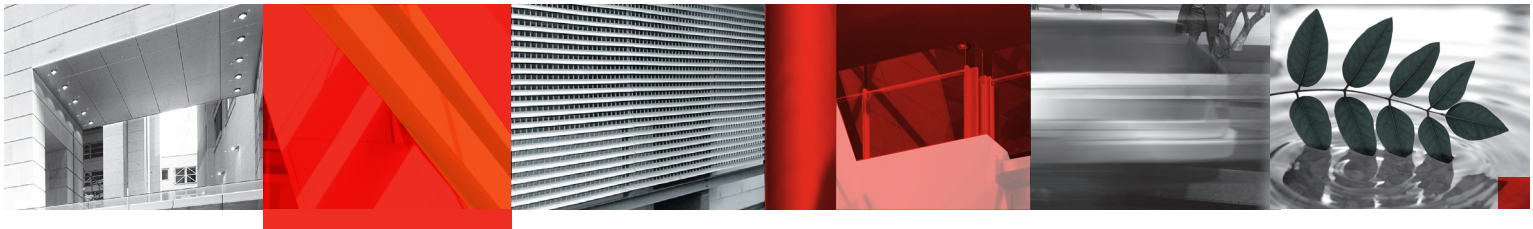


Project Application Environmental Assessment Report



Kings Forest Stage 1 Subdivision and Bulk Earthworks (MP 08_0194)

Submitted to NSW Department of Planning & Infrastructure
On Behalf of Project 28 Pty Ltd

November 2011 ■ 10681

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This report has been prepared by: Claire Wright

Signature  Date 15/11/11

This report has been reviewed by: Vivienne Goldschmidt

Signature  Date 15/11/11

Contents

Executive Summary	viii
1.0 Introduction	1
1.1 Overview of Proposal	1
1.2 Project Background and Chronology	2
1.3 Modification to the approved Concept Plan	3
1.4 Project Team	3
2.0 The Site	4
2.1 Site Location and Context	4
2.2 Land Title and Zoning	5
2.3 Existing Consents	5
2.4 Site Description	6
2.5 Site Constraints	7
2.6 Surrounding Development	8
3.0 Description of Development Proposal	9
3.1 Subdivision	9
3.2 Bulk Earthworks	10
3.3 Roadworks	12
3.4 Rural Retail Development (Precinct 1)	14
3.5 Infrastructure Works	15
3.6 Precinct 5	16
3.7 Landscaping for Stage 1 Development	17
3.8 Drainage Maintenance	17
3.9 Land Dedication	18
3.10 Management and Maintenance of Open Space	20
3.11 Indicative Staging	20
3.12 Construction Management	21
3.13 Developer Contributions	22
4.0 Modification to the Concept Plan	23
4.1 Concept Plan Drawings	23
4.2 Further Assessment Requirements	26
4.3 Koala Plan of Management	27
5.0 Consultation	28
6.0 Director General's Requirements	31
7.0 Environmental Assessment	36
7.1 Consistency with Relevant Legislation, Strategies and Planning Instruments	36
7.2 Consistency with Concept Plan	49
7.3 Consistency with the Instrument of Approval and Development Code	50
7.4 Subdivision Design, Layout and Desired Future Character	50
7.5 Affordable Housing	53
7.6 Visual Impact	54
7.7 Infrastructure and Utilities	57
7.8 Traffic and Accessibility	59
7.9 Noise	61

Contents

7.10	Contamination	63
7.11	Radiation	66
7.12	Acid Sulfate Soils	66
7.13	Bushfire Impacts	67
7.14	Geotechnical Conditions	69
7.15	Groundwater Impacts	70
7.16	Flooding	72
7.17	Water Cycle Management	74
7.18	Erosion and Sediment Control	77
7.19	Existing Drainage Lines	77
7.20	Heritage and Archaeology	78
7.21	Ecological Values of the Site	78
7.22	Agricultural Buffers	82
7.23	Ecological Buffers	83
7.24	Biodiversity Management Plans	91
8.0	Draft Statement of Commitments	94
8.1	Land Dedication	94
8.2	Developer Contributions	94
8.3	Construction Management	94
8.4	Haulage Management	95
8.5	Urban Design	95
8.6	Affordable Housing	95
8.7	Water Supply	95
8.8	Accommodation for NSW Ambulance, SES and Fire Service	95
8.9	Traffic	95
8.10	Noise	96
8.11	Contamination	96
8.12	Acid Sulfate Soils	96
8.13	Bushfire	96
8.14	Geotechnical Conditions	97
8.15	Groundwater	97
8.16	Flooding	97
8.17	Water Cycle Management	97
8.18	Erosion and Sediment Control	98
8.19	Drainage Maintenance	98
8.20	Prohibition of Cats	98
8.21	Biodiversity Management Plans	98
8.22	East-West Wildlife Corridor	99
9.0	Conclusion and Justification	100

Figures

1	Locality Plan	4
2	Extent of cut and fill across site	11
3	Proposed roadworks	13
4	Proposed dedication of land	19
5	Proposed works in buffers and 7(a) and 7(l) zones	40
6	Identified contamination sites	65
7	Precinct 5 Stormwater Management Measures	76

Contents

8	Conceptual Groundwater Impacts and Recharge Scenarios	86
9	Extent of earthworks in Precincts 2-4 & 6-14	88

Tables

1	Proposed subdivision of the Kings Forest site	10
2	Summary of proposed allotments in Precinct 5	10
3	Key development information for the rural retail development	14
4	Key issues from Authority consultation	28
5	Director General's Environmental Assessment Requirements	31
6	Application of Design Principles for Coastal Settlements	51
7	Comparison of heath in ecological buffers between 2005 and 2011	91

Appendices

Volume 1

A	Director-General's Environmental Assessment Requirements <i>NSW Department of Planning & Infrastructure</i>
B	Consolidated Concept Plan Approval (MP06_0318) and Minister's Order <i>NSW Department of Planning & Infrastructure</i>
C	Site Plans <i>Landpartners, MPS Architects and NSW Department of Planning & Infrastructure</i>
D	Engineering Services Report <i>Mortons Urban Solutions</i>

Volume 2

E	Bulk Earthworks and Engineering Plans <i>Mortons Urban Solutions</i>
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Volume 3

F	Kings Forest Subdivision Plans <i>Landsurv Pty Ltd</i>
G	Precinct 5 Subdivision Plans <i>Landsurv Pty Ltd</i>
H	Concept Plan Drawings and Plan of Development for Precinct 5 <i>MPS Architects</i>
I	Precinct 1 Development Architectural Drawings <i>The Buchan Group</i>

Contents

J Precinct 1 Landscape Concept Plan

Place Design Group

K Stage 1 Statement of Landscape Intent

Place Design Group

L Plans of Land Dedication

Landsurv Pty Ltd

Volume 4

M Construction Management Plan

Mortons Urban Solutions

N Koala Plan of Management

James Warren & Associates

O Tables of Compliance

JBA Planning and MPS Architects

P Precinct 5 Design Guidelines

Project 28 Pty Ltd

Q Affordable Housing Study

Hill PDA

R Precinct 1 Visual Impact Assessment

MPS Architects

S Acoustic Fencing Visual Impact Statement

Place Design Group

T Traffic Impact Assessment

Carter Rytenskild Group

U Environmental Noise Assessment

Carter Rytenskild Group

V Contamination Assessment and Summary Report

Gilbert + Sutherland

Volume 5

W Acid Sulfate Soils Assessment

Gilbert + Sutherland

X Bushfire Risk Assessment

Bushfiresafe (Aust) Pty Ltd

Contents

Y Geotechnical Investigation Report
Cardno Bowler Pty Ltd

Z Site Based Management Plan
Gilbert + Sutherland

Volume 6

AA Groundwater Assessment
Gilbert + Sutherland

BB Groundwater Management Plan
Gilbert + Sutherland

CC Flooding and Flood Management Assessment
Gilbert + Sutherland

DD Integrated Water Cycle Management Plan
Gilbert + Sutherland

EE Overall Water Management Plan
Gilbert + Sutherland

FF Stormwater Management Plan
Gilbert + Sutherland

GG Erosion and Sediment Control Plan
Gilbert + Sutherland

HH Drainage Maintenance Impact Assessment
Gilbert + Sutherland

II Drainage Maintenance Management Plan
Gilbert + Sutherland

JJ Heritage Statement
Everick Heritage Consultants

Volume 7

KK EPBC Act Referral
James Warren & Associates

LL Agricultural Buffer Zone Assessment
Gilbert + Sutherland

MM Buffer Management Plan - Precincts 1 & 5
James Warren & Associates

Contents

- NN** Buffer Management Plan - Precincts 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13 & 14
James Warren & Associates
- OO** Plans of Ecological Buffer to Precinct 5
Mortons Urban Solutions
- PP** Feral Animal Management Plan
James Warren & Associates
- QQ** Weed Management Plan - Precincts 1 & 5
James Warren & Associates
- RR** Weed Management Plans -
Precincts 2, 3, 4, 6, 7, 8, 9, 10 & 11 and Precincts 12, 13 & 14
James Warren & Associates
- SS** Threatened Species Management Plan - Precincts 1 & 5
James Warren & Associates
- TT** Threatened Species Management Plans -
Precincts 2, 3, 4, 6, 7, 8, 9, 10 & 11 and Precincts 12, 13 & 14
James Warren & Associates
- UU** Vegetation Management Plan - Precincts 1 & 5
James Warren & Associates
- VV** Vegetation Management Plans -
Precincts 2, 3, 4, 6, 7, 8, 9, 10 & 11 and Precincts 12, 13 & 14
James Warren & Associates

Statement of Validity

Prepared under Part 3A of the Environmental Planning and Assessment Act, 1979 (as amended)

Environmental Assessment prepared by

Name	Vivienne Goldschmidt
Qualifications	BA (Hons) MPIA CPP
Address	Level 7, 77 Berry Street, North Sydney
In respect of	A Project Application for Stage 1 of the Kings Forest development. The proposed works include: ■ subdivision to create new lots for future development; ■ bulk earthworks across the site; ■ roadworks comprising: - construction of the entrance road into the site and associated intersection works on Tweed Coast Road; - alignment and construction of the proposed Kings Forest Parkway from Tweed Coast Road via Precincts 4 and 5 through to the western precincts; and - alignment and part construction of two proposed roads through SEPP 14 areas to access the southern precincts; ■ development of 2,126m² of floorspace for rural retail development and access arrangements within Precinct 1; ■ construction of subdivision and infrastructure works along the Kings Forest Parkway and within Precinct 5; ■ maintenance of the existing east-west agricultural drainage channel in the SEPP 14 wetlands within the central part of the site; and ■ the Plan of Development for Precinct 5.

Project Application

Applicant name	Project 28 Pty Ltd
Applicant address	Suite 14, Level 1, Cavill Park, 46 Cavill Avenue SURFERS PARADISE, QLD 4217
Land to be developed	Kings Forest
Proposed development	Stage 1 of the Kings Forest development

Environmental Assessment

Certificate	An Environmental Assessment (EA) is attached. 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.
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Signature



Name

Vivienne Goldschmidt

Date

15 November 2011

Executive Summary

Purpose of this Report

The (then) Minister for Planning approved a Concept Plan for the development of the Kings Forest Estate (MP 06-0318) on 19 August 2010. This Project Application, prepared on behalf of the proponent, Project 28 Pty Ltd, represents the first stage of the Kings Forest development. Accordingly, this Environmental Assessment Report (EAR) for the Stage 1 development is submitted to the Minister for Planning and Infrastructure pursuant to Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act) and State Environmental Planning Policy (Major Development) 2005 (MD SEPP).

The EAR provides an assessment of the environmental planning issues associated with the Project Application in accordance with the Director-General's Environmental Assessment Requirements. It also includes a modification to the approved Concept Plan under section 75W of the EP&A Act.

Appended to this EAR is a suite of integrated detailed management plans designed to manage the impacts of the development on the ecological values and physical conditions of the site during bulk earthworks, construction and operations.

