraded areas.</p> <p>An Integrated Water Cycle Management Strategy will be implemented including recycling of stormwater runoff to minimise consumption of potable water and all future buildings will comply with BASIX energy efficiency requirements.</p>

#### 4.1.2 State Environmental Planning Policy (Major Projects) 2005

On 6 November 2008, the Minister for Planning authorised the submission of a Concept Plan. The Minister further agreed to consider the site as a potential State Significant Site.

The State Significant Site Study justifying rezoning of the site by way of an inclusion in Schedule 3 of State Environmental Planning Policy Major Projects forms Part A of this Report.

Part B of the Report comprises this Concept Plan which has been prepared pursuant to the Minister's decision and the Director General's Environmental Assessment Requirements issued on 5 February 2009.

#### 4.1.3 State Environmental Planning Policy No. 44 – Koala Habitat Protection

The Ecological Assessment at **Annexure 16** concludes that a Koala Management Plan is not required under the provisions of this Policy.

#### 4.1.4 State Environmental Planning Policy No. 55 – Remediation of Land

In summary, Clause 7 of this Policy provides that the consent authority must not consent to the carrying out of any development on land unless it has considered, among other things, whether the land is contaminated, based on a preliminary investigation of the land carried out in accordance with the Contaminated Land Planning Guidelines.

The Contaminated Land Planning Guidelines (Department of Urban Affairs and Planning, Environment Protection Authority, 1998) provide information relating to preliminary contamination investigations.

The Contamination Assessment at **Annexure 24** concludes that subject to additional investigations in relation to the 12<sup>th</sup>, 14<sup>th</sup>, 15<sup>th</sup> and 16<sup>th</sup> golf greens and validation of any necessary remediation measures, the site would be suitable for the proposed residential uses in accordance with the provisions of Clause 6 of State Environmental Planning Policy No. 55 – Remediation of Land.

#### 4.1.5 State Environmental Planning Policy No. 65 – Design Quality of Residential Flat Development

This Policy applies to residential flat buildings that comprise three or more stories and four or more self contained dwellings.

A number of residential buildings proposed on the site come within the scope of this definition and accordingly the provisions of this Policy would normally apply.

The Architectural Design Report at **Annexure 9** generally addresses the Design Quality Principles contained in Part 2 of the Policy. A Report addressing the Design Quality Principles and a statement from a Registered Architect will accompany future Development Applications for residential flat buildings.

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#### 4.1.6 State Environmental Planning Policy (Housing for Seniors or People With a Disability)

The Concept Plan proposes the establishment of Retirement Living Precincts, including a Nursing Home which will be permissible, with consent, in the proposed R1 General Residential zone once the Minister makes the amendments recommended in the State Significant Site Study. Therefore, the proposed Retirement Living developments will not rely on the enabling provisions of this State Environmental Planning Policy for permissibility. Nevertheless, it is intended that the detailed design and operation of the Retirement Villages and the Nursing Home will generally comply with the provisions of this Policy.

#### 4.1.7 State Environmental Planning Policy (Infrastructure) 2007

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 and apartment or residential flat buildings involving 300 or more dwellings, among other things.

Therefore, this Concept Plan should be referred to the Roads and Traffic Authority for comment.

A Traffic Impact Assessment Report for the project is contained at **Annexure 17**.

#### 4.1.8 North Coast Regional Environmental Plan 1988

The subject land is located within the North Coast region and therefore the provisions of this Plan are applicable. Relevant clauses of the Plan are addressed in the following **Table 15**.

TABLE 15 – NORTH COAST REGIONAL ENVIRONMENTAL PLAN 1988	
CLAUSE	ASSESSMENT
<b>12 Development control—impact of development on agricultural activities</b>	
The council shall not consent to an application to carry out development on rural land unless it has first considered the likely impact of the proposed development on the use of adjoining or adjacent agricultural land and whether or not the development will cause a loss of prime crop or pasture land.	An Agricultural Buffer Zone Assessment has been prepared ( <b>Annexure 21</b> ) which demonstrates that potential land use conflicts can be appropriately managed by suitable buffers.
<b>15 Development control—wetlands or fishery habitats</b>	
The council shall not consent to an application to carry out development for any purpose within, adjoining or upstream of a river or stream, coastal or inland wetland or fishery habitat area or within the drainage catchment of a river or stream, coastal or inland wetland or fishery habitat area unless it has considered the following matters:	
(a ) the need to maintain or improve the quality or quantity of flows of water to the wetland or habitat,	Appropriate water quality control measures will be implemented as indicated in <b>Annexure 22</b> . In addition, a 50m ecological buffer will be created between the sports facilities and Cobaki Creek.
(b) the need to conserve the existing amateur and commercial fisheries,	See above.
(c) any loss of habitat which will or is likely to be caused by the carrying out of the development,	There will be some loss of habitat areas as a result of the development as indicated in <b>Annexure 16</b> . However in the context of the overall development and having regard to the extensive rehabilitation measures proposed, the impact of that habitat loss is not considered to be significant.

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TABLE 15 – NORTH COAST REGIONAL ENVIRONMENTAL PLAN 1988	
CLAUSE	ASSESSMENT
(d) whether an adequate public foreshore reserve is available and whether there is adequate public access to that reserve,	A 50m wide public foreshore reserve will be dedicated adjacent to Cobaki Creek.
(e) whether the development would result in pollution of the wetland or estuary and any measures to eliminate pollution,	No pollution of wetlands is likely to occur having regard to the extensive water quality management measures proposed.
(f) the proximity of aquatic reserves dedicated under the <i>Fisheries Management Act 1994</i> and the effect the development will have on these reserves,	There are no aquatic reserves in close proximity.
(g) whether the watercourse is an area of protected land as defined in section 21AB of the <i>Soil Conservation Act 1938</i> and any measures to prevent soil erosion, and	Not applicable.
(h) the need to ensure that native vegetation surrounding the wetland or fishery habitat area is conserved, and	See comments in relation to (d).
(i) the recommendations of any environmental audit or water quality study prepared by the Department of Water Resources or the Environment Protection Authority and relating to the river, stream, wetland, area or catchment.	Not applicable.
<b>32B Development control—coastal lands</b>	
(1) This clause applies to land within the region to which the NSW Coastal Policy 1997 applies.	
(2) In determining an application for consent to carry out development on such land, the council must take into account:	
(a) the NSW Coastal Policy 1997,	Relevant provisions of the NSW Coastal Policy are addressed in Section 4.8.
(b) the Coastline Management Manual, and	The site is well removed from the coastline and is not subject to coastal processes.
(c) the North Coast: Design Guidelines.	As indicated in the Architectural Plans and Urban Design Guidelines at <b>Annexure 9</b> , the proposed buildings generally comply with the principles contained in the North Coast Design Guidelines.
(3) The council must not consent to the carrying out of development which would impede public access to the foreshore.	The area of land between Cobaki Road and Cobaki Creek will be dedicated to the public as public reserve and this will facilitate access to Cobaki Creek.
(4) The council must not consent to the carrying out of development:	
(a) on urban land at Tweed Heads, Kingscliff, Byron Bay, Ballina, Coffs Harbour or Port Macquarie, if carrying out the development would result in beaches or adjacent open space being overshadowed before 3pm midwinter (standard time) or 6.30pm midsummer (daylight saving time), or	Not applicable.
(b) elsewhere in the region, if carrying out the development would result in beaches or waterfront open space being overshadowed before 3pm midwinter (standard time) or 7pm midsummer (daylight saving time).	Not applicable.

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TABLE 15 – NORTH COAST REGIONAL ENVIRONMENTAL PLAN 1988	
CLAUSE	ASSESSMENT
<b>33 Development control—coastal hazard areas</b>	
Before granting consent to development on land affected or likely to be affected by coastal processes, the council shall:	
(a) take into account the Coastline Management Manual,	The site is not located adjacent to the coastline.
(b) require as a condition of development consent that disturbed foreshore areas be rehabilitated, and	It is proposed to rehabilitate the Cobaki Creek foreshore area within the 50m ecological buffer.
(c) require as a condition of development consent that access across foredune areas be confined to specified points.	Not applicable.
<b>43 Development control – residential development</b>	
(1) The council shall not grant consent to development for residential purposes unless:	
(a) it is satisfied that the density of the dwellings have been maximised without adversely affecting the environmental features of the land,	The North Coast Urban Planning Strategy 1995, Strategy Action 1 (at Page 40) provides that urban rezonings should achieve a neighbourhood dwelling density of 15 dwellings per hectare in new release areas. Based on the proposed R1 zone (89.62 hectares and the projected yield of 1804 dwellings, the RISE project will achieve approximately 20 dwellings per hectare. The proposal is therefore consistent with this Clause because it optimises yields based on site opportunities and constraints.
(b) it is satisfied that the proposed road widths are not excessive for the function of the road,	Road widths are consistent with the provisions of Tweed Development Control Plan 2007, Part A5 – Subdivision Manual.
(c) it is satisfied that, where development involves the long term residential use of caravan parks, the normal criteria for the location of dwellings such as access to services and physical suitability of land have been met,	Not applicable.
(d) it is satisfied that the road network has been designed so as to encourage the use of public transport and minimise the use of private motor vehicles, and	Appropriate cycleways and walkways are included in the Structure Plan together with walkable neighbourhoods to minimise motor vehicle use.
(e) it is satisfied that site erosion will be minimised in accordance with sedimentation and erosion management plans.	Appropriate erosion and sedimentation control measures will be implemented (see <b>Annexure 22</b> ).
<b>81 Development control—development adjacent to the ocean or a waterway</b>	
(1) The council shall not consent to a development application for development on land within 100 metres of the ocean or any substantial waterway unless it is satisfied that:	
(a) there is a sufficient foreshore open space which is accessible and open to the public within the vicinity of the proposed development,	A 50m foreshore buffer is proposed to be dedicated to the public and appropriately embellished.
(b) buildings to be erected as part of the development will not detract from the amenity of the waterway, and	No buildings are proposed in close proximity to Cobaki Creek other than the single storey amenities block serving the adjacent unstructured open space facilities.
(c) the development is consistent with the principles of any foreshore management plan applying to the area.	There is no applicable Foreshore Management Plan for Cobaki Creek.

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TABLE 15 – NORTH COAST REGIONAL ENVIRONMENTAL PLAN 1988	
CLAUSE	ASSESSMENT
(2) Nothing in subclause (1) affects privately owned rural land where the development is for the purpose of agriculture	Not applicable.

#### 4.2 Tweed Local Environmental Plan 2000

Under the provisions of this Plan, that part of the site to which this Concept Plan applies is currently zoned part 2(c), part 6(b), part 7(d) and part 1(a).

**Table 16** summarises the existing zones, the zone objectives and the areas of the site within each zone.

TABLE 16 – ZONE SUMMARY		
Zoning	Zone objectives	Area ha
1(a) Rural	<p><b>Primary objectives</b></p> <ul style="list-style-type: none"> <li>♦ to enable the ecologically sustainable development of land that is suitable primarily for agricultural or natural resource utilisation purposes and associated development.</li> <li>♦ to protect rural character and amenity.</li> </ul> <p><b>Secondary objectives</b></p> <ul style="list-style-type: none"> <li>♦ to enable other types of development that rely on the rural or natural values of the land such as agri- and eco-tourism.</li> <li>♦ to provide for development that is not suitable in or near urban areas.</li> <li>♦ to prevent the unnecessary fragmentation or development of land which may be needed for long-term urban expansion.</li> <li>♦ to provide non-urban breaks between settlements to give a physical and community identity to each settlement.</li> </ul>	39.081
2(c) Urban Expansion	<p><b>Primary objectives</b></p> <ul style="list-style-type: none"> <li>♦ to identify land for urban expansion (which will comprise mainly residential development focused on multi-use neighbourhood centres) and to ensure its optimum utilisation consistent with environmental constraints and the need to minimise residential landtake.</li> </ul> <p><b>Secondary objectives</b></p> <ul style="list-style-type: none"> <li>♦ to allow associated non-residential development which meets the recreation, shopping, commercial, employment and social needs of future residents.</li> <li>♦ to ensure that sensitive environmental areas within and outside the zone are protected from any adverse impacts of development.</li> <li>♦ to enable planning flexibility to achieve the other objectives of the zone by means of detailed guidelines in a development control plan.</li> </ul>	40.2
5(a) Special Use	<p><b>Primary objective</b></p> <ul style="list-style-type: none"> <li>♦ to identify land which is developed or is proposed to be developed, generally by public bodies, for community facilities and services, roads, railways, utilities and similar things.</li> </ul>	0.08

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TABLE 16 – ZONE SUMMARY		
Zoning	Zone objectives	Area ha
	<b>Secondary objective</b> <ul style="list-style-type: none"> <li>♦ to provide flexibility in the development of the land, particularly if it is not yet or is no longer required for the relevant special use.</li> </ul>	
6(b) Recreation	<b>Primary objective</b> <ul style="list-style-type: none"> <li>♦ to designate land, whether in public or private ownership, which is or may be used primarily for recreational purposes.</li> </ul> <b>Secondary objective</b> <ul style="list-style-type: none"> <li>♦ to allow for other development that is compatible with the primary function of the zone.</li> </ul>	64.6
7(d) Environmental Protection (Scenic Escarpment)	<b>Primary objectives</b> <ul style="list-style-type: none"> <li>♦ to protect and enhance those areas of particular scenic value to the area of Tweed, minimise soil erosion from escarpment areas, prevent development in geologically hazardous areas, and maintain the visual amenity of prominent ridgelines and areas.</li> </ul> <b>Secondary objective</b> <ul style="list-style-type: none"> <li>♦ to allow other development that is compatible with the primary function of the zone.</li> </ul>	35.3

A plan showing the existing zones is attached at **Annexure 5**.

A three storey height limit applies pursuant to Clause 16 of the Instrument. On the assumption that the land incorporating Precincts A to O on **Annexure 2** (Minister's Declaration Map) were to be zoned 2(c) pursuant to the State Significant Site Study forming Part A of this Report, the Concept Plan would be consistent with the relevant provisions of Tweed Local Environmental Plan 2000 with the exception of building heights.

As indicated on the Building Height Map at **Annexure 8**, buildings up to eight storeys in height are proposed. **Table 17** identifies the relevant clauses of the Local Environmental Plan and addresses compliance or justifies any variations.

TABLE 17 – TWEED LOCAL ENVIRONMENTAL PLAN 2000 RELEVANT CLAUSES		
CLAUSE NO.	CLAUSE SUMMARY	COMMENTS
5 – Ecologically Sustainable Development	<p>An objective of this plan is to promote development that is consistent with the four principles of ecologically sustainable development. These are:</p> <p>(a) the precautionary principle—namely, that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.</p> <p>In the application of the precautionary principle, public and private decisions should be guided by:</p> <p>(i) careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and</p> <p>(ii) an assessment of the risk-weighted consequences of various options, and</p>	See Table 34.

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TABLE 17 – TWEED LOCAL ENVIRONMENTAL PLAN 2000 RELEVANT CLAUSES		
CLAUSE NO.	CLAUSE SUMMARY	COMMENTS
	<p>(b) inter-generational equity—namely, that the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations, and</p> <p>(c) conservation of biological diversity and ecological integrity—namely, that conservation of biological diversity and ecological integrity should be a fundamental consideration, and</p> <p>(d) improved valuation, pricing and incentive mechanisms—namely, that environmental factors should be included in the valuation of assets and services, such as:</p> <ul style="list-style-type: none"> <li>(i) polluter pays—that is, those who generate pollution and waste should bear the cost of containment, avoidance or abatement, and</li> <li>(ii) the users of goods and services should pay prices based on the full life cycle of costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste, and</li> <li>(iii) environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, that enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems.</li> </ul>	As above.
8 – Consent Considerations	<p>(1) The consent authority may grant consent to development (other than development specified in Item 3 of the Table to clause 11) only if:</p> <ul style="list-style-type: none"> <li>(a) it is satisfied that the development is consistent with the primary objective of the zone within which it is located, and</li> <li>(b) it has considered those other aims and objectives of this plan that are relevant to the development, and</li> <li>(c) it is satisfied that the development would not have an unacceptable cumulative impact on the community, locality or catchment that will be affected by its being carried out or on the area of Tweed as a whole.</li> </ul> <p>(2) The consent authority may grant consent to development specified in Item 3 of the Table to clause 11 only if the applicant demonstrates to the satisfaction of the consent authority that:</p> <ul style="list-style-type: none"> <li>(a) the development is necessary for any one of the following reasons: <ul style="list-style-type: none"> <li>(i) it needs to be in the locality in which it is proposed to be carried out due to the nature, function or service catchment of the development,</li> </ul> </li> </ul>	These considerations are not relevant as it is intended to adopt the Standard Planning Instrument zones and provisions.

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TABLE 17 – TWEED LOCAL ENVIRONMENTAL PLAN 2000 RELEVANT CLAUSES		
CLAUSE NO.	CLAUSE SUMMARY	COMMENTS
	<ul style="list-style-type: none"> <li>(ii) it meets an identified urgent community need,</li> <li>(iii) it comprises a major employment generator, and</li> <li>(b) there is no other appropriate site on which the development is permitted with consent development (other than as advertised development) in reasonable proximity, and</li> <li>(c) the development will be generally consistent with the scale and character of existing and future lawful development in the immediate area, and</li> <li>(d) the development would be consistent with the aims of this plan and at least one of the objectives of the zone within which it is proposed to be located.</li> </ul> <p>(3) Development referred to in subclause (2) which, in the opinion of the consent authority, meets the criteria of that subclause is identified as advertised development for the purposes of the Act.</p>	
15 – Availability of Essential Services	<p>(1) Objectives</p> <ul style="list-style-type: none"> <li>♦ to ensure that development does not occur without adequate measures to protect the environment and the community's health.</li> <li>♦ to ensure that development occurs in a coordinated and efficient manner.</li> </ul> <p>(2) Consent must not be granted to the carrying out of development on any land unless:</p> <ul style="list-style-type: none"> <li>(a) a water supply and facilities for the removal or disposal of sewage and drainage are available for that land, or</li> <li>(b) arrangements satisfactory to the consent authority have been made for the provision of that supply and those facilities.</li> </ul>	Underground water supply, power, telephone and reticulated sewerage will be provided to all lots and buildings within the RISE site.
16 – Height of Buildings	<p>(1) Objective</p> <ul style="list-style-type: none"> <li>♦ to ensure that the height and scale of development is appropriate to its location, surrounding development and the environmental characteristics of the land.</li> </ul> <p>(2) Consent must not be granted to the erection of a building which exceeds the maximum height or number of storeys indicated on the Height of Buildings map in respect of the land to which the application relates.</p> <p>(3) If an application for development consent made to the consent authority prior to the commencement of <i>Tweed Local Environmental Plan 2000 (Amendment No 46)</i> is not determined by the consent authority before that date:</p> <ul style="list-style-type: none"> <li>(a) the amendments made to Schedule 1 to this plan by <i>Tweed Local Environmental Plan 2000 (Amendment No 46)</i> do not apply to the determination of the application, and</li> </ul>	A three storey statutory height limit applies to the subject land. A number of buildings will not comply with the three storey limit and justification for a variation to the statutory height limit is provided in the State Significant Site Study forming Part A of this Report.

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TABLE 17 – TWEED LOCAL ENVIRONMENTAL PLAN 2000 RELEVANT CLAUSES		
CLAUSE NO.	CLAUSE SUMMARY	COMMENTS
	<p>(b) the application is to be determined under this plan as if those amendments had not been made (that is, having regard to the definitions of <b>height</b> in relation to a building and <b>storey</b> in force under this plan immediately before that commencement).</p> <p>(4) This clause does not apply to the land to which clause 53B applies.</p>	
17 – Social Impact Assessment	<p>(1) Objective</p> <ul style="list-style-type: none"> <li>to ensure proper consideration of development that may have a significant social or economic impact.</li> </ul> <p>(2) Where the consent authority considers that a proposed development is likely to have a significant social or economic impact in the locality or in the local government area of Tweed, the consent authority may grant consent to the proposed development only if it has considered a socio-economic impact statement in respect of the proposed development.</p> <p>(3) The socio-economic impact statement that the consent authority considers must do at least the following:</p> <ul style="list-style-type: none"> <li>(a) identify the likely future impacts of the development on the affected community,</li> <li>(b) analyse the impacts in terms of magnitude, significance, duration, effect on current and future conditions and community services, and the like,</li> <li>(c) determine if the impacts will cause a loss of amenity within the locality due to a net reduction in community services and facilities,</li> <li>(d) determine and assess possible measures for the management or mitigation of likely impacts.</li> </ul>	A Socio-Economic Impact Assessment is provided at <b>Annexure 15</b> .
26 – Development in Zone 7(d)	<p>(1) Objective</p> <ul style="list-style-type: none"> <li>to ensure that the development of land within Zone 7 (d) minimises soil erosion and will preserve or enhance the scenic quality of the land and the locality.</li> </ul> <p>(2) Unless it is exempt development, a person must not clear vegetation from, excavate or erect a building on land within Zone 7(d) except with development consent.</p> <p>(2) Consent must not be granted to the erection of a building on land within Zone 7 (d) unless the consent authority is satisfied that:</p> <ul style="list-style-type: none"> <li>(a) the scale, height and location of the building, and (b) the colour, type and reflectivity of materials to be used, will preserve or enhance the scenic quality of the land and the locality.</li> </ul>	This Clause is not directly relevant as the Standard Instrument Zones are proposed and the provisions of Council's Draft LEP 2008 will apply.
32 – Aircraft Noise	<p>(1) Objectives</p> <ul style="list-style-type: none"> <li>to prevent certain noise sensitive developments from locating in proximity to Coolangatta Airport and its flight paths.</li> <li>to minimise the noise impact from the operation of Coolangatta Airport on development in its vicinity.</li> </ul>	The subject land is well clear of any mapped ANEF contours.

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TABLE 17 – TWEED LOCAL ENVIRONMENTAL PLAN 2000 RELEVANT CLAUSES		
CLAUSE NO.	CLAUSE SUMMARY	COMMENTS
	<p>(2) This clause applies to land within the 20 or higher ANEF contour.</p> <p>(3) Consent must not be granted to development for the purpose of a caravan park, child care centre, hospital or educational establishment or for residential development (including subdivision for residential purposes, but not including the erection or use of a dwelling house) within the 25 or higher ANEF contour.</p> <p>(4) The consent authority must not grant consent to the erection of a dwelling house within the 25 or higher ANEF contour unless it imposes a condition on the consent that the building is to meet the building construction requirements of Australian Standard AS 2021–1994 (<i>Acoustics—Aircraft noise intrusion—Building siting and construction</i>).</p> <p>(5) When deciding whether to grant consent to development for:</p> <p>(a) the purpose of a caravan park, child care centre, hospital or educational establishment or for residential development between the 20 and 25 ANEF contours, or</p> <p>(b) a community building, place of assembly, place of public worship or retail, commercial or light industrial purposes within the 25 or higher ANEF contour, the consent authority must consider Australian Standard AS 2021–1994 (<i>Acoustics—Aircraft noise intrusion—Building siting and construction</i>).</p>	
34 – Flooding	<p>(1) Objectives</p> <ul style="list-style-type: none"> <li>to minimise future potential flood damage by ensuring that only appropriate compatible development occurs on flood liable land.</li> <li>to minimise the adverse effect of flooding on the community.</li> </ul> <p>(2) Where, in the consent authority's opinion, land is likely to be subject to flooding, then it must not grant consent to development on that land unless it has considered:</p> <p>(a) the extent and nature of the flooding hazard affecting the land, and</p> <p>(b) whether or not the development would increase the risk or severity of flooding of other land in the vicinity, and</p> <p>(c) whether the risk or severity of flooding affecting the development could be reasonably mitigated, and</p> <p>(d) the impact of the development on emergency services, and</p> <p>(e) the provisions of Section A3 - Development of Flood Liable Land of <i>Tweed Development Control Plan</i>.</p>	The Sports Park area of the Concept Plan is low lying and is subject to flooding. The impacts of the creation of the unstructured facilities on the site are addressed in the Flooding Report at <b>Annexure 22</b> .
35 – Acid Sulphate Soils	<p>(1) Objectives</p> <ul style="list-style-type: none"> <li>to manage disturbance of acid sulphate soils to minimise impacts on water quality, ecosystems, infrastructure and agricultural and urban activities.</li> </ul>	

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TABLE 17 – TWEED LOCAL ENVIRONMENTAL PLAN 2000 RELEVANT CLAUSES														
CLAUSE NO.	CLAUSE SUMMARY	COMMENTS												
	<ul style="list-style-type: none"><li>♦ to require special consideration and development consent for works, including some agricultural and infrastructure-related works, that would disturb soils or ground water levels in areas identified as having acid sulphate soils.</li><li>♦ to provide for a regime of self-regulation by those organisations which have demonstrated to the Council their ability to manage acid sulphate soils issues.</li></ul>													
	<p>(2) For the purpose of this clause, <b>works</b> includes:</p> <p>(a) any landform alteration that may result in the disturbance of soil (such as occurs in carrying out agriculture, including land levelling and the like, the construction of new drains, the widening, deepening or extension of existing drains, extractive industries, dredging, the construction of artificial waterbodies (including canals, dams or detention basins), footings, road or bridgeworks, the laying of cables, pipes etc, or flood mitigation works), or</p> <p>(b) any other works which may lower ground water levels.</p>													
	<p>(3) A person must not, without development consent, carry out works on land shown as being Class 1, 2, 3, 4 or 5 land on the series of maps held in the office of the Council and marked “Acid Sulphate Soil Planning Map”, being the works specified for the class of land in the following Table:</p> <table><tr><th>Class of land</th><th>Specified works</th></tr><tr><td>1</td><td>Any works</td></tr><tr><td>2</td><td><ul style="list-style-type: none"><li>• Works below the ground surface</li><li>• Works by which the watertable is likely to be lowered</li></ul></td></tr><tr><td>3</td><td><ul style="list-style-type: none"><li>• Works beyond 1 metre below the natural ground surface</li><li>• Works by which the watertable is likely to be lowered beyond 1 metre below the natural ground surface</li></ul></td></tr><tr><td>4</td><td><ul style="list-style-type: none"><li>• Works beyond 2 metres below the natural ground surface</li><li>• Works by which the watertable is likely to be lowered beyond 2 metres below the natural ground surface</li></ul></td></tr><tr><td>5</td><td><ul style="list-style-type: none"><li>• Works within 500 metres of Class 1, 2, 3 or 4 land which are likely to lower the watertable below 1 metre AHD in adjacent Class 1, 2, 3 or 4 land</li></ul></td></tr></table> <p>(4) The consent authority must not grant consent to works specified in subclause (3) unless it has considered:</p> <p>(a) a preliminary soil assessment to ascertain the presence or absence of acid sulphate soils within the area of proposed works, unless the applicant agrees that acid sulphate soils are present within the area of proposed works, and</p> <p>(b) where the preliminary soil assessment ascertains (or the applicant agrees) that acid sulphate soils are present, the adequacy of an acid sulphate soils management plan prepared in accordance with guidelines, as amended from time to time, published by the Environment Protection Authority, and</p>	Class of land	Specified works	1	Any works	2	<ul style="list-style-type: none"><li>• Works below the ground surface</li><li>• Works by which the watertable is likely to be lowered</li></ul>	3	<ul style="list-style-type: none"><li>• Works beyond 1 metre below the natural ground surface</li><li>• Works by which the watertable is likely to be lowered beyond 1 metre below the natural ground surface</li></ul>	4	<ul style="list-style-type: none"><li>• Works beyond 2 metres below the natural ground surface</li><li>• Works by which the watertable is likely to be lowered beyond 2 metres below the natural ground surface</li></ul>	5	<ul style="list-style-type: none"><li>• Works within 500 metres of Class 1, 2, 3 or 4 land which are likely to lower the watertable below 1 metre AHD in adjacent Class 1, 2, 3 or 4 land</li></ul>	<p>Council's Acid Sulphate Soils Maps indicate that the low lying land between Cobaki Road and Cobaki Creek is Class 5.</p> <p>It is unlikely that construction of the Sports Park will lower the water table. However when more detailed design work is undertaken at the development application stage an Acid Sulphate Soils Management Plan can be provided if required.</p>
Class of land	Specified works													
1	Any works													
2	<ul style="list-style-type: none"><li>• Works below the ground surface</li><li>• Works by which the watertable is likely to be lowered</li></ul>													
3	<ul style="list-style-type: none"><li>• Works beyond 1 metre below the natural ground surface</li><li>• Works by which the watertable is likely to be lowered beyond 1 metre below the natural ground surface</li></ul>													
4	<ul style="list-style-type: none"><li>• Works beyond 2 metres below the natural ground surface</li><li>• Works by which the watertable is likely to be lowered beyond 2 metres below the natural ground surface</li></ul>													
5	<ul style="list-style-type: none"><li>• Works within 500 metres of Class 1, 2, 3 or 4 land which are likely to lower the watertable below 1 metre AHD in adjacent Class 1, 2, 3 or 4 land</li></ul>													

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TABLE 17 – TWEED LOCAL ENVIRONMENTAL PLAN 2000 RELEVANT CLAUSES		
CLAUSE NO.	CLAUSE SUMMARY	COMMENTS
	<ul style="list-style-type: none"> <li>(c) the likelihood of the proposed development resulting in the oxidation of acid sulphate soils and discharge of acid water from the area of the proposed works, and</li> <li>(d) any comments received from any relevant public authority the Council may consult with in respect of the application.</li> </ul>	
39 – Remediation of Contaminated Land	<ul style="list-style-type: none"> <li>(1) Objective <ul style="list-style-type: none"> <li>♦ to ensure that contaminated land is adequately remediated prior to development occurring.</li> </ul> </li> <li>(2) <i>State Environmental Planning Policy No 55—Remediation of Land</i> applies to land to which this plan applies despite any other provision of this plan.</li> </ul>	Compliance with this Clause and SEPP55 is addressed in the Contamination Report at <b>Annexure 24</b> .
39A – Bushfire Protection	<ul style="list-style-type: none"> <li>(1) Objective <ul style="list-style-type: none"> <li>♦ to minimise bushfire risk to built assets and people and to reduce bushfire threat to ecological assets and environmental assets.</li> </ul> </li> <li>(2) In determining whether to grant consent to development in areas that, in the opinion of the consent authority, are likely to be affected by bushfire, the consent authority must take into account: <ul style="list-style-type: none"> <li>(a) whether the development is likely to have a significant adverse effect on the implementation of any strategies for bushfire control and fuel management adopted by the Bushfire Control Office established by the Council for the area, and</li> <li>(b) whether a significant threat to the lives of residents, visitors or emergency services personnel may be created or increased as a result of the development (including any threat created or increased by the access arrangements to and from the development), and</li> <li>(c) whether the increased demand for emergency services during bushfire events that is created by the development would lead to a significant decrease in the ability of the emergency services to effectively control major bushfires, and</li> <li>(d) the adequacy of measures proposed to avoid or mitigate the threat from bushfires including: <ul style="list-style-type: none"> <li>(i) the siting of the development, and</li> <li>(ii) the design of structures and the materials used, and</li> <li>(iii) the importance of fuel-free and fuel-reduced areas, and</li> <li>(iv) landscaping and fire control aids such as roads, reserves, access arrangements and on-site water supplies, and</li> </ul> </li> <li>(e) the environmental and visual impacts of the clearing of vegetation for bushfire hazard reduction.</li> </ul> </li> </ul>	Compliance with this Clause and the provisions of Planning for Bushfire Protection 2006 is addressed in the Bushfire Assessment at <b>Annexure 19</b> .

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TABLE 17 – TWEED LOCAL ENVIRONMENTAL PLAN 2000 RELEVANT CLAUSES		
CLAUSE NO.	CLAUSE SUMMARY	COMMENTS
	(3) In taking into account the matters required by subclause (2), the consent authority must have regard to the provisions of the document entitled <i>Planning for Bushfire Protection</i> , prepared by Planning & Environment Services, NSW Rural Fire Service in co-operation with the then Department of Urban and Transport Planning, and dated December 2001, and must be satisfied that those provisions are, as much as is possible, complied with.	

#### 4.3 Draft Tweed Local Environmental Plan 2008

Notwithstanding the provisions of Tweed Local Environmental Plan 2000, Tweed Shire Council intends to publicly exhibit Draft Tweed Local Environmental Plan 2008 which implements the Standard Planning Instrument adopted by the Department of Planning. A copy of the exhibited Draft Local Environmental Plan Map relating to the RISE site is at **Annexure 6**.