Overview of Project

This Project Application seeks approval for Stage 1 of the Kings Forest development. The proposal includes:

- subdivision to create new lots for future development;
- bulk earthworks across the site;
- roadworks comprising:
 - construction of the entrance road into the site and associated intersection works on Tweed Coast Road;
 - alignment and construction of the proposed Kings Forest Parkway from Tweed Coast Road via Precincts 4 and 5 through to the western precincts; and
 - alignment and part construction of two proposed roads through SEPP 14 areas to access the southern precincts;
- development of 2,126m² of floorspace for rural retail development and access arrangements within Precinct 1;
- construction of subdivision and infrastructure works along the Kings Forest Parkway and within Precinct 5;
- maintenance of the existing east-west agricultural drainage channel in the SEPP 14 wetlands within the central part of the site; and
- the Plan of Development for Precinct 5.

This Project Application includes the dedication of land to the National Parks and Wildlife Service.

Modification to Concept Plan

This EAR includes a modification to the approved Concept Plan under section 75W (in accordance with the savings and transitional arrangements) of the EP&A Act. The modification seeks amendments to the Concept Plan drawings, specifically in relation to: residential density; the number of development precincts; the road hierarchy and potential bus routes; and the locations of structured open space, the future school site, the neighbourhood centre and zone substation; the configuration of the proposed lake.

There are no negative impacts as a result of these changes all of which are necessary as a result of further design development.

The proponent is also seeking minor changes to the Instrument of Approval for the Concept Plan in relation to the timing for the preparation of various management plans and the need for geotechnical assessments.

The updated Koala Plan of Management (KPoM) reflects a different approach to that in the taken in the KPoM approved with the Concept Plan. The modification seeks to incorporate this different approach into the Concept Plan.

The Site and Surrounding Development

The Kings Forest site is located on the far north coast of NSW in the Tweed Shire Council local government area. It is 880ha in area and bounded by agricultural and rural uses to the north, west and south west, and by the Cudgen Nature Reserve and Cudgen Creek to the south and east. There is a small area of residential development along Tweed Coast Road to the north of the site

Project 28 Pty Ltd owns the site which is currently used for cattle grazing and / or silviculture. The land is on a gently undulating coastal floodplain with the Duranbah Ridge bordering the western boundary. It is generally low lying and of low relief with the exception of three areas in the west which have slopes exceeding 20%.

Consistency with Relevant Legislation, Strategies and Planning Instruments

The Project Application addresses relevant legislation, the MD SEPP and other State Environmental Planning Policies. The proposed development is permissible in the 2(c) Urban Expansion zone and meets the zone objectives under the Tweed LEP. The Project Application has taken into account the relevant objectives and provisions of the North Coast Regional Environmental Plan and is consistent with the relevant matters for consideration.

Consistency with the Concept Plan

The Project Application is generally consistent with the approved Part 3A Concept Plan, other than those matters the subject of the modification. The EAR demonstrates consistency with the Concept Plan, approved Statement of Commitments and Conditions of Approval.

Subdivision Design and Layout

The subdivision design and layout of Precinct 5 has been assessed against, and found to be in accordance with, the relevant provisions of the NSW Coastal Policy, the Coastal Design Guidelines for NSW and the neighbourhood planning principles within the Far North Coast Regional Strategy. Furthermore, the EAR demonstrates that the subdivision design and Plan of Development for Precinct 5 facilitates the following urban design outcomes:

- the provision of a range of dwelling types in compliance with the Kings Forest Development Code;
- easy and legible pedestrian access from the proposed allotments to the neighbourhood park, the potential bus route and proposed Town Centre;
- views from dwellings across the park and bushland areas;
- variation in built form and an interesting streetscape..

Affordable Housing

The proposed Kings Forest development supports the need for affordable housing in the following ways:

- the provision of up to 4,500 new dwellings will generate greater housing choice;
- the development proposes a broad mix of dwelling types and densities to cater for the increasing number of smaller households and an ageing population; and
- the Kings Forest development will seek to attract a range of household types which will meet a range of household incomes.

Without subsidy, the proposed development cannot provide for lower income households. In order to provide affordable housing at Kings Forest, Project 28 Pty Ltd has submitted a National Rental Affordable Housing Scheme (NRAS) application and will use its best endeavours to secure NRAS funding. Subject to a successful application for NRAS funding, Project 28 Pty Ltd will:

- provide between 1% and 3% of housing (45-135 dwellings) within the Kings Forest site as affordable housing for rent for a minimum of 10 years;
- provide dwellings at a minimum 20% discounted market rent to eligible low and moderate income households for the entire 10 year period, in keeping with NRAS requirements;
- give priority for smaller dwellings as affordable rental dwellings to meet the highest need group; and
- locate affordable housing in proximity to the proposed centres to provide access to services and transport for high need users.

Visual Impact

The only element of the proposed development which will be externally visible will be the rural retail development (Precinct1) which will be visible from Tweed Coast Road and from the houses on the western side of the road. The assessment concludes that the development will not give rise to any unacceptable visual impacts, however landscaping works to soften the appearance of the development are included into the design.

The visual impact of the proposed acoustic fencing along the Kings Forest parkway and Tweed Coast Road was also assessed. Overall, the fences and associated planting are considered appropriate in the context and will not detract from the overall character or function of the entry road, the residential landscape, and the amenity of residents along Tweed Coast Road.

Infrastructure & Utilities

The ability of the Kings Forest site to be serviced by water, sewer, electricity and telecommunications was addressed by the Concept Plan. The Project Application demonstrates that development proposed within Precincts 1 and 5 can also be suitably serviced.

Traffic and Accessibility

The traffic and accessibility analysis confirms that the proposed development within Precincts 1 and 5 will not give rise to any adverse impacts on the traffic flow along Tweed Coast Road or result in any unacceptable delays at the proposed intersections. Furthermore, it is demonstrated that the proposed design for Kings Forest Parkway provides a continuous through alignment which reinforces its priority route status and will be able to carry in excess of the anticipated traffic volumes.

Noise

Noise intrusion from traffic along Tweed Coast Road and the future Kings Forest Parkway, along with future commercial development within Precinct 4 and construction activities, has the potential to adversely impact upon the amenity of the strip of houses on the western side of Tweed Coast Road and the future residents within Precinct 5. Subject to the implementation of noise mitigation measures, such the proposed acoustic walls adverse impacts from noise generating sources will be adequately mitigated and managed.

Contamination

Detailed site investigations for five sites identified within the Concept Plan as having potential for contamination have been undertaken. Soil samples taken from the sites found that concentrations of potential contaminating materials are generally below or consistent with background concentrations, with the exception of levels of Total Petroleum Hydrocarbons within the Fuel Storage Site and contamination associated with previous cattle dip operations. Project 28 will undertake remediation works, as necessary, to ensure that that site can be made suitable for future residential development as detailed in the Contamination Assessment Report.

Radiation

Historically, the Kings Forest site has been used for sand mining and distinctive areas of disturbance are found within the eastern portion of the site. No radioactivity on the site could be identified at levels that would present a health risk and no further investigation or mitigation measures are necessary.

Acid Sulfate Soils

Acid Sulfate Soils (ASS) assessments have determined the extent and spatial variability of ASS across the Kings Forest site. The proposed bulk earthworks will encounter ASS materials requiring treatment; however the management of ASS in accordance with standard procedures and practices will ensure the risks are controlled and any acidic materials excavated can be fully treated and placed to minimise any adverse environmental impacts.

Bushfire Impacts

Vegetation adjacent to Precincts 1 and 5 poses a bushfire threat to the rural retail and future residential development respectively. A bushfire risk assessment has considered the type of bushfire prone vegetation and the characteristics of the land surrounding each precinct and confirmed that management measures are required to mitigate the bushfire threat. Accordingly the Bushfire Management Plan has been prepared as part of this EAR and will be implemented along with the provision of Asset Protection Zones (APZ) between the proposed development and the bushfire prone vegetation.

Geotechnical Conditions

The geotechnical conditions encountered on the site are not considered to be a constraint to the proposed development, however a number of measures are needed to be implemented to preserve the soil profile and its stability. In this respect, measures in relation to site preparation, trafficability, excavatability, structural fill placement, batter slopes, building footings, settlement, the lake and existing drains will be implemented by the proponent.

Groundwater Impacts

The bulk earthworks and development of Precinct 5 has the potential to adversely impact upon the existing groundwater flow regimes and groundwater quality across the site. The issues identified within the groundwater assessment are considered to be manageable. In particular:

- the residential development at Precinct 5 will not change the flow regime and the groundwater will still flow towards the SEPP 14 wetlands;
- a minor reduction in the groundwater level in the northern portion of the southern precinct area is anticipated, however this can be managed appropriately to ensure no adverse impacts are generated;
- the SEPP 14 wetlands may be subject to minor changes in groundwater regime, however the works to the southern precincts pose a very low level risk to the wetlands and the changes can appropriately be managed;
- the proposed bio-retention swales in the ecological buffer to Precinct 5 will contribute to recharge of the wetlands to the east; and
- the development will not impact upon the groundwater regime of the Bogangar landfill site.

Flooding

The proposed bulk earthworks and creation of the residential pad levels will provide flood immunity to the proposed development from the ARI 100 year high climate change level and 10% increase in rainfall intensity climate change level. Furthermore, the proposed roads will be trafficable for all flood events up to and including the 100 year climate change flood and for the ARI 500 year existing situation design flood. It is likely, however, that during a PMF flood event, the majority of slab on ground dwellings would experience above floor flooding. In order to ensure the safety of residents in a PMF flood event, in conjunction with Council, SES and Police, the proponent will prepare and seek to incorporate an evacuation response plan for Kings Forest into the Local Disaster Plan.

Water Cycle Management

A treatment train of stormwater management measures is included in this Project Application consistent with the principles of water sensitive urban design and the integrated water cycle management strategy (IWCMS) approved under the Concept Plan. The IWCMS includes concepts for stormwater management and re-use, reduction in potable water demand, and reduction in wastewater generation. The strategy for Precinct 5 will include:

- provision of rainwater storage tanks on all lots to capture and reuse rainwater;
- a system of bio-retention basins and trenches for the management of stormwater runoff; and
- use of Reduced Infiltration Gravity Sewers (RIGS) to reduce the generation of wastewater.

With the implementation of the treatment train measures, average annual suspended sediments and pollutant loads will be substantially reduced and the quality of stormwater run-off from the site would be acceptable. In addition, the Stormwater Management Plan establishes the responsibilities and procedures for the management of erosion, sediment and stormwater during the construction, maintenance and operational stages of the development.

Within Precinct 1, stormwater runoff will be treated before release by means of a gross pollutant trap to capture sediment and hydrocarbons from the paved areas. Rain water will be captured and re-used for toilet flushing and external uses.

Existing Drainage Lines

This project application is seeking consent for on-going routine maintenance of the main east-west drain running through the SEPP 14 wetlands. The drain needs to be periodically maintained to ensure the correct function of the drainage and flooding conveyance regimes at the site. On these occasions, the works may result in hydrological impacts, disturbance of acid sulfate soils, water quality impacts (short-term turbidity), erosion and sedimentation and impacts to flora and fauna. Previous studies have characterised these impacts as minor and the proposed frequency of maintenance means the impacts are likely to be experienced only in the short-term. To ensure that the identified potential impacts are avoided minimised and/or managed in accordance with proven techniques, drains will be managed in strict compliance with the Drainage Maintenance Management Plan.

Biodiversity

The Project Application does not give rise to any new or additional adverse impacts on the ecological values of the site, other than those addressed in the Concept Plan. Nevertheless, the EAR addresses the matters for further consideration highlighted in the Director-General's Report to the Concept Plan.

The assessment of the proposed development's potential impact on agricultural buffers has found that there will be no impact and where short term impacts are envisaged they can be appropriately managed in accordance with the measures in the Construction Management Plan.

The assessment of the impact of proposed works in the ecological buffers indicates that there are no impacts that cannot be managed, and that the benefits to the proposed mitigation measures - in particular extensive revegetation and regeneration of heath, planting of koala food trees and provision of Acid frog compensatory habitat - will result in a significant net gain in heath and improvements to the quality and quantum of vegetation in the buffers. Management strategies are proposed in Buffer Management Plans to manage and mitigate the impact of development within the ecological buffers, as well as requirements for performance monitoring and measurement.

The keeping of cats on the site will be prohibited.