The Department of Planning has advised that the zones proposed in the State Significant Site Study and Concept Plan should be based on the Standard Instrument Zones (email from Simon Bennett dated 7 April 2009). Under the Draft Plan, Council proposes to zone the site as indicated in the following table.

TABLE 18 – DRAFT TWEED LOCAL ENVIRONMENTAL PLAN 2008 ZONINGS		
ZONE NO.	OBJECTIVE	CONSISTENCY
R1 General Residential	<p><b>1. Objectives of Zone</b></p> <ul style="list-style-type: none"> <li>• To provide for the housing needs of the community.</li> <li>• To provide for a variety of housing types and densities.</li> <li>• To enable other land uses that provide facilities or services to meet the day to day needs of residents.</li> <li>• To encourage the provision of tourist accommodation and related facilities and services in association with residential development where it is unlikely to significantly impact on amenity or place demands on services beyond the level reasonably required for residential use.</li> </ul> <p><b>2. Permitted Without Consent</b></p> <p>Environmental Protection Works; Environmental Facilities; Home Occupations, Roads.</p> <p><b>3. Permitted With Consent</b></p> <p>Attached Dwellings; Boarding Houses; Business Premises; Child Care Centres; Community Facilities; Dwelling Houses; Group Homes; Hostels; Multi Dwelling Housing; Neighbourhood Shops; Places of Public Worship; Residential Flat Buildings; Retail Premises; Semi-detached Dwellings; Seniors Housing; Shop; Shop Top Housing; Any other development not specified in Item 2 or 4.</p>	<p>This zone would only apply to that part of the site currently zoned 2(c) under the provisions of TLEP2000. Some uses under this zone which are proposed in the Concept Plan would be prohibited, including:</p> <ul style="list-style-type: none"> <li>• retail premises</li> <li>• hotel and motel accommodation</li> <li>• business premises</li> <li>• office premises</li> <li>• medical centre</li> </ul>

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TABLE 18 – DRAFT TWEED LOCAL ENVIRONMENTAL PLAN 2008 ZONINGS		
ZONE NO.	OBJECTIVE	CONSISTENCY
	<p><b>4. Prohibited</b></p> <p>Agriculture, Backpackers' Accommodation; Bed and Breakfast Accommodation; Biosolid Waste Applications; Boat Repair Facilities; Brothels; Canal Estate Developments; Cemeteries; Charter and Tourism Boating Facilities; Correctional Centres; Crematoriums; Entertainment Facilities; Extractive Industries; Farm Stay Accommodation; Freight Transport Facilities; Funeral Chapels; Funeral Homes; Health Services Facilities; Highway Service Centres; Home Occupation (sex services); Hotel or Motel Accommodation; Industries; Marinas; Mining; Moorings; Mortuaries; Nightclubs; Office Premises; Passenger Transport Facilities, Port Facilities; Public Administration Buildings; Recreation Facilities (major); Research Stations; Restricted Premises; Rural Industries; Rural Workers' Dwellings; Sex Services Premises; Stock and Sale Yards; Storage Premises; Transport Depots; Truck Depots; Vehicle Body Repair Workshops; Vehicle Repair Stations.</p>	
RE2 Private Recreation	<p><b>1. Objectives of zone</b></p> <ul style="list-style-type: none"> <li>• To enable land to be used for private open space or recreational purposes.</li> <li>• To provide a range of recreational settings and activities and compatible land uses.</li> <li>• To protect and enhance the natural environment for recreational purposes.</li> </ul> <p><b>2. Permitted without consent</b></p> <p>Environmental Facilities; Environmental Protection Works; Roads.</p> <p><b>3. Permitted with consent</b></p> <p>Boat Sheds; Car Parks; Caravan Parks; Charter and Tourism Boating Facilities; Child Care Centres; Community Facilities; Electricity Generating Works; Entertainment Facilities; Flood Mitigation Works; Food and Drink Premises; Function Centres; Helipads; Heliports; Information and Education Facilities; Kiosks; Marinas; Markets; Public Administration Buildings; Recreation Areas; Recreation Facilities (indoor); Recreation Facilities (major); Recreation Facilities (outdoor); Registered Clubs; Tourist and Visitor Accommodation; Water Recreation Structures.</p> <p><b>4. Prohibited</b></p> <p>Any development not specified in Item 2 or 3.</p>	<p>This proposed zone will apply to that part of the site currently zoned 6(b). As the 6(b) land is included in the Far North Coast Regional Strategy as a committed urban area, rezoning of the proposed RE2 land to R1 General Residential would be appropriate.</p>
E2 Environmental Conservation	<p><b>1. Objectives of zone</b></p> <ul style="list-style-type: none"> <li>• To protect, manage and restore areas of high ecological, scientific, cultural or aesthetic values.</li> <li>• To prevent development that could destroy, damage or otherwise have an adverse effect on those values.</li> </ul>	<p>The extent of this zone proposed by Council is inconsistent with the recommended zoning plan at <b>Annexure 7</b>. Justification for the recommended zones is provided in the State Significant Site Study.</p>

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TABLE 18 – DRAFT TWEED LOCAL ENVIRONMENTAL PLAN 2008 ZONINGS		
ZONE NO.	OBJECTIVE	CONSISTENCY
	<p><b>2. Permitted without consent</b></p> <p>Environmental Protection Works.</p> <p><b>3. Permitted with consent</b></p> <p>Bed and Breakfast Accommodation; Community Facilities; Dwelling Houses; Environmental Facilities; Helipads; Home Businesses; Home Industries, Roads.</p> <p><b>4. Prohibited</b></p> <p>Business Premises; Hotel or Motel Accommodation; Industries; Multi Dwelling Housing; Nightclubs; Recreation Facilities (major); Research Stations; Residential Flat Buildings; Retail Premises; Seniors Housing; Service Stations; Warehouse or Distribution Centres; Any other development not specified in Item 2 or 3.</p>	

A submission will be made by the applicant to Tweed Shire Council in relation to the exhibited Draft Local Environmental Plan and in particular the location of the boundary between the E2 zone, the RE2 zone and R1 zone. It is apparent that the extent of the E2 zone proposed by Tweed Shire Council is based on the Tweed Vegetation Management Strategy Mapping and Draft Local Environmental Plan Amendment No. 21 which was exhibited in 2004/2005.

The extent of the natural vegetation on the site has been identified by James Warren and Associates (see **Annexure 16**) and accurately surveyed. It is considered that the location of the zone boundary between the R1, RE2 and E2 zones to the south is more appropriately and accurately defined as shown on the Recommended Zoning Map at **Annexure 7** based on the more recent, rigorous and accurate constraints mapping undertaken for the RISE project.

The Draft Local Environmental Plan retains the current three storey height limit.

The Concept Plan proposes a number of buildings which do not comply with the current three storey height limit under Tweed Local Environmental Plan 2000. As indicated on the Building Height Map at **Annexure 8** building heights up to eight storeys are proposed over parts of the site. The Report titled "RISE Residential and Retail Assessment" prepared by Conics contained at **Annexure 13** provides justification for higher densities and increased buildings heights. An extract from that Report is as follows:

*"The proposed RISE town centre and hilltop village will not only contain retail uses but be surrounded by a number of residential uses. A lot of these residential uses will be in the form of multi storey dwellings or retirement living. The multi storey dwellings in and around the town centre and hilltop village have an important function in terms of the retail uses for these centres.*

*The greater density of multi storey dwellings compared to low rise or separate dwellings will result in a higher population in and around these centres. As such this increases the population of the walkable catchment. A walkable catchment is generally classified as being approximately 400m as this is considered to be the distance that people are willing to walk for convenience retail. Any distance further than this and people will most likely choose to drive.*

*A high population in a walkable catchment is important for convenience retail as residents within walking distance to a centre are more likely to patronise the centre than if they had to drive. This leads to a higher centre visitation rate and also creates an active and lively town centre. These centres are also important in terms of selling the residential product as it helps to offer a lifestyle option helping to create a diverse population demographic on the subject site.*

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*The current demographic of Bilambil Heights is that of young families with above average incomes living in separate dwellings. The different types of residential dwelling options (from hilltop villages and retirement living to multi storey dwellings) will help to create a more diverse demographic (eg. empty nesters, retirees, working families) with the retail centres catering to each section of the community.*

*The proposed RISE town centre (as well as the hilltop village to a certain extent) offers a diverse range of uses such as shopping, dining, a tavern, child care centre, short stay accommodation and commercial office space. These uses help to create a centre which services the needs of local residents whilst also making an appealing place for people to live in so that they can easily access these types of facilities. The multi storey dwellings cater to this demand and in turn also reinforce demand for the proposed centres.*

*The mix of facilities in the town centre (retail, commercial and residential) will provide the centres network on site and as part of the future Bilambil Height Urban Release Area with facilities for dining, socialising, shopping and impulse retail. This will create a community in which people can live, work and play."*

Further, the ML Design "RISE Architecture and Urban Planning Report for MP08-0234 March 2009" (see **Annexure 9**) contains commentary on pages 30 to 34 of that report which further justifies the requirement for additional building height in the Concept Plan.

#### **4.4 Development Control Plans**

##### **4.4.1 Tweed Development Control Plan 2007, Part A1 – Residential and Tourist Code**

**Annexure 9** contains a Development Control Plan Compliance Checklist at Page 28 which concludes that all forms of residential development will comply with Tweed Development Control Plan 2007, Part A1 with the exception of building heights. Justification for the variation in building heights is provided in the State Significant Site Study forming Part A of this Report.

##### **4.4.2 Tweed Development Control Plan 2007, Part A2 – Site Access and Parking Code**

**Annexure 9** contains a Car Parking Schedule at Page 36 identifying car parking requirements for the various product types proposed under the Concept Plan. In summary, the proposal will comply with relevant provisions of Part A2 with the exception of the Community Hall, the Community Club Building and the Community Lap Pool. Justification for the reduction in car parking is provided in **Annexure 9**. In summary, the Community Hall, if it were a public facility, would technically require 120 car parking spaces whereas only 17 spaces are provided in the scheme. It is proposed that the shortfall will be accommodated in the 11 dedicated street spaces for the Shopping Centre opposite the Hall plus the internal Shopping Centre parking spaces which provide more than the number required. This arrangement is based on the premise that the majority of events utilising the Hall would occur outside normal shopping hours and that the use of the Community Hall will be managed by the RISE Body Corporate.

In addition, a large number of local residents live within walking and cycling distance from the Hall and alternative transport options such as shuttles and golf carts would service the Retirement Villages and the estate generally.

Insofar as the Community Club Building is concerned, a total of 38 spaces are required and 10 will be provided. This shortfall is justified on the basis the Club is not a public building and is for the private use of RISE residents only. The Club is located within a 400m walking distance of a large population in RISE and access will also be available via walking, bicycles and golf carts throughout the estate.

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#### 4.4.3 Tweed Development Control Plan 2007, Part A3 – Development of Flood Liable Land

That part of the site on which the Sports Park is proposed (Precinct U) is flood prone. Potential impacts of the proposal are addressed in **Annexure 22** (Integrated Water Cycle Management Plan Section 1.3). In summary, the Sports Park is unlikely to result in any significant increase in flood levels or velocities.

#### 4.4.4 Tweed Development Control Plan 2007, Part A5 – Subdivision Manual

Section A5.3 of this Development Control Plan provides planning and design information relating to subdivisions.

Relevant provisions are addressed in the following tables.

TABLE 19 – SUBDIVISION REQUIREMENTS	
PROVISION	COMMENTS
<b>A5.3.1 – Master Plans</b>	
<p>The subject site is located within the coastal zone and involves more than 25 lots and therefore a Development Control Plan would normally be required under the provisions of State Environmental Planning Policy No. 71. However, as this is a Major Project to which Part 3A applies a Development Control Plan is not required under State Environmental Planning Policy No. 71.</p> <p>However, this Section of the Development Control Plan provides that a Master Plan is still required for more than 25 lots and, <b>where the urban pattern (street and open space network, neighbourhood structure, etc.) is not determined by:</b></p> <ul style="list-style-type: none"><li>• Development and street/neighbourhood development patterns; or</li><li>• An existing site specific section that determines the general street and neighbourhood layout.</li></ul>	<p>As this is a Major Project Application, this Concept Plan will serve a similar purpose as a Development Control Plan.</p>
<b>A5.3.4 – Subdivision Design</b>	
Site investigation, survey and analysis	As indicated in the Annexures, detailed site opportunities and constraints analysis has been undertaken to identify the suitable footprint for the proposed urban development.
Statutory and Council requirements	Integrated development provisions do not apply to Part 3A Major Projects.
Subdivision design trial layouts and optimisation	A number of layouts have been investigated and discussed with Council Officers and having regard to site opportunities and constraints and commercial considerations the current layout is considered to be optimal.
Pre-application consultation	Numerous discussions have been held with Council Officers over the past two years in relation to the various layout options and servicing details. Council was consulted on the final Concept Layout in correspondence dated 23 February 2009.

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## Urban Design Guidelines and Development Standards

The following table summarises the key guidelines contained in this Section.

TABLE 20 – DESIGN GUIDELINES	
PROVISION	COMMENTS
<b>A5.4.3 – Physical Constraints</b>	
In summary, this section provides that prior to detail Master Planning of a site, the physical constraints of the site must be identified, mapped and constraint issues resolved.	Constraints relating to slope, geotechnical stability, bushfire, contamination and threatened species have been identified in the various plans and annexures and the subdivision layout reflects those constraints and the site's opportunities.
<b>A5.5.4 – Environmental Constraints</b>	
Contaminated land.	<b>Annexure 24</b> comprises a soil contamination assessment for the site. The report concludes that the site is suitable for the proposed residential development.
Landslip or subsidence.	<b>Annexure 20</b> includes a Geotechnical Report which concludes that the proposed subdivision is a suitable and feasible land use for the subject site in terms of geotechnical conditions.
Bushfire risk.	The Bushfire Assessment at <b>Annexure 19</b> does not identify bushfire threats as an absolute constraint.
Threatened species, population or ecological communities or their habitats.	<b>Annexure 16</b> comprises a Flora and Fauna Assessment addressing all relevant statutory provisions under the Threatened Species Conservation Act. The report concludes that the proposed development does not result in a significant effect and a Species Impact Statement is not required for the development.
Koala habitat.	The Flora and Fauna Assessment concludes that for the purposes of State Environmental Planning Policy No. 44 there is no requirement for a Koala Plan of Management.
Significant vegetation.	High conservation value vegetation has been identified in the Ecological Assessment at <b>Annexure 16</b> and the majority of that vegetation will be preserved in an Environmental Conservation zone and managed as common property. Rehabilitation of degraded areas will also be undertaken as indicated in the Rehabilitation Plan at <b>Annexure 16</b> .
Landscape visual character.	A Visual Impact Assessment has been prepared and that Assessment demonstrates that the proposed built form will not have a significant adverse impact on the visual character of the locality (see <b>Annexure 12</b> ).
Acid Sulphate Soils.	See <b>Annexure 24</b> and Section 4.2.
Heritage or cultural items of Aboriginal or European origin.	This issue is addressed in the Cultural Heritage Report at <b>Annexure 18</b> .

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TABLE 21 – LAND FORMING	
PROVISION	COMMENTS
<b>A5.4.5 – Land Forming</b>	
A. General Criteria	
<p>1. Significant Natural Features</p> <p>Site regrading is not to take place on:</p> <ul style="list-style-type: none"> <li>• topographical features that are significant to the character of the site or locality.</li> <li>• existing or natural watercourses with catchment areas of 100ha or more.</li> <li>• riparian zones (see Table A5-5) associated with above.</li> </ul>	These matters are addressed in the Civil Engineering Report at <b>Annexure 20.</b>
<p>2. External &amp; Perimeter Issues</p> <p>(a) Cross Boundary Drainage;</p> <ul style="list-style-type: none"> <li>• Runoff from the subject land to other land shall not be significantly increased;</li> <li>• Runoff from upstream or upslope of the subject land shall be conveyed unimpeded across the land;</li> <li>• Public infrastructure in land to be regraded shall be preserved and if necessary for its continued viability be reconstructed to suit the new landform. Public infrastructure continuity shall be preserved at external boundaries.</li> <li>• Alteration of the locations of cross boundary stormwater drainage/watercourse discharge should be avoided. If alterations are proposed, then the written agreement of all effected downstream landowners is required.</li> </ul> <p>(b) Perimeter levels;</p> <p>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 1.2m in height. The application of this criteria may be varied in infill subdivisions in flood liable areas where there is general filling to provide flood immunity.</p>	These matters are addressed in the Civil Engineering Report at <b>Annexure 20.</b>
<p>B. Mass Landform Change Criteria</p> <p>1. Residential, includes residential subdivisions in Village, Urban Expansion and Rural Living zones.</p> <p>The proportion of a subdivision site (plan area) that contains cut or fill areas with finished surface levels that depart from natural surface levels by more than 5m shall not exceed 10%. Variations up to 15% of site area may be considered if such variations have a demonstrated environmental benefit (eg. avoidance of importing borrowed fill off site).</p> <p>2. Industrial, Business and Mixed Use Subdivision, includes industrial, business and mixed use subdivisions in Village and Urban Expansion zones.</p> <p>The proportion of a subdivision site (plan area) that contains cut or fill areas with finished surface levels that depart from natural surface levels by more than 8m shall not exceed 20%.</p>	These matters are addressed in the Civil Engineering Report at <b>Annexure 20.</b>

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TABLE 21 – LAND FORMING	
PROVISION	COMMENTS
<b>A5.4.5 – Land Forming</b>	
<p>For the purpose of this Section "subdivision site" includes the parcels of land created for private sale and formal parks, and does not include undeveloped areas, areas retained for environmental purposes, roads, or residual allotments. If a subdivision contains a mix of urban and rural/rural residential uses, the rural/rural residential areas must be excluded from the urban areas for the purposes of complying with this Clause.</p>	
<p><b>C. Shape/Surface Criteria</b></p> <p>1. Residential and Rural Living Subdivision, includes residential subdivisions in Village and Urban Expansion zones:</p> <ul style="list-style-type: none"> <li>• The finished landform shape (concave/convex, rolling, stepped etc) of the subdivision site should mimic existing and local surrounding natural topography.</li> <li>• Except as provided in Note 1 below, no sharp changes of gradient (eg associated with batters or retaining walls) are permitted at or near inter lot boundaries or within lots.</li> <li>• Batters and retaining walls are not permitted for the purpose of creating terraced lots.</li> <li>• Sharp changes of gradient are permitted at road and public land boundaries.</li> <li>• See Figure 4.2.2.</li> </ul> <p>Note 1: A retaining wall or batter of maximum "combined height" (as defined in Section E) 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>2. Industrial, Business and Mixed Use Subdivision, includes industrial, business and mixed use subdivisions in Village and Urban Expansion zones:</p> <ul style="list-style-type: none"> <li>• Terraced lots with sharp changes of gradient associated with retaining walls or batters are permitted.</li> </ul> <p>Sharp changes of gradient (ie. associated with batters or retaining walls) are permitted at or near lot, road and public land boundaries. Sharp changes of gradient are permitted within lots.</p>	<p>These matters are addressed in the Civil Engineering Report at <b>Annexure 20.</b></p>
<p><b>D. Plans Criteria</b></p> <p>Site regrading proposals must be accompanied by the plans specified in Development Design Specification D13 – Engineering Plans (Subdivisions) clause D13.03 5(a)</p>	<p>These matters are addressed in the Civil Engineering Report at <b>Annexure 20.</b></p>
<p><b>E. Retaining Walls and Batters Criteria</b></p> <p>1. Definitions:</p> <p>"retaining wall" is defined as a structure required to retain soil, rock and other materials. It includes retaining and revetment structures as defined in clause 1.1 of AS 4078 - 2002.</p> <p>"batter" is defined as the sloping surface of artificial cuttings and embankments that have a gradient exceeding 25%. It excludes natural slopes.</p>	

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TABLE 21 – LAND FORMING																																											
PROVISION				COMMENTS																																							
<b>A5.4.5 – Land Forming</b>																																											
<p>"Combined height" is defined as the vertical height difference at or adjacent to the boundary between top of batter or retaining wall and bottom of batter or retaining wall. Adjacent to a boundary includes any batters or retaining walls that lie either wholly or partly within a distance of 5m measured horizontally from the allotment boundary.</p> <p>2. Criteria</p> <p>(a) The combined height of retaining walls or cut/fill batters on an allotment boundary shall not exceed the following:</p>				<p>These matters are addressed in the Civil Engineering Report at <b>Annexure 20</b>.</p>																																							
<table><tr><th colspan="5">MAXIMUM PERMISSIBLE COMBINED HEIGHT OF RETAINING WALLS OR BATTERS</th></tr><tr><th rowspan="2">Type of Subdivision</th><th rowspan="2">Perimeter boundary of subdivision</th><th colspan="3">Boundaries of lots created within subdivision</th></tr><tr><th>Side and Rear Boundaries</th><th colspan="2">Street Boundary</th></tr><tr><th></th><th></th><th></th><th>Above Street Level</th><th>Below Street Level</th></tr><tr><td>Residential</td><td>1.2</td><td>1.2 see Note 1 of Table A5-3(C)(1)</td><td>1.8</td><td>2.4</td></tr><tr><td>Industrial</td><td>1.2</td><td>5</td><td>2.5</td><td>5</td></tr><tr><td>Business</td><td>1.2</td><td>5</td><td>1.2</td><td>2.4</td></tr><tr><td>Rural Living</td><td>1.2</td><td>Nil</td><td>1.2</td><td>2.4</td></tr></table>						MAXIMUM PERMISSIBLE COMBINED HEIGHT OF RETAINING WALLS OR BATTERS					Type of Subdivision	Perimeter boundary of subdivision	Boundaries of lots created within subdivision			Side and Rear Boundaries	Street Boundary					Above Street Level	Below Street Level	Residential	1.2	1.2 see Note 1 of Table A5-3(C)(1)	1.8	2.4	Industrial	1.2	5	2.5	5	Business	1.2	5	1.2	2.4	Rural Living	1.2	Nil	1.2	2.4
MAXIMUM PERMISSIBLE COMBINED HEIGHT OF RETAINING WALLS OR BATTERS																																											
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Business	1.2	5	1.2	2.4																																							
Rural Living	1.2	Nil	1.2	2.4																																							
<p>(b) Where retaining walls or batters are utilised to create a level difference between adjacent allotments or an allotment and a road and the retaining wall is located in the lower allotment, the top of batter or top of retaining wall shall be located a minimum 0.5m horizontally from the boundary.</p>																																											

TABLE 22 – STORMWATER MANAGEMENT	
<b>A5.4.6 – Stormwater Runoff, Drainage, Waterways and Flooding</b>	
PROVISION	COMMENTS
Water Sensitive Urban Design	This issue is addressed in the Stormwater Management Plan at <b>Annexures 22</b> .
Erosion and Sedimentation Control	This issue is addressed in the Stormwater Management Plan at <b>Annexure 22</b> .
Permanent Stormwater Quality Facilities	This issue is addressed in the Stormwater Management Plan at <b>Annexure 22</b> .
Drainage (lawful point of discharge)	This issue is addressed in the Stormwater Management Plan at <b>Annexure 22</b> .
Riparian Buffer Widths	In accordance with the normal requirement, a 50m ecological buffer will be dedicated adjacent to Cobaki Creek and appropriately rehabilitated.

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The following table summarises the key principles applicable to urban structure.

<b>TABLE 23 – SECTION A5.4.7 – URBAN STRUCTURE</b>	
<b>Requirement</b>	<b>Compliance</b>
No more than 15% of lots fronting cul-de-sac.	Approximately 132 lots will front cul-de-sacs out of a total of approximately 846 residential "dwellings". This equates to 15.6%. Given the difficult terrain, the objective of minimising landform changes and on the basis that it is Community Title Subdivision, this minor numerical variation is considered to be justified in the circumstances.
Maximum cul-de-sac length 100m serving no more than 12 dwellings with clear view for full length of cul-de-sac.	A number of cul-de-sacs will exceed 100m and 12 dwellings however again this is necessary to minimise landform changes and on the basis that it is a Community Title Subdivision.
Linking access for pedestrians and cyclists.	Complies (see Layout Plans).
Bus route/stops should be located at an average spacing of 300 – 400m.	Consultations with Surfside Buslines indicate that the Spine Road ultimately will become a bus route and all dwellings are generally within 300m to 400m walking distance of the bus route.
Street design to achieve target street speeds.	Complies – width and alignment designed to discourage high speeds (see plans).
Cycleway network required.	Normal contributions under Section 94 Plan No. 22 will be applicable.
Dedication of environmentally sensitive areas.	All environmentally sensitive areas will be appropriately zoned and created as Association Property to be managed by the Community Association in perpetuity for environmental open space purposes.
Casual parks – 1.13 hectares/1000 population (11.3m <sup>2</sup> /person). Desirable minimum area 2500m <sup>2</sup> – 4000m <sup>2</sup> .	Complies – see Section 11.0.
95% of residences within 400m walking distance of casual parks.	Complies – all lots are within 400m walking distance (see Layout Plan).
Land form of casual park – slopes less than 8%.	Will comply – details to be submitted with Development Application.
Access from more than one local road.	Generally complies – see <b>Annexure 9</b> .
Road frontage – 50% of perimeter.	Generally complies – see <b>Annexure 9</b> .
Embellishment.	Complies – all necessary services will be provided including play equipment and landscaping in accordance with Development Design Specification D14 – Landscaping Public Space.
Sports playing field – 1.7 hectares/1000 persons (structured or active open space).	Complies – see Section 11.0.
Minimum residential lot size of 450m <sup>2</sup> and 10 x 15m building envelopes for dwellings.	Complies.
Dual occupancy lots minimum 900m <sup>2</sup> or 1000m <sup>2</sup> for corner lots.	Not applicable.
Solar access – 70% of lots oriented from 340° to 20° or 70° to 120°.	Generally complies – however constraints imposed by the topography and Council's Landforming Policy do limit the orientation of the allotments.

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TABLE 23 – SECTION A5.4.7 – URBAN STRUCTURE	
Requirement	Compliance
Generally rectangular shaped lots.	Generally complies – see Application Plans.
East – west lots must have a minimum width of 14m.	Generally complies – however as this is an integrated and master planned community some lots will not comply.

TABLE 24 – SECTION A5-10 – SUBDIVISION INFRASTRUCTURE REQUIREMENTS			
Infrastructure Required	Where Required	Standard of Infrastructure	Comments
Sealed road frontage with kerb and gutter both sides	All lots for private occupation, community facilities lots and public open space lots	See Development Design Specification D1	Complies see <b>Annexure 20.</b>
Landform			Generally complies see <b>Annexure 20.</b>
Water Supply	All lots for private occupation, community facilities lots, sports fields, parks, play areas, other utility facilities (pump stations etc.)	See Development Design Specification D11	Complies see <b>Annexure 20.</b>
Sewerage	As above	See Development Design Specification D12	Complies see <b>Annexure 20.</b>
Electricity	As above	Must be underground and provided in accordance with suppliers and Australian standards. Verge service location is to comply with Development Design Specification D1	Complies – internal reticulation will be underground.
Telecommunications	All lots for private occupation, community facilities lots and sports fields. As required for other utility facilities).	As above, service must be such that standard connection is available to local/national/ overseas networks	Complies – telecommunication facilities will be provided underground.
Gas	Optional	As above	See letter from APA Group dated 6 March 2009 at <b>Annexure 29.</b>
Drainage system	Must provide Q100 local flooding immunity for all lots for private occupation and community facilities. Major/minor system required, roads public open space may (subject to other development standards) be used for Q100 overland flow paths. Must be equipped with stormwater treatment facilities to meet Chapter 3, PC7.15 standards	See Development Design Specifications D5 and D7.	Complies see <b>Annexures 20 and 22.</b>
Flood Immunity	All lots for private occupation must have surface levels above the Q100 level for regional creek/river flooding. See section 4.26 of this chapter for public open space standards.	See Section A3 - Development of Flood Liable Land for detailed requirements.	Complies see <b>Annexure 22.</b>

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TABLE 24 – SECTION A5-10 – SUBDIVISION INFRASTRUCTURE REQUIREMENTS			
Infrastructure Required	Where Required	Standard of Infrastructure	Comments
External Connections and/or upgrades	The subdivider must provide all external connections required to connect subdivision infrastructure and upgrade external infrastructure to cater for the additional subdivision load. See also D1, D5, D7, D11, D12		Complies see Application Plans and Annexure 20.

The following table indicates the amount of casual and structured open space required for the projected population based on the rates contained in Tweed Development Control Plan 2007, Part A5.

TABLE 25 – OPEN SPACE SUMMARY TABLE			
LAND USE & OCCUPANCY RATE	NO. OF UNITS	CASUAL OPEN SPACE REQUIRED @ 11.3M <sup>2</sup> PER PERSON	STRUCTURED OPEN SPACE REQUIRED @ 17M <sup>2</sup> PER PERSON
Boutique Hotel Units – 1.7 ppu	160	272 x 11.3 = 3074	Nil
Apartments – 1.95 ppa	403	786 x 11.3 = 8880	786 x 17 = 13362
Retirement Living – 1.2 ppd	598	718 x 11.3 = 8113	718 x 17 = 12206
Dwelling House – 2.6 ppd	251	653 x 11.3 = 7379	653 x 17 = 11101
Villa/Townhouse/SOHO – 2.3 ppd	192	442 x 11.3 = 4995	442 x 17 = 7541
Nursing Homes – 1 ppd	200	Nil (on the basis that Nursing Home residents do not generate a demand for casual or structured open space)	
<b>TOTAL</b>	<b>1804</b>	<b>3.24ha</b>	<b>4.42ha</b>

Abbreviations:  
 ppu – persons per unit.  
 ppa – persons per apartment.  
 ppd – persons per dwelling.

Open space to be provided on site is discussed in Section 11.0.

#### 4.4.5 Tweed Development Control Plan 2007, Part A7 – Child Care Centres

A child care centre is proposed at Precinct A11 adjacent to the Spine Road and the town centre. Council has adopted Part A7 – Child Care Centres with the aim of presenting locational and design criteria to ensure that the siting of child care centres does not have an unacceptable adverse impact on the amenity of surrounding areas.

The following table (Table 26) identifies the relevant criteria and provides comments on each criteria.

TABLE 26 – CHILD CARE CENTRE LOCATION REQUIREMENTS	
LOCATION REQUIREMENT	COMMENTS
<b>A7.2.1 Residential Areas</b>	
(a) In residential zones Council shall strongly favour the location of child care centres adjacent to non-residential uses such as retailing uses (neighbourhood shopping centres), schools, community facilities and the like.	The proposed child care centre is located on the proposed Spine Road and adjacent to the school site. It is in proximity to residential and retirement precincts, however it is well buffered from those precincts.

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TABLE 26 – CHILD CARE CENTRE LOCATION REQUIREMENTS	
LOCATION REQUIREMENT	COMMENTS
<p>(b) The development of child care centres on "infill" sites within low density residential areas shall not be favoured unless:</p> <p>(i) The lot has a minimum area of 800m<sup>2</sup>, a 3.0 metre perimeter landscape buffer with adjacent properties and a minimum 1.8 metre high intervening fence. If the proposed building and play areas comprising the Child Care Centre are 10 metres or more from any adjacent dwelling, then the 3.0 metre landscape buffer and 1.8 metre high fence is not required. Some landscaping and fencing will still be required, however, each application will be treated on its own merits;</p> <p>(ii) The applicant can demonstrate that noise emanating from the use of the child care centre will not be detrimental to the amenity of adjacent residents;</p> <p>(iii) Car parking is provided in such locations that will minimise disturbance to adjacent neighbours by the frequent arrival and departure of cars; and</p> <p>(iv) The overall traffic impact to the immediate neighbourhood is not detrimental to the amenity.</p>	<p>The future Development Application for the child care centre will demonstrate compliance with this criteria. However sufficient site area is available to achieve compliance as indicated on the Concept Plan.</p> <p>Given the separation between the child care centre and adjacent residential and retirement living uses compliance with this Clause can be achieved.</p> <p>Sufficient site area is available to provide compliant car parking.</p> <p>The site is adjacent to the Spine Road which is a future bus route of collector status and therefore impacts on local streets will be minimised.</p>
<p>(c) For new urban release areas there should be planned provision within a development control plan for a particular release area to locate child care centres immediately adjacent to retailing, commercial and community uses and which are essentially located to provide convenient access to the population served.</p>	<p>The siting of the child care centre has been carefully planned in finalising the Concept Plan to ensure that accessibility is achieved without impacting on the amenity of future residential neighbourhoods. This is achieved by siting the child care centre in Precinct A which is the Village Centre Precinct.</p>

#### 4.4.6 Tweed Development Control Plan 2007, Part 13 – Socio-Economic Impact Assessment

This Section sets out thresholds for certain types of development which require the preparation of a Socio-Economic Impact Statement. As this is a Major Project Application a formal Socio-Economic Impact Statement is not required, however relevant socio-economic information and assessment is contained in the Economic Impact Report prepared by TEDC Ltd dated August 2006 (**Annexure 15**) and the Retail Assessment prepared by Conics dated 24 March 2009 (**Annexure 13**).

### 4.5 Legislation and Policies

#### 4.5.1 North Coast Urban Planning Strategy, 1995

Under the provisions of this Strategy, which was prepared by the Department of Planning in 1995, the subject land is identified as a committed urban area.

#### 4.5.2 Tweed Residential Development Strategy, 1991

This Strategy has been approved by the Director General of the Department of Planning in accordance with the provisions of Clause 38 of the North Coast Regional Environmental Plan 1988.

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In summary, Clause 38 provides that the Council shall not prepare a Local Environmental Plan which permits development for significant urban growth unless it has prepared an Urban Land Release Strategy for the whole of its local government area, the Strategy has been approved by the Director of Planning and the Local Environmental Plan Amendment is in accordance with that Strategy.

The land to which the Concept Plan relates is identified as an existing urban area under the 1991 Strategy. This includes the majority of the golf course area currently zoned 6(b).

#### **4.5.3 Far North Coast Regional Strategy, 2006 – 2031**

On 17 January 2007, the Far North Coast Regional Strategy was adopted by the Minister for Planning. The purpose of the Regional Strategy is to manage the region's expected high growth rate in a sustainable manner. The Regional Strategy will protect the unique environmental assets, cultural values and natural resources of the region while ensuring the future planning maintains the character of the region and provides for economic opportunities. In addition, future growth will be managed by preventing the spread of coastal development and encouraging the development of non-coastal centres – ensuring adequate land is available and appropriately located to sustainably accommodate the projected housing, employment and environmental needs of the region's population over the next 25 years.

The Regional Strategy identifies and promotes a settlement pattern that protects environmental values and natural resources while utilising and developing the existing network of major urban centres, reinforcing village character and requiring efficient use of existing services and major transport routes.

To accommodate the addition 60400 people anticipated to be living in the region by 2031, the Regional Strategy has set individual dwelling targets for each Local Government Area.

The Strategy aims to achieve a more appropriate mix for future housing that reflects the region's changing housing needs (ie. 60% single dwellings and 40% multi unit) for the 51000 proposed dwellings within the town and village growth boundaries by 2031.

The Strategy indicates that in the Tweed Local Government Area there were 34650 dwellings existing in 2006 and an additional 19100 dwellings will be required by 2031 to accommodate the expected population growth.

As indicated on **Annexures 2 and 7**, the area to be zoned R1 General Residential is consistent with the existing urban footprint shown on Sheet 1 of the adopted Far North Coast Regional Strategy.

Rezoning of the site as recommended in the State Significant Site Study and development of the site as proposed in the Concept Plan would be consistent with the settlement and housing provisions of the Far North Coast Regional Strategy in that it will provide approximately up to 1804 "dwellings" in a range of housing types to assist in meeting the identified demand for an additional 19100 dwellings within the Tweed Local Government area by 2031.

#### **4.5.4 Tweed 2000+ Strategic Plan**

Following lengthy and detailed public consultations and consultations with State Agencies, this Plan was adopted by Council on 17 December 1996.

The Bilambil Heights release area was initially zoned for urban development approximately 18 years ago. The Bilambil Heights release area is generally bounded by Scenic Drive to the south, Cobaki Road to the north with the subject land forming the western limit. Tweed Shire Council has approved residential subdivisions at Stott Street and Walmsleys Road, both of which have been constructed.

A residential subdivision adjacent to Scenic Drive (adjoining Tweed Pacific) has also been approved and constructed. No other major subdivisions have been constructed within the release area to date, however several are in the early planning stages.

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Clause 114 of the Plan relates to Bilambil Heights and provides that:

*"Long Term Urban Release – The Bilambil Heights release area has major infrastructure impediments and requires a comprehensive multi-ownership planning approach. If after three years no commitment has been given by landowners for infrastructure at Bilambil Heights, then Area E at Terranora should be considered for release subject to other Tweed 2000+ Strategic Plan requirements."*

Substantial efforts were made over a number of years to coordinate the various land owners (approximately 90) in the release area with a view to having them contribute equitably to the necessary forward planning for the locality and the provision of infrastructure. However these efforts were unsuccessful because of the fragmented ownership and relatively high costs involved.

Notwithstanding an extension of the deadline contained in Clause 114 of the Tweed 2000+ Strategic Plan, landowners were unable to comply and as a consequence Council, at its meeting on 7 May 2000, resolved to:

*"Amend Clause 114 of the Tweed 2000+ Strategic Plan to read as follows:*

*Long Term Urban Release – The Bilambil Heights release area has major infrastructure impediments and requires a comprehensive planning approach. No development approvals for the release of land for residential development will be granted until such times as the Tugun Bypass and the Cobaki Parkway are commenced to provide appropriate access to the regional road network.*

*In accordance with Section 54 of the Environmental Planning and Assessment Act inform the Regional Director, Department of Urban Affairs and Planning, that Council intends to prepare a Draft LEP to amend the Tweed LEP 2000 to require that no development approval for the release of land for residential development at Bilambil Heights can be granted by Council until the Tugun Bypass and Cobaki parkway are commenced to provide appropriate access to the regional road network and that in Council's opinion a LES is not required."*

In relation to the latter part of the resolution, it should be noted that Planning NSW has been advised of this resolution, however no further action has been taken to progress this amendment.

Tugun Bypass has been approved and construction work was completed in mid 2008, including the Boyd Street (Tugun) Overpass.

Construction of Cobaki Parkway from Boyd Street (Qld) to the "Sandbridge Roundabout" has been "commenced", however the section from the Sandbridge Roundabout to Piggabeen Road has not been commenced. As indicated in the Traffic Impact Assessment at **Annexure 17**, there is sufficient reserve capacity on Kennedy Drive to accommodate 3911 vehicle trips for the RISE site. Therefore, when the stage of development is reached in RISE which generates the traffic volumes identified in the Traffic Report, further stages of the development will not proceed until Cobaki Parkway is connected to Boyd Street in Queensland. This issue is further addressed in the Draft Heads of Agreement at **Annexure 28**.

Other Policies and Actions under the Tweed 2000+ Strategic Plan of relevance to Bilambil Heights include:

*"Clause 118*

*Before any land is released in an urban release area, detailed integrated local area planning must be undertaken. Council will require the following to effect "release" of these areas, unless other arrangements satisfactory to Council are made (eg. Master Plan):*

- ♦ *An Infrastructure Plan, including proposed works and funding sources, and any Council liability.*

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- 
- ♦ *A Water Quality Management Plan.*
  - ♦ *A Development Control Plan.*
  - ♦ *A Section 94 Contribution Plan.*

*These plans are to be prepared at the proponent's expense and are to coordinate all landowners.*

Terranora Group Management has funded the preparation of the Draft Bilambil Heights Local Area Structure Plan (and confidentially forwarded a copy of this plan to Council and the Department) which forms the basis of a future Development Control Plan for the area. Subject to Council formalising and adopting the Plan at some time in the future, this Clause will be satisfied.

As no site specific Section 94 Plans apply to the Bilambil Heights Release Area, the applicant is prepared to enter into a Voluntary Planning Agreement to secure dedication of land and the payment of contributions, if required by the Department of Planning. Information relating to infrastructure and water quality is provided in the Annexures to this Concept Plan.

#### *Clause 119 – Integrated Planning*

*Urban Release Areas shall be designed to provide for housing choice, make the best use of available resources and provide for diversity and social interaction. The design of urban release areas will require:*

- ♦ *Meeting any requirements of the Housing Strategy.*
- ♦ *Provision of suitable land for employment opportunities.*
- ♦ *Design to facilitate an efficient bus route system.*
- ♦ *Upfront provision of easily accessible community services and facilities which are Council's responsibility.*
- ♦ *Provision of a range of residential densities.*
- ♦ *Protection and enhancement of environmental values of adjacent land.*
- ♦ *Provision of appropriate open space for residents at local, neighbourhood and regional level.*

*Future urban releases shall not occur without a catchment based Water Quality Management Study being prepared to the satisfaction of Council, prior to local Environmental Plan and/or Development Control Plan confirmation.*

#### *Individual Release Area Requirements*

#### *Clause 120 – Bilambil Heights*

*The detailed planning for Bilambil Heights is to include the following principles:*

- ♦ *Commitment by the landowners for funding of Scenic Drive Diversion (to the Piggabeen Road intersection).*
- ♦ *Water and sewerage provision so that there is no unnecessary duplication of mains and pump stations.*
- ♦ *Completion of investigation into clearway provisions for Kennedy Drive.*
- ♦ *Defined areas of potential dual occupancy and medium density development.*
- ♦ *Collector road access to all properties.*
- ♦ *Consideration of current 1(c) zoned land for urban density development if the land is hazard free, if it can be economically serviced with water and sewer, and if there are no unacceptable impacts on water quality and scenic values."*

The Draft Bilambil Heights Local Area Structure Plan has been prepared by Terranora Group Management to address the key issues contained in Clauses 119 and 120 and that document has been confidentially submitted to Council to enable Council to prepare a Development Control Plan for the whole Release Area in the future as noted above. This Concept Plan is consistent with the Draft Local Area Structure Plan.

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#### **4.5.5 Tweed 04/24 Strategic Plan**

This Plan retains the Bilambil Heights area as an urban release area which generally encompasses the subject land.

#### **4.5.6 Cobaki/Bilambil Heights/Terranora Interim Planning Strategy**

This Strategy was prepared by Council in 1995 and contains a Structure Plan at Figure 11 which provides for an indicative road network for the Bilambil Heights area together with the provision of open space, schools and shops.

The Structure Plan is somewhat conceptual, however based on more detailed analysis carried out for the purposes of the subject land it is considered that the Draft Bilambil Heights Local Area Structure Plan achieves a more appropriate urban form.

#### **4.5.7 Draft Bilambil Heights Local Area Structure Plan**

During discussions with Council officers concerning their assessment of the original State Significant Site Submission, issues were raised in relation to how the RISE project fits into the Bilambil Heights Release Area as a whole. As a result of these concerns and as Council does not have the planning and financial resources to prepare a Structure Plan for the whole of Bilambil Heights, Terranora Group Management Pty Ltd undertook to prepare a Draft Local Area Structure Plan in conjunction with Council in accordance with certain requirements agreed between Council officers and Terranora Group Management Pty Ltd.

Following further consultations with Council officers in relation to various draft versions of the Structure Plan, the final Draft Bilambil Heights Local Area Structure Plan was submitted to Council on 15 May 2007 on a confidential basis. A copy has also been provided to the Department of Planning. The Draft Structure Plan demonstrates that the proposed development of the RISE site is in accordance with the Concept Plan and proposed rezoning, and it is entirely compatible with the Draft Structure Plan. Indeed, development of the RISE site will provide essential infrastructure to facilitate the efficient and timely development of the remaining Release Area, particularly in relation to road upgrading, provision of augmented water supplies and trunk sewerage infrastructure.

**Annexure 9** (Page 10) contains an extract from the Draft Bilambil Heights Structure Plan showing the strategic plan for the area and the proposed land uses. The RISE Concept Plan is consistent with the Draft Local Area Structure Plan.

#### **4.5.8 Threatened Species Conservation Act**

The Ecological Assessment at **Annexure 16** addresses the Seven Part Test and State Environmental Planning Policy No. 44 and concludes that the proposed development will not have a significant effect and therefore a Species Impact Statement is not required. That report also recommends certain mitigation measures which are further addressed in Section 20.0 (Draft Statement of Commitments).

#### **4.5.9 Native Vegetation Act, 2003**

Section 5 of this Act provides that the Act does not apply to land described in Part 3 of Schedule 1. Schedule 1, Part 3, Paragraph 14 provides that land within a zone designated "residential" under an Environmental Planning Instrument is excluded from the operation of the Act. The proposed zone for the urban footprint is R1 General Residential. It is therefore considered that the zone has the "*substantial character*" of a residential zone.

Therefore, Development Consent or a Property Vegetation Plan are not required under this Act for the proposed clearing works within that part of the site to be zoned R1.

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However, part of the Spine Road and all of the Sports Park are currently located and will ultimately be located on land which is not zoned for residential purposes and therefore approval under the Native Vegetation Act for any clearing involving these facilities and other infrastructure would normally be required.

It should also be noted that Section 75U of the Environmental Planning and Assessment Act provides that an authorisation referred to in Section 12 of the Native Vegetation Act, 2003 does not apply to a Major Project Application.

#### **4.5.10 Roads Act, 1993**

Section 138 of this Act requires approval to be obtained for certain works and access connections to a public road. However, Section 75V of the Environmental Planning and Assessment Act provides that an approval under Section 138 must be consistent with any Part 3A approval granted by the Minister.

#### **4.5.11 Rural Fires Act, 1997**

This Act requires an authority from the Rural Fire Service for certain development types including subdivisions to be used for residential purposes and aged persons housing. These forms of development would normally also be integrated development under the provisions of Section 91 of the Environmental Planning and Assessment Act. However, Section 75U provides that a Bushfire Safety Authority under Section 100B of the Rural Fires Act is not required in respect of a Major Project Application.

#### **4.5.12 Water Management Act, 2000**

Approvals would normally be required under this Act for certain activities including dewatering however, Section 75U of the Environmental Planning and Assessment Act provides that a Water Use Approval under Section 89, a Water Management Work Approval under Section 90 or an Activity Approval under Section 91 of this Act is not required in respect of a Major Project Application.

#### **4.5.13 Commonwealth Environmental Protection and Biodiversity Conservation Act, 1999**

The Ecological Assessment at **Annexure 16** concludes that the proposed development does not give rise to a requirement for any approvals under the Commonwealth Environmental Protection and Biodiversity Conservation Act, 1999.

### **4.6 Development Contributions**

Tweed Shire Council has adopted a number of Shire wide Section 94 Contribution Plans which may apply to the project. In addition, Council has adopted Water and Sewer Headworks Charges for the Tweed Local Government Area.

**Table 27** summarises development contributions and current charges for the generic land uses proposed under the Concept Plan. The final amount of the contributions will be determined when future Development Applications are determined at which time actual floor areas and uses will be known to enable accurate contributions to be calculated.



TABLE 27 – SECTION 94 CONTRIBUTIONS						
PLAN NO.	DESCRIPTION	\$ RATE PER DWELLING OR UNIT				
		Hotel & Tourist	Medium Density	Dwelling Houses	Retail/ Commercial	Aged Persons Housing
4	TRCP (Sector 4)	5/100m <sup>2</sup> GFA	6946	11577	See formula in Plan	Self Contained 4452.5 Hostel/ Residential Care 3652
5	Local Open Space	Contributions are not applicable on the basis that casual and structured open space will be dedicated and embellished on site to meet the demand of the projected population.				
6	Street Trees	N/A	N/A	297	N/A	N/A
11	Libraries	N/A	450	688	N/A	450
12	Bus Shelters	N/A	16	26	N/A	N/A
13	Eviron Cemetery	N/A	90	131	N/A	90
16	Emergency Services	131	131	200	N/A	131
18	Council Offices	1152	1305.60	1996.80	399.40/small unit 277/300m <sup>2</sup> GFA large units	1305.60
22	Cycleways	136/bed	230	352		230
26	Regional Open Space – Structured		1521	2327	N/A	1521
	– Casual	329/bed	559	855	N/A	559

Public benefits will accrue from the project by way of the dedication and embellishment of structured open space Sports Park within Precinct U as shown on the Structure Plan at Page 22 of **Annexure 9**. Those facilities will be available for general public use and care, control and management will vest in Tweed Shire Council.

In addition, wider public benefits will flow by way of improved road connectivity and permeability particularly with the connection of Marana Street to Cobaki Road, upgrading of Cobaki Road, Marana Street, the installation of traffic lights at the Scenic Drive and McAllisters Road intersection and ultimately the construction of Cobaki Parkway through to Boyd Street in Queensland. This network will provide an alternate route for existing and future residents to access the Pacific Highway and Tweed Heads to the east, particularly given that Kennedy Drive is approaching its environmental capacity constraint.

A further public benefit is the agreement between the applicant and council that the Concept Plan is to provide for the inclusion of two major regional water supply reservoirs at Precincts C and K, and that the Concept Plan is to provide for two public road connections to the adjoining urban zoned property which will allow for the strategic road system in the release area to be completed in the future.

Other public benefits include the provision of neighbourhood scale retail/shopping facilities together with restaurants and cafes for day trippers and local residents.

**Table 28** summarises Section 64 Water and Sewer Headworks Contributions for the key elements of the Concept Plan.

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TABLE 28 – SECTION 64 WATER AND SEWER HEADWORKS CONTRIBUTIONS						
SERVICE	HOTEL	MEDIUM DENSITY	DWELLING HOUSE	SELF CONTAINED AGED PERSONS HOUSING	NURSING HOME	RETAIL
Water	0.3 ET	1 Bed 0.4 ET 2 Bed 0.6 ET 3 Bed 0.8 ET	1 ET \$10709	1 Bed 0.4 ET 2 Bed 0.6 ET 3 Bed 0.8 ET	0.5 ET	Varies depending on actual use – see TSC Development Servicing Plans for Water Supply Services and Sewerage Services (July 2007).
Sewer	0.45 ET	1 Bed 0.5 ET 2 Bed 0.75 ET 3 Bed 1.0 ET	1 ET \$5146	1 Bed 0.5 ET 2 Bed 0.75 ET 3 Bed 1.0 ET	0.75 ET	Varies depending on actual use – see TSC Development Servicing Plans for Water Supply Services and Sewerage Services (July 2007).

#### 4.7 Capital Investment Value

The capital investment value of the project has been determined at \$141,518,631. A copy of the Quantity Surveyor's Report is contained at **Annexure 23**.

#### 4.8 NSW Coastal Policy

Part of the land which is the subject of this Development Application is within the coastal zone and therefore relevant provisions of this Policy apply. The matters for consideration under Clause 8 of the Policy are addressed within the following table.

TABLE 29 - NSW COASTAL POLICY COMPLIANCE		
STRATEGIC ACTION NO.	STRATEGIC ACTION	COMMENT
1.3.2 & 1.3.8	Stormwater Quality	This issue is addressed in the Erosion and Sedimentation Control Plan and Stormwater Management Plan at <b>Annexure 22</b> .
1.4.5	Coastal Hazards	This issue is addressed in Section 4.1.8 of this Statement.
2.1.4	Acid Sulphate Soils	This issue is addressed in Section 4.2 of this Statement. An Acid Sulphate Soil Management Plan is not required for this Concept Plan.
3.2.1	North Coast Design Guidelines	This issue is addressed in Section 4.1.8 of this Statement.
3.2.4	Design and Locational Principles	The proposal will not overshadow the beach or foreshore open space. The height of the building is consistent with the proposed planning controls and strategies relating to the site.
7.2.3	Surf Life Saving Facilities	Council has adopted a Section 94 Contribution Plan for Surf Lifesaving facilities.

#### 5.0 URBAN DESIGN AND BUILT FORM

##### 5.1 Design Quality Controls

The bulk of the proposed development consists of detached houses and townhouses that are in accordance with the Tweed Shire DCP and the relevant Planning Instruments.

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The areas that require a variation to the applicable planning instruments with regards to Building Heights are those that underpin the viability of the development in the local and regional context and provide the critical mass and density essential to urban areas. Bulk, scale and size of these areas will be appropriately sculptured and architecturally designed to ensure a seamless transition between them and neighbouring development. Specific Design Guidelines to be embodied into the future Body Corporate By Laws will control the outcome in these areas.

## **5.2 Proposed Development Controls and Urban Design Guidelines**

The submitted Architectural and Urban Design Report March 2009 provided by ML Design (**Annexure 9**), supported by the Streetscape Master Plan and Landscape Open Space Master Plan provided by EA Design (**Annexure 11**), form the basis for the proposed urban design guidelines. The entire project will be a Community Management Scheme. The overarching Planning Control will be the Tweed Shire Council's Development Control Plan 2007 and the detailed Architectural Design Guidelines will be initiated at the individual Development Application phase.

The submitted documents set out the framework of the proposed development and define the following Urban Elements:

- Structure of the subdivision
- Road access, circulation and Streetscape
- Location of the various build types, which are optimised to their topographic location
- Proposed densities of the individual precincts
- Proposed maximum building heights
- Extent and location of Community Facilities
- Landscape and Open Space Plans

The Urban Design Controls support the design outcome set out in the DCP. Variations to the DCP are highlighted and will be controlled through Architectural Design Guidelines.

RISE is proposed as a community title scheme which ensures that controls set in place at the outset can be maintained in perpetuity by inclusion of Design Guidelines within the Body Corporate by-laws.

In order to provide a continuity of control and direction whilst at the same time providing the ability to respond to changing conditions over time, a covenant including an appropriate architectural code will be refined at each development approval phase. The basis of any covenants and/or design guidelines will be the Tweed Council's Development Control Plan 2007 or subsequent document. The proposed design guidelines may contain requirements beyond the standards of the DPC.

The design guidelines will generally include but not be limited by the following:

- 01 A Vision Statement that encapsulates the development philosophy.
- 02 The purpose of the document.
- 03 The structure of the document to identify the various forms of development and how they are categorized.
- 04 Authorities and the role they play.
- 05 The residential, retail and commercial character and their relevant architectural forms.
- 06 Landscape principles, requirements, design, species and planting.
- 07 General guidelines regarding responsibilities of construction processes and social responsibilities including management.

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- 08 Conditions of land purchase and development.
  - 09 Siting of building and orientation outcomes.
  - 10 Climate design, energy management and sustainability issues including rain water and recycled water systems and management that will already be integrated into the development.
  - 11 Privacy design and methodologies to achieve required outcomes.
  - 12 Roads and their widths, shape, finishes, parking strategies and landscaping are more flexible in their resolution resulting in a higher level of aesthetic consideration.
  - 13 Fences, common walls and other shared ancillary features require standards and guidelines to achieve a high level of urban design. The wide range of fence/wall types external to buildings will be categorized according to function, terrain and visual amenity.
  - 14 Building Heights, setbacks, site cover and car parking will be specific to building type, lot size, lot location, terrain, form of development and visual amenity criteria. Due to the wide range of development categories and the staging over time, these will be developed as distinct requirements, prepared in separate segments according to the land use. The general principles will reflect the accepted standards for development.
  - 15 Fire management zones will affect certain aspects of the development according to their location in relation to identified bushfire hazards.
  - 16 Site cover requirements will reflect the type of development in designated precincts.
  - 17 Building characteristics. These will identify architectural treatment that is either encouraged or discouraged.
  - 18 Building colours and materials. Palettes of colour will be created to suit the various architectural categories, their location and their use. When the environment is of critical concern, for example, colours will be earth tones, whereas commercial and recreational precincts will require more active colours. Materials will be identified so they maintain the perceived character in specific areas and nominated so that realistic achievement will ensure the intended goals of architectural symbiosis.
  - 19 Roofs will be identified where colours, shape and materials have direct affect on visual amenity from the ground (example being skylines on the ridges) or on overlooking from higher levels. Roof pitches will be included in this evaluation and also where issues of vistas and sustainability (solar energy) are determined to be particularly relevant.
  - 20 Ancillary structures such as plants and equipment, retaining walls and sheds will all be defined insofar as they require visual and/or safety consideration.
  - 21 Tennis courts, pools and other recreational activities will be considered with respect to their public or private use and their impact, either positive or negative will be defined.
  - 22 Temporary structures, detached garages, public active and passive space structure and lighting will be divided into various categories depending on their location.
  - 23 The document will be divided into specific categories or 'parts' related to the building type – Residential, Medium Density, Commercial, etc. This will provide a specific reference for convenient use and clear understanding. Cross reference will be included as required.

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- 24 An architectural/planning review committee will be established to manage compliance and assist users, the developer, authorities and other interested parties to comprehend the implications of development. The mechanism of approval will be outlined in this document with the intention of using it as a marketing opportunity as much as a pragmatic tool.
- 25 This control document will become an integral part of the Body Corporate by laws and will initially be managed by the “master developer” but will remain in perpetuity as it will become a responsibility of the Body Corporate.

The conclusions and recommendations contained in **Annexures 9** and **11** will be implemented as part of the project.

### **5.3 Site Analysis**

The Site Analysis has highlighted the opportunity of linking Cobaki with Bilambil Road to locate a Town Village Centre within the local region. The topography has been carefully studied and has been a major controlling factor in determining the proposed design outcome of the development.

For a detailed description of the site analysis refer to the Architectural and Urban Design Report (**Annexure 9**, Pages 4 to 10).

### **5.4 Visual Analysis**

LVO have prepared a Visual Impact Assessment of the proposed Concept Plan, including the built form. A copy of that Assessment is contained at **Annexure 12**.

The report builds upon and updates the findings of the Visual Impact Assessment, prepared by LVO' Architecture, dated 30th June 2006, in light of more detailed information with regard to development proposals, including the proposed basic locations of buildings exceeding three storeys in height as included in the MP08-0234 application.

The visual amenity of the existing site and of the proposed development were assessed by observation and analysis when seen from frequently and, in some cases, less frequently accessed public locations, such as roads and streets from which the site is currently visible.

Although not as important as views from public spaces, similar views would also be obtainable from private properties near to the selected streets from which the observations were made.

There are few locations from which the full extent of the site forms an important element in the viewshed and even when it does, other existing urban developments are either more visually dominant or are more apparent.

Viewed from locations where the site is quite visible, the parts of the site which are quite obvious will remain as open space and the parts of the site which will be subject to urban development will be visually subservient or screened from those viewpoints.

From the locations where proposed structures which exceed three storeys will be visible, they will not negatively impact the visual landscape due to building heights being restricted to mature native tree height, neutral colour selection for building finishes and distance from Viewpoints.

In summary, the findings of the Visual Analysis indicate that, with regard to visual impact, the project should be approved for development. The Visual Analysis Report makes no specific recommendations in relation to the project.

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## 5.5 Strategic Context

A Residential and Retail Assessment justifying the project in terms of market demand has been prepared by Conics. The Report is contained at **Annexure 13**.

### Concept Proposal

The subject site covers a total area of approximately 184 hectares in Bilambil Heights West Tweed. The portion of the site being dealt with in this report, as part of the MP08-0234 Major Project Application, is approximately 110 hectares and is proposed to have approximately 1,604 residential dwellings plus a nursing home. The residential product on site will comprise 181 residential lots, 70 hillside housing homes, 160 resort apartments, 36 penthouses, 367 apartments, 176 villas and townhouses, 16 art shop houses (Soho units), 100 retirement cottages, 486 retirement apartments, 12 retirement villas and a nursing home with 200 beds. It will also include a number of retail and community facilities.

Retail facilities include a town centre (with a village supermarket, convenience retail, commercial suites and a tavern), a hilltop village (consisting of restaurants, retail, arts school and arts studios) and another small retail centre at the northern end of the urban footprint.

### Site Assessment

The subject site is part of the wider 880 Ha Bilambil Heights Urban Release Area which has been designated by The Tweed Shire Council and State Government to house between 8,000 to 10,000 people since 1989. It is also part of the urban growth boundary under the Far North Coast Regional Strategy (FNCRS). The establishment of retail centres in this area is in line with the Tweed Retail Strategy, which acknowledges that future centres should be located in expansion areas (such as Bilambil Heights) catering to these populations.

The different types of retail uses proposed for the site (town centre, hilltop village with gallery/art studio and local shops) will each trade to different catchment areas. This is due to the reasonably isolated nature of the subject site, and the varying functions that the developments upon it serve. The proposed retail uses on site trade to relatively tight local catchments, while other more specialized developments (such as the art gallery as part of the hilltop village) will trade to a wider market due to their broad appeal. The topography of the site allows for views over the coast and hinterland enhancing the appeal of residential product on the site and providing it with a point of difference. The proposed layout of the residential product also helps to capture the views on offer and increases the appeal of the site.

### Existing Retail Infrastructure

There are few existing retail uses surrounding the subject site. These existing centres trade to the existing local population and are relatively small in scale, serving mainly a convenience function. Currently, residents would need to travel into Tweed Heads or Banora Point to conduct their larger weekly/fortnightly shopping trips and top up shopping trips.

### Catchment Area Delineation

The proposed mix of uses for the town centre on the subject site will see it cater to resident's impulse and top up shopping trips. The existing community of Bilambil Heights is located adjacent to the proposed town centre, and the town centre is expected to trade to these residents due to its range and choice of retail, and relatively easy access via Marana Street. Residents located along Scenic Drive are also expected to patronise the subject site. Residents of these areas make up the town centre's Primary Trade Area (PTA).

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Future residents of the Bilambil Heights Urban Release Area north and east of the proposed town centre are located down in a valley, and as such, would be required to travel uphill to access the town centre. Residents from this area will make up the Secondary Trade Area (STA).

The gallery/art studio/spa uses as part of the hilltop village development will trade to wider regional area, including tourists and day trip visitors. This is due to its specialised product offerings and appeal.

### **Resident Characteristics**

The demographic profile of the combined town centre trade areas is based on that of the existing Bilambil Heights community, and is likely to comprise young families with above average incomes. At capacity there is projected to be approximately 7,148 people in the identified trade areas. This equates to approximately \$42.9 million in household convenience and food and beverage expenditure in the town centre trade areas, indicating demand for the proposed town centre. The town centre is also expected to receive a portion of inflow expenditure from residents outside of the trade areas in the Bilambil Heights Urban Release Area, due to the variety of uses on site such as child care, commercial office, tavern and other dining.

Population projections from the NSW Department of Planning for the Tweed Shire have predicted the population to increase from approximately 86,518 in 2009 to approximately 98,100 in 2016 and 105,190 in 2021. This equates to an increase of approximately 9,151 dwellings between 2009 and 2021 placing pressure on residential land in Tweed Shire. The residential development on the subject site will help to relieve some of this pressure from the increasing population.

The proposed retirement village housing options will also cater to the local community with Tweed Heads having a significantly higher population over the age of 55 (36%) compared to that of the Gold Coast (26%).

### **Residential Diversity**

The Tweed Shire has a number of different residential housing options. These include townhouses, apartments, penthouses, retirement villages, rural housing, single and two storey houses and others. Higher density uses such as apartments are generally located in and around Tweed Heads and the Queensland – New South Wales border. There are also a number of masterplanned communities such as Salt and the Currumbin Eco Village. Whilst the Currumbin Eco Village is located on the Gold Coast it is within close proximity to the subject site and is an example of a successful masterplanned community with a different residential product offer.

The proposed mix of residential uses on the subject site is already present in the local market. As such the residential product will meet the market rather than making the market. This is seen as evolutionary rather than revolutionary in terms of residential product in the Tweed Shire and surrounds as it represents an alternative location for this product rather than a completely new product.

### **Hilltop Village**

The gallery/art/studio/spa uses as part of the hilltop village will cater to tourists and daytrippers who visit the area. This will result in additional flow on effects for the Tweed Shire through the money daytrippers spend while visiting the site. The hilltop village will also benefit the local community, as it will give local artists a place to display their work, and creates an alternate employment offering for local residents.

### **Residential Assessment**

The site is within the Bilambil Heights Urban Release Area and associated urban land under the FNCRS and as such residential uses here are considered to be appropriate.

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The FNCRS also states that dwelling densities throughout the region should be increased to cope with the expected increase in population and one and two person households. Uses such as apartments, villas and townhouses on the subject site are in line with the FNCRS intent for increased densities.

The proposed mix of residential uses on the subject site does not represent a new type of product for the Tweed but rather existing product in an unfamiliar location in the foothills rather than on the beach or waterfront. This represents an evolution of the Tweed residential market. The 1,604 dwellings and 200 nursing beds on the subject site will also help cater to the demand of a growing population in the area.

The sites amenity through its views and complimentary infrastructure such as retail and community facilities are expected to enhance the appeal of the site and provide it with a point of difference in the market appealing to a wide range of people such as retirees, singles, families and investors.