The Project Application includes revised and updated management plans to manage and mitigate potential adverse impacts associated within the proposed development on the ecological values of the site, in relation to, amongst others, the management of threatened species, weeds, vegetation, feral animals and koalas (see below).

In addition to the above, a referral of a matter of national environmental significance under the *Environmental Protection Biodiversity and Conservation Act 1999* for the Wallum sedge frog (Acid frog), a listed vulnerable species, has been made to the Commonwealth Department of Sustainability, Environment, Water, Population and Communities.

Koalas

The EAR includes a revised Koala Plan of Management for Kings Forest. The revised KPoM departs from the approach adopted in the KPoM approved as part of the Concept Plan. It identifies the difficulty in managing exposures to road traffic, domestic dogs and, to a lesser extent, swimming pools, and proposes effective separation of koalas and their habitat from these threats, whilst maintaining and enhancing existing habitat linkages.

In order to mitigate and manage exposure of koalas to these identified threats, the KPoM recommends the following:

- Fencing to exclude koalas from the development areas in Precincts 1 and 5 in conjunction with the required road underpasses/bridging and grids.
- Measures on roads intersecting fauna linkages involving construction of grids in roadways, the installation of appropriate lighting and signage at each grid location; construction of an underpass beneath the Kings Forest Parkway at the entrance of the estate to facilitate the movement of koalas; and connection of underpasses, bridging and grids to exclusion fencing and the connection of new fencing to the existing fencing along Tweed Coast Road to effectively complete the enclosure of the defined Koala habitat area.

In addition, the KPoM details other measures to ameliorate impacts on koalas as a result of the proposed development and examines opportunities to improve the size and condition of existing core koala habitat

Draft Statement of Commitments

A Draft Statement of Commitments has been prepared to inform the future development of the site and manage construction and on-going environmental impacts.

1.0 Introduction

This Project Application and Environmental Assessment Report (EAR) is submitted to the Minister for Planning pursuant to Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act). The Project Application seeks approval for Stage 1 of the Kings Forest development.

The report has been prepared by JBA Urban Planning Consultants Pty Ltd (JBA Planning) for the proponent, Project 28 Pty Ltd, and is based on information provided by the proponent and the expert consultant team. This EAR describes the site, its environs and the proposed development, and includes an assessment of the proposal in accordance with the Director-General's Requirements (DGRs) (**Appendix A**). It should be read in conjunction with the supporting information appended to this report (see Table of Contents) and the approved Concept Plan.

1.1 Overview of Proposal

This Project Application seeks approval for Stage 1 of the Kings Forest development. The proposal includes:

- subdivision to create new lots for future development;
- bulk earthworks across the site;
- roadworks comprising:
 - construction of the entrance road into the site and associated intersection works on Tweed Coast Road;
 - alignment and construction of the proposed Kings Forest Parkway from Tweed Coast Road via Precincts 4 and 5 through to the western precincts; and
 - alignment and part construction of two proposed roads through SEPP 14 areas to access the southern precincts;
- development of 2,126m² of floorspace for rural retail development and access arrangements within Precinct 1;
- construction of subdivision and infrastructure works along the Kings Forest Parkway and within Precinct 5;
- maintenance of the existing east-west agricultural drainage channel in the SEPP 14 wetlands within the central part of the site; and
- the Plan of Development for Precinct 5.

This project application includes the dedication of land to the National Parks and Wildlife Service.

In addition, the project application incorporates a modification to the approved Concept Plan under section 75W of the EP&A Act (in accordance with the savings and transitional arrangements), and a concurrent referral to the Commonwealth Department of Sustainability, Environment, Water, Population and Communities for a matter of national environmental significance under the Commonwealth *Environmental Protection Biodiversity and Conservation Act 1999* (EPBC Act).

1.2 Project Background and Chronology

State Environmental Planning Policy (Major Development) 2005 identifies development to which Part 3A of the EP&A Act applies and which therefore requires approval from the Minister for Planning ("the Minister"). Clause 6(1) of the Major Development SEPP states that development, which in the opinion of the Minister is development of a kind referred to in Schedule 2 of the SEPP, is declared to be a project to which Part 3A of the EP&A Act applies. On 9 January 2007, the then Minister for Planning formed the opinion that the proposed development of Kings Forest was development of a kind described in Schedule 2 Clause 1(1)(i) of the (then) State Environmental Planning Policy (Major Projects) 2005, namely being development for subdivision of land in a residential zone into more than 25 lots in the coastal zone.

It should be noted that prior to the above declaration in November 2006 Kings Forest was designated as a State Significant Site and is listed in Schedule 3 of the Major Development SEPP.

In December 2008, the proponent lodged an EAR for a Concept Plan for the development of the Kings Forest Estate with the Department of Planning (MP 06_0318). On 19 August 2010, the Minister for Planning approved the Concept Plan in accordance with section 75O of the EP&A Act. The Minister also determined that approval to carry out the project, other than Stage 1 and any precinct subdivision application for Precincts 17-24, be subject to Part 4 of the EP&A Act. Overall, the Concept Plan establishes the overall planning framework for Kings Forest including:

- residential development for approximately 4500 dwellings;
- town centre and neighbourhood centre for future retail and commercial uses;
- community and education facilities;
- employment land;
- a golf course;
- open space;
- wildlife corridors;
- protection and rehabilitation of environmentally sensitive land;
- utility services infrastructure;
- water management areas and lake; and
- roads and pedestrian and bicycle paths.

The Concept Plan was subsequently modified under section 75W of the EP&A Act on 22 December 2010. Amongst other things the modification amended the Concept Plan to incorporate the Kings Forest Development Code into the Concept Plan approval.

Further, on 24 December 2010, pursuant to section 75P(2)(d) of the EP&A Act, the Minister for Planning issued an order which declared that development within the Kings Forest site that satisfies the requirements for exempt or complying development specified in Part A - Exempt and Complying Development within the Kings Forest Development Code, is exempt and complying development. A copy of the consolidated Concept Plan Approval and the Minister's Order is included at **Appendix B**.

On 23 December 2010, in accordance with section 75F of the EP&A Act, the Director-General of the Department of Planning issued the Environmental Assessment Requirements for Stage 1 of the Kings Forest development. A copy of the DGRs is appended at **Appendix A**.

1.3 Modification to the Approved Concept Plan

As a result of detailed design, design resolution and the outputs of the environmental studies and management plans prepared for this Project Application, the need has emerged for a number of elements of the approved Concept Plan to be amended. Accordingly, concurrent with this application, the proponent is also seeking a modification to the approved Concept Plan in accordance with section 75W of the EP&A Act (in accordance with the savings and transitional arrangements). The changes and their justification are detailed in Section 4 of this report. None are of a significant nature and they do not change the approved Concept Plan in any material fashion.

1.4 Project Team

An expert project team has been formed to deliver the project. It includes:

Urban Planning	JBA Planning
Urban Design	MPS Architects
Surveyors	Landsurv
Rural Retail Architects	The Buchan Group
Community Consultation	Project 28 Pty Ltd
Landscaping	Place Design Group
Engineering Services	Mortons Urban Solutions
Affordable Housing	Hill PDA
Visual Impact	MPS Architects Place Design Group
Traffic and Transport	Carter Rytenskild Group
Noise	Carter Rytenskild Group
Contamination and Radiation	Gilbert + Sutherland
Acid Sulfate Soils	Gilbert + Sutherland
Bushfire Management	Bushfiresafe (Aust) Pty Ltd
Geotechnical	Cardno Bowler Pty Ltd
Flooding	Gilbert + Sutherland
Water Cycle Management	Gilbert + Sutherland
Erosion & Sediment Control	Gilbert + Sutherland
Drainage Management	Gilbert + Sutherland
Aboriginal Heritage	Everick Heritage Consultants
Agricultural Buffers	Gilbert + Sutherland
Flora and Fauna	James Warren & Associates

2.0 The Site

2.1 Site Location and Context

Kings Forest is located on the far north coast of NSW in the Tweed local government area (LGA) approximately 20km south of the Queensland/ NSW border, 5km north of the village of Bogangar and 4km south of Kingscliff (**Figure 1**). With an area of 880ha, the site is bounded by agricultural and rural uses, to the north, west and south west, and by Cudgen Lake (Cudgen Nature Reserve) and Cudgen Creek to the south and east.

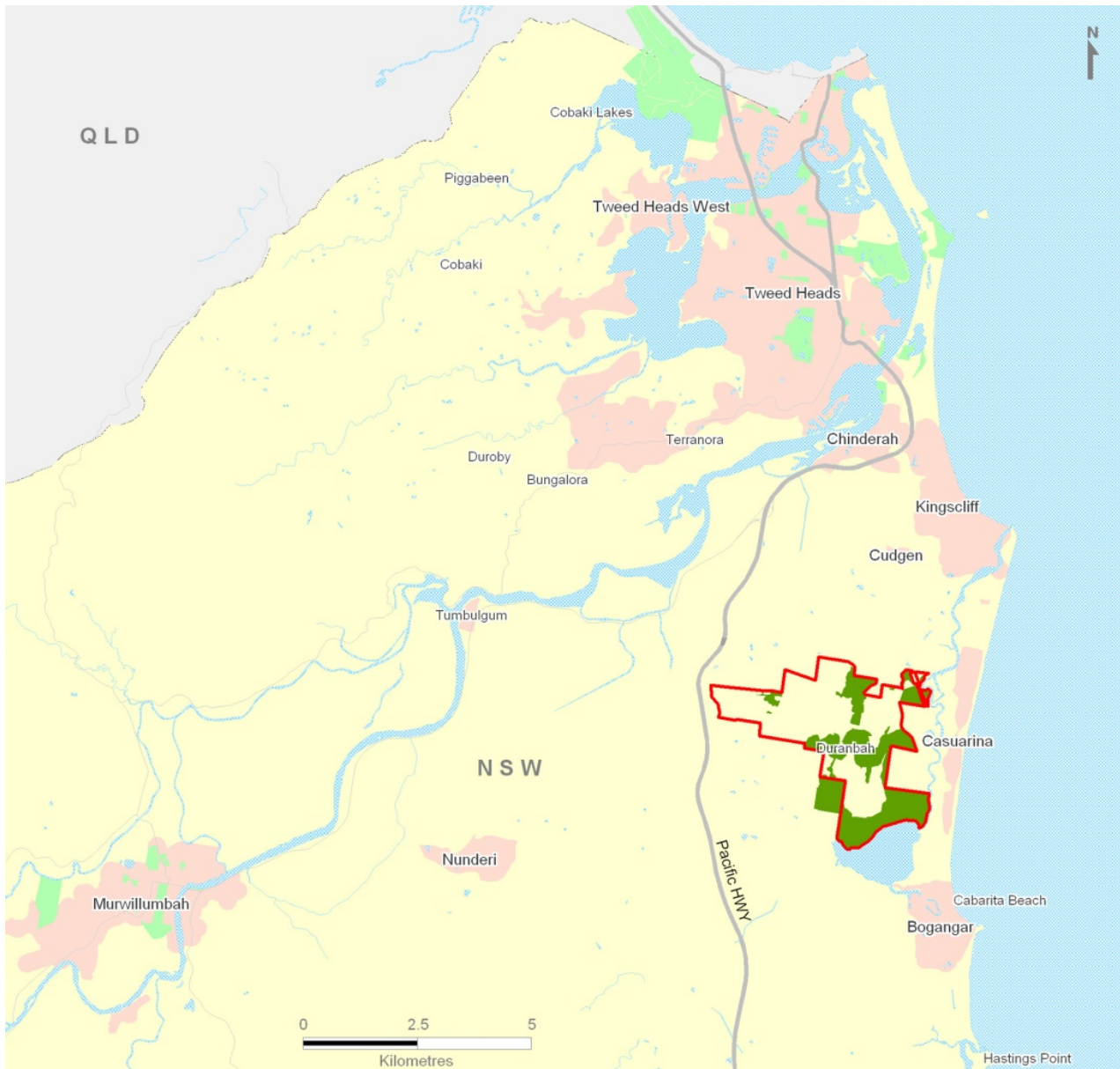


Figure 1 – Locality Plan

2.2 Land Title and Zoning

The land comprising the Kings Forest site is owned by Project 28 Pty Ltd. Title details are listed below and a cadastral plan is included at **Appendix C**.