The proposed residential product proposed for the subject site is expected to be successful in the market.

### **Retail Economic Impact Assessment**

The population at capacity of the identified town centre trade areas of 7,148 people creates demand for proximate local retail facilities. The proposed centres on the subject site such as the town centre, hilltop village and local shops will cater to this demand and trade to local catchments. The hilltop village; with uses such as the spa, arts gallery and studios, will also cater to the tourist market, bringing additional income to both the subject site and the Tweed Shire.

The proposed developments will be beneficial to the community as it will offer proximate places for surrounding resident's convenience, top up, and impulse shopping needs. They will also expand upon the level of choice and offer in the area. The proposed gallery and art studio uses as part of the hilltop village will also benefit the artistic community and the Tweed Shire through the number of tourist visitations to the site.

The proposed uses on the subject site are not expected to impact adversely upon the Tweed Shire retail hierarchy or future retail centres as part of the Bilambil Heights Urban Release Area due to their localised trade areas. As such, the proposed developments are considered to be consistent with the intentions of the Tweed Shire Retail Strategy, as the proposed developments caters to future population growth without adversely affecting existing or proposed centres.

## **6.0 BIODIVERSITY AND THREATENED SPECIES**

### **6.1 Flora and Fauna**

A detailed flora assessment of the entire site which discusses the methods used in the vegetation assessment and provides a description of the location, composition and extent of the vegetation communities on the Subject site is provided within the Ecological Assessment (at Appendix 1 of Volume 2 of **Annexure 16**).

The Ecological Assessment comprises three volumes as follows:

Volume 1 – Ecological Assessment  
Volume 2 – Appendices to the Ecological Assessment  
Volume 3 – Site Rehabilitation and Pest Management Plan

The flora assessment recorded seven (7) vegetation communities.

One (1) Endangered Ecological Community (EEC) – Lowland rainforest – occurs on the subject site. The locations of the EEC are shown in **Figure 12** of **Annexure 16**.

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Better quality rainforest in the south of the site and some patches in the northern portion of the site are considered to represent the EEC Lowland rainforest. Additionally, several areas that have been subject to Camphor laurel poisoning practices are regenerating into this rainforest EEC.

The Scientific Committee Final Determination notes that Lowland rainforest includes subtropical rainforest and some related structurally forms of dry rainforest and states:

*“Lowland rainforest may be associated with a range of high-nutrient geological substrates, notably basalts and fine-grained sedimentary rocks, on coastal plains and plateau, footslopes and foothills. In the north of its range, Lowland Rainforest is found up to 600 metres above sea level...”*

Depauperate rainforest vegetation over large portions of the site has been degraded by regenerating Camphor laurel and Large-leaved privet saplings subsequent to removal of mature Camphor laurel and is not considered to adequately represent this EEC.

In total, three hundred and ninety-one (391) flora species have been recorded at the subject site. A complete list of flora species recorded from the site is provided in **Annexure 16** (Volume 2, Annexure 1). A total of seventeen (17) threatened flora species have been recorded on the subject site to date. These are listed in the table below.

<b>TABLE 30 - THREATENED FLORA RECORDED ON THE SITE</b>			
<b>Common name</b>	<b>Botanical name</b>	<b>TSC Act (1995)</b>	<b>EPBC Act (1999)</b>
Axe breaker	<i>Geijera paniculata</i>	E	-
Ball nut	<i>Floydia praealta</i>	V	V
Basket fern	<i>Drynaria ruigidula</i>	E	-
Bopple nut	<i>Hicksbeachia pinnatifolia</i>	V	V
Coolamon	<i>Syzygium moorei</i>	V	-
Fine-leaved tuckeroo	<i>Lepiderema pulchella</i>	V	-
Marblewood	<i>Acacia bakeri</i>	V	-
Rough-shelled bush nut	<i>Macadamia tetraphylla</i>	V	V
Rusty rose walnut	<i>Endiandra hayesii</i>	V	V
Small-leaved tamarind	<i>Diploglottis campbellii</i>	E	-
Southern ochrosia	<i>Ochrosia moorei</i>	E	E
Spiny gardenia	<i>Randia moorei</i>	E	-
Stinking laurel	<i>Cryptocarya foetida</i>	V	V
Sweet myrtle	<i>Gossia fragrantissima</i>	E	E
White laceflower	<i>Archidendron hendersonii</i>	V	-
Yellow satinheart	<i>Bosistoa transversa</i>	V	V
Yiel yiel	<i>Grevillea hilliana</i>	E	-

V = Vulnerable, E = Endangered

Seven (7) ROTAP species were also identified on the site:

- ♦ Ardisia (*Ardisia bakeri*);
- ♦ Black walnut (*Endiandra globosa*);
- ♦ Blunt wisteria (*Millettia australis*);

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- Long-leaved tuckeroo (*Cupaniopsis newmanii*);
- Smooth scrub turpentine (*Rhodamnia maideniana*);
- Stream lily (*Helmholtzia glaberrima*); and
- Veiny laceflower (*Archidendron muellerianum*).

#### Fauna values

A detailed fauna assessment which includes a description of the methods used in determining which fauna species use, or are likely to use, the Study area and a discussion of the results of fauna surveys completed on the subject site is provided within Volume 2, Appendix 2 of **Annexure 16**. Fauna surveys on the subject site have revealed the presence of seven (7) amphibian species, six (6) reptile species, seventy-nine (79) bird species and twenty-one (21) mammal species.

A total of eight (8) Threatened fauna species have been recorded from the subject site to date, including:

- Rose-crowned fruit-dove (*Ptilinopus regina*);
- White-eared monarch (*Monarcha leucotis*);
- Black flying-fox (*Pteropus alecto*);
- Eastern bent-wing bat (*Miniopterus schreibersii oceanensis*);
- Eastern free-tail bat (*Mormopterus norfolkensis*);
- Little bent-wing bat (*Miniopterus australis*);
- Grey-headed flying-fox (*Pteropus poliocephalus*); and
- Koala (*Phascolarctos cinereus*).

It is worth noting that indirect evidence of Koala activity was recorded from the eastern portion of the subject site during a study by JWA in 2004. Koalas were not recorded in the 1996 WBM Oceanics survey, and have not been recorded on the site by Groundskeepers (Bill Clarke – Head Groundskeeper *pers comm.* April 2005). No evidence of Koala activity was recorded during recent site surveys.

Additionally, five (5) Migratory species as listed within schedules of the EPBC Act (1999) were also recorded:

- Cattle egret (*Ardea ibis*);
- Rainbow bee-eater (*Merops ornatus*);
- Rufous fantail (*Rhipidura rufifrons*);
- Spectacled monarch (*Monarcha trivirgatus*); and
- White-bellied sea-eagle (*Haliaeetus leucogaster*).

A further fifteen (15) Threatened fauna species were considered to be likely or possible occurrences on the Subject site due to the presence of suitable habitat. These include:

- Albert's lyrebird (*Menura alberti*);
- Barred cuckoo-shrike (*Coracina lineata*);
- Beccari's free-tail bat (*Mormopterus beccarii*);
- Black breasted button quail (*Turnix melanogaster*);
- Common planigale (*Planigale maculata*);
- Coxen's fig parrot (*Cyclopsitta diophthalma coxeni*);
- Eastern long-eared bat (*Nyctophilus bifax*);
- Eastern pygmy possum (*Cercartetus nanus*);
- Koala (*Phascolarctos cinereus*);
- Masked owl (*Tyto novaehollandiae*);
- Sooty owl (*Tyto tenebricosa*);
- Square-tailed kite (*Lophoictinia isura*);
- Three-toed snake toothed skink (*Coeranoscincus reticulatus*);
- Wompoo fruit dove (*Ptilinopus magnificus*); and
- Yellow-bellied sheath-tail bat (*Saccolaimus flaviventris*).

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Volume 1 (Section 5, Table 9) of the Ecological Assessment at **Annexure 16** contains a summary of impacts, mitigation measures and offsets.

The mitigation and offsets identified in **Table 31** will be implemented as part of the project. That Table is reproduced as follows:

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TABLE 31 - SUMMARY OF IMPACTS, MITIGATION AND OFFSETS

Threatened flora	Potential impacts	Mitigation measures	Proposed offset	Net loss/gain
<ul style="list-style-type: none"> <li>Axebreaker (<i>Geijera paniculata</i>)</li> <li>Ball nut (<i>Floydia praealta</i>)</li> <li>Basket fern (<i>Drynaria rigidula</i>)</li> <li>Bopple nut (<i>Hicksbeachia pinnatifolia</i>)</li> <li>Coolamon (<i>Syzygium</i>)</li> </ul>	<ul style="list-style-type: none"> <li>None of the forty (40) stems of Axebreaker recorded on the site occur within the proposed development footprint (<b>FIGURE 13</b>).</li> <li>The single stem of Ball nut recorded on the site does not occur within the proposed development footprint (<b>FIGURE 13</b>).</li> <li>The single Basket fern recorded on the site does not occur within the proposed development footprint (<b>FIGURE 13</b>).</li> <li>None of the forty-nine (49) stems of Bopple nut recorded on the site occur within the proposed development footprint (<b>FIGURE 13</b>).</li> <li>One (1) planted stem of Coolamon occur within areas of the proposed development footprint. None of the five (5) naturally occurring</li> </ul>	<ul style="list-style-type: none"> <li>Approximately 16.31 hectares (79.5%) of suitable habitat for these species will be retained.</li> <li>Rehabilitation of rainforest communities will be completed.</li> <li>Retained patches of rainforest will be buffered from the proposed development and embellished to increase the overall extent of isolated patches and reduce existing anthropogenic impacts.</li> <li>Propagation of Threatened flora species has commenced and will continue as part of the rehabilitation works on the subject site in an attempt to bolster local populations.</li> <li>As a minimum, every retained Threatened plant on the subject site will be provided with a 5m vegetated buffer.</li> <li>Weed control will be completed on the interface of remnant bushland by a qualified Bush regenerator;</li> <li>Weed control will be undertaken on a progressive basis on an anticipated three (3) - five (5) year period;</li> <li>All areas of remnant vegetation will be fenced where necessary to exclude pedestrian traffic and cattle grazing;</li> </ul>	<ul style="list-style-type: none"> <li>Rehabilitation of an additional 28.9ha of rainforest communities in accordance with the Site Rehabilitation &amp; Pest Management Plan (<b>VOLUME 3</b>) to offset the loss of 4.21 ha and ensure protection for retained Threatened flora species.</li> <li>Any Threatened flora species removed during any stage of the development will be offset at a minimum rate of 5:1 (i.e. 5 replacement plants for every 1 removed) within RA's in the MP08-0234 development area.</li> <li>Offsets for the removal of Threatened flora to date have included the planting of: <ul style="list-style-type: none"> <li>Coolamon (<i>Syzygium moorei</i>) x 163, to offset the potential removal of 1 stem (planted), resulting in an increase of 162 plants on the subject site;</li> <li>Fine-leaved tuckeroo (<i>Lepiderema</i>)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>The local populations of these species will be bolstered through propagation and replanting works.</li> <li>The rehabilitation works include: <ul style="list-style-type: none"> <li>Restoration and embellishment of approximately 15.42ha of existing mature EEC (54.4% of rehabilitation area);</li> <li>Assisted regeneration of approximately 2.1ha of existing regenerating EEC (7.3% of rehabilitation area);</li> <li>Regeneration of approximately 10.14ha of disturbed land/depauperate rainforest to create additional EEC (35.1% of rehabilitation area); and</li> <li>Revegetation of approximately 1.2ha cleared land to create additional EEC (4.2% of</li> </ul> </li> </ul>

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TABLE 31 - SUMMARY OF IMPACTS, MITIGATION AND OFFSETS

	Potential impacts	Mitigation measures	Proposed offset	Net loss/gain
<i>moorei</i> )  <ul style="list-style-type: none"> <li>Fine-leaved tuckeroo (<i>Lepiderema pulchella</i>)</li> <li>Marblewood (<i>Acacia bakeri</i>)</li> <li>Rough-shelled bush-nut (<i>Macadamia tetraphylla</i>)</li> <li>Rusty rose walnut (<i>Endiandra hayesii</i>)</li> </ul>	<p>Coolamons will be removed (<b>FIGURE 13</b>).</p> <ul style="list-style-type: none"> <li>The proposed development will potentially remove one hundred and fourteen (114) stems (10.1%) of Fine-leaved tuckeroo recorded on the site (<b>FIGURE 13</b>).</li> <li>None of the nineteen (19) stems of Marblewood recorded on the site occur within the proposed development footprint (<b>FIGURE 13</b>).</li> <li>The proposed development will potentially remove twenty-nine (29) stems (7.4%) of Rough-shelled bush nuts recorded on the site (<b>FIGURE 13</b>).</li> <li>The single stem of Rusty rose walnut recorded on the site does not occur within the proposed development footprint (<b>FIGURE 13</b>).</li> <li>None of the twenty-four (24) stems of Small-</li> </ul>	<ul style="list-style-type: none"> <li>Formal pathways are to be provided through areas of remnant vegetation to prevent the creation of numerous informal tracks;</li> <li>A monitoring and maintenance program for areas of remnant vegetation is included in the Site Rehabilitation &amp; Pest Management Plan (<b>VOLUME 3</b>).</li> <li>It is highly likely that the forty-nine (49) Stinking laurel saplings to be affected can be translocated to a more suitable location on the site, where they will have better opportunities to develop to maturity.</li> </ul>	<p><i>pulchella</i>) x 547, to offset the potential removal of 114 stems, resulting in an increase of 433 plants on the subject site;</p> <ul style="list-style-type: none"> <li>Marblewood (<i>Acacia bakeri</i>) x 17, resulting in an increase of 17 plants on the subject site;</li> <li>Rough-shelled bush nut (<i>Macadamia tetraphylla</i>) x 334, to offset the potential removal of 29 stems, resulting in an increase of 305 plants on the subject site;</li> <li>Rusty rose walnut (<i>Endiandra hayesii</i>) x 9, resulting in an increase of 9 plants on the subject site;</li> <li>Small-leaved tamarind (<i>Diploglottis campbellii</i>) x 413, resulting in an increase of 413 plants on the subject site;</li> <li>Spiny gardenia (<i>Randia moorei</i>) x 16, to offset the potential removal of 1 stem, resulting in an increase of 15 plants on the subject</li> </ul>	<p>rehabilitation area).</p> <p>and will result in a long-term net gain of approximately 11.34ha of suitable habitat for these species.</p>

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TABLE 31 - SUMMARY OF IMPACTS, MITIGATION AND OFFSETS

	Potential impacts	Mitigation measures	Proposed offset	Net loss/gain
<ul style="list-style-type: none"> <li>Small-leaved tamarind (<i>Diploglottis campbellii</i>)</li> <li>Southern ochrosia (<i>Ochrosia moorei</i>)</li> <li>Spiny gardenia (<i>Randia moorei</i>)</li> <li>Stinking laurel (<i>Cryptocarya foetida</i>)</li> <li>Sweet myrtle (<i>Gossia fragrantissima</i>)</li> </ul>	<ul style="list-style-type: none"> <li>leaved tamarind occur within the proposed development footprint (<b>FIGURE 12</b>).</li> <li>None of the forty-eight (48) stems of Southern ochrosia recorded on the site occur within the proposed development footprint (<b>FIGURE 13</b>).</li> <li>The proposed development will potentially remove one (1) stem (1.6%) of Spiny gardenia recorded on the site (<b>FIGURE 13</b>).</li> <li>The proposed development will potentially remove forty-nine (49) stems (35.8%) of Stinking laurels recorded on the site (<b>FIGURE 13</b>).</li> <li>The proposed development will potentially remove five (5) stems (8.8%) of Sweet myrtle recorded on the site (<b>FIGURE 13</b>).</li> <li>None of the four (4) stems of White lace flower recorded on the</li> </ul>		<ul style="list-style-type: none"> <li>site;</li> <li>Sweet myrtle (<i>Gossia fragrantissima</i>) x 337, to offset the potential removal of 5 stems, resulting in an increase of 332 plants on the subject site;</li> <li>White laceflower (<i>Archidendron hendersonii</i>) x 74, resulting in an increase of 17 plants on the subject site;</li> <li>Yellow satinheart (<i>Bosistoa transversa</i>) x 8, to offset the potential removal of 7 stems, resulting in an increase of 1 plant on the subject site; and</li> <li>Yiel yiel (<i>Grevillea hilliana</i>) x 32, to offset the potential removal of 11 stems, resulting in an increase of 21 plants on the subject site.</li> </ul>	

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TABLE 31 - SUMMARY OF IMPACTS, MITIGATION AND OFFSETS

	Potential impacts	Mitigation measures	Proposed offset	Net loss/gain
<ul style="list-style-type: none"> <li>White lace flower (<i>Archidendron hendersonii</i>)</li> <li>Yellow satinheart (<i>Bosistoa transversa</i>)</li> <li>Yiel yiel (<i>Grevillea hilliana</i>)</li> </ul>	<p>site occur within the proposed development footprint (<b>FIGURE 13</b>).</p> <ul style="list-style-type: none"> <li>The proposed development will potentially remove seven (7) stems (4%) of Yellow satinheart recorded on the site (<b>FIGURE 13</b>).</li> <li>The proposed development will potentially remove eleven (11) stems (22%) of Yiel yiel recorded on the site (<b>FIGURE 13</b>).</li> </ul>			
<b>Endangered Ecological Communities</b>				
<ul style="list-style-type: none"> <li>Lowland rainforest</li> </ul>	<ul style="list-style-type: none"> <li>Approximately 4.21 hectares (20.5%) of Lowland rainforest will be lost (<b>FIGURE 16</b>).</li> <li>Edge effects may impact on retained EEC's.</li> </ul>	<ul style="list-style-type: none"> <li>Amelioration for the removal of Lowland rainforest will be provided through revegetation works on the subject site.</li> <li>A Site Rehabilitation &amp; Pest Management Plan has been prepared for the subject site and includes measures to offset any loss of this EEC from the subject site (<b>VOLUME 3</b>).</li> <li>Furthermore, retained patches of this EEC will be buffered from the</li> </ul>	<ul style="list-style-type: none"> <li>In total, 28.9 hectares of Lowland rainforest on floodplain will be regenerated/revegetated on the subject site (<b>FIGURE 15</b>) to offset the loss of 4.21 hectares.</li> </ul>	<ul style="list-style-type: none"> <li>Revegetation works on the subject site will result in a long-term net gain of approximately 27.8ha of Lowland rainforest.</li> <li>The rehabilitation works include: <ul style="list-style-type: none"> <li>Restoration and embellishment of approximately 15.42ha of existing mature EEC (54.4% of rehabilitation</li> </ul> </li> </ul>

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TABLE 31 - SUMMARY OF IMPACTS, MITIGATION AND OFFSETS

	Potential impacts	Mitigation measures	Proposed offset	Net loss/gain
		<p>proposed development and embellished to increase the overall extent of isolated patches and reduce existing anthropogenic impacts.</p> <ul style="list-style-type: none"> <li>The Site Rehabilitation &amp; Pest Management Plan includes specific performance criteria as well as a detailed maintenance and monitoring program to ensure the persistence of this EEC in the long-term.</li> <li>Weed control will be completed on the interface of EEC's by a qualified Bush regenerator;</li> <li>All areas of EEC will be fenced to exclude pedestrian traffic and cattle grazing;</li> <li>Formal pathways are to be provided through areas of retained EEC to prevent the creation of numerous informal tracks;</li> <li>A monitoring and maintenance program for areas of remnant vegetation is included in the Site Rehabilitation &amp; Pest Management Plan (VOLUME 3).</li> </ul>		<p>area);</p> <ul style="list-style-type: none"> <li>Assisted regeneration of approximately 2.1ha of existing regenerating EEC (7.3% of rehabilitation area);</li> <li>Regeneration of approximately 10.14ha of disturbed land/depauperate rainforest to create additional EEC (35.1% of rehabilitation area); and</li> <li>Revegetation of approximately 1.2ha cleared land to create additional EEC (4.2% of rehabilitation area).</li> </ul> <p>and will result in a long-term net gain of approximately 11.34ha of suitable habitat for these species.</p>
<b>Threatened fauna</b>				
<ul style="list-style-type: none"> <li>Grey-headed flying-fox (<i>Pteropus poliocephalus</i>)</li> </ul>	<ul style="list-style-type: none"> <li>Approximately 12.49 hectares (42.1%) of potential forage habitat will be removed from the subject site.</li> <li>Suitable roosting habitat will be retained in the</li> </ul>	<ul style="list-style-type: none"> <li>The Grey-headed flying-fox is considered likely to continue foraging within retained areas of vegetation on the site.</li> <li>Furthermore, 28.9 hectares of rainforest vegetation will be regenerated/revegetated on the</li> </ul>	<ul style="list-style-type: none"> <li>In total, 28.9 hectares of vegetation likely to provide suitable forage habitat for the Grey-headed flying-fox will be regenerated/revegetated on the subject site (FIGURE 14) to offset the loss of 12.42 hectares.</li> </ul>	<ul style="list-style-type: none"> <li>Revegetation works on the subject site will result in a long-term net gain of approximately 16.48ha of suitable forage and/or corridor habitat for the Grey-headed flying-fox including embellishment of</li> </ul>

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TABLE 31 - SUMMARY OF IMPACTS, MITIGATION AND OFFSETS

	Potential impacts	Mitigation measures	Proposed offset	Net loss/gain
tail bat ( <i>Mormopterus norfolkensis</i> )	<ul style="list-style-type: none"> <li>potential forage habitat will be removed from the subject site.</li> <li>Given the high mobility of this species, the loss of potential foraging habitat is not considered significant in relation to the regional distribution of habitat for this species.</li> <li>No roost habitat will be affected by the proposed development and it is considered that this species will continue to forage over the retained vegetation on the subject site.</li> </ul>	<ul style="list-style-type: none"> <li>vegetation for foraging.</li> <li>Furthermore, approximately 28.9ha of revegetation /regeneration will be completed in accordance with the Site Rehabilitation &amp; Pest Management Plan (<b>VOLUME 3</b>) to offset any loss of vegetation.</li> </ul>	<ul style="list-style-type: none"> <li>suitable forage habitat for these species will be regenerated/revegetated on the subject site (<b>FIGURE 14</b>) to offset the loss of 12.42 hectares.</li> </ul>	<ul style="list-style-type: none"> <li>long-term net gain of approximately 16.48ha of suitable forage habitat for this species including embellishment of existing habitat and revegetation/ rehabilitation works.</li> </ul>
<ul style="list-style-type: none"> <li>White-eared monarch (<i>Monarcha leucotis</i>)</li> </ul>	<ul style="list-style-type: none"> <li>Approximately 2.62 hectares (15.3%) of potential forage habitat will be removed from the subject site.</li> <li>Given the high mobility of this species, the loss of potential foraging habitat is not considered significant in relation to the regional distribution of habitat for this species.</li> </ul>	<ul style="list-style-type: none"> <li>Approximately 28.9ha of revegetation/regeneration will be completed in accordance with the Site Rehabilitation &amp; Pest Management Plan (<b>VOLUME 3</b>) to offset any loss of vegetation.</li> <li>These areas are all likely to provide suitable forage habitat for this species in the long-term.</li> </ul>	<ul style="list-style-type: none"> <li>In total, 28.9ha of vegetation that may provide suitable forage habitat for this species in the long-term will be regenerated/ revegetated on the subject site (<b>FIGURE 14</b>) to offset the loss of 2.62 hectares.</li> </ul>	<ul style="list-style-type: none"> <li>Revegetation works on the subject site will result in a long-term net gain of approximately 26.28ha of potential forage habitat for the White-eared monarch including embellishment of existing habitat and revegetation/ rehabilitation works.</li> </ul>
<ul style="list-style-type: none"> <li>Rose-crowned fruit-dove (<i>Ptilinopus regina</i>) &amp;</li> </ul>	<ul style="list-style-type: none"> <li>Approximately 12.49 hectares (42.1%) of potential forage habitat will be removed from the</li> </ul>	<ul style="list-style-type: none"> <li>Rehabilitation works in accordance with the Site Rehabilitation &amp; Pest Management Plan (<b>VOLUME 5</b>) will result in the regeneration/</li> </ul>	<ul style="list-style-type: none"> <li>In total, 28.9ha of vegetation that may provide suitable forage habitat for these species in</li> </ul>	<ul style="list-style-type: none"> <li>Revegetation works on the subject site will result in a long-term net gain of approximately 26.28ha of</li> </ul>

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TABLE 31 - SUMMARY OF IMPACTS, MITIGATION AND OFFSETS

	Potential impacts	Mitigation measures	Proposed offset	Net loss/gain
Wompoo fruit-dove ( <i>P. magnificus</i> )	<ul style="list-style-type: none"> <li>subject site.</li> <li>Given the high mobility of this species, the loss of potential foraging habitat is not considered significant in relation to the regional distribution of habitat.</li> </ul>	<ul style="list-style-type: none"> <li>revegetation of 28.9 hectares of rainforest vegetation.</li> <li>These areas will provide suitable habitat for the fruit-dove in the long-term and offset the loss of 12.49ha of potential forage habitat.</li> </ul>	the long-term will be regenerated/ revegetated on the subject site ( <b>FIGURE 14</b> ) to offset the loss of 12.49 hectares.	potential forage habitat for the fruit-dove.
<ul style="list-style-type: none"> <li>Black flying-fox (<i>Pteropus alecto</i>)</li> </ul>	<ul style="list-style-type: none"> <li>Approximately 12.49 hectares (42.1%) of potential forage habitat will be removed from the subject site.</li> <li>Suitable roosting habitat will be retained in the southern portion of the subject site.</li> <li>Given the high mobility of this species, the loss of 12.49 hectares of known and potential foraging habitat is not considered significant in relation to the regional distribution of potential foraging habitat for this species.</li> </ul>	<ul style="list-style-type: none"> <li>The Black flying-fox is considered likely to continue foraging within retained areas of vegetation on the site.</li> <li>Furthermore, 28.9 hectares of rainforest vegetation will be regenerated/revegetated on the subject site (<b>FIGURE 14</b>) in accordance with the Site Rehabilitation &amp; Pest Management Plan (<b>VOLUME 3</b>).</li> <li>These areas are likely to provide suitable forage habitat for this species and offset the loss of 12.49ha.</li> </ul>	<ul style="list-style-type: none"> <li>In total, 28.9 hectares of vegetation likely to provide suitable forage habitat for the Black flying-fox will be regenerated/ revegetated on the subject site (<b>FIGURE 14</b>) to offset the loss of 12.49 hectares.</li> </ul>	<ul style="list-style-type: none"> <li>Revegetation works on the subject site will result in a long-term net gain of approximately 16.48ha of suitable forage and/or corridor habitat for the Black flying-fox.</li> </ul>
<b>Wildlife corridors</b>				
	<ul style="list-style-type: none"> <li>The proposed development will result in the removal of vegetated portions of the subject site. However, the majority of vegetation to be removed is comprised of grassland</li> </ul>	<ul style="list-style-type: none"> <li>The proposed development utilises existing cleared areas.</li> <li>A network of existing vegetated corridors will be retained on the site.</li> <li>Additionally, smaller interlinking corridors will be provided on the</li> </ul>	<ul style="list-style-type: none"> <li>A Site Rehabilitation &amp; Pest Management Plan has been prepared for the subject site (<b>VOLUME 3</b>) to provide vegetated links across the site and ensure that the remaining wildlife corridors will be embellished</li> </ul>	<ul style="list-style-type: none"> <li>A net gain of approximately 28.9ha of vegetation providing suitable corridor habitat will occur as a result of the proposed development.</li> </ul>

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**TABLE 31 - SUMMARY OF IMPACTS, MITIGATION AND OFFSETS**

	<b>Potential impacts</b>	<b>Mitigation measures</b>	<b>Proposed offset</b>	<b>Net loss/gain</b>
	with scattered trees, landscape plantings and areas dominated by Camphor laurel. <ul style="list-style-type: none"><li>• Edge effects may impact on retained corridor habitat.</li></ul>	subject site through regeneration and revegetation works. <ul style="list-style-type: none"><li>• Rehabilitation works on the subject site will include buffers to retained vegetation corridors as well as weed maintenance along edges.</li></ul>	utilising revegetation and natural regeneration principles.	

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## 6.2 Management of Threatened Species

### Vegetation Management

#### Background

A program of poisoning Camphor laurel and Large-leaved privet has been in progress on the site for the last five (5) years. The loss of these weeds can be seen clearly in the aerial photograph shown in **Annexure 16**. The sudden influx of light to many of the smaller trees and shrubs in the understorey has resulted in rapid growth of many of these understorey plants. Large numbers of native pioneer species including Macaranga (*Macaranga tanarius*) seedlings in particular were noted to have germinated in some parts of the site, and it is anticipated that widespread germination of other native species such as Guioa (*Guioa semiglauca*) will follow.

#### Methodology

The proposed conservation areas over the entire subject site have been divided into forty-three (43) Rehabilitation Areas (RA's). Individual regeneration and revegetation plans are to be completed for each of the forty-three (43) RA's. RA's 33 - 43 occur within the Stage 1 development area (Stage 1 being the MP08-0234 area).

A Site Rehabilitation and Pest Management Plan (JWA 2009) has been prepared for the subject site (Volume 3 of **Annexure 16**). The objectives of the regeneration and revegetation plan are:

- ♦ To enhance the vegetation to be conserved;
- ♦ To revegetate disturbed areas with endemic species including threatened plant species;
- ♦ To obtain a minimum of 70% native canopy cover;
- ♦ To obtain a minimum five (5) metre buffer of retained native vegetation around each retained threatened species, to reduce detrimental edge effects and other disturbance related impacts;
- ♦ To improve the value of the subject site as habitat for fauna groups; and
- ♦ To manage weeds using plantings of endemic species and best practice control methods to achieve less than 10% exotic weed cover within each stratum.

In most areas large numbers of both Large-leaved privet and Camphor laurel seedlings have responded to the opened canopy and are competing with native species for light and resources. These seedlings will require management (by spraying) to limit any re-establishment of these species. Care will be required to limit the spraying of native species, particularly Threatened species, such as Fine-leaved tuckeroo which often produce large numbers of seedlings. This work will only be undertaken by a qualified and experienced bush regenerator.

Focus will continue on weed control in the more degraded portions of the site. Vegetation in the south-west of the site (zoned 7A) is generally in excellent condition and it is not considered necessary to commence works within this community. The degraded area of land in the south of the site adjacent to the 7A area requires intensive work to eliminate infestations of Lantana and Crofton weed. While some natural regeneration is likely to occur in these areas, ongoing maintenance will be a long term prospect, while the topography of the area is likely to make regular maintenance very difficult. It is recommended that this area be targeted for rehabilitation once works in the north of the site have been in progress for at least a two (2) year period.

#### Regeneration

There are excellent opportunities for natural regeneration throughout much of the site, due to the great diversity of native species on the site. Mass regeneration of the pioneer species Macaranga has already occurred in some parts of the site where large scale Camphor laurel poisoning has reduced the canopy and resulted in sunlight penetration. The presence of many mature figs is also likely to result in birds and bats bringing in seed from the locality onto the site.

It is likely that over time, and with appropriate management, regeneration of much of the site is likely to result in establishment of good quality rainforest which will continue to support a diversity of Threatened flora species.

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The site serves as a high quality seed bank for Threatened flora species, and there are excellent opportunities to collect and propagate seed of these species for use in the regeneration process. Threatened species such as the Small-leaved tamarind, Rough-shelled bush nut and Fine-leaved tamarind all propagate readily from seed. Furthermore, the wide variety of other rainforest species on the site also provides a diverse seed source worthy of propagation. A rainforest nursery will be established on the site to support the regeneration process (in addition to providing landscaping plantings) utilising local seed sources. Early implementation of a propagation program will enable tubestock of Threatened species in particular, to be grown up and ready to utilise in future rehabilitation plantings.

#### Pest Management

The Site Rehabilitation & Pest Management Plan (Volume 3 of **Annexure 16**) provides background information on the following pest animal species potentially occurring on the Subject site and outlines the management strategy for each:

- ♦ Wild dogs
- ♦ Feral cats
- ♦ Rabbits/hares
- ♦ Cane toads
- ♦ Foxes

Management of pests in parks and reserves within the Tweed area is dealt with in the NSW National Parks and Wildlife Service *Northern Rivers Region Pest Management Strategy 2008 – 2011*. The measures outlined in the Site Rehabilitation & Pest Management Plan (Volume 3 of **Annexure 16**) aim to complement the goals of the NPWS Strategy.