- Lot 76, 272, 323 and 326 in DP 755701;
- Lot 6 in DP 875446;
- Lot 2 in DP 819015;
- Lot 1 in DP 706497;
- Lot 40 in DP 7482;
- Lot 37A in DP 13727;
- Lot 38A in DP 13727;
- Lot 38B in DP 13727;
- Lot 1 in DP 129737;
- Lot 1 in DP 781633; and
- Lot 7 in DP 875447.

Under Schedule 3 (Clause 4, Part 6) of the Major Development SEPP and as illustrated on the Land Zoning Map included at **Appendix C**, the land use zones which apply to Kings Forest are:

- Zone 2(c) Urban Expansion;
- Zone 7(a) Environmental Protection (Wetlands and Littoral Rainforests); and
- Zone 7(l) Environmental Protection (Habitat).

2.3 Existing Consents

2.3.1 Development Approval for Grazing

Part of the Kings Forest site - specifically parts of the land in Precincts 12, 13 and 14 (the future golf course) - is subject to a current development approval for cattle grazing. The Proponent intends to continue this use of the land in accordance with the approval once earthworks have been completed and pasture re-established. These precincts are the subject of DA05/0840 from TSC dated 15 June 2006, as modified by DA05/0840.01 dated 4 June 2007, and further modified by DA05/0840.02 dated 17 February 2011.

The approval permits the use of the subject land for the grazing of a maximum 45 cattle within defined paddocks. Commencement was conditional upon the making of what subsequently became SEPP (Major Projects) 2005 (Amendment No 10), gazetted in November 2006. The DA commenced in June 2008.

The June 2007 modification clarified certain conditions, while the February 2011 modification extends the permitted grazing areas to include that of the proposed golf course, subject to the Minister's approval of the project application the subject of this EAR, and limits the approved use of the land to a period of five years from commencement.

In accordance with clause 8M(1) of the *Environmental Planning and Assessment Regulation 2000*, the proponent intends to continue the use approved under Part 4 of the Act once earthworks have been completed and until the land is developed for golf course and residential uses.

The Proponent intends to continue the use of the land in accordance with DA05/0840 once earthworks have been completed and pasture re-established. The koala food trees to be planted once earthworks are complete will be appropriately protected.

Should subdivision works have not commenced by June 2013 and commencement is not planned for two years or more thereafter, the proponent intends to seek a further amendment to the above approval to extend the period approved for cattle grazing.

It should be noted that due to the substantial separation of Precinct 5 from the southern precincts the subject of the above approval, the continuation or resumption of cattle grazing will not have any impact on residents in Precinct 5.

2.3.2 Existing Use Rights

Most of the site, other than the southern precincts, benefits from existing use rights (under section 106 of the EP&A Act) for cattle grazing and/ or silviculture and associated routine agricultural activities. The land to which the existing use rights apply is currently used for cattle grazing and as a yet to be harvested pine plantation.

On completion of the bulk earthworks and following the implementation of erosion and sediment control measures and revegetation of the disturbed land, the proponent intends continuing cattle grazing activities and harvesting of the pine plantation from time to time, until such time as the land is developed. Given the long lead time until completion of the Kings Forest development, it is both appropriate and necessary that the land be used and actively maintained.

2.4 Site Description

An aerial photo of the site and site analysis plan are provided at **Appendix C**. Historically, the site has been used for sand mining, turf production, dairy farming, small cropping and grazing, sugar cane production and as a pine plantation, and it is accessed from Tweed Coast Road in the east via Depot Road.

2.4.1 Topography

The site is on a gently undulating coastal floodplain with the Duranbah Ridge bordering the western boundary (refer to the contour plan at **Appendix C**). The majority of the site (and surrounding lands) is generally low lying and of low relief, with a large proportion comprising beach ridge plain. Approximately 94% of the land is below 10m AHD and the remainder generally less than 20m AHD with the exception of two areas within the western part of the site and an area within the Environmental Protection area in the south, which have slopes exceeding 20%. In addition, approximately 25% of the coastal plain within the site is permanent wetland.

2.4.2 Geology and Soils

The geology of the area is described in Soil Landscapes of the Murwillumbah-Tweed Heads 1:1000,000 sheet (NSW DLWC) as being predominantly aeolian and marine formed beach ridge plains of Pleistocene origin. Major soil types at Kings Forest are:

- sandy soils in the lowlands;
- loamy silty clay soils between 5m and 8m AHD; and
- silty sand clays overlying weathered rock above 8m AHD.

Potential acid sulfate soils have been identified in some areas of the site, generally coinciding with wetland vegetation communities. Refer to Section 7.12 for a detailed discussion.

2.4.3 Flora and Fauna

The Kings Forest site includes the following areas of high conservation value flora and fauna:

- Three endangered ecological communities (EECs), listed under Schedule 1 of the *Threatened Species Conservation Act 1995* (TSC Act), located within larger vegetated areas and within Environment Protection areas:
 - Subtropical Coastal Floodplain Forest of the NSW North Coast Bioregion;
 - Swamp Sclerophyll Forest on Coastal Floodplains of the NSW North Coast, Sydney Basin and South East Corner Bioregions; and
 - Freshwater Wetlands on Coastal Floodplains of the NSW North Coast, Sydney Basin and South East Corner Bioregions.
- Significant areas of wetland, including wetlands identified under State Environmental Planning Policy 14 - Coastal Wetlands (SEPP 14).
- Core koala habitat in the eastern, south eastern and north-eastern areas. These habitat areas have been incorporated into the Environmental Protection zone adopted within Amendment No.10 of the Major Development SEPP and within the Concept Plan.

Furthermore, the following species have been recorded on or near the site:

- six (6) flora species listed in the *Threatened Species Conservation Act 1995* (TSC Act) and in the *Environmental Protection & Biodiversity Conservation Act 1999* (EPBC Act) recorded on the site; and
- twenty (20) fauna species listed in the TSC Act and/or in the EPBC Act, recorded on or near the site.

As a result of its long history of agricultural uses, substantial areas of the site are highly modified and today consist of improved pasture and pine plantations, with some regrowth heath. The land proposed for urban development within the application is modified land and generally does not include areas of high conservation value.

2.4.4 Indigenous Heritage

The Concept Plan recorded and assessed 17 identified sites for their cultural heritage significance. Artefacts have been collected and preserved from eight (8) sites, and seven (7) sites are preserved in situ.

2.5 Site Constraints

The Kings Forest site has been extensively studied over recent years, including for the preparation of the Concept Plan. The main constraints to the proposed development include:

- low lying land;
- the presence of acid sulfate soils;
- sensitive ecosystems including SEPP 14 wetlands, threatened flora and fauna and endangered ecological communities;
- flood affectation;
- isolated contamination associated with past agricultural activities; and
- bushfire risk.

2.6 Surrounding Development

Generally, agricultural and rural lands surround the Kings Forest site. Cudgen Lake bounds the south east boundary of the site. Cudgen Lake, a Coastal Wetland listed in SEPP 14, is a shallow tidal lagoon covering an area of 160 hectares which drains a catchment of approximately 66 square kilometres via two main creeks. The lake is contained within the Cudgen Nature Reserve which is managed by the NSW National Parks and Wildlife Service (NPWS).

The coastal suburb of Casuarina is directly to the east of the site. There is a small area of residential development along Tweed Coast Road to the north of the site near Depot Road. Adjacent to the site at Depot Road is the former Depot Road Tip owned by Tweed Shire Council, which has been decommissioned and capped.

Adjoining the site to the north, north-west, west and south-west boundaries are lands predominantly used for agriculture including grazing, small crop production, timber production and pastoral activities.

3.0 Description of Development Proposal

This Project Application seeks approval for the following:

- subdivision to create new lots for future development;
- bulk earthworks across the site;
- roadworks comprising:
 - construction of the entrance road into the site and associated intersection works on Tweed Coast Road;
 - alignment and construction of the proposed Kings Forest Parkway from Tweed Coast Road via Precincts 4 and 5 through to the western precincts; and
 - alignment and part construction of two proposed roads through SEPP 14 areas to access the southern precincts;
- development of 2,126m² of floorspace for rural retail development and access arrangements within Precinct 1;
- construction of subdivision and infrastructure works along the Kings Forest Parkway and within Precincts 1 and 5;
- maintenance of the existing east-west agricultural drainage channel in the SEPP 14 wetlands within the central part of the site; and
- the Plan of Development for Precinct 5.

This Project Application includes the dedication of land to the NSW National Parks and Wildlife Service (see Section 3.9).

3.1 Subdivision

Approval is sought for the consolidation and subsequent staged subdivision of the Kings Forest site. The stages of subdivision comprise:

- subdivision of the Kings Forest site into 8 allotments (proposed Lots 1-8); and
- future subdivision of proposed Lot 2 into 410 Torrens title allotments.

The subdivision of the Kings Forest site is illustrated on the plans at **Appendix F** and **Table 1** lists the proposed use and area of the proposed allotments.

Table 1 – Proposed subdivision of the Kings Forest site

Proposed Lot	Proposed Use	Area (ha)
Lot 1	Precinct 1 – rural retail development	2.41
Lot 2	Precinct 5 – residential development and part of Kings Forest Parkway	41.9
Lot 3	Environmental Protection areas to be dedicated to NPWS	178.7
Lot 4	Precincts 2, 3 and 4	36.88
Lot 5	Environmental Protection areas to be dedicated to TSC	9.854
Lot 6	Road to southern precincts	1.119
Lot 7	Part of Kings Forest Parkway and road to southern precincts	3.967
Lot 8	Precincts 6 -14 – residential development, Environmental Protection area and golf course.	953.3

3.1.1 Subdivision of Precinct 5

Proposed Lot 2 (Precinct 5) is to be subdivided into 410 Torrens title allotments. **Table 2** lists the proposed allotment numbers and their intended use. The subdivision layout and intended staging (which is to be in accordance with the construction of infrastructure) is illustrated on the plans prepared by Landsurv Pty Ltd at **Appendix G**.

Table 2 – Summary of proposed allotments in Precinct 5

Proposed Lots	Proposed Use	Number of allotments
101-173; 201-203; 301-360; 401-467; 501-558; 601-651; 701-703; 801-827 and 901-959.	Residential	401
174	Public Reserve	1
175; 361; 468 and 559	Drainage Reserve & APZ	4
177	Sewer Pump Station	1
176 and 960	Environmental Open Space	2

3.2 Bulk Earthworks

The purpose of the bulk earthworks is generally to assist with the stormwater management of the site and to lower the site levels in Precincts 2, 4, 5 and 12 to 14 in order to provide fill for Precincts 6 to 11 to form the development pads for the residential precincts and to contour the future golf course.

As detailed in the Engineering Services Report (at **Appendix D**) and shown on the Bulk Earthworks and Engineering Plans (at **Appendix E**), Mortons Urban Solutions has undertaken an earthworks review of the whole of the Kings Forest development in order to ascertain the cut and fill requirements of the site. The review considered local and regional flood levels and the escape routes for the Probable Maximum Flood (PMF), as well as geotechnical constraints and flora fauna considerations.

The drawings attached at **Appendix E** (see Dwg No.12301-05-040, 12301-SK025) and **Figure 2** illustrate the extent of the cut and fill on site and the proposed finished levels, and estimates the movement of fill within the site. Specifically:

- the northern precincts, that is, Precincts 2, 4 & 5, are generally in cut with an estimated 94,000m³ of excess spoil being transported from here to the western balance site (Precincts 6 to 11);
- the southern precincts, that is, Precincts 12, 13 & 14, are predominately in cut with an estimated 473,600m³ of excess spoil being transported to the western balance site (Precincts 6 to 11);
- an anticipated maximum 320,000m³ of imported fill material may be required within the western balance site (Precincts 6 to 11) to achieve the designated flood levels for residential development at or above the 1:100 ARI (see Bulk Earthworks Balance Precincts 06-11, Plan 12301-EWB at **Appendix E**).

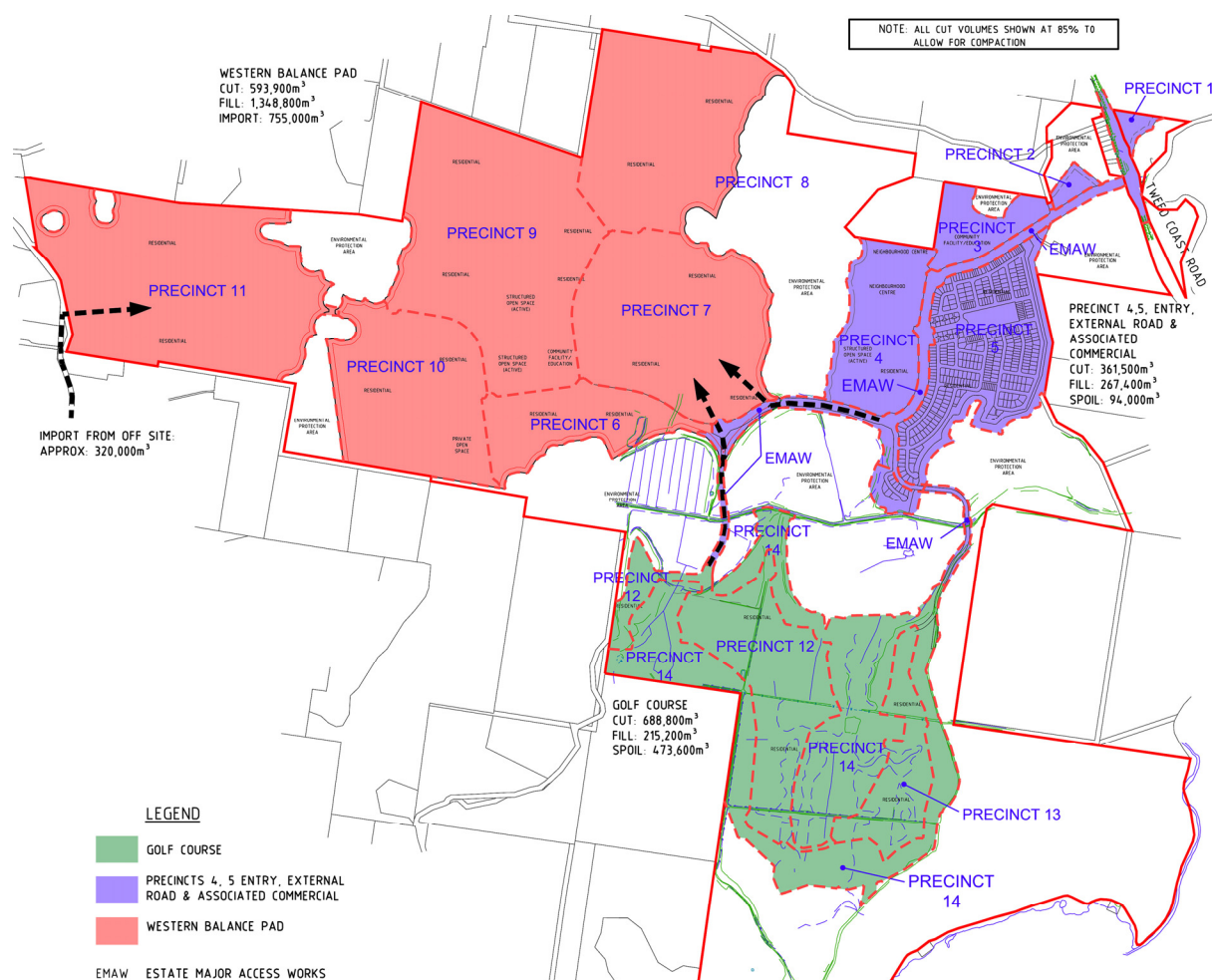


Figure 2 – Extent of cut and fill across site (Source: Mortons Urban Solutions)

The quantity of imported fill required will be dependent upon compaction factors, spoil achieved from trench excavations and possible further burrow areas on site. Given this uncertainty, the exact amount of additional fill required for Precincts 6 to 11 cannot be accurately specified, but is likely to be a maximum of 320,000m³. Likewise, the source(s) of fill cannot be specified as the need is likely to occur 5 to 10 years hence. Accordingly, the proponent is seeking consent:

- to import in the order of 320,000 m³ of fill onto the site; and
- for pad levels between RL4.5 and RL5 in Precincts 6 to 11.

Under these circumstances, prior to commencement of importation, the proponent will prepare, and provide to TSC, a Haulage Management Plan detailing, amongst other things, the source of fill, haulage routes, traffic routes and volumes, any traffic impacts and any requisite environmental management measures.

This matter is addressed in the draft Statement of Commitments.

The estimated levels to be achieved in the other precincts are shown on the engineering drawings at **Appendix F**. Similar to Precincts 6-11, all residential areas are to be constructed to ensure immunity for the 1:100 ARI flood event.

As the site generally consists of loose over dense sand over indurated sands, it is anticipated that earthmoving would be undertaken using scrapers for the majority of the works. Stabilisation of disturbed earthworks areas will occur immediately following completion of the areas of bulk earthwork. This will include seeding and placement of sediment and erosion control and stormwater dissipation devices (as described in the Site Based Management Plan appended at **Appendix Z**). The land to be developed for the future golf course will be planted with koala food trees in accordance with the Koala Plan of Management (KPoM).

Measures to manage and mitigate the potential impacts of the bulk earthworks, such as noise, dust, traffic, sedimentation and erosion control are considered in Sections 3.12 and 7.18 of this EAR.

The staging of earthworks will generally be dependent on the sequencing of construction on site, which, in turn, will be a function of market conditions.

This is summarised in Section 3.11. The earthworks within Precincts 12 to 14 may follow or be undertaken concurrently with Precinct 5.

In the case of the western precincts it is anticipated that spoil from elsewhere on the site will be placed to the requisite levels in the vicinity of Precincts 9 to 11. After stabilisation and seeding the whole of the western precinct will be allowed to revegetate prior to further bulk earthworks and development in the long term.

3.3 Roadworks

The proposed roadworks comprise:

- construction of the entrance road into the site and associated intersection works on Tweed Coast Road;
- alignment and construction of the proposed Kings Forest Parkway; and
- alignment and part construction of two proposed roads to access Precincts 12, 13 & 15 in the south.

The general location of the proposed roadworks is illustrated in **Figure 3** below and on the Road Hierarchy Plan, prepared by MPS Architects at **Appendix H**. Detailed plans, prepared by Mortons Urban Solutions are at **Appendix E**.

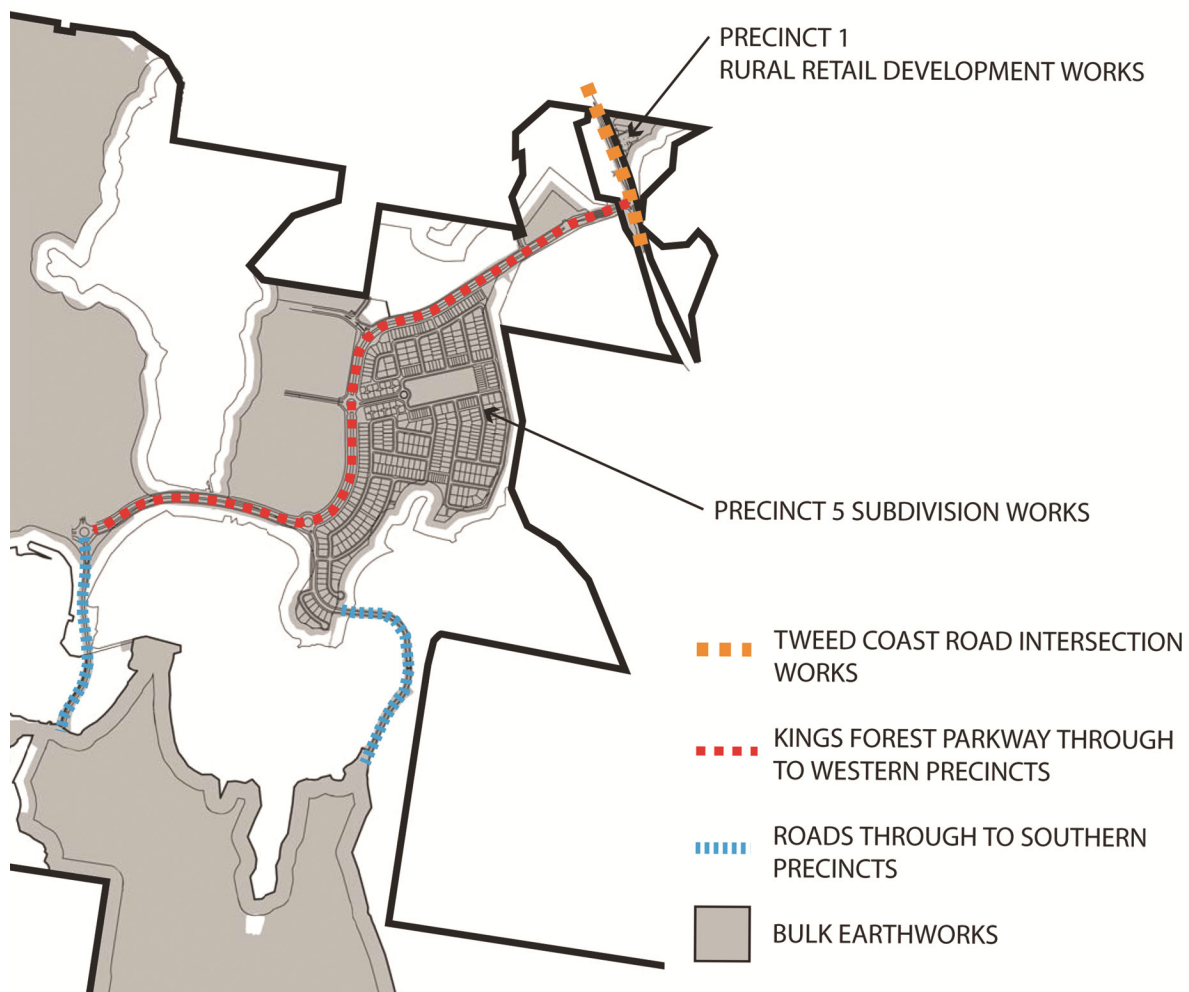


Figure 3 – Proposed roadworks (Source: MPS)

3.3.1 Entrance Road and Intersection Works

The works associated with the new entrance road to the Kings Forest site include the following:

- widening and upgrade of the existing Depot Road access way to provide a four lane road leading directly from Tweed Coast Road. The width of the road reserve of the entrance road will vary and comprise fauna friendly crossings with the provision of slow down points, signage and fauna linkages in accordance with the KPoM;
- construction of a new intersection with Tweed Coast Road with traffic islands to channel vehicles into and out of the site; and
- construction of left turn slipway and median strips on Tweed Coast Road.

The intersection will initially be constructed with a channelised right hand and auxiliary left lane in Tweed Coast Road with appropriate storage lengths as determined by the Traffic Impact Assessment (see **Appendix T**). However, once the Kings Forest development reaches approximately 1,680 lots, the intersection will be signalised and two through-traffic lanes will be provided on the Tweed Coast Road.

3.3.2 Kings Forest Parkway

Kings Forest Parkway is to be constructed as a four lane dual carriageway distributor road, with a varying road reserve width of approximately 34.6m to 40.6m. Carriageways will generally have a 7.5m width in both directions.

A priority controlled 'T' junction is to be provided on Kings Forest Parkway at the future Town Centre access road intersection. The final form will be completed when the Town Centre is developed. Roundabouts will generally be constructed at other intersections within the Kings Forest Parkway.

3.3.3 Southern Precinct Access Roads

Two access roads (Roads 9 and 23) from the Kings Forest Parkway towards Precincts 12, 13 and 14 will be partially constructed. They have been designed to minimise disturbance of the SEPP 14 wetlands, and will include a bridge or bebo arch structure on Road 9 (eastern road) to enable water flow and fish passage. Furthermore, the western road (Road 23) will include a series of box culverts (or similar) to allow flood waters to pass without upstream afflux issues and the safe passage of fish. These roads are permissible in the 7(a) and 7(l) zones respectively.