The Site Rehabilitation and Pest Management Plan at Volume 3 of **Annexure 16** will be implemented as part of the project.

### 6.3 Vegetation Clearing and Offset Strategy

Development in accordance with the proposed layout will result in the loss of vegetation for the construction of buildings, access roads, driveways and associated infrastructure. An overlay of the proposed development layout on the vegetation is shown in **Annexure 16** (Figure 19 of Volume 1).

A summary of vegetation types that will be lost as a result of the proposed layout is shown in **Table 32**.

<b>Vegetation Community</b>	<b>Total area (ha)</b>	<b>Area to be lost (ha)</b>	<b>Percentage of area lost</b>	<b>Percentage of TOTAL vegetation to be removed</b>
Community 1 - Tall closed forest ( <i>Cinnamomum camphora</i> +/- mixed species)	8.77	7.93	90.4%	7.8%
Community 2 - Tall closed forest (mixed species)	17.13	2.62	15.3%	2.6%
Community 3 - Tall closed forest ( <i>Lophostemon confertus</i> )	0.35	0.35	100%	0.3%
Community 4 - Regrowth closed forest (mixed species)	3.39	1.59	46.9%	1.6%
Community 5 - Landscape plantings	35.61	33.74	94.7%	32.9%
Community 6 - Disturbed land	21.12	18.89	89.4%	18.5%
Community 7 - Grassland with scattered trees	38.01	37.16	97.8%	36.3%
<b>TOTAL VEGETATION REMOVED</b>	<b>124.38 ha</b>	<b>102.28 ha</b>	<b>82.2%</b>	

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In total, 102.28 hectares of vegetation will be removed for the proposed project. However, it should be noted that 37.16 ha (36.3% of the total vegetation to be removed) consists of exotic pasture with scattered trees (Community 7) and 33.74 ha (32.9% of the total vegetation to be removed) consists of landscape plantings (ie. disused golf course) in addition to approximately 18.89 hectares (18.5% of the total vegetation to be removed) of disturbed land (Community 5) and approximately 7.93 hectares (7.8% of the total vegetation to be removed) of Camphor laurel dominated vegetation (Community 1).

The most significant vegetation loss in regard to conservation status will be the loss of 2.26ha of Sub-tropical rainforest (Community 2), and 1.59ha of regenerating rainforest representing 15.3% of rainforest communities within the development area.

Additional impacts on vegetation communities include:

- Clearance of areas of the Subject site represents a loss of habitat available for dispersal for plants and will reduce visits by pollination and dispersal vectors;
- Disturbance to the Subject site creates opportunities for weeds to colonise. Weeds may be introduced to the site in construction materials or by vehicles. Occupation of the Subject site creates opportunities for weeds to become established. Landscape species may escape to retained areas of vegetation;
- The removal of vegetation from the Subject site represents the loss of organic material from the site;
- Residents may create walking tracks through bushland areas. This may result in direct loss of vegetation, change in vegetation structure and increased opportunities for weeds and disturbance-adapted animal species; and
- Occupation of the site may increase the risk of fire release into the surrounding bushland.

Details of the vegetation clearing and offset strategy are contained in Section 6.4 and Section 1.3 of **Annexure 16**.

#### **6.4 Weed and Pest Management**

The developer has committed to future rehabilitation works on the site as recommended in this report and within the Site Rehabilitation & Pest Management Plan (JWA 2009). This plan outlines measures for weed and pest animal control as part of the ongoing rehabilitation efforts and is provided in **Annexure 16** (Volume 3).

The objectives of the Management Plan are to:

- Provide a plan for the revegetation and regeneration of the development site;
- To offset the removal of any Endangered Ecological Communities (EEC's), Threatened flora species, and habitat for Threatened flora and fauna species, to ensure no net loss as a result of the development;
- Identify areas of retained vegetation that will be maintained through weed control and general maintenance;
- Identify areas that will be rehabilitated using natural regeneration or enhancement plantings;
- Provide management guidelines for the revegetation, natural regeneration and weed control to be implemented;
- Outline a maintenance and monitoring program for the site;
- Provide management guidelines for pest animal species that may occur on the site; and
- Provide management guidelines for the on-going conservation of vegetation on the site.

The proposed conservation areas on the subject site have been divided into forty three (43) Rehabilitation Areas (RA's). Individual rehabilitation management plans are to be completed for each of the forty three (43) precincts. RA's 33 – 43 occur within the development area.

The Site Rehabilitation and Pest Management plan should be read in conjunction with detailed plans prepared for each RA. Each RA plan will contain:

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- ♦ A detailed set of directions on the most appropriate methods of:
  - Weed control;
  - Regeneration techniques;
  - Pest control;
  - Monitoring procedures.
- ♦ Measurable performance criteria.

By achieving the objectives outlined in these plans via the suggested strategies, all conservation areas are to be successfully regenerated or revegetated.

The Performance Objectives within each plan will contain measures designed to allow the applicant to demonstrate that revegetation objectives are being achieved, to allow Council to sign off on the success of the program.

Whilst this Concept Plan only applies to the area of the site within the Far North Coast Regional Strategy footprint, it should be noted that the Site Rehabilitation Strategy will apply to the whole site and there will ultimately be a net benefit from the rehabilitation works as it proceeds into the future Stage 2. That is to say the total rehabilitation plan will form part of future Development Applications outside the MP08-0234 area.

The following table summarises vegetation losses and offsets.

TABLE 33 – VEGETATION LOSSES AND OFFSETS											
VEGETATION	TOTAL AREA (ha)	LOSSES					RETAINED	OFFSETS			
		LOSS – MP08-0234 Dev. (ha)	LOSS – MP08-0234 Sports Field (ha)	LOSS – MP08-0234 Spine Rd (ha)	LOSS – Balance Area (ha)	TOTAL LOSS (ha)	TOTAL RETAINED (ha)	PROPOSED OFFSETS – MP08-0234 (ha)	PROPOSED OFFSETS – Balance Area (ha)	Total Area at completion of Development (ha)*#	Net Loss/Gain (ha) *^
Community 1	27.32	0.00	0.00	0.33	0.00	0.33	26.98	4.17	28.39	76.59	27.6
Community 2	17.13	2.62	0.00	0.00	0.00	2.62	14.51				
Community 3	0.35	0.35	0.00	0.00	0.00	0.35	0.00				
Community 4	4.13	1.59	0.00	0.00	0.00	1.59	2.54				
<b>TOTAL</b>	<b>188.16</b>	<b>87.26</b>	<b>4.44</b>	<b>7.66</b>	<b>0.00</b>	<b>99.36</b>	<b>88.80</b>	<b>4.17</b>	<b>28.39</b>	<b>49.61</b>	<b>28.35</b>
<b>TOTAL %</b>	<b>100.00</b>	<b>46.37</b>	<b>2.36</b>	<b>4.07</b>	<b>0.00</b>	<b>52.80</b>	<b>47.20</b>	<b>~</b>	<b>~</b>	<b>~</b>	<b>~</b>

\* Calculations of net loss/gain have only considered native vegetation communities (i.e. grassland, landscaping, dams and existing infrastructure have not been included)

# Total area at development completion has been calculated as follows = Area to be retained + Proposed offsets.

^ Net Loss/Gain has been calculated as follows = Total area at development completion - Total area (original area prior to construction).

## 6.5 Ecological Corridors

The site occurs within Macpherson Range – Cobaki Regional Corridor (NPWS Key Habitats and Corridors database), which links Mt. Tomewin and McAllisters Road. This is shown as Figure 20 of Volume 1 at **Annexure 16**. The Bilambil Subregional Corridor traverses the southern and eastern portions of the site and links McAllisters Road and Duroby Creek.

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The site has substantial areas of vegetation which comprise moderate to good quality fauna habitat. Adjacent land to the north, south and east also features large areas of vegetation, and highly mobile fauna (ie. birds and bats) are likely to move between these remnants.

#### **Accuracy of NPWS mapping**

Site assessments have revealed that the NPWS Corridor mapping appears to be inaccurate over the subject site. Large areas of the site that are included in the mapping have been cleared of vegetation. An overlay of the NPWS Corridor mapping on a recent aerial photograph of the site is included as Figure 21 of Volume 1 at **Annexure 16**. Inaccuracies within the NPWS Corridor mapping are as follows:

- ♦ Macpherson Range – Cobaki Regional Corridor – the majority of this mapped “Regional Corridor” on the subject site is comprised of cleared land;
- ♦ The Bilambil Subregional corridor – this corridor incorporates rainforest and Camphor laurel communities along the southern boundary of the subject site however, where this corridor traverses the eastern portion of the site it is comprised of landscape plantings associated with the disused golf course.

#### **Potential impacts**

The proposed Stage 1 development (**Stage 1 being the MP08-0234 area**) will result in the removal of vegetated portions of the subject site. However, the majority of vegetation to be removed is comprised of grassland with scattered trees, landscape plantings and areas dominated by Camphor laurel. Under the proposed Stage 1 development large areas of the site will be regenerated and/or revegetated therefore increasing the sites habitat and movement corridor values.

Edge effects may also further impact on retained vegetation and corridor habitat. An overlay of the proposed Stage 1 development on the NPWS corridors is shown in Figure 22 of Volume 1 at **Annexure 16**. Specific impacts on the NPWS corridors on the subject site are as follows:

- ♦ Cobaki-Terranora Regional Corridor – The majority of the mapped area on the subject site occurs within areas which are proposed to be developed. Some vegetation retention will occur within this mapped corridor as well as regeneration/revegetation works.
- ♦ The Bilambil Subregional corridor – rainforest and Camphor laurel communities along the southern boundary of the subject site within this corridor will be retained and rehabilitated. Development is proposed where this corridor traverses the eastern portion of the site and is comprised of landscape plantings associated with the disused golf course.

#### **Proposed amelioration measures**

The proposed Stage 1 development has been designed to utilise existing cleared areas where possible. A network of existing substantial vegetated corridors will be retained along the southern and western boundaries of the subject site. Additionally, smaller interlinking corridors will be provided on the subject site through regeneration and revegetation works.

A Site Rehabilitation and Pest Management Plan has been prepared for the subject site (Volume 3 of **Annexure 16**) and will result in approximately 28.9ha of revegetation/regeneration within the Stage 1 development area to provide vegetated links across the site and ensure that the remaining wildlife corridors will be embellished utilising revegetation and natural regeneration principles.

#### **Buffers**

This section will describe the various treatments of ecological buffers on the subject site and will include details on the interactions of ecological buffers with the following:

1. Threatened flora species;
2. Endangered Ecological Communities;
3. Environmental restoration and enhancement works; and
4. Asset Protection Zones.

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## **Proposed buffers**

### **Buffers to Threatened flora**

The locations of Threatened flora species on the subject site are shown in **FIGURES 14(a) – 14(e)** of Volume 1 at **Annexure 16**. A large proportion of Threatened species on the subject site occur within the rainforest communities in the southern portion of the subject site, or in areas of the subject site otherwise designated for retention.

A Vegetation Management Plan will be prepared for the subject site and discusses measures to be implemented to protect Threatened flora species during the construction phase. The remnant rainforest community in the southern portion of the site will be conserved and buffered by a minimum of 10 metres of planted vegetation to ameliorate the potential impacts of adjacent development (in accordance with the Site Rehabilitation & Pest Management Plan – Volume 3 of **Annexure 16**).

The Plan will also ensure that a minimum five (5) metre revegetated buffer is marked for all known specimens of Threatened flora to be retained, and the cleared parts of these areas are revegetated with locally endemic flora species.

An indicative cross-section of the interface between development and the locations of retained Threatened flora is shown in **FIGURES 23(a) & 23(b)** of Volume 1 at **Annexure 16**. These areas will be maintained in their natural condition with minimal disturbance, except where the development is sensitive to and consistent with the conservation values of these areas, and undertaken in accordance with an approved management plan.

Allowable uses: No uses will be allowed within this area.

Landscape and Built Form: Maintenance of existing significant vegetation is the primary aim within this area. Management of these areas may also include the replanting of appropriate native species in accordance with an approved Management Plan.

Lot Reconfiguration: No lot reconfiguration is envisaged within this precinct.

### **Buffers to Endangered Ecological Communities**

The concept plan has been designed to retain the majority of EEC on the subject site (**FIGURE 13** of Volume 1 at **Annexure 16**). Retained EEC on the subject site will be buffered by a minimum of 10 metres of vegetation where possible to ameliorate potential impacts of adjacent development (in accordance with the Site Rehabilitation & Pest Management Plan – Volume 3 of **Annexure 16**).

Where sufficient area is not available to provide a 10m buffer (i.e. particularly steep land adjacent to land zoned for development & 'spine road') a dense screen of vegetation will be planted to minimise edge effects and the interface of the EEC and development will be monitored for weed infestations (in accordance with the Site Rehabilitation & Pest Management Plan – Volume 3 of **Annexure 16**). A Vegetation Management Plan will be prepared for the subject site to include measures to be implemented to protect the EEC during the construction phase.

An indicative cross-section of the interface between development and the retained EEC is shown in **FIGURES 23(a) & 23(b)** of Volume 1 at **Annexure 16**. These areas will be maintained in their natural condition with minimal disturbance, except where the development is sensitive to and consistent with the conservation values of these areas, and undertaken in accordance with an approved management plan.

Allowable uses: No uses will be allowed within this area.

Landscape and Built Form: Maintenance of existing significant vegetation is the primary aim within this area. Management of these areas may also include the replanting of appropriate native species in accordance with an approved Management Plan.

Lot Reconfiguration: No lot reconfiguration is envisaged within this precinct.

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### Environmental restoration and enhancement works

The concept plan has been designed to retain the majority of remnant bushland on the subject site (**FIGURE 14** of Volume 1 at **Annexure 16**). These areas will be buffered where possible by a minimum of 10 metres of planted vegetation to ameliorate potential impacts of adjacent development (in accordance with the Site Rehabilitation & Pest Management Plan – Volume 3 of **Annexure 16**). Where sufficient area is not available to provide a 10m buffer (i.e. particularly steep land adjacent to land zoned for development & 'spine road') a dense screen of vegetation will be planted to minimise edge effects and the interface of the remnant bushland and development will be monitored for weed infestations (in accordance with the Site Rehabilitation & Pest Management Plan – Volume 3 of **Annexure 16**). A Vegetation Management Plan will be prepared for the subject site and discuss measures to be implemented to protect retained vegetation during the construction phase.

In some instances an Asset Protection Zone (APZ) will be required on the interface between rehabilitated bushland and the development. The treatment of this interface is discussed below.

An indicative cross-section of the interface between development and retained remnant bushland is shown in **FIGURES 22(a)** and **22(b)** of Volume 1 of **Annexure 16**. These areas will be maintained in their natural condition with minimal disturbance, except where the development is sensitive to and consistent with the conservation values of these areas, and undertaken in accordance with an approved management plan.

Allowable uses: No uses will be allowed within this area.

Landscape and Built Form: Maintenance of existing significant vegetation is the primary aim within this area. Management of these areas may also include the replanting of appropriate native species in accordance with an approved Management Plan.

Lot Reconfiguration: No lot reconfiguration is envisaged within this precinct.

### Asset Protection Zones

The NSW Rural Fire Services guidelines "Planning for Bushfire Protection 2006" list six (6) key Bushfire Protection Measures which in combination must be addressed in a development assessment context. In relation to Asset Protection Zones (APZ's), Table A2.3 in the guidelines classifies the Tweed local council area as having a Forest Danger Index rating of 80 assumed as a 1:50 year event.

Table A2.5 of the guidelines sets the minimum width of APZ's for residential development based on the adjacent forest type. These minimum APZ widths range from 20m (for situations where the slope towards the vegetation ranges from uphill, to a maximum of 5° downhill) to 45m (for situations where the adjacent forested slope is up to 18° downhill).

Any Asset Protection Zones (APZs) will be accommodated within already cleared land. The interface between retained vegetation areas and any APZ's will be planted with a dense screen of fire-resistant vegetation to minimise edge effects and will be monitored for weed infestations (in accordance with the Site Rehabilitation & Pest Management Plan – Volume 3 of **Annexure 16**). There may also be opportunities for revegetation within APZ's with fire-resistant plant species. An indicative cross-section showing the interaction of APZ's with retained vegetation is shown in **FIGURES 23(a) & 23(b)** of Volume 1 of **Annexure 16**.

## 6.6 Impacts on Waterways

Stormwater runoff from the subject site has the potential to impact on the hydrological regime of the adjacent Cobaki Creek to the north of the site. Amelioration measures will be discussed in detail within a Stormwater Management Plan prepared by a suitably qualified firm.

### General Impacts

The proposed development has the potential to result in impacts on Cobaki Creek related to:

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- ♦ Alterations of hydrology;
  - ♦ Change to the hydrological regime may alter the current distribution of vegetation communities;
  - ♦ Increased sediment loads from construction activities;
  - ♦ Impacts on water quality and hydrology as a result of stormwater runoff from the proposed development;
  - ♦ Increased visitation, with potential for trampling of riparian vegetation, dumping of rubbish or refuse in creek habitats (particularly discarded fishing line, bait bags etc.), disturbance of fauna; and
  - ♦ Disturbance to the Subject site creates opportunities for weeds to colonise. Weeds may be introduced to the Study site in construction materials or by vehicles. Occupation of the Subject site creates opportunities for weeds to become established.

### **Erosion**

The subject site shows some evidence of soil erosion. A number of factors contribute to the level of erosion evident on the site.

These factors include:

- ♦ The nature of the alluvial soil structure,
- ♦ The high rainfall and climatic conditions of the Subject site, and
- ♦ Land management practices.

Earthworks will increase the potential for soil erosion.

### **Stormwater Impacts**

Due to the steep slope in parts of the Subject site and the periods of high rainfall, stormwater runoff may potentially impact on the Subject site and Study area in a number of ways.

Impacts may include:

- ♦ Increased soil erosion,
- ♦ Increased soil dispersal,
- ♦ Alteration of habitat microclimate conditions for flora and fauna, and
- ♦ Alteration of water quality of aquatic habitats downstream from the Subject site.

These potential impacts are mitigated by the measures identified in the Stormwater Management Plan and Erosion and Sedimentation Control Plan at **Annexure 22**. These Plans are discussed in more detail in Section 9.3.

### **Amelioration measures**

A minimum 50m buffer is proposed between the Unstructured Sports Park (Precinct U) (**FIGURE 8** of Volume 1 of **Annexure 16**) and Cobaki Creek. Areas of retained vegetation will assist in sedimentation deposition and nutrient uptake for any stormwater runoff from the development area. These vegetated areas also provide habitat and movement opportunities for fauna in the Study area (including Threatened fauna).

A Stormwater Management Plan will be prepared for the subject site which incorporates current best-practise measures to ensure that untreated stormwater does not flow directly into Cobaki Creek. All stormwater treatment areas should occur within land designated as Open Space and be designed to provide wetland habitat.

Stormwater management will involve the creation and use of suitable planted buffer zones where necessary.

The conclusions and recommendations contained in **Annexure 22** will be implemented as part of the project.

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## 7.0 TRAFFIC AND TRANSPORT

### 7.1 Traffic Management Plan

A Traffic Impact Assessment has been completed by CRG (**Annexure 17**). Section 11 of the Report contains the following recommendations in relation to road upgrading works.

- ♦ Widening of Cobaki Road, between the site and the Cobaki Parkway intersection, to a 7 metre seal over a 9 metre formation (as per the current approval over the site) when the construction of the Spine Road occurs.
- ♦ Construction of or contribution towards a roundabout at the Kennedy Drive / Gollan Drive / Piggabeen Road intersection (as per the current approval over the site) when the traffic demand from the RISE project dictates this requirement.
- ♦ Provision of traffic control devices in Marana Street (as per the current approval over the site) during the early stages of the project.
- ♦ Pavement widening and kerb and channelling at the western end and on the northern side of Marana Street during the early stages of the project.
- ♦ It is also considered reasonable that the proposed development be required to undertake the construction of or contribute towards the implementation of traffic signals at the Scenic Drive / McAllisters Road intersection, in order to address existing and increasing safety deficiencies at the intersection when the project's traffic demand requires the upgrade to occur.

### 7.2 Traffic Study

The Traffic Impact Assessment at **Annexure 17** addresses the existing traffic and transport network, estimates traffic to be generated by the development and potential impacts on the road network.

The traffic carrying capacity of Kennedy Drive has been studied in detail by the Tweed Shire Council. However, the scope of this assessment has been limited to a review of mid-block capacity with a view to establishing policy regarding how much development can occur west of the Cobaki Bridge, until the planned Cobaki Parkway route to Boyd Street (Tugun) is constructed.

The latest assessment, completed in June 2007, concludes that Kennedy Drive can carry up to 24,650 vehicles per day before development should cease. A trip generation of 2,660 vehicles per day on Kennedy Drive has been allocated to the subject site under the current Resort approval. Modelling undertaken by VLC indicates that only 68% of residential trips use Kennedy Drive with the balance dissipating throughout the local network or travelling south via Bilambil Road. Therefore, the proposed development would need to have a total external trip generation of approximately 3,911 vehicles per day (ie. 2,660 vpd / 0.68) in order to generate 2,660 vehicles per day on Kennedy Drive.

3911 vehicles per day equates to approximately 640 equivalent dwellings (see Staging Matrix, Page 47 of **Annexure 9**).

The Marana Street – Mountain View Esplanade – McAllisters Road route will function as a Neighbourhood Connector route in the local road network, and have capacity for up to 5,000 vehicles per day (vpd). McAllisters Road currently carries in the order of 2,000 vpd, leaving approximately 3,000 vpd available for the proposed development. However it is noted that Marana Street, Mountain View Road and McAllisters Road previously carried a much heavier traffic load when the Terranora Country Club was fully functioning in the past. Whilst the future ultimate road network will enable development traffic to spread throughout the network, care should be taken in the sequencing of development to ensure that this capacity is not exceeded prior to other road network elements (such as the Spine Road and Cobaki Road upgrade) being constructed.

The conclusions and recommendations contained in **Annexure 17** will be implemented as part of the project.

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### 7.3 Public Transport

Surfside Buslines currently services the Bilambil Heights area with a bus service between the subject site and Kingscliff via Tweed Heads. This service operates on an hourly frequency, seven days a week. Details of consultations with Surfside Buslines are contained at **Annexure 27**.

### 7.4 Road Network

Tweed Road Network Strategy

The Banora Point and Tweed Road Development Strategy (2004) includes the following road network upgrades for the 'Ultimate' scenario:

- ♦ Pacific Highway Tugun Bypass
- ♦ Cobaki Parkway extending between Piggabeen Road and Boyd Street
- ♦ Cobaki Parkway Extension between Piggabeen Road and Scenic Drive, including a connection between McAllisters Road and Cobaki Parkway

The Tugun Bypass is now completed and fully operational. The layout of the Tweed Bypass interchange in relation to the existing Kennedy Drive interchange is shown in Figure 5.2 of **Annexure 17**.

Draft Bilambil Heights Local Area Structure Plan Research

As shown in Figure 5.2 (of **Annexure 17**), the Draft Bilambil Heights Local Area Structure Plan research conducted by the applicant in discussion with Tweed Shire Council designates the Marana Street – Mountainview Esplanade route and McAllisters Road as Neighbourhood Connector roads. Such roads are intended to provide for local travel between and within neighbourhoods and typically carry in the order of 3,000 – 5,000 vehicles per day.

Future Projected Traffic Demands

Council's traffic model indicates that Scenic Drive will ultimately carry in the order of 10,000 vehicles per day, east of the future Cobaki Parkway Extension, and 8,000 vehicles per day to the west. According to the model, the McAllisters Road extension will also carry in the order of 10,000 vehicles per day.

### 7.5 Access to Lot 30 DP 850230 Marana Street

The Department of Planning has referred a copy of the letter from Planit Consulting to Tweed Shire Council dated 13 February 2009 to Darryl Anderson Consulting Pty Ltd for consideration in preparing the RISE Concept Plan. A response to the matters raised by Planit Consulting was forwarded to Tweed Shire Council on 19 March 2009 in the following terms:

1. *Development Consent No. T4/3116 (as amended on 24 May 1990) was issued on 30 May 1984 for the erection of a holiday village comprising 48 units on Lot 3 and part Lot 2 DP 604732 Marana Street, Bilambil Heights (now known as Lot 30 DP 850230). A copy of that Consent is attached. Your particular attention is invited to Conditions 1, 6, 7 and 10 of the Consent.*
2. *Development Consent No. 98/226 was issued on 15 September 1998 (and amended on 4 December 1998) for the conversion of existing lower ground floor space within Buildings C and D to tourist accommodation in respect of Lot 30 DP 850230 Marana Street, Bilambil Heights (a copy of that Consent is attached). Your particular attention is invited to Condition 11 which requires, in summary, the owner/developer of Lot 30 to relocate the access to the satisfaction to the Director of Engineering.*

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3. *Construction Certificate No. CC0850/98B was issued on 7 October 1998 for tourist accommodation and according to Council's records the building work was completed on 22 February 1999.*
  4. *Notwithstanding the above, no legal access agreement was completed between the respective landowners before the current owner purchased Lot 30 on 8 January 2007. Terranora Group Management had an agreement with the previous owner to possibly allow access over Terranora Group Management's land, however this was never formalised and completed.*
  5. *Lawyers acting for Terranora Group Management Pty Ltd advised Lawyers representing the purchasers of Lot 30 that no legal access rights existed before the current owners purchased Lot 30. Further, Terranora Group Management's Lawyers advised the Lawyers acting for the Vendor of Lot 30 that the proposed Conditions of Sale were not sufficient and should be amended regarding access over Terranora Group Management's land, as no legal access rights existed over that land in respect of Lot 30.*
  6. *Terranora Group Management Pty Ltd has an arrangement with Tweed Shire Council to purchase the closed road reserves (now Council operational land) being the western end of Marana Street and Conmurra Avenue.*
  7. *In later 2006, Terranora Group Management Pty Ltd attempted to resolve the access issue with the then owners of Lot 30, however these discussions were not successful.*
  8. *The owners of Lot 30 commenced Court action approximately two years ago to preclude Tweed Shire Council from transferring the closed roads to Terranora Group Management, without advising Terranora Group Management that it was taking such action.*
  9. *Terranora Group Management only became aware of this Court action when contacted by Tweed Shire Council seeking information in relation to the matter.*
  10. *Terranora Group Management subsequently arranged a meeting with the owners of Lot 30, Tweed Shire Council and their Lawyers approximately eighteen months ago in an attempt to resolve the issue.*
  11. *A meeting was held between the Director of Terranora Group Management, Mr Godfrey Mantle and Mr Mark Howard representing the owners of Lot 30, approximately twelve months ago with a view to seeking common ground to resolve the issue.*
  12. *Terranora Group Management also instructed its Engineers to investigate if alternative access was possible to Lot 30 from Marana Street. These investigations revealed that alternative access is feasible. These investigations were undertaken in case agreement with the owners of Lot 30 could not be reached.*
  13. *Terranora Group Management declined to encumber its land with an access easement, however the Company did offer a licence arrangement to the owners of Lot 30 that would also have been acceptable to Tweed Shire Council. The licence was at Terranora Group Management's discretion because of the new Major Project which was planned over its land.*
  14. *Terranora Group Management, in good faith, showed the owners of Lot 30 what was intended with respect to a new road from Marana Street to Cobaki Road which would pass along the boundary of Lot 30 eventually giving direct access to Lot 30 from the new public "spine" road.*
  15. *Terranora Group Management made it clear to the owners of Lot 30 that this new "spine" road is notional because it was part of a State Significant Site Project Application that could take years to approve, if ever, and that the road could move location during planning negotiations.*

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16. *The owners of Lot 30 made amendments to the licence as proposed by Terranora Group Management, such that it had to remain in place until the new road was built and Terranora Group Management had to pay for any new driveway access requirements to Lot 30.*
  17. *Both Tweed Shire Council and Terranora Group Management declined to accept these changes because neither could guarantee that the new road would ever exist.*
  18. *As a result of the above, resolution of the issue reached an impasse and accordingly Terranora Group Management Pty Ltd decided to protect its interests and blocked access to Lot 30 over the Terranora Group Management property.*
  19. *On or about 8 March 2009 Terranora Group Management gave the owners of Lot 30 fourteen days to accept the original licence agreement or alternatively it will be withdrawn and Terranora Group Management further advised Tweed Shire Council that Lot 30 was now operating in breach of its development consent conditions.*
  20. *Terranora Group Management Pty Ltd has no moral or legal requirement to allow the owners of Lot 30 or guests, visitors or maintenance and service contractors to the resort on Lot 30 to access that lot over Terranora Group Management's land.*
  21. *Terranora Group Management believes that the owner of Lot 30 has taken its current position because it does want to spend the money on constructing a new driveway.*
  22. *We attach a Statement, Sketch Plan and Cost Plan from TGM's Civil Engineers VKL Consulting that clearly shows that the Lot 30 owners could indeed resolve their access problems and continue to operate the resort within their Consent conditions (for which they are not complying at present because of breaching Condition 11) by spending their funds on constructing a new access driveway, which has been their responsibility since they contracted to purchase the resort in late 2006.*

*In summary, it is TGM's position that the Lot 30 owners simply do not wish to spend their money which is required to resolve this access problem with a new driveway. Moreover the Lot 30 owners obviously wish to spend those funds fighting for access rights over TGM's land, and Council's operational land through the Courts, instead of simply resolving the new driveway construction issue which has been their responsibility since they contracted to purchase the resort.*

## **8.0 HERITAGE**

### **8.1 European Heritage**

#### **8.1.1 North Coast Regional Environmental Plan**

There are no conservation areas or heritage items of State or Regional environmental significance identified in this Plan within the subject land.

#### **8.1.2 Tweed Local Environmental Plan 2000**

There are no heritage items on the subject land identified in Schedule 2 of this Planning Instrument.

Based on a site view and the findings of the Cultural Heritage Assessment prepared by Everick Heritage Consultants at **Annexure 18**, there are no European heritage items of significance existing on the site.

### **8.2 Aboriginal Cultural Heritage**

Everick Heritage Consultants have prepared an Aboriginal Cultural Heritage Assessment of the site and a copy of their Report is contained at **Annexure 18**.

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The report presents the results of a cultural heritage assessment for Indigenous and non- Indigenous heritage items for Stage One of the proposed RISE Development ('Subject Lands') including the former Terranora Country Club in Bilambil Heights, Northern NSW. Everick understands that this report is to be submitted by Steve MacRae Development Services on behalf of Terranora Group Management Pty Ltd in support of a Concept Plan under Part 3A of the *Environmental Planning and Assessment Act 1979* (NSW).

As part of a desktop study, Everick undertook searches of the relevant Aboriginal and European heritage registers. A search of applicable European heritage registers identified no items of cultural heritage significance within the Subject Lands. A search conducted on 25 March 2009 of the Department of Environment and Climate Change ('DECC') Aboriginal Heritage Information Management System ('AHIMS') found 46 recorded sites for the broader search area. These are indicated in Figure 4 of **Annexure 18**. None were recorded within the Subject Lands. In our attempt to obtain as much information about the cultural significance of the Subject Land, the Tweed Byron LALC's internal database, the Bundjalung Mapping Programme ('BMP'), was reviewed.

There were no sites or places of Indigenous cultural heritage recorded in the Subject Lands. There are no Indigenous places within the Subject Lands listed in other heritage registers.

The Subject Lands are within the area administered for Aboriginal cultural heritage purposes by the Tweed Byron Local Aboriginal Land Council ('LALC'). A survey for Aboriginal cultural heritage was carried out by the Tweed Byron LALC Sites Officer, a representative of the Traditional Owners and the consultant on 19 March 2009. The Land Council's views on the conduct and outcomes of the assessment are attached as Appendix A of **Annexure 18**.

In summary the TBLAC advised that there are no Aboriginal sites or relics within the property and the site has no significance to Aboriginal people.

The following recommendations are based upon the results of the desktop review, field inspection and consultation with the Sites Officer of the Tweed Byron LALC.

## **General Recommendations**

### **Recommendation 1: Post Clearing Survey**

Some members of the Aboriginal Community have requested that as each precinct of the Subject Lands is developed, a member of Aboriginal community be engaged to conduct a survey of that area after initial clearing works have been undertaken. Should any items of cultural heritage significance be identified, the processes outlined in Recommendations 2, 3 and 4 should be followed. Everick support this recommendation for the areas outside of the Monitoring Area and the disturbed areas of the Terranora Lakes Country Club Golf Course, Gun Club and Tennis Club land, and the terraced gardens on the northern ridge.

### **Recommendation 2: Monitoring Area**

The Tweed Byron LALC has requested that, in those parts of the Monitoring Area or Part thereof identified in Figure A below, an Aboriginal monitor be present to monitor initial clearing and subsurface disturbance for cultural material. Should any items of cultural heritage significance be identified, the processes outlined in Recommendations 2, 3 and 4 should be followed. Everick supports this recommendation.

### **Recommendation 3: Aboriginal Human Remains**

It is recommended that if human remains are located at any stage during construction works within the Subject Lands, all works must halt in the immediate area to prevent any further impacts to the remains. The Site should be cordoned off and the remains themselves should be left untouched.

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The nearest police station, the Tweed Byron LALC, and the DECC Regional Office, Coffs Harbour are to be notified as soon as possible. If the remains are found to be of Aboriginal origin and the police do not wish to investigate the Site for criminal activities, the Aboriginal community and the DECC should be consulted as to how the remains should be dealt with. Work may only resume after agreement is reached between all notified parties, provided it is in accordance with all parties' statutory obligations.

It is also recommended that in all dealings with Aboriginal human remains, the proponent should use respectful language, bearing in mind that they are the remains of Aboriginal people rather than scientific specimens.

#### **Recommendation 4: Aboriginal Cultural Material**

It is recommended that if it is suspected that Aboriginal material has been uncovered as a result of development activities, including Post Clearing Surveys, within the Subject Lands:

- (a) work in the surrounding area is to stop immediately;
- (b) a temporary fence is to be erected around the site, with a buffer zone of at least 10 metres around the known edge of the site;
- (c) an appropriately qualified archaeological consultant is to be engaged to identify the material; and
- (d) if the material is found to be of Aboriginal origin, the Aboriginal community is to be consulted in a manner as outlined in the DECC guidelines: *"Interim Community Consultation Requirements for Applicants"* (2005).

#### **Recommendation 5: Notifying the Department of Environment and Climate Change**

It is recommended that if Aboriginal cultural material is uncovered as a result of development activities within the Subject Lands, they are to be registered as Sites in the Aboriginal Heritage Information Management System (AHIMS) managed by the DECC. Any management outcomes for the site will be included in the information provided to the AHIMS.

#### **Recommendation 6: Conservation Principles**

It is recommended that all effort must be taken to avoid any impacts on Aboriginal Cultural Heritage values at all stages during the development works. If impacts are unavoidable, mitigation measures should be negotiated between the proponent and the Aboriginal Community.

#### **Recommendation 7: Employment and Training**

Members of the Aboriginal Community have requested that the Developer seek ways to ensure Aboriginal participation and consultation in the development through the identification of opportunities including employment, training and business opportunities both in the short term and in the long term. It is recommended that the proponent engage with the Aboriginal Community to establish appropriate mechanisms (eg. committee, reference group, participation plan) to ensure that meaningful dialogue is established and maintained.

#### **Indigenous/Non Indigenous Cultural Heritage**

There are no recommendations relating to the former Terranora Lakes Country Club Golf Course, Gun Club, Bowls Club and Tennis Club land.

#### **Recommendation 1: Terrace Recording Work – Norvill Farm Land**

It is recommended that the terraces and associated infrastructure be mapped in detail by a surveyor under the supervision of a heritage professional. Remaining infrastructure should be documented in detail and a comprehensive photographic record be made.

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Aboriginal/South Sea Islander people should be interviewed with a view to obtaining a more detailed account of the importance of this work to those communities.

The recording should then be provided to the Aboriginal Liaison Committee of the Tweed Shire Council and the Lower Tweed River Historical Society, and annexed to this report in preparation for any subsequent development applications.

The entire system of walls is not of such cultural significance that they be retained. However, it is further recommended that those terraces within reserve land (parks, open space or conservation areas) be retained and incorporated into the planning of those areas.

The conclusions and recommendations contained in **Annexure 18** will be implemented as part of the project.

## **9.0 UTILITIES AND INFRASTRUCTURE**

### **9.1 Existing Infrastructure Capacity**

The proposed RISE development is located within the boundaries of the Bilambil Heights Urban Release Area in Tweed Shire.

Portions of the site are currently connected to existing utilities and infrastructure. Existing utilities and infrastructure will require upgrading and new infrastructure constructed to meet the ultimate requirements of the overall development in accordance with the overall Tweed Shire Council (TSC) Infrastructure Planning and Section 64 Developer Services Plan (DSP) prepared for the Bilambil Heights Urban Release Area. The RISE development site is located in the North West Precinct of the DSP for Tweed Shire.

Potable water is derived from the Bray Park Water Treatment Plant in Murwillumbah and pumped to a low level water zone reservoir located at Snowgum Crescent Bilambil Heights and services development within Bilambil Heights by gravity up to approximately RL 85.

A booster pump station is located adjacent to the Snowgum Crescent Reservoir which pumps potable water from the Snowgum Crescent reservoir to an existing 1.1 ML reservoir located within RISE Development on a parcel of land owned by TSC in fee simple.

The 1.1 ML reservoir has a base level of RL 207 and services an intermediate water catchment zone between RL 120 and RL 85, generally external to the RISE Development site.

The rising main linking the booster pump station at the Snowgum Crescent reservoir to the existing 1.1 ML reservoir at a high point within RISE is currently inadequate to service the numbers of houses connected to the intermediate zone and requires upgrade to DN250 or greater, subject to detailed design by TSC.

TSC have placed development conditions on an existing Deferred Commencement Development Consent for a 76 Lot subdivision over the proposed Precinct B of the RISE Concept Plan area which will require the Developer of RISE to contribute to the upsizing of the rising main between Snowgum Crescent reservoir and the existing 1.1 ML reservoir servicing the existing Bilambil Heights residential area. Further it requires the Developer to provide TSC a site for the future augmentation of the Snowgum Crescent low level reservoir to be dedicated to TSC for the purposes of constructing a future low level reservoir adjacent to McAlisters Road to augment the existing storage capacity of the Snowgum Crescent reservoir and provide access easements. TSC is to purchase the future low level reservoir site from the Developer and the developer is to create the required access and service line easements.

TSC has an existing easement for access to the existing 1.1 ML reservoir and the existing rising main is located within that easement.

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The location of the existing easement to the existing 1.1 ML reservoir does not suit the ultimate layout of RISE Development and negotiations have occurred between the Developer and TSC to agree on a proposed Water Strategy which will result in Tweed Shire Council constructing the new increased capacity rising main to the 1.1 ML reservoir in RISE along the existing easement and RISE fully funding the relocation of the rising main to another vertical / horizontal alignment that suits the RISE development on a progressive basis as subdivision works proceed.

The cost of infrastructure to deliver from the Tweed River to RISE development via the Bray Park Water Treatment Plant, a series of pumping stations and reservoirs and rising mains are part of the Section 64 Developer Services Plan (DSP) for the NW area of Tweed Shire.

The current DSP for the Bilambil Heights Urban Release Area makes provision for upgrades in capacity to service the area and a major upgrade of the Bray Park Water Treatment Plant is expected to be completed by December 2009 by TSC.

The existing 1.1 ML reservoir surrounded by the RISE development will be replaced by a new reservoir with sufficient capacity to service RISE development, at the cost of the Developer with TSC contributing to the pro rata cost of capacity to service areas of the Bilambil Urban Release Area beyond RISE development, the details of which will be resolved with TSC during the processing by TSC of the first RISE Precinct Development Consent.

The RISE development is located within the Banora Point DSP area.

Limited external reticulated sewerage sewer main capacity exists for the servicing of new development comprising the RISE development and future development within the Cobaki and Bilambil Heights precinct. Adequate capacity or planned augmentation of the Banora Point Waste Water Treatment Plant exists to service these areas.

There is a Deferred Commencement Development Approval for a 76 Lot subdivision over Precinct B of the RISE development. This area of the site gravitates to an existing public sewerage system in McAllisters Road.

Subject to available capacity of this system at the time of Construction Certificate, augmentation of the pumps in the existing pump station and flat grade sections of the existing gravity sewer in Peninsular Drive will be determined.

The extent of augmentation required will be dependent upon whether other approved developments within the catchment have proceeded at the time that the RISE development approvals are granted over that particular precinct.

There is an existing licensed sewerage treatment plant "Pasveer 1000" on the RISE site which serviced the Terranora Country Club however it is not intended to operate this plant to service the overall RISE development but it may be utilized in the initial stages of RISE as a storage tank prior to pumping off peak to the existing Peninsular Drive gravity sewer system.

Approval exists under the current Resort Consent for a sewerage treatment plant to be located to the north of the subject site near Cobaki Road but within the land owned by the RISE applicant. The approval for this site sewerage treatment plant is part of an existing approval for a Golf Course Resort Development. This approval is still valid as substantial commencement on the Golf Course Resort Development Consent has been acknowledged by TSC. The approval provides for site disposal of treated effluent with precautionary discharge approval to Cobaki Creek.

The RISE Concept envisages that this approved Sewerage Treatment Plant will not be constructed and that sewage will be pumped to the Banora Point Waste Water Treatment Plant for treatment and effluent disposal via existing discharge licenses that TSC has for Banora Point Waste Water Treatment Plant. Details relating to infrastructure are contained in **Annexure 20**.

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The conclusions and recommendations contained in **Annexure 20** will be implemented as part of the project, including the provision and/or augmentation of infrastructure as identified in Table 10 at Section 3.6.

## **9.2 Proposed Augmentation**

### **Potable Water System**

The RISE development land ranges in elevation from RL 5 AHD to RL 216 AHD. The RISE development will have three (3) potable water supply zones.

#### ***Low Level Potable Water***

This zone applies to future Precincts located on the northern extremity of the development site outside the RISE MP08-0234 Concept Plan area where possible future development may occur subject to future rezoning and Development Applications to TSC.

Precinct U (Sports Park) is included in the low level potable water zone.

As this zone will ultimately be serviced from the east, initially it will be serviced from the proposed 7 ML high level zone reservoir located within the subject site with a pressure reduction valve in the trunk main located at approximately RL 85 AHD.

Ultimately the low level zone will service development between RL 85 to RL 5. On the south eastern section of RISE no development exists in the range of RL 120 to RL 85 and therefore the Snowgum Crescent Reservoir does not service any of RISE by gravity feed.

#### ***High Level Zone***

VKL Consulting Pty Ltd Drawing No. 1355-07-SK11 shows the extent of development which is serviced by the high level zone located in Precinct K (**Annexure 20**).

This water zone will be serviced by a proposed 7 ML reservoir to be constructed in the region of the existing 1.1 ML reservoir. It is proposed that the reservoir be constructed in two (2) sections which will facilitate future TSC reservoir maintenance and allow the existing 1.1 ML reservoir to remain in service until the first half of the new reservoir is constructed and commissioned then it will be decommissioned / demolished and the second half of the new reservoir constructed.

The 7 ML reservoir will be filled via a new pumping main to be constructed from the existing Snowgum Low Level Reservoir to the new reservoir. An upgrade of the existing pump station and pumps at Snowgum Reservoir will be required because of the greater delivery flow required. Refer to External Components.

The high level zone will service development between RL 180 and RL 120 within the RISE development and within other existing areas and future Bilambil Heights Urban Release areas.

#### ***Boosted Level Zone***

An area of the proposed development, contained in Precinct L, is at an elevation above the high level zone serviced by the proposed new 7 ML reservoir and will service development above RL 180.

This boosted level water zone will be serviced by the high level reservoir supplying a pressure booster pump station. This booster pump station will be supported with backup diesel powered pump or generator, subject to detailed design, to ensure continuity of supply water to the boosted level zone if an electricity outage occurs.

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Pumps will have a duty point which will service the highest properties in the development and provide adequate fire flows for the commercial development proposed in precincts of the boosted level water zone.

### **Potable Water**

The supply of potable water to RISE Development comes from the Tweed River and is treated at the Bray Park Water Treatment Plant which is currently undergoing a major augmentation to increase capacity to 100 ML per day. This augmentation by TSC is expected to be completed by December 2009.

The Bilambil Urban Release Area is part of the TSC North West DSP. Provision has been made in the DSP to upgrade the potable water delivery and storage system that will service the RISE development.

Components of these upgrades of the delivery and storage system are planned to be constructed in the near future by TSC in their planned works programme.

The timing of the RISE development is not expected to require TSC to bring forward any of the planned DSP works.

### **Sewerage System**

#### ***General***

The proposed development is part of the contributing area serviced by the Section 64 DSP covering Banora Point Sewerage Treatment Plant.

Current capacity or planned expansion of capacity of the plant exists to handle sewage from the RISE development and Bilambil Heights Urban Release Area in general.

#### ***Initial Stage – Interim Servicing***

The subject site has a number of sub catchments.

Subject to approval and phasing of actual development it is probable that initial development will commence from Marana Street in Precinct B. This area is proposed to be sewered via the existing Peninsular Drive system to Banora Point STP.

Sections of this existing Council system will require augmentation to have adequate capacity. Subject to final design considerations the existing licensed Pasveer sewerage treatment plant (P1000) located on the southern part of the proposed development land may be utilised to provide limited storage capacity for the sewage from initial areas of development. This sewage will then be pumped into the existing Peninsular Drive sewerage system at off peak times thereby making more efficient use of existing sewerage infrastructure.

#### ***Internal Works***

The various sewerage sub catchments within RISE will be sewered by gravity sewer combined with pump stations and rising mains to convey the sewage to a major pump station near Cobaki Road on the applicants land. These sewers and pump stations are proposed to be transferred to TSC ownership for operation and maintenance except for a small privately owned system which will service the proposed private school in Precinct I in the southern section of the subject development.

Sewage from this privately owned and operated system will be conveyed by rising main to the proposed public sewers.

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It is proposed that pump stations will have eight (8) hours storage at average dry weather flow (ADWF) to provide adequate storage in the event of an electrical outage or mechanical failure.

Ultimately sewage from the majority of the development will gravitate and be pumped to the north of the site, consistent with the current Resort Development Approval, and conveyed along Cobaki Road / Piggabeen Road by rising main to the existing TSC trunk sewerage system which delivers sewage to Banora Point STP.

The extent of external work required to service the subject land will be dependent upon timing of the development and whether construction of Cobaki Lakes Development has proceeded to the extent of construction of the proposed regional sewerage pump station near the intersection of the proposed Cobaki Parkway and Piggabeen Road.

If this proposed regional pump station has not been constructed for Cobaki Lakes by the time the proposed RISE development proceeds then the external works required to service the subject land will need to be extended to the Council existing trunk sewerage infrastructure at the Gollan Drive pump station.

External sewerage infrastructure from the regional pump station to be constructed near the intersection of Cobaki Parkway to Banora Point Waste Water Treatment Plant form part of the DSP charges for Banora Point.

Provision exists under this DSP for Developers to fund the construction of works included in the DSP and receive credits against future DSP charges applicable.

Conveyance of sewage from RISE to the regional pump station is a cost to be borne by the Developer of RISE.

The conclusions and recommendations contained in **Annexure 20** will be implemented as part of the project, including the provision and/or augmentation of infrastructure as identified in Table 10 at Section 3.6.

### **9.3 Stormwater Management**

Integrated Water Cycle Management (IWCM) can be described as a way of managing water in which all components of the water system (water supply, stormwater and wastewater) are integrated to optimise the use of the resource.

Sound IWCM means the community's water needs are met, whilst minimising environmental impacts and maximising the efficient use of this finite resource.

IWCM can involve the integration of a large number of concepts for re-use, reduction and recycling. These options may include (but are not limited to):

- ♦ demand management – use of water efficient appliances
- ♦ rainwater (roof runoff) collection and re-use (household or community scale)
- ♦ stormwater collection and reuse
- ♦ aquifer storage and recovery
- ♦ effluent recycling (sewer mining).

The optimum IWCM solution for any community will typically involve a combination of these options, based on existing infrastructure, local climate and site-based constraints. Economic and social factors may also contribute to the selection of appropriate IWCM options.

A preliminary assessment of potential IWCM options for the RISE community was undertaken to identify individual components appropriate to the site. From these, an indicative IWCM strategy was developed for analysis and modelling. The selected IWCM strategy is described below.

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Roof runoff will be collected from all buildings within the development and stored in community rainwater tanks located in each precinct. Rainwater from all precincts will be pumped to and treated at a central treatment plant, then held in a storage reservoir for distribution throughout the site.

Stormwater runoff collected in the wetlands within catchments 8, 9, 10, 12 and 13 (see Figure 1.6 of IWCMP at **Annexure 22**) will be used to supplement the rainwater supply. A maximum 500mm storage depth has been allowed for within each of the wetlands, and daily evaporation from the water surface within each wetland has been included in the water balance. Collected stormwater will also pass through the treatment plant prior to being held in the reservoir for distribution.

The secondary water supply (rainwater and treated stormwater) will be used by residents for toilet flushing, laundry and domestic outdoor uses and will also be made available for irrigation of public and private open space areas.

A reticulated (town water) supply will be provided to households and businesses for kitchen, laundry and bathroom uses.

In addition to meeting the requirements of BASIX, it is intended that all buildings within the development will be fitted with WELS Scheme rated water-efficient devices (including taps, showerheads, toilets, dishwashers and washing machines) to further reduce the demand on both the reticulated and secondary water supplies.

Stormwater quality treatment will be provided for the remainder of rainfall runoff (not captured and stored in the community rainwater tanks) by means of constructed wetlands within each catchment in accordance with Tweed Shire Council's 'deemed to comply' requirements. Existing dams on the site will be incorporated into these wetland areas, providing detention and treatment of runoff prior to it leaving the site.

Sizing of the water supply and storage devices has been carried out in accordance with the requirements of Council's 'Development Design Specification D11 Water Supply' Version 1.2, June 2004 and Water Services Association of Australia 'Water Supply Code of Australia' Version 2.3. Their performance has been assessed by means of water balance modelling which is described in Section 3 of this report. Stormwater quality treatment is discussed in Section 4.

A water treatment plant would be installed on-site in a central location to treat collected stormwater to a standard acceptable to the NSW Department of Health prior to its reuse in homes for toilet flushing and laundry cold water. The capacity and type of treatment plant to be used would be the subject of further studies and assessment. Such details would be submitted to TSC as part of an application for a Development Approval. It is envisaged that the issues to be considered at the time of the plant selection and design would include:

- ♦ the water quality objectives to be achieved for the intended uses of the water (fit for purpose)
- ♦ the disinfection requirements applicable
- ♦ the treatment process to be used
- ♦ management and storage of any chemicals used in the process
- ♦ removal and disposal off-site of waste products and residues
- ♦ provision of a standby power source
- ♦ design and construction requirements of the plant housing structure to minimise visual impacts and noise.

It is intended that ownership, operation and maintenance of the plant will come under the control of the Community Title Scheme (CTS) body corporate.

Stormwater management details are contained in the Erosion and Sedimentation Control Plan, Stormwater Management Plan and the Integrated Water Cycle Management Plan at **Annexure 22**.

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The conclusions and recommendations contained in the Plans will be implemented as part of the project including Implementation of the following systems:

- ♦ Demand management – use of water efficient appliances.
- ♦ Rainwater (roof runoff) collection and re-use (household or community scale).
- ♦ Stormwater collection and reuse.
- ♦ Treatment of stormwater runoff.

## **9.4 Water Supply**

### **Potable Water**

The RISE development site is located in the North West Precinct of the DSP for Tweed Shire. Potable water is derived from the Bray Park Water Treatment Plant in Murwillumbah and pumped to a low level water zone reservoir located at Snowgum Crescent Bilambil Heights and services development within Bilambil Heights by gravity up to approximately RL 85.

A booster pump station is located adjacent to the Snowgum Crescent Reservoir which pumps potable water from the Snowgum Crescent reservoir to an existing 1.1 ML reservoir located within RISE Development on a parcel of land owned by TSC in fee simple.

The 1.1 ML reservoir has a base level of RL 207 and services an intermediate water catchment zone between RL 120 and RL 85, generally external to the RISE Development site.

The rising main linking the booster pump station at the Snowgum Crescent reservoir to the existing 1.1 ML reservoir at a high point within RISE is currently inadequate to service the numbers of houses connected to the intermediate zone and requires upgrade to DN250 or greater, subject to detailed design by TSC.

TSC have placed development conditions on an existing Deferred Commencement Development Consent for a 76 Lot subdivision over the proposed Precinct B of the RISE Concept Plan area which will require the Developer of RISE to contribute to the upsizing of the rising main between Snowgum Crescent reservoir and the existing 1.1 ML reservoir servicing the existing Bilambil Heights residential area. Further it requires the Developer to provide TSC a site for the future augmentation of the Snowgum Crescent low level reservoir to be dedicated to TSC for the purposes of constructing a future low level reservoir adjacent to McAlisters Road to augment the existing storage capacity of the Snowgum Crescent reservoir and provide access easements. TSC is to purchase the future low level reservoir site from the Developer and the developer is to create the required access and service line easements.

TSC has an existing easement for access to the existing 1.1 ML reservoir and the existing rising main is located within that easement.

The location of the existing easement to the existing 1.1 ML reservoir does not suit the ultimate layout of RISE Development and negotiations have occurred between the Developer and TSC to agree on a proposed Water Strategy which will result in Tweed Shire Council constructing the new increased capacity rising main to the 1.1 ML reservoir in RISE along the existing easement and RISE fully funding the relocation of the rising main to another vertical / horizontal alignment that suits the RISE development on a progressive basis as subdivision works proceed.

The cost of infrastructure to deliver from the Tweed River to RISE development via the Bray Park Water Treatment Plant, a series of pumping stations and reservoirs and rising mains are part of the Section 64 Developer Services Plan (DSP) for the NW area of Tweed Shire.

The current DSP for the Bilambil Heights Urban Release Area makes provision for upgrades in capacity to service the area and a major upgrade of the Bray Park Water Treatment Plant is expected to be completed by December 2009 by TSC.

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The existing 1.1 ML reservoir surrounded by the RISE development will be replaced by a new reservoir with sufficient capacity to service RISE development, at the cost of the Developer with TSC contributing to the pro rata cost of capacity to service areas of the Bilambil Urban Release Area beyond RISE development, the details of which will be resolved with TSC during the processing by TSC of the first RISE Precinct Development Consent.

### **General**

The proposed integrated water management system will mean that a dual water reticulation system will be provided in accordance with the principals set forth in relevant Water Services Association of Australia (WSAA) Water Code of Australia and in accordance with the DCP design requirements of TSC. Installation will also comply with the NSW Plumbing Code and AS3500.

Potable water will be plumbed into dwellings in the development for use in kitchens, hot water systems, showers, baths and bathroom basins.

In commercial buildings potable water will be plumbed to food preparation areas, sinks, basins, showers and baths.

All other uses will be plumbed for recycled stormwater in accordance with the NSW Plumbing Code.

Water balance studies carried out by Gilbert & Sutherland as part of the MP08-0234 application indicate that there will be times during certain climatic occurrences where insufficient stormwater can be captured and stored to ensure 100% reliability of the recycled supply. Therefore potable water storage and system delivery will need to be sized to ensure adequacy of supply during periods where recycled stormwater is not available.

Details relating to water supply are contained in **Annexure 20**.

## **9.5 Ground Water**

It is anticipated that there would be some localised, transient groundwater mounding in the vicinity of each of the constructed wetlands, due to the depth of storage required for stormwater harvesting. It is estimated that the localised increase in groundwater level would fluctuate with climatic conditions and be limited to an area of approximately 15m outside the boundary of each wetland (to be confirmed by modelling at Development Application to TSC stage if required).

The potential for groundwater mounding around the constructed wetlands would be unlikely to have any broader impact on the groundwater table within the region.

Extraction of groundwater is not proposed.

The risk of groundwater depletion or water table rise is therefore considered minimal. This would be demonstrated by an onsite investigation and computer modelling during the detailed design phase for Development Applications to TSC.

Details relating to water supply are contained in **Annexure 22**.

## **10.0 ECOLOGICALLY SUSTAINABLE DEVELOPMENT**

### **10.1 Ecologically Sustainable Development Principles**

Contemporary environmental planning practice requires development projects to be assessed against the key ecologically sustainable development principles. **Table 34** identifies those principles and assesses the site generally and the rezoning/development concept against each of those principles.

TABLE 34 – ESD PRINCIPLES	
OBJECTIVE	COMMENT
<p>(a) the precautionary principle—namely, that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. In the application of the precautionary principle, public and private decisions should be guided by:</p> <p>(i) careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and</p> <p>(ii) an assessment of the risk-weighted consequences of various options, and</p>	<p>Rigorous and comprehensive assessment of the sites biophysical and geophysical opportunities and constraints has been undertaken to inform the rezoning process and the preparation of the concept plan. Key environmental factors are discussed in <b>Section 6.0</b>, including in particular conservation of threatened species.</p> <p>Areas of high conservation value as identified in the Ecological Assessment at <b>Annexure 16</b> will be rehabilitated and zoned E(2) Environmental Conservation. These areas will be created as community land under the Community Title Scheme applicable to the RISE development and will be managed and maintained in perpetuity by the community association with funding provided by residents as part of their normal body corporate fees.</p> <p>Options for development of the site include implementation of Development Consent No. 96/519 and/or Development Consent No. 05/1351 (see Section 5.3 for details of those consents) or alternatively the “do nothing option.”</p> <p>The “do nothing option” would result in the relatively unconstrained parts of the site being sterilised from future urban development and thus the objectives of the FNCRS 2006 – 2031 and Council’s strategic planning policies would not be achieved. This option would also result in the land continuing to be used for grazing without any significant management of noxious weeds and non-native species such as Camphor Laurel, as will occur as part of the current development proposal.</p> <p>Implementation of the 1996 resort consent, whilst remaining a possibility, would not achieve a built form outcome consistent with contemporary urban planning practice, nor would it achieve the highest and best use of the land based on current market considerations.</p> <p>Similarly, implementation of the 76 lot subdivision consent in the Marana Street precinct, whilst still an option, does not necessarily result in the most appropriate land use and yields for that part of the site and would likely to give rise to greater conflicts with existing abutting residential properties.</p> <p>The proposed rezoning and development of the RISE site in accordance with the Concept Plan, based on the contemporary and rigorous assessments carried out, is considered to be the most sustainable option. All high conservation value areas on the site will be rehabilitated, appropriately zoned E2 Environmental Conservation and created as community land (common property) under the Community Titles Scheme.</p> <p>Ongoing management of high conservation value areas by the Community Association (with appropriate funding through the normal Body Corporate fees) will ensure that these areas are protected in perpetuity.</p>
<p>(b) inter-generational equity—namely, that the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations, and</p>	<p>The RISE Concept Plan and this rezoning proposal are consistent with this Principle in that it is an integral part of the project that all areas of high conservation value will be appropriately zoned in an E2 Environmental Conservation zone and suitably rehabilitated in accordance with the Site Rehabilitation Plan and Pest Management Plan at Volume 3 of <b>Annexure 16</b>.</p>

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TABLE 34 – ESD PRINCIPLES	
OBJECTIVE	COMMENT
	In addition, an integrated water cycle management system will be implemented and the community has been designed based on contemporary urban design principles to minimise motor vehicle use, minimise urban sprawl, make efficient use of infrastructure and services and minimise the carbon footprint generated by ensuring that all buildings are designed to meet Green Globe Certification requirements for energy efficiency.
(c) conservation of biological diversity and ecological integrity—namely, that conservation of biological diversity and ecological integrity should be a fundamental consideration, and	<p>As indicated above, rigorous scientific analysis and survey has been undertaken to identify the species and location of all native plants and threatened species on the site, together with fauna habitat areas. Those areas of high conservation value are proposed to be zoned E2 Environmental Conservation and suitably rehabilitated (see <b>Annexures 6 and 16</b>).</p> <p>Ongoing management of the environmental conservation areas including funding will be the responsibility of the Community Association under the Community Title Scheme and it is therefore submitted that rezoning of the land as proposed in this State Significant Site Study and development of the site in accordance with the Concept Plan would be consistent with this Principle.</p>
<p>(d) improved valuation, pricing and incentive mechanisms—namely, that environmental factors should be included in the valuation of assets and services, such as:</p> <p>(i) polluter pays—that is, those who generate pollution and waste should bear the cost of containment, avoidance or abatement, and</p> <p>(ii) the users of goods and services should pay prices based on the full life cycle of costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste, and</p> <p>(iii) environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, that enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems.</p>	<p>The Concept Plan proposes to collect and recycle stormwater runoff and also install community rainwater tanks and provide a dual rainwater system to dwellings. Appropriate head works contributions and sewer rates will be paid to Tweed Shire Council to ensure that all sewerage is treated to a high standard prior to discharge from Tweed Shire Council Sewerage Treatment Works.</p> <p>Under the Community Titles Scheme to apply to RISE, individual landowners will pay normal local government rates and Body Corporate fees for services and facilities, which will reflect the cost of providing and operating those facilities.</p> <p>A number of mechanisms will be included in the Concept Plan to achieve the environmental goals of the site including water and energy efficiency, recycling and the preparation of Architectural Design Guidelines to ensure that future buildings are both energy efficient and aesthetically pleasing to achieve sustainable outcomes.</p>

## 10.2 Green Globe Earth Check 3 Certification

The RISE project has achieved Certification from EC3 Global (Green Globe/Earthcheck) using a Precinct Planning and Design Standard (PPDS) for Ecological Improvements on Large Mixed Use Developments. PPDS is an integrated tool which is the significant outcome from five years of research and testing at the Centre for Sustainable Design – University of Queensland. The work is a federally funded initiative with the Sustainable Tourism Co-operative Research Centre and is undertaken in the collaboration with EC3 Global and several industry partners.

For RISE to achieve Industry Best Practice level the proponent gave environmental, social and economic commitments to establish a set of Environmentally Sustainable Development related goals to assist in aligning its development outcomes with ethical and socially responsible business principles.

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The integrated tool provides organisations with environmental design frameworks, energy and water models, social and economic guidelines and checklists. These enable the assessment of the development and its operations in terms of outcomes and overall enhancement of total ecological or triple bottom line performance. A copy of the EC3 (Green Globe) Assessment Report dated 31 March 2009 is attached at **Annexure 25**.

## **11.0 OPEN SPACE AND COMMUNITY FACILITIES**

### **11.1 Sports Park**

Under the provisions of Tweed Development Control Plan 2007, Part A5 – Subdivision Manual, a total of 4.42 hectares of structure open space (sports fields) is required. Calculation details for the area requirements are provided at Section 4.44.

Precinct U shown on the Structure Plan at Page 22 of **Annexure 9** comprises the proposed Sports Park located between Cobaki Road and Cobaki Creek having a total area of 4.513 hectares.

The proposed Sports Park precinct will be dedicated to Council and embellished in accordance with the standards contained in Tweed Development Control Plan 2007, Part A5 – Table A5-8.3 (see Section 4.4.4). Following recent consultations with Tweed Council Officers, facilities to be provided within the structured open space sports fields will include:

- ♦ A bicycle BMX track.
- ♦ A skateboard park.
- ♦ Tennis courts.
- ♦ Basketball courts.
- ♦ Netball courts.
- ♦ Together with appropriate Clubhouse facilities and car parking areas. Clubhouse facilities would be constructed in an appropriate location (out of the main flow path) with a floor level at least 300mm above the 100 year ARI flood level.

Construction and dedication of the sports park will be undertaken as part of the project.

Following dedication of the sports park it will be owned and managed by Tweed Shire Council and will be available for general public use in accordance with Council's normal policy.

### **11.2 Casual Open Space**

Under the provisions of Part A5 of Tweed Development Control Plan 2007, a total of 3.24 hectares of casual open space will be required (see Section 4.44 for calculation details).

The Structure Plan at Page 22 of **Annexure 9** provides for three local parks which will be located and embellished in accordance with the standards contained in Tweed Development Control Plan 2007, Part A5 – Table A5-8.2.1.

The total area of the parks proposed under the Concept Plan will be not less than 3.24 hectares. The local parks will be within community land (ie. common property) under the Community Title Scheme and their ongoing care, control and management will be the responsibility of the Community Association with funding provided through the normal Body Corporate structure of levies. Most of the local parks will be available for general public use as well as for use by residents of RISE.

The local parks will be embellished and created as community land as each precinct is progressively developed.