3.4 Rural Retail Development (Precinct 1)

The 8.3ha area of Precinct 1 will be developed for rural retail uses. The proposed development comprises:

- 2,126m² of floorspace for rural supplies within two separate buildings;
- vehicular access from Tweed Coast Road;
- car parking; and
- landscaping.

Architectural drawings of the proposed rural retail development, prepared by The Buchan Group are included at **Appendix I**. The retail buildings are single storey and rectangular in form. Building A will be approximately 46m long and 23.5m wide and comprise a drive-through facility. Building B will be approximately 54.8m long and 19m wide and includes a 3.8m wide awning attached to the building frontage. An amenity and service area is also attached to the eastern part of the building.

Approval for the fit-out of both buildings, use and hours of operation and signage will be the subject of future development applications, submitted to Tweed Shire Council and determined under Part 4 of the EP&A Act.

Table 3 provides a summary of the key development information relating to the rural retail development.

Table 3 – Key development information for the rural retail development

Component	Building A	Building B	Total
Floorspace	1080m ²	1046m ²	2,126m ²
Maximum Building Height	6.5m	5.1m	-
Total Car Spaces	-	-	167 car spaces (inc 3 accessible spaces and 12 staff spaces)

3.4.1 Access and Car Parking

The existing vehicular access from Tweed Coast Road is to be upgraded and formalised. It will comprise an all movement entry/ exit driveway in Tweed Coast Road, located approximately 200m north of the proposed Kings Forest Parkway intersection. Detailed drawings of the proposed vehicular access arrangements, prepared by Mortons Urban Solutions, are included in **Appendix E**.

3.4.2 Landscaping

The proposed landscaping and planting details for the rural retail development are illustrated on the plans prepared by Place Design Group (**Appendix J**). The proposed design provides:

- large columnar trees adjacent to the precinct entrance and at the north and southern extremities of the precinct on the Tweed Coast Road boundary to indicate the boundary of the development;
- planter boxes comprising low scale shrubs and groundcovers along the Tweed Coast Road boundary to soften the interface between the road and carpark;
- a mix of trees, low-scale shrubs and groundcovers along the south-eastern precinct boundary adjacent to the ecological buffer zone;
- a mix of trees, low-scale shrubs and groundcovers throughout the car park;
- broom finished coloured concrete pathways between the buildings and within the car park in the form of a central pedestrian walkway; and
- boundary fencing along the northern boundary.

3.5 Infrastructure Works

The proposed infrastructure works to service Precincts 1 and 5 are detailed within the Engineering Services Report and illustrated on the plans prepared by Mortons Urban Solutions at **Appendices D and E**. The proposed works comprise:

- Sewer reticulation constructed using a conventional gravity system augmented with sewer pump and lift stations. The sewer reticulation works are to be staged as described in the Engineering Services Report.
- A Regional Pump Station located just south of the Precinct 1 on the eastern side of Tweed Coast Road. This will be connected to the existing 255mm diameter rising main which ultimately will discharge to the Kingscliff Treatment Plant.
- Potable water reticulation comprising the extension of the existing 450mm diameter water main along Tweed Coast Road to the entrance to the site. The main will service the initial precincts including Precinct 5. The ultimate network will also connect the 450mm diameter water main to the existing 600mm trunk main located further to the west.
- Traditional stormwater drainage consisting of concrete pipes with gully pits to capture road runoff. The stormwater is to be directed to bio-retention treatment areas, comprising swales and treatment devices. The swales perform a number of functions including treatment of stormwater runoff and aiding the protection of wetlands to the east of Precinct 5 by maintaining the existing hydrological regime (see Groundwater Assessment Report prepared by Gilbert & Sutherland at **Appendix AA**). The constructed swale is an infiltration trench with no hard infrastructure and with side slopes not exceeding 1V:4H.
- Internal road network layout for Precinct 5, comprising predominantly 15m wide Access Street and 7m Laneways, with two 19m wide low volume Connector Roads leading from Kings Forest Parkway and into Precinct 5.

In accordance with the requirements of relevant service providers (in particular power and telecommunications) Precinct 1 and the individual allotments within Precinct 5 will be connected to utility services. Furthermore, a 2.5m high acoustic barrier will be constructed fronting the Tweed Coast Road and 1.8m and 2.0m high acoustic fences will be constructed along the Kings Forest Parkway. The Plan of Development for Precinct 5 illustrates the location of these fences (refer to **Appendix H**). Land owners consent is being sought for works within the Tweed Coast Road road reserve.

3.6 Precinct 5

The 30.8 ha area of Precinct 5 will ultimately comprise a total of 442 residential dwellings. Approval is sought for the Plan of Development as described below. Approval for the design and construction of the dwellings will be the subject of future development applications to Tweed Shire Council or a complying Development Certificate.

3.6.1 Objectives for the Location and Proposed Density of the Precincts

The Concept Plan established the objectives for the location of the various types of housing across the entire Kings Forest site. These objectives have been adopted in relation to Precinct 5 (and other areas of the site) as follows:

- Higher density development is located in places of high amenity, such as:
 - the town and neighbourhood centres;
 - locations with scenic or recreational value (i.e. proposed lake or sites with potential for elevated views);
 - around the golf course;
 - close to public transport; and
 - on corner sites.
- Medium density development generally surrounds the higher density areas to provide a transition between high density and lower density areas.
- Lower density development is generally provided towards the perimeter of the precinct to provide a transition between the higher density residential areas and the surrounding bushland.

3.6.2 Plan of Development

The Plan of Development (POD) for Precinct 5, prepared by MPS Architects is included in **Appendix H**. The POD has been designed in accordance with the subdivision plans, prepared by Landsurv and is generally consistent with the General Subdivision Controls contained within the Kings Forest Development Code. In accordance with the requirements of the Kings Forest Development Code, the POD illustrates the following:

- zero-lot boundaries to the zero-lot dwellings;
- indicative location of vehicular access;
- indicative location of alternative vehicular access;
- indicative location for shared vehicular access;
- proposed location of the 1.8m to 2m high acoustic fence;
- proposed location of the 1.5m high transparent fence;
- proposed location of the 1.8m high translucent fence;
- the 20m wide Asset Protection Zones (APZ);
- lots to be affected by section 88B Covenants requiring the dwellings to be built to Bushfire Attack Levels 19 or 29; and

- number of dwellings per lot and bedrooms per dwelling for mews and plex dwellings.

No seniors housing is proposed within Precinct 5 and none of the proposed lots will be flood affected.

Development Description and Mix

As illustrated on the Plan of Development, the proposed development mix is as follows:

Proposed Dwelling Type	Number
Mews	24
Plex ¹	37
Zero lot	141
Traditional Detached	181
Terrace	59
TOTAL	442

¹ Plex dwellings contain 2-3 dwellings per allotment, as indicated on the plans

3.7 Landscaping for Stage 1 Development

The proposed landscape concept for the Stage 1 development, including the Kings Forest Parkway and Precinct 5, is illustrated in the plans, prepared by Place Design Group at **Appendix K**. The main features of the landscape concept are:

- an entry feature at the site entrance on Kings Forest Parkway including a fauna crossing;
- street trees along Kings Forest Parkway and along the internal access streets within Precinct 5;
- landscaped median strips along the Kings Forest Parkway;
- planting and signage on the roundabouts and at intersections along Kings Forest Parkway;
- a neighbourhood park within the central part of Precinct 5;
- bio-retention swale along the eastern boundary of Precinct 5; and
- multi-use pathway located along the western boundary of Precinct 5.

3.8 Drainage Maintenance

The east-west agricultural drainage channel - also known as Blacks Creek - running through the SEPP 14 wetlands within the central part of the site needs to be retained for flood management purposes and will require periodic maintenance to maintain adequate flows in flood events. This will involve removing excessive vegetation growth, obstructions to water flow (eg snags etc) and deposited sediment.

Based on the historical maintenance regime, it is expected that removing vegetation growth by chemical spraying will be required at two-yearly intervals, whilst the removal of deposited sediment will be required approximately once every ten years.

The drain has been routinely maintained under Existing Use Rights. The project application is seeking consent for the on-going routine maintenance of the east-west drain once these rights are relinquished.

3.9 Land Dedication

It is proposed that land within the Environmental Protection (including land adjacent to the koala fence) zone be dedicated in due course to the National Parks and Wildlife Service (NPWS) and Tweed Shire Council. Proposed future structured and unstructured open space is also to be dedicated to the Council on completion of the development of the relevant precincts. The land to be dedicated is shown at **Appendix L** and in **Figure 4**.

It is intended that the dedication of the lands will conserve the ecological communities at Kings Forest. The land dedication to NPWS and commitment to dedicate other areas to Tweed Shire Council will be the subject of a Voluntary Planning Agreement made under the EP&A Act.

3.9.1 Dedication to NPWS

In accordance with the Concept Plan approval, approximately 150 hectares of land within the Environmental Protection zone will be dedicated to the NPWS. A further 28 hectares contiguous with this land will also be dedicated to NPWS, and together they will form proposed Lot 3. A Voluntary Planning Agreement is to be entered into between NPWS and Project 28, with the terms to include:

- the area(s) of land to be dedicated;
- details and timing of rehabilitation and revegetation, fencing, and like works to be carried out;
- monitoring of impacts of development on the Cudgen Nature Reserve and the additional dedicated land;
- the timing of dedication(s);
- maintenance responsibilities after dedication and the funding thereof;
- public access, if any, and the associated conditions.

The agreement will meet the requirements of Condition C3 of the Concept Plan approval (as modified 22 December 2010), and the proponent will provide the Director-General evidence of the agreement prior to the construction of Stage 1, or as otherwise agreed by the Director-General.

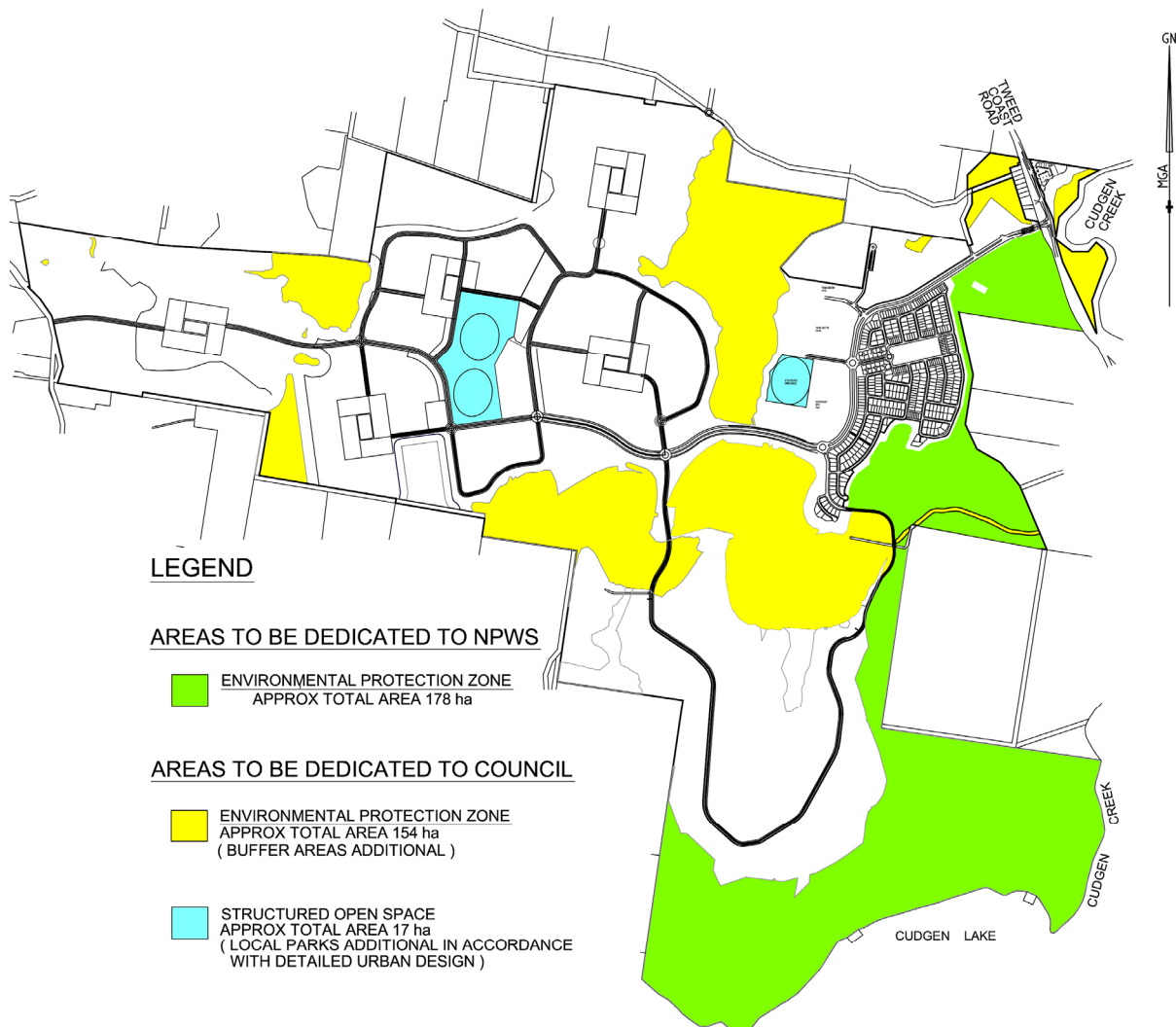


Figure 4 – Proposed dedication of land (Source: Landsurv)