### 11.3 Environmental Open Space

In addition to the establishment of casual and structured open space, it is also proposed to create a total of 28 hectares of environmental open space comprising high conservation areas containing threatened species and native vegetation which is proposed to be zoned E2 Environmental Conservation. Precinct V on the Structure Plan comprises the environmental open space which will be community land under the Community Title Scheme, with ongoing care, control and management provided by the Community Association with funding provided through the normal Body Corporate structure of levies.

Parts of the environmental open space area have been degraded by agricultural activities and accordingly a rehabilitation program has been commenced in accordance with the Site Rehabilitation and Pest Management Plan prepared by James Warren and Associates at **Annexure 16**.

This Plan involves approximately \$3 million of expenditure over approximately five years over the entire 187ha land parcel to implement the Rehabilitation Strategy.

Walkways will also be established within the environmental open space to provide safe pedestrian access to key points of interest, including prominent ridges, waterfalls and vegetation communities. Walkways will be constructed to National Parks and Wildlife Service standards so as to avoid removal of native vegetation, where possible. Full details of the actual alignment and type of boardwalk will accompany future Development Applications.

The environmental open space will be rehabilitated in accordance with the Site Rehabilitation and Pest Management Plan (Volume 3) at **Annexure 16**.

### 11.4 Community Facilities

In addition to the proposed open space facilities, which will be available for general public use, it is intended to provide a multi purpose building within the village centre (Precinct A). The building will be owned and managed by the Community Association but will be available for hire by the general public. It will have a gross floor area of approximately 500m<sup>2</sup> and will be designed as a multi purpose building such that it is capable of being used for a range of purposes including public meetings, places of public worship and entertainment generally.

## 12.0 OWNERSHIP AND MANAGEMENT

The initial stages of RISE will involve a five lot subdivision as indicated on the plan at **Annexure 10**. The following table (**Table 35**) indicates the lot numbers, proposed use and intended ownership and titling/management arrangements.

TABLE 35 – LOTS, USE AND OWNERSHIP		
LOT NO.	USE	TITLE/OWNERSHIP
934	Low level reservoir	Conventional lot owned by Tweed Shire Council.
935	High level reservoir	Conventional lot owned by Tweed Shire Council.
938	Structured open space (Precinct U)	Conventional lot owned by Tweed Shire Council.
936	Precincts A to O and V	Conventional lot owned by Terranora Group Management Pty Ltd.
937	Residual lot (balance of land outside of MP08_0234 area)	Conventional lot owned by Terranora Group Management Pty Ltd.

Proposed Lot 4 will be subdivided as part of future stages to create community title lots for the various precincts and land uses. Each lot will be available for purchase by individual owners as part of the Community Title Scheme.

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## 13.0 BUSHFIRE

### 13.1 Compliance with Planning for Bushfire Protection, 2006

Parts of the development site are mapped as bushfire prone land. Compliance with Planning for Bushfire Protection, 2006 is addressed in the Bushfire Report at **Annexure 19**.

- ♦ The proposed RISE development site contains and adjoins bush fire prone land as identified by Tweed Shire Council Overlay Mapping, and hence requires referral to the Rural Fire Service as part of the development assessment process. The bushfire planning requirements have been recognised in the current master plan design and will be dealt with in detail in the future development applications for the specific precincts of the project.
- ♦ The RISE development is located on land that forms part of the Bilambil Heights Release Area, which is approximately 880 hectares in extent. The proposed RISE development is consistent with the land use intents specified for the site in the Tweed Shire Council's strategic planning documents.
- ♦ The majority of the RISE development consists of standard residential land uses, however several components of the proposed development constitute Special Fire Protection Purposes (SFPP) land uses. SFPP land uses proposed as part of the *RISE* development include:
  - a Private School, located in the south-east of the site;
  - a nursing home located within the north-east of the site; and
  - a hotel, forming part of the Village Centre, located centrally within the east of the site.
- ♦ In compliance with the requirements of the PBP Guideline, the *RISE* development makes generally appropriate provisions for a combination of bush fire protection measures, including:
  - the provision of clear separation of buildings and bush fire hazards, in the form of fuel-reduced Asset Protection Zones;
  - appropriate building construction standards and design;
  - appropriate access standards for residents, fire fighters, emergency service workers and those involved in evacuation;
  - adequate water supply and pressure;
  - emergency management arrangements for fire protection or evacuation; and
  - suitable landscaping, to limit fire spreading to a building.

### 13.2 Bushfire Plan of Management

- ♦ In compliance with the requirements of the PBP Guideline, the *RISE* development makes generally appropriate provisions for a combination of bush fire protection measures, including:
  - the provision of clear separation of buildings and bush fire hazards, in the form of fuel-reduced Asset Protection Zones;
  - appropriate building construction standards and design;
  - appropriate access standards for residents, fire fighters, emergency service workers and those involved in evacuation;
  - adequate water supply and pressure;
  - emergency management arrangements for fire protection or evacuation; and
  - suitable landscaping, to limit fire spreading to a building.
- ♦ Additional consideration of bush fire protection measures will be required during the preparation of detailed development plans and development approval applications to ensure that relevant bush fire protection outcomes are achieved for the *RISE* development.

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- ♦ Easements will need to be secured to accommodate some APZs which are unable to be located wholly within the *RISE* development site. The easement arrangements must contain provisions for the ongoing maintenance of the APZs to ensure compliance with the accepted standards for APZs. If, at the time of the individual Development Applications for specific precincts in *RISE*, the creation of easements on adjoining property is not possible then the location of the proposed buildings may need to be re-evaluated.
  - ♦ Detailed Bush Fire Management Plans should be prepared at the time of Development Applications for specific precincts in *RISE* for areas where APZs are required on slopes in excess of 18° and where APZs cannot be wholly contained within the site boundary and easements are to be established. The Detailed Bush Fire Management Plans must demonstrate that the issues associated with locating APZs on steep slopes and on adjoining lands can be effectively managed for the life of the development.

The conclusions and recommendations contained in **Annexure 19** will be implemented as part of the project.

#### **14.0 FLOODING**

A review of Tweed Shire Council's flood data indicates that the northern portion of the site adjacent to Cobaki Creek may be subject to flooding during a regional 100 years Average Recurrence Interval (ARI) event. The project has been designed to accommodate this constraint.

Adequate on-site detention will be provided to ensure that there are no increases in flows in Cobaki Creek and at the other points of discharge for all storm events up to and including the 100 years ARI event. The proposal would therefore have no impact on the existing creek or the existing adjoining development. Further detail of flood mitigation and management measures would be provided in support of a later application to TSC for Development Approval.

Apart from the Sports Park area to the north of Cobaki Road, the site is elevated and well above local and regional flood levels. Emergency access to or from the site would be available via Marana Street.

Tweed Shire Council has provided details of potential 100 years Average Recurrence Interval (ARI) flood heights in the vicinity of the proposed Sports Park in Precinct U from its regional 36 hour storm flood modelling results. Copies of the details provided by Council are attached as Appendix 1. These results indicate that the flood level would be approximately RL3.5m AHD. The minimum acceptable level on the Sports Park area (as defined in TSC's 'Subdivision Manual' DCP16, Table 4.33c ) is no lower than 1.0m below the 100 years ARI flood level. The minimum acceptable level would therefore be approximately RL 2.5m AHD. Given that the existing surface level appears to be between RL 2.0 and 3.0m AHD, the earthworks required to achieve the desired finished level would be minimal. This complies with Council's policy that no more than 300mm of filling should be placed in areas where the depth/velocity product is greater than 0.3m<sup>2</sup>/sec.

As requested by Council Officers, a 50m buffer zone for the Sports Park has been provided adjacent to Cobaki Creek.

The style of Sports Park to be provided has been discussed with officers from TSC. Based on these discussions, it is proposed that flood compatible facilities would be constructed. Such facilities would include:

- a bicycle BMX track
- a skateboard park
- tennis courts
- basket ball courts and
- netball courts

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together with appropriate club house facilities and car parking areas. Club house facilities would be constructed in an appropriate location (out of the main flow path) with a floor level at least 300mm above the 100 year ARI flood level.

Because there are some irregularities in Council's flood model and its output, and the digital terrain model grid is too coarse for detailed design or assessment of the proposed development's impacts, it is proposed that detailed flood modelling would be undertaken during the detailed design process at the Development Application stage for the Sports Park. Such modelling would examine the likely flood heights due to local storms having a range of durations in the Cobaki Creek catchment. The impact on these heights of elevated tail water levels resulting from regional floods would also be examined.

However, based on the information available at present, it is expected that the requirement that the proposed development should have no adverse impacts on flood levels or velocities upstream or downstream of the site can be achieved. The layout of the proposed Sports Park would be adjusted if necessary on the basis of these future results.

In summary, the provision of the Sports Park and facilities that accord with Tweed Shire Council's intentions appears achievable but will need to be checked against detailed modelling at the later Development Application stage.

Further information relating to flooding is contained in Section 1.3 of the IWCMP at **Annexure 22**.

## **15.0 PLANNING AGREEMENTS AND/OR DEVELOPER CONTRIBUTIONS**

The developer will pay relevant Section 94 Contributions prior to the issue of a Construction Certificate for building works or prior to the issue of a Subdivision Certificate for subdivision, subject to any credits which may apply in respect of works carried out in accordance with the Section 94 Plan. Applicable Section 94 and Section 64 contributions are addressed in Section 4.6.

Draft Heads of Agreement have been negotiated with Tweed Shire Council in relation to, inter alia, transfer of closed roads, water and sewer headworks credits and construction of Cobaki Parkway. A copy of the Draft Heads of Agreement is attached at **Annexure 28**. The proponent would be prepared to enter into a Voluntary Planning Agreement (pursuant to Section 93F of the Environmental Planning and Assessment Act) with Tweed Shire Council in relation to the Draft Heads of Agreement, if this is deemed necessary.

## **16.0 SITE PREPARATION WORKS**

### **16.1 Land Forming**

#### **EXISTING AND PROPOSED LEVELS**

Preliminary road and adjacent land proposed to be reprofiled as shown in VKL Consulting Pty Ltd Drawing Nos. 1355-07-SK06C and 07C appended in the project concept drawing documentation and specifically in Appendix A of the Report at **Annexure 20**.

Existing contours are shown in light grey at 5m contour interval and preliminary final contour levels shown in red at 1m contour interval.

These plans show, in plan view, the areas of proposed disturbance at the subdivision stage.

Additional reprofiling of the site will occur at the building stage however the architectural design seeks to accommodate changes in level across the various sites by incorporating level differences within the built form to minimise the extent of earthworks required.

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Differences in level are also accommodated by single sided access from internal roads where appropriate.

Preliminary road gradings and cross sections are shown on VKL Consulting Pty Ltd Drawing Nos. 1355-07-SK20 to SK142. Refer to Major Project Application MP08-0234 VKL Consulting Pty Ltd drawing set (**Annexure 20**).

#### CUT AND FILL QUANTITIES

Based on the preliminary road gradings and lot reprofiling included with this application have been calculated and are recorded on VKL Consulting Pty Ltd Drawing No. 1355-07-SK12C in Appendix A of **Annexure 20**. These volumes of cut and fill are not solid volumes and make no provision for any detailed earthworks that may be required during building operations.

Subject to detailed design there will be an excess of material to site requirements of approximately 237,000 cubic metres.

This volume of earthworks will be hauled from the site and will comprise a mixture of the various material types identified in the Geotechnical investigations by Border-Tech and Gilbert & Sutherland (**Annexure 20**).

No specific area of disposal of this material has been identified at this early phase however preliminary discussions have occurred with Tweed Shire Council on the need for fill to complete the formation of future arterial roads servicing Bilambil Heights Release Area.

Potential sites are shown on VKL Consulting Pty Ltd Drawing No. 1355-07-150. Refer Appendix A of **Annexure 20**.

Subject to final design, approval and construction timing it is anticipated that the haul route of excess earthworks from the site will be along Cobaki Road to the proposed Scenic Drive deviation. No earthworks materials will be required to be imported to the site.

Soil and fill materials will be moved from one section of the site to other areas of the site, subject to design requirements and construction of the various precincts of the development.

#### ASSESSMENT OF EXTENT OF CUT/FILL DEPTHS & AREA OF SITE DISTURBANCE

An assessment of the extent of depths of cut/fill over the proposed development area at bulk earthworks stage is required.

This assessment is shown on VKL Consulting Pty Ltd Drawing No. 1355-07-301 in **Annexure 20** in the form of coloured areas showing ranges of depths of cut/fill.

This assessment has then been used to assess the percentage of areas of the development footprint where cut/fill depths exceed five (5) metres as set out in TSC DCP - D6 which provides for a maximum percentage of 10%.

The outcome of this assessment indicates that the proposed RISE Development complies with the DCP – D6 with a percentage of 6.27% taking into account of public and private roads.

Land forming on the site will be undertaken in accordance with the design details contained in **Annexure 20**.

### 16.2 Fill Sources

No fill material will be imported to the site. Subject to detail design, approximately 237,000m<sup>3</sup> of excess material will be exported from the site as detailed in Section 16.1 above.

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### 16.3 Geotechnical

Geotechnical investigations have previously been undertaken by Border-Tech Geotechnical Engineering Services in November 1996 and by Gilbert & Sutherland in December 1997.

These Geotechnical investigations were undertaken as part of the Statement of Environmental Effects (SEE) in support of a Resort Development Application which was approved over the subject site and remains as an active Development Approval.

Investigation test locations of the two Geotechnical investigations have been compiled and overlayed with the RISE concept so that the relativity of the Geotechnical testing can be related to the current application concept.

This Report has been prepared on the basis of the conclusions of the Border-Tech Geotechnical Engineering Services Report dated November 1996 and extracts from the Gilbert & Sutherland Report dated December 1997 which are included in **Annexure 20** as the Geotechnical conditions applicable to the site have not changed, notwithstanding that the project concept has changed.

The Border-Tech Geotechnical Engineering Services Report dated November 1996 makes references to various components of the Golf Course Resort and proprietary names.

For the purpose of interpretation, **Table 36** identifies the subject area in the RISE Concept Plan.

TABLE 36 – INTERPRETATION TABLE				
Item No.	Reference Clause Border-Tech Report dated Nov 1996	Ref Page No. Border-Tech Report dated Nov 1996	Area Referred to in Border-Tech Report dated Nov 1996	Equivalent Location in RISE Concept Plan
1.	2.1	3	"Landscaped Golf Course Area"	Precincts A, B, C, D, E, F, G and H
2.	2.1	3	"Clubhouse & Hotel" Precinct	Precincts A, D, E and G
3.	2.1	3	"Norville Property"	Part Precinct L, Precincts M, N, O & land to the north of Precinct N through to Cobaki Creek Road
4.	2.1	3	"Holmview"	West of the Spine Road Chainages 2700 to 3400 Refer VKL Consulting P/L Dwg No. 1355-07-SK07C for Spine Road chainages. This area is outside of RISE concept application area.

During the Border-Tech Geotechnical investigation of the site a total of 30 No. boreholes and 17 No. test pits were bored / excavated to establish underlying Geotechnical conditions. Undisturbed and disturbed samples were collected and tested and reported on.

A further 5 No. boreholes were drilled by Gilbert & Sutherland during their investigation to establish soil classifications over the site.

The site consists of various geological formations with the oldest rocks being metasediments of the Neranleigh - Fernvale Group. These occur in the northern region of the site in the valley floor near Cobaki Creek Road and form the foot slopes rising to the south from Cobaki Creek Road.

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Metasediments are typically sandstone and siltstone however beds of greywacke can occur near the basalt – metasediment contact.

Above these Neranleigh – Fernvale Group are Tertiary age basalt lava flows (Lamington Volcanic Group) with younger volcanic rhyolitic lava (Lamington Volcanic Group) overlaying the basalt and forms the higher areas of the subject site.

The rhyolitic can be dissected into two types, being upper tuffaceous rhyolite and lower perlitic, vitreous (glassy) brittle rhyolite.

The contacts between the base of the basalt and underlying Neranleigh – Fernvale beds and the top of the basalt and overlaying rhyolitic have their own weathering characteristics and locally control topography and soil type.

Recent alluvials of Cobaki Creek form low lying land at Cobaki Creek level.

Gilbert & Sutherland's investigation of soil types found that the site soils consisted of Ferrosols, Dermosols and Kurosols.

The Ferrosols being associated with the Tertiary Age basalt lava flows and the Dermosols / Kurosols associated with the younger volcanic rhyolitic lava and older metasediments of the Neranleigh – Fernvale Group.

The subject site has some complex geological structures and whilst geological / Geotechnical properties are expected to be typically gradational they could exhibit rapid lateral variations.

In a broad scale Geotechnical investigations such as the Border-Tech and Gilbert & Sutherland investigations it cannot be expected that lateral variations can be identified.

Specific detailed Geotechnical investigations will be required for each component or Precinct of the development at the time Development Consent application or construction approval stage.

The investigations found that there are no geological conditions evident on the site which would indicate that the proposed development cannot be satisfactorily achieved.

There are no known geological conditions at the site which could adversely affect the adjoining land and a consequence of the proposed development.

Rhyolitic deeper than 5-7 metres and basalt shelf rock may not be rippable.

Specifically designed subsurface drainage will be required in the contact zones between the various geological formations throughout the subject site.

Subject to detailed design of earthworks at Development Application stage per Precinct a range in size of basalt boulders may be encountered. In those areas where basalt boulders are encountered, foundation design for structures will need to account for the possibility of variable degrees of bearing capacity.

If areas of basalt boulders are encountered during DA and construction design specific attention to construction safety methods will be required to prevent boulders from rolling beyond the specific construction sites. One method of achieving this is to locate stripped topsoil windrows down slope of the construction site.

No evidence of active land slippage was identified on the subject site during investigations.

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As a consequence of slopes in steeper areas of the site construction design documentation should take into account the potential for stability failure to occur and provide suitable batter / fill slopes, benching of fill areas, subsurface and cut off drainage together with vegetation restoration of disturbed areas.

In summary, there are no apparent Geotechnical reasons evident that would prevent the proposed development being completed.

Detail Geotechnical investigations will be required at the time of construction of the various components of the proposed development.

Unrippable rhyolite and basalt may be encountered in various areas of the proposed development together with varying sizes of basalt boulders.

Subsurface drainage will be required at the interface zone of various geological formations and cut off drains will be required where cut batters are to be located.

Disturbed areas are to be reinstated with appropriate vegetation.

The conclusions and recommendations contained in the Geotechnical Reports will be implemented.

#### **16.4 Preliminary Erosion and Sedimentation Control Plan**

Terranora Group Management Pty Ltd commissioned Gilbert & Sutherland Pty Ltd to prepare an Erosion and Sediment Control Plan (ESCP) in relation to the proposed RISE development at Bilambil Heights, New South Wales (**Annexure 22**). This ESCP relates to the concept approval phase of the project.

The report is based on previous soil surveys carried out by qualified Gilbert & Sutherland staff, and has been based on information previously provided in 'Addendum Report & EMP - Onsite Sewage Treatment & Effluent Reuse' by Gilbert & Sutherland, dated January 1998 and 'Amended Stormwater Management Plan, Pacific Highlands Estate, Stage 1', by Gilbert & Sutherland, dated August 2006.

This report provides an overview of the site soils and their associated erosion potential. It adopts and is based on the Tweed Shire Council's 'Code of Practice for Soil and Water Management on Construction Works' contained in and as required by the 'Development Design Specification, D7, Stormwater Quality', Version 1.2, dated June 2004. Management of the potential impacts during the construction phase have been addressed in the management tables in Section 4 (which form the ESCP).

The Erosion and Sedimentation Control measures identified in **Annexure 22** will be implemented as part of the project.

#### **16.5 Contaminated Land**

The Contamination Assessment Report at **Annexure 24** indicates that the 1997 WBM Oceanics assessment identified four potentially contaminated locations on the site. These were:

- Golf course greens
- STP biosolids disposal area
- Former gun club
- Former Norville property.

The results of analytical testing identified elevated OC pesticide levels exceeding the HILs on a number of golf course greens.

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As the Dieldrin + Aldrin concentrations exceeded the NEPM HILs guidelines (3.33mg/kg) within the greens on the 12<sup>th</sup> (7.98mg/kg) 14<sup>th</sup> (10.4mg/kg) and 15<sup>th</sup> (11mg/kg) and 16<sup>th</sup> (2.96mg/kg) holes during the 1997 investigation, remediation of this soil would be required to allow its use in a standard residential setting.

The biosolids sampling associated with the STP identified copper (89 to 352 mg/kg) and zinc (139 to 470mg/kg) concentrations elevated above the EILs. However, these concentrations comply with the HILs for a standard residential setting.

The gun club area showed no elevated concentrations of lead, but exhibited levels of copper (7 to 133 mg/kg), mercury (0.1 to 2.8mg/kg) and zinc (51 to 357mg/kg) above the typical environmental background concentrations. The Norvill property investigation identified some residue of OCP, however these concentrations were below the HILs and the site would be suitable for the proposed future development.

This assessment was conducted as a consequence of WBM Oceanics findings of elevated levels of Dieldrin during the 1997 investigation Terranora Country Club – Site Contamination Assessment Report.

The laboratory results indicated concentrations of OC and OP pesticides were below the HILs within the composite samples collected from the three (3) golf course greens.

The Preliminary Site Investigation confirmed activities with the potential to contaminate were likely to have taken place across the site. The following sampling was conducted for the Stage 2 site investigation:

- ♦ Two (2) samples were taken from the north western portion of the site in the shallow natural gully, where surface waters would be expected to drain.
- ♦ Two (2) samples were retrieved from the far eastern portion of the site on the north-eastern facing slope, which is adjacent to significant former areas of cropping.
- ♦ Two (2) samples were taken from the stockpile of rock (miscellaneous waste) in the northern portion of the site.

All of these samples complied the HIL (10mg/kg); however Dieldrin and Aldrin levels were elevated in reference to the EILs.

This investigation was limited to the fully detached buildings surrounding the former Country Club. The laboratory results indicate that levels of heavy metals, hydrocarbons, BTEX and OC/OP pesticides adjacent to the investigated buildings do not exceed the adopted NEPM investigation levels with the exception of sample BH7 0.0-0.2 (Dieldrin concentration of 30mg/kg) located on the western side of the pool filter shed. As such, it is considered prudent to undertake subslab investigations for OC/OP pesticides on each of the outbuildings prior to the removal of the slabs.

Terranora Group Management Pty Ltd was granted conditional consent to demolish the super structures of the country club and outbuildings (golf buggy shed, irrigation shed, pool filter shed and transformer building) and prior to the removal of the concrete slabs beneath these buildings, a Remediation Action Plan (RAP) shall be prepared, submitted and approved, if required, based on the results of the sub slab investigation.

Subject to additional investigations in relation to the 12<sup>th</sup>, 14<sup>th</sup>, 15<sup>th</sup> and 16<sup>th</sup> golf greens and validation of any necessary remediation measures, the site would be suitable for the proposed residential uses in accordance with the provisions of Clause 7 of State Environmental Planning Policy No. 55 – Remediation of Land.

The Contamination Assessment Report (**Annexure 24**) contains the following recommendations at Section 9.

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## Site Contamination

Elevated OC pesticide levels exceeding 3.33mg/kg on the 12th, 14th, 15th and 16<sup>th</sup> (marginal concentration of 2.96mg/kg) golf course greens were identified from 0- 150mm below the surface in 1997. A further topsoil investigation conducted in 2005 found the concentrations of OC pesticides were below the HILs on the 11th, 12th and 18th golf greens.

Due to the variability of the OC pesticides concentrations in the greens and the sandy material used to construct the greens, we recommend an additional investigation be conducted to determine the spatial extent of OC pesticides within the golf greens as each Development Application is prepared for each Precinct or part Precinct of the RISE project.

The biosolid sampling in 1997 revealed the material associated with the STP complied with the HILs for a suite of metals.

However, it is understood the biosolids pond(s) shall be retained and remediated for stormwater treatment and retention. If biosolids were to be removed and placed elsewhere on site, lab analysis of the material for bacterial antigens, including a written safe work method statement (SWMS) would be prudent to protect persons handling the material. This detail can be resolved during the Works Application process for the relevant RISE Precinct.

An investigation of the outbuildings associated with the Country Club identified Dieldrin concentration of 30mg/kg located on the western side of the pool filter shed. As such, testing for OC pesticides beneath each concrete slab shall be carried out on the Country club and associated outbuildings in accordance with the provisions of the Council's Pre-demolition Testing Guidelines as the demolition works proceed.

Following the reporting of the sub slab investigations, a Remediation Action Plan (RAP) shall be prepared and submitted for approval prior to the commencement of any demolition of the slabs or substructures on site.

Subject to the remediation measures being validated as successful in the applicable contamination hot spots, the site would be suitable for the proposed residential uses.

## Acid Sulphate Soils

A majority of the site is above five (5) metres AHD and it is unlikely acid sulphate soils (ASS) would be encountered above this elevation. However, a small portion of land is below five (5) metres AHD in the northern extent of the site (the proposed Sports Park).

A review of the Bilambil Acid Sulphate Soil Risk Map 4 revealed the subject site is mapped as '*no known occurrence of ASS*'. However, an ASS assessment would be required within the northern extents of the MP08-0234 Area located below five (5) metres AHD (the proposed Sports Park) if disturbance of these soils is to occur.

The conclusions and recommendations contained in **Annexure 24** will be implemented as part of the project.

## 17.0 SUBDIVISION

### 17.1 Plans of Subdivision

The Plan of Proposed Subdivision for the MP08-0234 application is contained at **Annexure 10**. Full details of the future subdivision will be provided with Development Applications for each Precinct. The general Subdivision Layouts and road alignments are shown on the Structure Plans at **Annexure 9**.

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## 17.2 Staging Plan

A Staging Plan is contained in **Annexure 9**.

## 18.0 AGRICULTURE

### 18.1 Impacts on Existing Agriculture

The perimeter of the proposed RISE development is adjoined by land zoned as rural, rural living, low density residential, urban expansion, recreation and environmental protection. To ensure disturbance to residents of future urban development is minimised and the intrinsic values of the adjacent land uses are maintained, buffer zones are recommended. The specific separation distance (applicable within the RISE development site) and buffer element proposed for each sub-section of the site's boundary is outlined in Section 5 of **Annexure 21**.

Vegetated buffer zones are an alternative to dedicating large tracts of land to achieve adequate separation distances. In accordance with the Queensland Planning Guidelines, the vegetated buffers proposed would have a total minimum separation distance of 40m, incorporating a 20m-wide tree and shrub planting, and 10m areas clear of vegetation to either side of the vegetation.

The determination of appropriate buffer zones to reduce and/or manage potential conflicts between agricultural and other land uses in New South Wales requires an exercise of professional judgement. Applicable development control documents and plans need to be considered in conjunction with relevant risk assessment methods informed by pertinent guidelines. Whilst the applicable New South Wales guidelines describe a risk-based approach to identifying and managing potential land use conflicts, quantifying and defining appropriate buffer zone widths for a given site requires the further consideration of proven industry practices supported by research linking buffer widths to risk management outcomes. In this regard, the methodology described in the Queensland Department of Natural Resources *Planning Guidelines - Separating Agricultural and Residential Land Uses (1997)* is useful and relevant.

Open space buffers can incorporate public open space, road reserves and/or natural features such as watercourses. Additionally, similar to vegetated buffers, they can be incorporated into large residential allotments so long as the specified separation distance is maintained between the source and sensitive receptor.

The specific separation distance (applicable within the RISE development site) and buffer element proposed for each sub-section of the site's boundary is outlined in Table 37.

TABLE 37 – RECOMMENDED BUFFER ZONES				
Land Use Zone	Land Use	Subsection	Separation Distance	Buffer Element
Rural	Pastoral land	A	40m	Vegetated
	Pastoral land	K & M	20m	Densely vegetated
	Pastoral land	N	30m	Open space
	Pastoral land	O	50m	Open space
	Pastoral land	Q	20m	Existing road
Rural Living	Vegetated	E	20m	Existing road
	Pastoral land	P	20m	Existing road
Low Density Residential	Residential	F	0m	n/a
Urban Expansion	Pastoral land	D	0m	n/a
Recreation	Tourist accommodation	G	0m	n/a

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TABLE 37 – RECOMMENDED BUFFER ZONES				
Land Use Zone	Land Use	Subsection	Separation Distance	Buffer Element
Environmental Protection	Pastoral land	B	40m	Vegetated
	Horticulture	H & I	40m	Vegetated
	Partly densely vegetated	C	20m	Densely vegetated
	Pastoral land	J & L	20m	Densely vegetated

The conclusions and recommendations contained in **Annexure 21** will be implemented as part of the project.

## 18.2 Water Quality Monitoring

The proposed stormwater quality treatment system meets Tweed Shire Council's strict guidelines for stormwater quality treatment. As such, water discharged from the site should be of a satisfactory standard for downstream water users.

## 18.3 Northern Rivers Catchment Action Plan

The Integrated Water Cycle Management Plan at **Annexure 22** provides a conceptual integrated water cycle management strategy for the proposed RISE development, addressing water supply, rainwater collection and re-use and stormwater treatment and harvesting.

## 19.0 CONSULTATION

### 19.1 State Agencies

On 23 February 2009, letters were forwarded to relevant State Agencies and Tweed Shire Council inviting comments on the project. **Table 38** identifies the State Agencies and their responses together with comments on relevant issues raised.

TABLE 38 – STATE AGENCY RESPONSES		
STATE AGENCY	RESPONSE	COMMENTS
Tweed Shire Council	No response received.	
Department of Environment and Climate Change	<p>The Department of Environment and Climate Change responded on 10 March 2009. A copy of their response is contained at <b>Annexure 26</b>. The key issues raised by the Department include:</p> <ul style="list-style-type: none"> <li>DECC is concerned that the proposed development appears to impact more remnant vegetation on the site than the current approved development proposal.</li> </ul>	<p>As indicated in the State Significant Site Study, constraints imposed by threatened species of flora and fauna and native vegetation have been identified in the Ecological Assessment at <b>Annexure 16</b>. That Assessment is based on contemporary and rigorous scientific investigation together with ground truthing and accurately defines the high conservation value areas.</p>

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TABLE 38 – STATE AGENCY RESPONSES		
STATE AGENCY	RESPONSE	COMMENTS
	<ul style="list-style-type: none"> <li>DECC is concerned that in the Concept Plan, Area J with a proposed predominant use of residential appears to be disjunct from the rest of the development footprint. As such the area is likely to fragment the native vegetation and threatened species habitat that occurs in that region. DECC recommends that the development footprint be realigned and consolidated so that the development footprint, particularly in this area, will ultimately reduce the overall impact.</li> </ul>	<p>It is considered that the proposed urban footprint will not have a significant impact on remnant vegetation and in addition appropriate rehabilitation and zoning of high conservation areas is proposed.</p> <p>Area J has also been the subject of contemporary and rigorous assessment of potential ecological impacts, bushfire issues and urban design considerations as indicated in <b>Annexures 9, 16 and 19</b>. In summary, Area J is relatively unconstrained and is therefore considered to be appropriate for development as proposed.</p>
NSW Ministry of Transport	No response received.	
NSW Rural Fire Service	The Rural Fire Service responded by letter dated 21 April 2009. A copy of the response is contained at <b>Annexure 26</b> . The Rural Fire Service have raised concerns in relation to Precinct J on the basis that it does not meet the aims and objectives of Planning for Bushfire Protection, 2006.	<p>Constraints relating to Precinct J have been ground truthed and designed to accord with the Bushfire and Ecological investigations on site as identified in <b>Annexures 16 and 19</b>.</p> <p>In addition justification for Precinct J is provided in the Architectural and Urban Planning Report at <b>Annexure 9</b>.</p>
NSW State Emergency Service	No response received.	
NSW Police Department	No response received.	
Department of Water and Energy	<p>The Department of Water and Energy responded on 11 March 2009. A copy of their response is contained at <b>Annexure 26</b>. The key issues raised by the Department include:</p> <ul style="list-style-type: none"> <li>The Department requires the proponent to identify in the Concept Plan all proposed sources of water for the development.</li> </ul>	<p>The development will be connected to the public reticulated water supply scheme and in addition an Integrated Water Cycle Management Strategy will be implemented to provide for recycling of stormwater. The use of groundwater is not proposed. Full details of water supply are provided in <b>Annexures 20 and 22</b>.</p>

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TABLE 38 – STATE AGENCY RESPONSES		
STATE AGENCY	RESPONSE	COMMENTS
	<ul style="list-style-type: none"> <li>♦ The Concept Plan and Environmental Assessment will need to clearly outline all riparian work proposed as part of the development.</li> <li>♦ The Concept Plan and Environmental Assessment will need to outline the general measures for stormwater and effluent management.</li> <li>♦ The proposal may require a licence under the Farm Dams Policy in relation to the construction of any storages or dams on site.</li> </ul>	<p>The only riparian areas on the site are those adjacent to Cobaki Creek. A 50m ecological buffer is proposed to the Creek including appropriate rehabilitation as indicated on <b>Annexure 16</b>. No significant disturbance of the riparian area is proposed and the adjoining land use (being recreational facilities) is not likely to significantly impact on Cobaki Creek.</p> <p>Details concerning these issues are contained in <b>Annexures 20</b> and <b>22</b>.</p> <p>Details regarding the use of existing farm dams and proposed dams for stormwater management are contained in <b>Annexures 20</b> and <b>22</b>.</p>
Roads and Traffic Authority	A response was received from the Roads and Traffic Authority on 17 March 2009. A copy of that response is contained at <b>Annexure 26</b> . In summary, the RTA advised that the information contained in the letter dated 15 February 2008 (to the Department of Planning) and the Director General's Requirements for traffic and transport adequately cover the RTA's concerns.	The relevant provisions of the DGEARS relating to traffic and transport are addressed in <b>Annexure 17</b> .
Northern Rivers Catchment Management Authority	No response received.	
Department of Primary Industries	<p>The Department of Primary Industries responded by letter dated 17 March 2009. A copy of that letter is attached at <b>Annexure 26</b>. Key issues raised by the Department include:</p> <ul style="list-style-type: none"> <li>♦ Section 117 Direction 5.3 Farmland of State and Regional Significance.</li> <li>♦ The subject land is a mix of Class 4 and 5 agricultural land.</li> <li>♦ There are four cattle dip sites in the locality.</li> <li>♦ Relevant planning provisions of the Far North Coast Regional Strategy and North Coast Regional Environmental Plan.</li> </ul>	<p>This matter is addressed in Section 6.3 of the State Significant Site Study forming Part A of this Report.</p> <p>The impacts of the Concept Plan on agricultural land are addressed in <b>Annexure 21</b>.</p> <p>The implications of the cattle dip sites are addressed in the Contamination Report at <b>Annexure 24</b>.</p> <p>These issues are addressed in Section 5.0 of the State Significant Site Study forming Part A of this Report and in Section 4.0 of this Concept Plan Report.</p>

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TABLE 38 – STATE AGENCY RESPONSES		
STATE AGENCY	RESPONSE	COMMENTS
	<ul style="list-style-type: none"> <li>♦ Chapters 5 and 6 of the North Coast Living and Working in Rural Areas Handbook.</li> <li>♦ The development design should be based on Best Practice Urban Design Principles.</li> <li>♦ The Structure Plan and Concept Plan should distinguish between lands identified in the Far North Coast Regional Strategy and those not identified in the Strategy.</li> <li>♦ Maps should be used to explain how existing Strategies and Environmental Planning Instruments have been used.</li> </ul>	<p>This issue is addressed in the Agricultural Report at <b>Annexure 21</b>.</p> <p>This issue is addressed in the Architectural and Urban Planning Report at <b>Annexure 9</b>.</p> <p>The State Significant Site Study and Concept Plan only apply to that part of the site which is within the Far North Coast Regional Strategy footprint. A detailed Site Opportunities and Constraints Analysis has been undertaken to identify that part of the site which is suitable for urban development (see <b>Annexure 9</b>).</p> <p>See Annexures for appropriate maps.</p>
Telstra	A response from Telstra was received on 3 April 2009. A copy of the response is contained at <b>Annexure 29</b> . In summary, Telstra advise that it maintains existing networks throughout the land marked for development and this network is currently not sufficient to meet the likely demands of the development. However, Telstra has incorporated the forecast telephone demand for the development into the overall planning process for the area and has planned to roll out upgrades in telecommunications infrastructure as growth occurs.	See <b>Annexure 29</b> in relation to the provisions of telecommunications infrastructure. In summary, having regard to the comments provided by Telstra provision of appropriate infrastructure does not impose a constraint on the development of the site.
Country Energy	A response from Country Energy was received on 6 March 2009. A copy of the response is contained at <b>Annexure 29</b> . In summary, Country Energy advised that it has no objections to the proposed development. Subject to the provision of three new feeders from the proposed zone substation.	See <b>Annexure 29</b> being Electrical Services Concept Plan (2 sheets) from EMF Griffiths dated May 2007 which have been prepared following consultations with Country Energy.
APA Group (Gas)	A response from APA Group is attached at <b>Annexure 29</b> . In summary, the Group can provide natural gas infrastructure to the site however costs are likely to be prohibitive so initially an LPG gas system may be included.	Further investigation of the provision of either natural gas or reticulated gas to the site based on onsite storage will be investigated as part of the future Development Applications.
Surfside Buslines	Discussions were held with Surfside on 27 February 2009. Discussion points raised are as follows:	

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TABLE 38 – STATE AGENCY RESPONSES		
STATE AGENCY	RESPONSE	COMMENTS
	<ul style="list-style-type: none"> <li>♦ Surfside are the licensed public bus transport contractors to Tweed Shire Council.</li> <li>♦ Surfside currently services Marana St by using the Terranora Golf Club car park to conduct a 180 turn to exit back down Marana St.</li> <li>♦ Surfside currently do not service Piggabeen Road or Cobaki Road.</li> <li>♦ Surfside are currently discussing the public transport needs for the proposed Cobaki Lakes development, through a transport committee set up by Tweed Council, but no conclusions have been drawn.</li> <li>♦ Surfside would not service the proposed RISE Town Centre internal streets, because they are not servicing any new retail centers in either the Tweed or Gold Coast Shires, because of the clash of bus and vehicle traffic that occurs in these retail centers.</li> <li>♦ Surfside would service the proposed "Spine Road" in RISE, but would not enter the project itself with busses.</li> <li>♦ Surfside would want a bus stop / shelter at approximately 400 to 500 meter intervals along the Spine Road, particularly locating bus stops at the Town Centre / end of Marana St and one at the proposed school site (or one stop that services both).</li> <li>♦ Surfside can only plan new bus routes at a maximum of 2 years in advance because the council and Dept Transport continually require changes to the routes and require "test routes" to be trialed to understand their validity.</li> <li>♦ So Surfside cannot plan a bus route for the RISE Spine Road because it is too many years in the future, however the design of the Spine Road suits their future requirements.</li> </ul> <p>However, Surfside would continue to provide the Marana St service until the new Spine Road was constructed at which time they would review the options with council and the Dept Transport.</p>	

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TABLE 38 – STATE AGENCY RESPONSES		
STATE AGENCY	RESPONSE	COMMENTS
Solo Waste	Solo Waste responded to consultations by letter dated 11 March 2009. A copy of that letter is attached at <b>Annexure 27</b> . In summary, Solo Resource Recovery advised that they can offer normal residential and commercial services to the site.	

## 19.2 Adjoining Landowners

Numerous activities were undertaken ahead of the series of public information sessions to ensure the community was well informed of the evenings:

- A Community Liaison Office was established with dedicated Community Liaison Officers (Bree Marr and Ryan Ellem), a dedicated toll free number (1300 033 800) and website ([www.riseaboveitall.com.au](http://www.riseaboveitall.com.au)) with opportunities for email;
- Two advertisements were published in *The Tweed Daily News* on Saturday February 14 and 21 promoting the upcoming information evenings. Dates, times and location of the public information sessions were contained in the advertisement;
- A third advertisement was placed in *The Tweed Sun* on Thursday 19 February detailing the dates, times and location of the public information sessions;
- A3 sized posters advertising the details of the public meetings were placed on community notice boards at key locations frequented by local residents, including the Panorama Plaza at Kennedy Drive, West Tweed; the independent service station on the corner of Bilambil and Carool Roads, Bilambil; the Top Shop convenience store on Simpson Road, Bilambil Heights; and the Banora Point Community Centre on the Corner of Woodlands and Leisure Drives.
- 76 flyers outlining the information evenings were distributed to residents abutting the RISE property on the north side of Marana Street and southern side of McAllisters Road;
- 21 flyers were letter-box dropped to adjoining property owners surrounding the site.
- A PowerPoint presentation to a workshop of Tweed Shire Council directors and councillors was conducted by Development Manager Steve MacRae and Project Urban Planner Brian Toyota on Tuesday 24 February. Councillors were informed of the upcoming information evenings and invited to attend;
- A media alert was distributed to all local and regional print and electronic media, inviting them to attend a media conference by the project's proponents to unveil the draft RISE Concept Plan and community consultation process;
- A media conference was conducted at the Seagulls Club, West Tweed, which included a power point presentation of the proposed project, attended by Leonie Brann, senior journalist at *The Daily News*, and Steve Spinks, Tweed Bureau chief for *The Gold Coast Bulletin*. TGM Director Godfrey Mantle, RISE Development Manager Steve MacRae and Urban Planner Brian Toyota were available for interview. The journalists were provided with a media release which was later circulated to relevant news/ property reporters in New South Wales, Queensland and nationally;
- Phone calls were made to the electorate offices of State Tweed MP Geoff Provest and Federal Member for Richmond Justine Elliot to inform them of the public information sessions. Follow-up emails were sent to both MPs for their records.

In addition, ahead of the public information sessions, Mr MacRae met with Mr Provest on January 23 at his South Tweed Heads electorate office and discussed the draft Concept Plan, and the project team's intention to hold a series of public information sessions to engage the community.

Mr Provest was unable to attend the public information sessions but his electorate officer was informed of the attendance numbers at the events and the general community sentiment to the proposal.

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Ms Elliot was also unable to attend the public information sessions due to her commitments in Canberra. However, Mr MacRae did meet with Ms Elliot at her South Tweed office on Friday 6 March where Mr MacRae provided an outline of the presentation and answered questions she had relating to the draft Concept Plan. (Copies of the correspondence with Mr Provost's and Ms Elliot's offices are contained in **Annexure 14**).

### **19.3 Community Consultation**

Public meetings were held on 25 and 26 February 2009 at Seagulls Leagues Club. The public meetings were advertised in the local press and were attended by approximately 76 people. A PowerPoint Presentation of the RISE Concept Plan was provided following which a response was given to questions from the participants.

A separate public meeting, attending by approximately 66 people was held at Seagulls Leagues Club on 3 March 2009. This meeting was specifically designed for owners of adjoining properties in Marana Street and McAllisters Road. Again a presentation was made focussing on that part of the project adjacent to Marana Street and McAllisters Road comprising the Retirement Living Precinct B, the Residential Precinct D, the Nursing Home Precinct F and Precinct C being the proposed Reservoir.

The Community Consultation Report at **Annexure 14** contains full details of all consultations undertaken, the key issues and outcomes of the process.

### **20.0 DRAFT STATEMENT OF COMMITMENTS**

The following table contains the Statement of Commitments the proponent is prepared to make in respect of environmental management and mitigation measures for the project. It is intended that these commitments will form conditions of approval for the project.

Where possible, the project has been planned and designed to avoid environmental impacts. However, where it is not practicable to avoid impacts, the Statement of Commitments aims to minimise and manage impacts such that they are acceptable in terms of magnitude and significance.

This Statement of Commitments has been prepared in accordance with the *"Draft Guidelines for Proponents; Preparing Statements of Commitments, Department of Planning, December 2005"*.

See **Table 39** on following page.

TABLE 39 – STATEMENT OF COMMITMENTS					
Project Component	Environmental Outcome (Commitment)	Measure (Commitment)	Purpose of Measure	Timing for Completion	Monitoring and Reporting
1. Erosion and Sediment Control (Construction Phase)	1.1 Minimise the escape of wind-borne particles by complying with the Erosion and Sedimentation Control Plan	1.1.1 Minimise disturbance area 1.1.2 Promptly rehabilitate disturbed areas 1.1.3 Regularly water disturbed areas of the site	To ensure that air pollution does not exceed DECC standards	Ongoing during the construction phase	Any complaints to be recorded in the Complaints Register and valid claims to be acted on within one hour. Details to be provided in the quarterly Compliance Report.
	1.2 Minimise mobilisation of sediments by complying with the Erosion and Sedimentation Control Plan	1.2.1 Erect sedimentation fences, inlet filters, hay bale barriers and diversion drains in accordance with the Erosion and Sedimentation Control Plan. 1.2.2 The controls shall be maintained during the construction phase and defects liability period.	To ensure that water quality in receiving waters is not decreased in quality by sediment and nutrient loads	All sediment and erosion control measures to be in place prior to commencing site work or demolition.	Visual monitoring shall be carried out by the Project Manager on a weekly basis and after each storm event. Details to be contained in the quarterly Compliance Report.
2. Site Safety	2.1 Minimise risk of injury to construction workers and members of the public by generally complying with the Safety Management Plan	2.1.1 The principal contractor shall prepare a Health and Safety Plan and submit the Plan to the Project Manager for approval. The contractor shall comply with the approved Plan.	To ensure that Occupational Health and Safety Act 2000, Occupation Health and Safety Regulation 2001 and relevant Codes of Practice are complied with.	Prior to commencing any work on the site.	Monitoring and reporting incidents to be recorded in the Incident Register and details to be included in the quarterly Compliance Report.  Work Cover to be notified in appropriate circumstances.
		2.1.2 The principal contractor shall prepare a Traffic and Pedestrian Plan for approval by the Project Manager.	To ensure that traffic and pedestrian management during the construction phase complies with the RTA Traffic Control Worksite Manual and AS1742.3	Prior to commencing work on site.	As above.
3. Acid Sulphate Soil	3.1 Minimise disturbance of acid sulphate soils by limiting excavations in accord with ASSMP.	3.1.1 Comply with the provisions of the Acid Sulphate Soils Manual (ASSMAC, 1998) and the Acid Sulphate Soil Management Plan	To ensure that significant volumes of acid sulphate soils are not disturbed.	During the excavation phase.	Gilbert & Sutherland to monitor excavation and address compliance in the quarterly Compliance Report.
4. Contamination	4.1 Minimise disturbance of potentially contaminated soils	4.1.1 Comply with recommendations in Contamination Report at <b>Annexure 24</b> .	To ensure that any contaminated sites are identified and suitably remediated.	Prior to issue of a Subdivision Certificate.	Compliance to be addressed in the quarterly Compliance Report.

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TABLE 39 – STATEMENT OF COMMITMENTS					
Project Component	Environmental Outcome (Commitment)	Measure (Commitment)	Purpose of Measure	Timing for Completion	Monitoring and Reporting
		4.1.2 In the event that contamination is identified, a Remediation Action Plan shall be prepared by the proponent for approval by the Department of Environment and Conservation and the site shall be rehabilitated in accordance with that Plan.	To ensure that any contaminated soil is suitably remediated.	Prior to erection of any permanent structures over the contaminated material.	As above.
5. Construction of Subdivision	5.1 Minimise noise, dust and vibration and amenity impacts by generally complying with the Construction Management Plan and the Safety Management Plan to be prepared prior to construction commencing.	5.1.1 Limit work hours to 7.00am to 6.00pm Monday to Saturday. 5.1.2 Limit noise levels to 5dBA above background at the nearest residential receivers.	To mitigate adverse construction impacts.	During construction.	Project Manager to address compliance in quarterly Compliance Report.
6. Comply with the Building Code of Australia Including Part J	6.1 Ensure that the design and operation of the buildings achieves energy efficiency and water efficiency requirements.	6.1.1 Comply with the Building Code of Australia Including Part J relating to Commercial Buildings	To achieve energy efficiency objectives.	Prior to issue of a Construction Certificate.	Project Manager to address compliance in quarterly Compliance Report.
7. Landscaping and Embellishment	7.1 Achieve improved aesthetics and useability of the site.	Carry out the embellishment and landscaping works in accordance with Landscape Concept Plan	To soften the appearance of the building and hardstand areas and provide a more attractive pedestrian environment and car parking area.	Prior to the issue of a final Subdivision Certificate.	Project Manager to address compliance in quarterly Compliance Report.
	7.2 Soften the visual impact of the buildings and surrounding hardstand areas	Carry out site landscaping in accordance with the Landscape Concept Plan.	As above.	Prior to the issue of a final Occupation Certificate for the building.	As above.

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TABLE 39 – STATEMENT OF COMMITMENTS					
Project Component	Environmental Outcome (Commitment)	Measure (Commitment)	Purpose of Measure	Timing for Completion	Monitoring and Reporting
8. Development Consents 96/519 (Integrated Tourist Resort) and DA05/1351 (76 Lot Residential Subdivision)	8.1 Surrender both consents prior to the issue of a Construction Certificate for Subdivision work.	Eliminate potential conflicts between Development Consents and the Concept Plan approval.	To ensure that potential conflicts do not occur between the Concept Plan approval and the previous Development Consents.	Prior to the issue of Construction Certificate for Subdivision Work.	Not applicable.
9. Land Forming	9.1 Limit major landform changes to those shown on <b>Annexure 20</b> plus major earthworks required for TSC reservoirs subject to detailed engineering design to accompany the Construction Certificate.	Minimise major landform changes.	To minimise visual impacts on the landscape and changes in hydrology.	Ongoing during the construction phase.	Certification to be provided by the Consulting Engineer prior to the issue of the Subdivision Certificate for each stage.
10. Threatened Species Protection	10.1 Protect all threatened species of flora to be retained, as identified in the James Warren and Associates Report, during the construction phase.	10.1.1 To identify species on the site. 10.1.2 To provide protective fencing to each species if required. 10.1.3 To undertake a staff induction process to alert all employees and contractors of the need to protect threatened species.	To ensure compliance of the Threatened Species Conservation Act, 1995.	Ongoing during the construction phase.	Monitoring and reporting incidents to be recorded in the Incident Register and details to be included in the quarterly Compliance Report.
11. Bush Regeneration and Vegetation Management	11.1 To rehabilitate disturbed areas.	Comply with the Site Rehabilitation and Pest Management Plan prepared by James Warren & Associates.  All environmental rehabilitation areas to be designated as common property under the community scheme.	To ensure that the conservation areas of the site are returned, as far as possible, to their natural state and achieve the objectives of the Threatened Species Conservation Act.	Prior to release of the final Linen Plan of Subdivision in respect of any residential lot.	Monitoring and reporting incidents to be recorded in the Incident Register and details to be included in the quarterly Compliance Report.
12. Aboriginal Cultural Heritage	12.1 Avoid disturbing any areas of Aboriginal Cultural Heritage.	In the event that any Aboriginal Cultural Items are identified during construction, the DECC and Tweed Byron Land Council will be notified.	To ensure compliance with the National Parks and Wildlife Act 1974.	Ongoing during the construction phase.	Monitoring and reporting incidents to be recorded in the Incident Register and details to be included in the quarterly Compliance Report.

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TABLE 39 – STATEMENT OF COMMITMENTS					
Project Component	Environmental Outcome (Commitment)	Measure (Commitment)	Purpose of Measure	Timing for Completion	Monitoring and Reporting
13. Maintaining Asset Protection Zones	13.1 The Body Corporate to be responsible for maintaining bushfire asset protection zones.	Compliance with the Bushfire Management Plan at <b>Annexure 19</b> to accompany the Concept Plan.	To ensure compliance with the Rural Fires Act and Regulations and Planning for Bushfire Protection, 2006.	Ongoing during the operational phase.	Not applicable.
14. Adjacent Land Uses	14.1 To minimise conflicts between the proposed urban development and adjacent non-urban uses.	14.1.1 Limit construction times to 7.00am to 6.00pm Monday to Saturday 14.1.2 Implement sedimentation and erosion control during the construction phase in accordance with the Erosion and Sedimentation Control Plan.	To minimise conflicts and adverse impacts between potentially incompatible land uses.	Ongoing during construction.	Monitoring and reporting incidents to be recorded in the Incident Register and details to be included in the quarterly Compliance Report.
15. Water Sensitive Urban Design	15.1 Implement Water Sensitive Urban Design principles in general accordance with the Gilbert and Sutherland report. The Owner's Corporation to manage and fund ongoing maintenance and operation of the facilities.	The Construction Certificates, applications and engineering plans and specifications shall be consistent with Water Sensitive Urban Design principles.	To minimise the use of reticulated water supplies, achieve sustainability principles and comply with BASIX requirements.  To comply with Green Globe Certification requirements.	Ongoing	Monitoring and reporting incidents to be recorded in the Incident Register and details to be included in the quarterly Compliance Report.
16. Concept Plan	16.1 The project to be carried out generally in accordance with the Concept Plan as approved based on a Community Title Subdivision.	Plans of Subdivision to be lodged for approval shall be prepared under the provisions of the Community Land Development Act, 1990.	To ensure that all common property is appropriately managed and maintained at no cost to ratepayers.	In conjunction with registration of the Plan of Subdivisions in the Land Titles Office.	Not applicable.

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TABLE 39 – STATEMENT OF COMMITMENTS					
Project Component	Environmental Outcome (Commitment)	Measure (Commitment)	Purpose of Measure	Timing for Completion	Monitoring and Reporting
17. Work Opportunities	17.1 Work with local Employment Agencies to ensure as many employees as possible are sourced from local Tweed and northern New South Wales Employment Agencies as possible.	17.1.1 Liaise with local Employment Agencies in appointing staff	To ensure that social and economic benefits of the development are enjoyed by residents of northern New South Wales.	During the development phase of the project.	Monitoring and reporting incidents to be recorded in the Incident Register and details to be included in the quarterly Compliance Report.
18. Accessibility	18.1 To ensure that the estate and all relevant facilities are publicly accessible.	18.1.1 All commercial and retail areas will be available for public use.	To ensure that public use of the facilities is facilitated.	Ongoing.	Not applicable.
		18.1.2 The spine road and the two access roads to Tietzel's land being Lot 2 DP 555026 will be public roads.			
		18.1.3 Provide and embellish public open space.			
		18.1.4 Provide public school and child care centre.			
19. Community Titles Scheme	19.1 RISE to be developed by way of a Community Title Scheme under the Community Land Development Act, 1990.	18.1.5 All walking trails to environmental areas will be available for public use.			
		19.1.1 Establish multi landowners corporation to manage all common property.	To ensure that sustainability principles are achieved to control and maintain the standard of the project and to minimise costs to ratepayers generally.	Ongoing.	Not applicable.
		19.1.2 Fund the ongoing management of the restored bushland area.			
		19.1.3 Community Management Statement to include bylaws for Architectural Design Guidelines and Landscaping Standards.			

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TABLE 39 – STATEMENT OF COMMITMENTS					
Project Component	Environmental Outcome (Commitment)	Measure (Commitment)	Purpose of Measure	Timing for Completion	Monitoring and Reporting
20. Traffic and Transport	20.1 Ensure that sufficient physical and environmental capacity exists in the local road network.	20.1.1 Upgrade Marana Street. 20.1.2 Upgrade Cobaki Road. 20.1.3 Provide traffic lights at Simpsons Drive and Scenic Drive. 20.1.4 Construct the spine road early in the project. 20.1.5 Forward funding of two lanes of Cobaki Parkway and Cobaki Bridge subject to normal Section 94 credits and corridor resumption by Tweed Shire Council when 50% of the Pacific Highlands is completed as indicated in the Traffic Report by the Carter Rytenskild Group, unless otherwise provided.	To ensure that appropriate accessibility and connectivity is provided.	Prior to release of the final Plan of Subdivision.	Monitoring and reporting incidents to be recorded in the Incident Register and details to be included in the quarterly Compliance Report.
21. Water Supply	21.1 Ensure that an adequate potable water supply is provided to the development.	21.1.1 Provide TSC reservoir sites subject to normal headworks credits. 21.1.2 Provide water main easements within road corridors. 21.1.3 Developer to build internal trunk water and local reticulation.	To ensure that an adequate potable water supply is provided.	Prior to release of the final Linen Plan of Subdivision.	As required.
22. Sewerage	22.1 To provide a reticulated sewer system to the estate.	22.1.1 Provide a sewer rising main from the site to the regional pump station at Cobaki Bridge via Cobaki Road including a pump station. 22.1.2 Developer to build the trunk sewer and pump station and Tweed Shire Council to maintain.	To ensure that a public standard reticulation system is provided and minimise potential adverse impacts arising from pollution events on local water bodies.	Prior to the release of the final Linen Plan of Subdivision.	As required.

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TABLE 39 – STATEMENT OF COMMITMENTS					
Project Component	Environmental Outcome (Commitment)	Measure (Commitment)	Purpose of Measure	Timing for Completion	Monitoring and Reporting
23. Comply with BASIX Requirements in Terms of Energy Efficiency and Water Consumption	23.1 Ensure that water consumption and energy consumption is minimised.	Green Globe Certification requirements.	To achieve the objectives of the BASIX statutory requirements.	Prior to the release of the final Linen Plan of Subdivision.	As required.
24. Contributions	24.1 Ensure that appropriate contributions and land dedications occur based on the demands generated by the RISE Estate.	Completion of a Planning Agreement in relation to planning credits.	To achieve the objectives of the Environmental Planning and Assessment Act in relation to the levying of contributions and the dedication of land.	Prior to commencement of any work on the site.	As required.
25. Community Liaison	25.1 Ensure that members of the community, state agencies and other key stakeholders are advised of progress during the construction phase.	25.1.1 The Developer will establish a Community Liaison Group. 25.1.2 The Developer will be responsible for arranging meetings and managing the role and function of the Liaison Group.	To ensure that feedback from the community is achieved and that information is disseminated to the community in a timely manner.	Ongoing during the life of the project.	Monitoring and reporting incidents to be recorded in the Incident Register and details to be included in the quarterly Compliance Report.
26. Architectural Design Guidelines	26.1 Achieve a high standard of built form for the development.	26.1.1 The developer will establish Architectural Design Guidelines for the development.	To establish appropriate design controls and achieve contemporary urban design outcomes.	Prior to the issue of development approvals for relevant precincts.	As required.
27. Sports Park	27.1 Provide appropriate facilities for future residents.	27.1.1 The developer will embellish and dedicate the proposed sports park being Precinct U.	To satisfy the open space requirements of future residents.	Prior to release of the final Plan of Subdivision.	As required.
28. Landscape	28.1 Achieve high standard of landscaped open space and streetscapes.	28.1.1 The developer will landscape open space areas and streets in accordance with <b>Annexure 11</b> .	To achieve a high standard of residential amenity and soften visual impacts.	Prior to release of the relevant Plan of Subdivision for each precinct.	As required.
29. Flora and Fauna	29.1 Mitigate impacts on threatened species of flora and fauna.	29.1.1 Comply with the impact mitigation measures and offsets contained in Table 9 of the Ecological Assessment (Volume 1) at <b>Annexure 16</b> ,	To ensure that potential impacts are mitigated and appropriate compensatory arrangements are made for vegetation and habitat loss.	Prior to release of the relevant Plan of Subdivision for each precinct.	As required.

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## 21.0 CONCLUSIONS AND JUSTIFICATION FOR THE PROJECT

### 21.1 Environmental Impacts

#### Flora and Fauna

**Annexure 16** comprises an Ecological Assessment identifying the key flora and fauna values of the site. It also includes a suitable Rehabilitation Plan in relation to those high conservation areas of the site which have been degraded and which are proposed to be rehabilitated. Whilst some areas of native vegetation will be removed, they are relatively minor, of low conservation value and appropriate compensatory plantings will be provided within the rehabilitated areas. In summary, it is therefore concluded that the proposed development will not have a significant effect on threatened species of flora and fauna and subject to the mitigation measures proposed in Table 34, impacts will be manageable.

#### Visual Impacts

The introduction of buildings up to eight stories in height has been addressed in the Visual Impact Assessment at **Annexure 12**. That assessment concludes that the proposed buildings will not have a significant impact on the landscape and scenic quality of the locality because of their design and siting and because of the nature of the visual catchment.

#### Infrastructure

There are existing constraints on water and sewer infrastructure capacity however appropriate augmentation will be undertaken at appropriate stages as the Concept Plan is implemented. In particular, construction of the Spine Road, upgrading of Cobaki Road and construction of Cobaki Parkway to link Piggabeen Road to Boyd Street in Queensland (if required) will be undertaken at an appropriate stage of the development to provide traffic capacity. This will also benefit the whole of the Bilambil Heights Urban Release Area and existing residents west of Cobaki Bridge. Ultimately, the development is likely to have positive outcomes in terms of managing the existing traffic network by the early provision of this key infrastructure.

#### Social and Economic

The proposed development has an estimated capital investment value of approximately \$141 million for the initial subdivision works and commercial building works and will generate approximately 1351 employment positions and contribute approximately \$134 to the local economy annually once completed. Clearly, because of the scale of the development it will have a significant positive impact on the economy of the Tweed and social infrastructure. In particular, the range of housing types, including aged person housing, will have social benefits in providing housing choice for future residents.

### 21.2 Mitigation Measures

In finalising the Concept Plan and the detailed Structure Plans accompanying the proposal, a number of options were prepared, critically reviewed and suitably modified to mitigate impacts, particularly relating to protection of high conservation value areas, minimising landform changes, achieving appropriate bushfire asset protection zones and ensuring that stormwater runoff is appropriately managed and treated (and recycled) to minimise potential impacts on receiving waters, particularly Cobaki Creek.

Appropriate Management Plans have also been prepared for the rehabilitation and management of pests within the high conservation value areas and Architectural Design Guidelines will be prepared to manage the built form and ensure that the vision for the RISE site is achieved over the life of the project.

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Achievement of ESC Principles has been the guiding criteria in the design of the concept and achieving Green Globe Certification demonstrates the proponent's commitment to sustainability and contemporary urban design principles.

### **21.3 Cumulative Impacts**

The Bilambil Heights Urban Release Area in general and the RISE site in particular have been identified in various Urban Release Strategies since approximately 1990. In particular, the Far North Coast Regional Strategy 2006 – 2031 identifies the site as an Urban Release Area.

Terranora Group Management Pty Ltd has also prepared the Draft Bilambil Heights Local Area Structure Plan which provides an integrated and co-ordinated assessment of the Release Area's key site opportunities and constraints and identifies an appropriate urban form. This Plan assists in enabling cumulative impacts to be managed over time as other sites within the Release Area are developed. In summary, having regard to the strategic planning work undertaken over many years and the key mitigation and management measures proposed for the RISE site, it is submitted that cumulative impacts will be negligible.

### **21.4 Suitability of the Site**

The Concept Plan is underpinned by a detailed and rigorous Site Opportunities and Constraints Analysis relating to flora and fauna, bushfire, geotechnical stability, slope analysis, visual impact analysis, stormwater management and efficient provision of infrastructure. That work has determined a suitable urban footprint (as identified in the Recommended Zoning Map at **Annexure 7**) being that part of the site which is suitable for urban development having regard to all relevant planning considerations. Clearly, the site has been identified strategically for many years for future urban development and the identified footprint has been fine tuned as part of the more detailed work for this Concept Plan. The site is considered to be appropriate and sustainable, particularly having regard to the objective of optimising residential yields, minimising urban landtake, reducing urban sprawl and achieve ESD Principles.

### **21.5 The Public Interest**

Tweed Shire continues to experience significant population growth and the Bilambil Heights Urban Release Area has been identified strategically as an area to accommodate this growth for approximately twenty years. More recently, the Far North Coast Regional Strategy 2006 – 2031 identifies the site to which the Concept Plan applies as a Future Urban Area and also indicates that a total of 19100 dwellings will be required to accommodate growth within Tweed Shire up to 2031.

The Concept Plan is entirely consistent with the Far North Coast Regional Strategy insofar as the footprint is concerned and will contribute approximately 1804 dwellings towards the identified future demand. In addition, RISE has been designed as a self contained community to incorporate appropriate retail, tourist, education and recreation facilities to meet the demands of the future population.

The site has also been highly degraded by agricultural land uses over many years and development of the site in accordance with the Concept Plan will facilitate protection in perpetuity of high conservation value areas together with rehabilitation of those areas. Accordingly, long term sustainable objectives are achieved in relation to threatened species and appropriate funding is provided for the management and rehabilitation of these areas by way of a Community Title Scheme.

The do nothing option would result in the site remaining in a highly degraded state with continuing impacts on flora and fauna and water quality as a result of uncontrolled grazing and agricultural activities and would also not achieve the objectives of the Far North Coast Regional Strategy. In summary, it is therefore concluded that the project is justified in terms of social, economic and environmental considerations and approval of the Concept Plan would be consistent with the public interest, particularly as reflected in NSW Government and Tweed Shire Council policies which identify the site for future urban development.

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