3.9.2 Dedication to Tweed Shire Council

As shown in **Figure 4**, the following land in the Environmental Protection zone is at this stage intended (in principle) to be dedicated to TSC:

- Environmental Protection zone: 154ha (excluding buffer areas)
- Urban Expansion zone: 17ha (structured open space)

The above land will be the subject of a future Voluntary Planning Agreement with TSC addressing:

- the area(s) of land to be dedicated;
- the details and timing of the dedication of parts of the lands;
- required rehabilitation and maintenance standards;
- monitoring and reporting requirements; and
- other matters Council may reasonably require.

In principle, each area of Environmental Protection zoned land together with associated ecological buffers and any additional residual land will be dedicated to Council, subject to the terms of the VPA, once the boundary of the area to be dedicated has been determined by the approval of development applications for adjacent areas.

The structured open space will be provided in accordance with Council's requirements in terms of timing, embellishments, maintenance and the like, and will be dedicated on completion of the development of the relevant precincts.

In addition to the above, local and neighbourhood parks (unstructured open space) will be dedicated to Council. Precinct 5 contains a neighbourhood park servicing the Precinct 4 and 5 neighbourhoods. Additional parks for the other precincts will be proposed as part of future development applications for Council approval.

This matter is addressed in the draft Statement of Commitments.

3.10 Management and Maintenance of Open Space

The following management and maintenance arrangements are proposed for the areas of land zoned Environmental Protection:

- Land to be dedicated to TSC: until such time as the land is dedicated to Council, it will be maintained and managed by the proponent. It will continue to be maintained and managed thereafter by the proponent for a period to be agreed with Council.
- Land to be dedicated to NPWS: until such time as the agreement referred to above comes into effect, the proponent will continue to maintain and manage the land in accordance with relevant Management Plans.

The areas of future structured and unstructured open space will be managed and maintained by TSC in accordance with its normal standards and policies.

In addition to the areas of open space referred to above and in Section 3.9.2, some open space land will remain in private ownership, namely the owner(s) of the proposed golf course. These are:

- the golf course estate itself, consisting of 60 ha of land in the Urban Expansion zone and 9ha in the Environmental Protection zone; and
- the proposed lake and its immediate surrounds, consisting of 7ha of land in the Urban Expansion zone.

These areas will be maintained and managed by the proponent until such time as they are transferred to new ownership, after which they will be maintained and managed by the new owner(s) in accordance with agreements embodying the requirements of relevant Management Plans.

3.11 Indicative Staging

The sequencing of the works the subject of this Project Application will be a function of market conditions. A key consideration, however, will be the avoidance of impacts on the amenity of future residents in Precinct 5. Where bulk earthworks are undertaken pad levels will be finalised with the objective of avoiding the need for further bulk earthworks.

After bulk earthworks have been completed in Precincts 12, 13 & 14, koala food trees will be planted in accordance with the Koala Plan of Management. All bulk earthworks areas will be revegetated for erosion and sediment control.

Indicative sequencing will generally be as follows:

- Stage 1 - to be undertaken concurrently:
 - Bulk earthworks - Precincts 1,2 and 3;
 - Bulk earthworks and road construction - Kings Forest Parkway to entry with Precinct 5;
 - Bulk earthworks and civil infrastructure works - Precinct 5;
 - Bulk earthworks - Precinct 4.
- Stage 2: Bulk earthworks and civil infrastructure - Tweed Coast Road Intersection.
- Stage 3: Bulk earthworks - Precincts 12, 13 and 14.
- Stage 4: Roadworks for the remainder of the Kings Forest Parkway and the roads to Precincts 12 to 14.

3.12 Construction Management

A Construction Management Plan (CMP), prepared by Mortons Urban Solutions and appended at **Appendix M**, sets out the measures to mitigate any impacts that may result from the construction works proposed within the Stage 1 development.

The measures cover:

- Notification of neighbouring properties.
- Sediment and erosion control, in accordance with the Erosion and Sediment Control Plan prepared by Gilbert and Sutherland (see **Appendix GG**).
- Haulage of spoil and transportation of other construction material. Internal haulage routes for transport of material will be designed as part of the detailed design for each component of the development and constructed in areas of future road reserves, where possible, to avoid disturbance on-site and to ensure no disturbance to SEPP 14 Wetlands. Vehicle access to the site as a whole will be via Depot Road.
- Traffic management associated with works within State or local road reserves.
- Noise attenuation in accordance with the recommendations of the noise assessment prepared by the Carter Rytenskild Group (see **Appendix U**).
- Dust control in accordance with the Site Based Management Plan prepared by Gilbert and Sutherland (see **Appendix Z**).
- Traffic and pedestrian movements.
- Workplace health and safety.

Detailed construction management plans will be prepared prior to the commencement of works within each Precinct. These plans will build upon the strategies outlined in the CMP and incorporate the measures, where relevant, outlined within the following management plans appended to this report:

- Site Based Management Plan;
- Overall Water Management Plan;
- Groundwater Management Plan;
- Acid Sulfate Soils Management Plan;
- Erosion and Sediment Control Plan;
- Flood Management Plan;
- Integrated Water Cycle Management Plan;
- Stormwater Management Plan;
- Koala Plan of Management;

- Feral Animal Management Plans;
- Vegetation Management Plans;
- Threatened Species Management Plans;
- Buffer Management Plans; and
- Weed Management Plans.

This matter is addressed in the draft Statement of Commitments.

3.13 Developer Contributions

Developer contributions will be paid by Project 28 Pty Ltd to Tweed Shire Council in accordance with the relevant Tweed Shire Council Section 94 Contributions Plans and Section 64 of the *Local Government Act 1993*.

This matter is addressed in the draft Statement of Commitments.

4.0 Modification to the Concept Plan

As a result of development, resolution and refinements to the layout and design of the Kings Forest estate and the outcomes of further work in relation to the management plans for the site, the requirement to amend some elements of the approved Concept Plan has arisen. Accordingly, Project 28 is requesting that the Minister (or his delegate) modify the approved Concept Plan (as modified on 22 December 2010) for the development of the Kings Forest site under section 75W of the EP&A Act. As the Concept Plan was approved prior to 1 October 2011, the savings and transitional arrangements in Schedule 6A of the EP&A Act ensure that the project can continue to be modified under section 75W of the EP&A Act. The modification relates to the following matters:

- Amendments to Concept Plan drawings.
- Amendments to the conditions of approval in relation to the timing for stage-specific management plan updates.
- A change of approach to koala management and an updated Koala Plan of Management.

4.1 Concept Plan Drawings

The drawings produced for the Concept Plan were, perforce, conceptual in nature, and did not at the time incorporate the results of further detailed environmental studies and engineering investigations. Matters such as stormwater management and drainage, for example, had not been resolved. Accordingly, the alignment of some roads and the location of open space had to be revised during detailed design.

None of the changes have any material impact on the intent of the approved Concept Plan and the key outcomes in relation to density, yield, housing choice, and protection of the ecological values of the site remain unchanged. Indeed, the amendments to the design improve the overall outcomes in terms of accessibility, connectivity, access to open space and delivery of mixed neighbourhoods. There are no impacts on the environment as result of the changes and, accordingly, no further assessment is required beyond that in this report.

The specific amendments are described below and shown on the plans produced by MPS at **Appendix H**.

4.1.1 Residential Density

The revised Concept Plan does not designate separate locations for medium and low density residential development. Instead, the indicative density of each precinct is specifically set out on the Density Matrix Summary Plan included at **Appendix H**. The mix of density remains the same.

A mix and variety of development types provides housing choice within neighbourhoods of varied density and character. Within each neighbourhood higher density development will be located in places of higher amenity, such as in proximity to open space, neighbourhood and town centres and future bus stops. Given the long timeframe for the development of Kings Forest - up to 25 years - any greater level of specificity would be unrealistic and inappropriate.

There are no impacts as a result of this change and the intent of the approved Concept Plan and yield of 4500 dwellings remains the same.

4.1.2 Precinct Plan

The Precinct Plan has been amended to reduce and rationalise the number of precincts from 24 to 14. The extent of the developable land within the precincts has not changed, and the general layout and configuration of Precincts 1 to 5 remain essentially the same. The precincts within the western portion of the site have been consolidated and reconfigured to provide six precincts instead of 11 and the previous seven precincts within the southern portion of the site have been consolidated into two.

The reconfiguration of the precinct layout provides larger self-contained neighbourhoods within the Kings Forest site instead of a number of smaller development parcels. As shown within the Open Space Network Plan, the reconfiguration of the layout provides a better urban design outcome by enabling the future residential precincts to be generally centred around local / neighbourhood parks and better comply with the 'neighbourhood planning principles' contained within the Far North Coast Strategy, as discussed in Section 7.4.3.

There is no impact on the broader intent of the Concept Plan or on development yield.

4.1.3 Location of Structured Open Space

The 17 ha area of structured open space has been relocated to two locations to firstly provide a smaller area to service the eastern zone of the site and, secondly, to locate the bulk of space more centrally in the western part of the site. The latter will be at a lower level than surrounding land, and will significantly reduce the amount of fill required to achieve required falls for stormwater management, as well as reducing stormwater and sewer pipe sizes.

In both cases the community facilities/education area and the town and neighbourhood centres are now located in convenient proximity to the structured open space.

There are no negative impacts as result of this change. Indeed, the change is beneficial as it creates a community hub for the central parts of the estate. Specifically, it places the future playing fields at the centre of the new residential community in close proximity to the neighbourhood centre and school, so enabling use of the sports fields by the school, and activating and attracting patrons to the neighbourhood centre.

In urban design terms the modification is considered a significant improvement on the arrangements in the Concept Plan.

4.1.4 School Site and Neighbourhood Centre

As a consequence of the relocation of the area of structured open space and to meet NSW Department of Education & Training (DET) requirements, the land set aside for a primary school and community facilities to the west of the site has been amended. The school site is now larger at 4.5 hectares to accommodate special needs facilities, and has been slightly moved spatially.

As a result of design development the neighbourhood centre is reduced in size and somewhat relocated as a result of the above changes.

There are no impacts as a result of these changes which are largely driven by design resolution and provide a site that will meet the needs of a primary school providing special needs facilities. The school, future community facilities and the neighbourhood centre are well located to serve the future population in the western precincts of the Kings Forest estate, and appropriately, are now in close proximity to the proposed structured open space - so creating a potential for a lively, well activated locality.

4.1.5 Configuration of the Lake

The water body to the south west of the site provides essential flood detention and in the future will also perform an amenity and recreational function. As a result of flood modelling and detailed work on site levels, its shape and extent have been amended to provide a more rectangular form. The lake and its immediate surrounds will remain in private ownership.

There are no impacts as a result of this change which arises from flood modelling and engineering design resolution.

4.1.6 Road Hierarchy and Potential Bus Routes

The Road Hierarchy Plan has been updated in accordance with the revised precinct layout. In addition, the indicative widths for road types A, B and C have been amended and new road types - D1, D2, E and F - included. This change brings the road layout in line with the Development Code.

As a consequence of the above changes, the Potential Bus Route Plan has been updated.

There are no impacts as a result of these amendments and the Kings Forest Parkway continues to provide continuous route through the site as envisaged in the Concept Plan.

4.1.7 Sub-station

Further to Country Energy's requirement for a zone substation in the north eastern part of the site, an area has been allocated for the proposed zone sub-station within the Environmental Protection area to the east of Precinct 5. The location is shown on the Concept Plan drawings, but its final location is still subject to the requirements of, and on-going negotiations with, Country Energy.

A zone sub-station is essential for the development of Kings Forest and without it the site will not be able to be serviced with electrical supply, and thus not able to be developed for the proposed residential, employment and community support uses.

The proposed land on which the sub-station is to be located is zoned 7(l) Environmental Protection (Habitat) under Tweed LEP 2000. Public utility undertakings and utility installations are both permitted in the zone with consent subject to the provisions of clause 8(2) of the LEP. The development of the zone sub-station meets these provisions as follows:

- it is necessary to be in the locality in which it is proposed due to its nature, function and service catchment, and it meets an identified urgent community need; and
- to date there is no other appropriate site in reasonable proximity on which the development is permitted with consent - this is the preliminary location identified by Country Energy; and
- it will be generally consistent with the scale and character of existing and future lawful development in the immediate area; and
- it would be consistent with the aims of the LEP and one of the objectives of the 7(l) zone - namely, 'to allow for other development that is compatible with the primary function of the zone' - in this case, the 'other development' being residential development in the neighbouring zone.

Country Energy will obtain the necessary approvals in accordance with its policies, once a site location is agreed.

4.2 Further Assessment Requirements

The Conditions of Approval for the Concept Plan (as modified on 22 December 2010) require that:

- Stage specific management plan updates (in relation to koalas, vegetation, feral animals, weeds, buffers and threatened species) are to be included, where relevant, with all future applications (Condition C2); and
- A detailed geotechnical assessment be submitted with each future development application for subdivision (Condition C13).

The proponent is seeking to have the above two conditions amended to enable firstly, the relevant management plans to be provided prior to the issue of the Construction Certificate for the relevant works; and secondly, to require detailed geotechnical assessments only where relevant to the proposed application.

Condition C2

The primary reason for the proposed amendment to Condition C2 is that there is likely to be a considerable time lag between the time of the preparation of supporting material for a development application and the actual works occurring (conceivably up to six years). Accordingly, the so-called 'updated' information in the management plans would no longer be current or up to date - so defeating the intent of the condition. By relating the plans temporally to the issue of Construction Certificates ensures that the content - particularly baseline data - is current.

There are no negative impacts as a result of this proposed change. In fact, the change is likely to be positive as it ensures that the content of the plans reflects the current conditions on the land to be developed. It is further noted that Tweed Shire Council is likely to be supportive of the proposition as it is consistent with the conditions of approval it has issued for the development of Cobaki - a site akin to Kings Forest.

It is proposed that Condition C2 be amended as follows. The following sets out the proposed amendments to the above clauses in the Instrument of Approval. Deletions are struck through and insertions are in *italics bold*.

" C2 Management Plans

.... ~~All future applications are to include,~~ ***Prior to the issue of the Construction Certificate for all future works,*** where relevant, stage-specific management plan updates ***are to be prepared*** providing ~~where~~ ***as*** relevant details on timelines for implementation of recommended works including maintenance periods and measurable performance and completion criteria ..."

Condition C13

In the case of the detailed geotechnical assessment, it is possible and likely that detailed geotechnical assessment will not be required for all future development applications as required by Condition C13. Accordingly, the proponent is requesting that the condition be amended to address by inserting the words where relevant into the text.

There is no impact as a result of the change - which in itself ensures that unnecessary (and costly) reports and investigative work is not required.

It is proposed that Condition C13 be amended as follows:

" C13 Geotechnical Assessments

In order to ensure the stability of development lots, a detailed geotechnical assessment prepared by a suitably qualified person must be submitted, ***where relevant,*** with each future development application for subdivision ..."

4.3 Koala Plan of Management

The Concept Plan conditions of approval required that an updated Koala Management Plan (KPoM) be provided with each future Project or Development Application. Subsequent to the preparation of the KPoM, the proponent consulted with koala interest groups and considered alternative approaches to the management of koalas at Kings Forest.

The resultant KPoM submitted with this Project Application, prepared by a different ecologist, makes recommendations which reflect a different approach to that taken in the Concept Plan KPoM, but which the proponent believes will have the support of Council and local interest groups.

The essential difference in the approach to the koala management lies in the measures to effectively prevent koalas from entering developed areas. These measures comprise a particular form of fencing in combination, where required, with road underpasses and cattle grids which meet certain requirements. They have recently been found to be effective in restricting koala movement so as to avoid contact with the threats posed by road traffic and domestic dogs, and the limited threat of swimming pools.

The KPoM submitted with the Concept Plan took a different approach where, because of the difficulty in restricting koala movement, it was deemed necessary to manage the above threats by way of controls to traffic, dog ownership and swimming pools.

The revised approach, detailed in the updated KPoM prepared by James Warren & Associates and appended at **Appendix N**, includes the following:

- Changes in the specification of koala fencing.
- Facilitating road crossings by underpasses (not over-road crossing).
- Providing cattle grids at particular points.
- Limiting the zones to which koalas will be restricted to areas of habitat where concentrated use has been recorded.

The effective restriction of koalas to parts of the Environmental Protection zone consequently obviates the need for:

- additional controls on dog ownership to those provided in the *Companion Animals Act* and Council's Regulations; and
- measures to prevent koalas entering swimming pools and to enable their escape from them.

Furthermore, the need for the previously recommended east-west koala movement corridor in the western part of the site is now called into question, but its retention will be considered at a later time.

Based on the content and direction of the updated KPoM there appear to be no negative impacts as a result of this amendment to the Concept Plan. Indeed the latest findings seem to indicate that the revised approach will be no less effective in managing koalas in the Tweed. It is further noted that in accordance with Condition B1 of the Concept Plan approval, the updated Koala Plan of Management is to be the subject of an independent review by a suitably qualified person to the satisfaction of the Director-General.

5.0 Consultation

During the preparation and public exhibition of the approved Concept Plan, the proponent consulted with and/ or responded to issues raised by the agencies listed below:

- Tweed Shire Council.
- NSW Department of Land & Property Management Authority (formerly Department of Lands).
- NSW Department of Environment Climate Change and Water (DECCW).
- NSW Industry and Investment (formerly Department of Primary Industries).
- NSW Department of Water and Energy.
- NSW Health.
- Roads and Traffic Authority.
- NSW Department of Education and Training.
- NSW Rural Fire Service.
- NSW Fire Brigade.

Many of the issues raised by the agencies were addressed within the Preferred Project Report (PPR) and formed (where relevant) commitments for future Project Applications within the approved Concept Plan. The proponent considered, therefore, that further consultation was not necessary with some of these organisations, as their views formed commitments or conditions of approval within the approved Concept Plan. Notwithstanding this, during the preparation of the Project Application, the proponent undertook further consultation with the authorities and agencies as summarised in **Table 4**.

Table 4 – Key issues from Authority consultation

Issues / Discussion	Proponent's Comment / Response
Tweed Shire Council	
■ The Kings Forest Development Code ■ Water and sewer services ■ Flood modelling ■ The long term ownership of Environmental Protection Areas ■ Long term drains maintenance ■ Affordable housing provision	The outcome of these discussions have informed the preparation of the application.
NSW Office of Environment & Heritage (Formerly NSW DECCW)	
■ Temporary installation of piezometers within Cudgen Nature Reserve to support groundwater modelling ■ Maintenance of drainage through NSW Office of Environment & Heritage estate ■ The interface between NSW Office of Environment & Heritage estate and the proposed golf course ■ Dedication of land to NSW Office of Environment & Heritage (NPWS) ■ Public access to Cudgen Lake and proposed adjacent amenities	The outcome of these discussions have informed the preparation of the application.

Issues / Discussion		Proponent's Comment / Response	
NSW Office of Water			
Potential impacts on the groundwater dependent ecosystems to the east of Precinct 5.		These potential impacts have been addressed within the relevant Management Plans.	
Stormwater treatment devices that intercept groundwater will need to be lined.		This requirement is noted and on-going consultation is continuing in relation to this and drain maintenance matters.	
Land and Property Management Authority			
Agreement for the closure of identified Council roads and the acquisition by the Proponent.		At the Council meeting on 15 February 2011, Tweed Shire Council resolved to approve the closure of the Council public road, running north-south within Lot 1 in DP 129737 and forming part of the western boundary of Lot 38B in DP 13727, and the closure of the Council public road running south-west within Lot 1 in DP 129737 and Lot 1 DP 781633.	
NSW State Emergency Service			
Need for a future base within Kings Forest.		The NSW SES has identified a need for a future base. A suitable site will be identified within Precinct 2 as part of a future Application.	
NSW Ambulance			
Need for a future base within Kings Forest.		The Ambulance Service has identified a need for a future base. A suitable site will be identified within Precinct 2 as part of a future Application.	
NSW Fire Brigade			
Need for a future base within Kings Forest.		The service has identified a need for a future base. A suitable site will be identified within Precinct 2 as part of a future Application.	
NSW Police			
Need for a future base within Kings Forest.		NSW Police has notified the proponent that it does not require a station site at Kings Forest.	
Northern Rivers Catchment Management Authority			
Preparation and content of a Stormwater Management Plan.		The proponent has undertaken to provide the Authority with a copy of the Stormwater Management Plan once it has been finalised. However we understand this application will be referred to the Authority during the public exhibition process.	
Tweed Byron Local Aboriginal Land Council			
Consultation has continued in accordance with the implementation of the Cultural Heritage Management Plan and agreement in regard to nominating a Keeping Place for artefacts. Refer to Section 7.20.			
Country Energy			
Country Energy requires a site for a zone sub-station in the north eastern part of the site.		Negotiations in regard to the location of, and sale of land for, the substation are on-going and still to be settled.	

5.1.1 Community Consultation

Kings Forest was recognised as a potential urban release area in the late 1980s. Since then, the development of the site has been subject to considerable consultation, most significantly through the State Significant Site designation and Concept Plan approval process.

During the public exhibition of the Concept Plan (between December 2008 and February 2009), the proponent, Project 28, arranged a media conference, placed advertisements about the public exhibition and wrote to rate payer associations, Chambers of Commerce, sporting clubs, environmental groups and residents in the area around Kings Forest.

The present application is consistent with the Concept Plan which received considerable previous public scrutiny.

Proposed Community Consultation

In conjunction with the exhibition of the EAR for this Project Application, the proponent, Project 28, will begin a program of public engagement, consisting of the following elements:

- The exhibition of the Project Application and EAR will, as a minimum, be notified through successive advertisements in the local press (Tweed Daily News and the Tweed Sun); and TSCs journal, Tweed Link:
 - the announcements will provide information about the proposal and the exhibition, as well as details of the DOP website, and invite comment and questions;
 - respondents will be able to contact Project 28 either by mail or email and these details will be provided; and
 - Project 28 will respond within 10 working days to all emails or letters, and to the full extent practical, meet with interested parties should this be requested.
- Project 28 will write to, amongst others, the following individuals, interest groups and organisations, to invite requests for information and consultation:
 - ratepayer associations;
 - resident associations/action groups;
 - Chambers of Commerce;
 - sporting clubs;
 - environmental groups; and
 - property owners and/or residents within the area surrounding Kings Forest.
- Project 28 will issue a media briefing on the scope of the Project Application and will respond to any media enquiries.

6.0 Director General's Requirements

Table 5 provides a summary of the individual matters listed in the DGRs and identifies where each of these requirements has been addressed in this report and the accompanying technical studies.

Table 5 – Director General's Environmental Assessment Requirements

Requirement		Location in Report
General requirements		
Executive Summary		Page viii
Description of the Proposal		Section 3
Site Analysis		Section 2
Consideration of relevant statutory and non-statutory provisions and identification of any non-compliances		Section 7.1
Consideration of the consistency of the project with the objects of the <i>Environmental Planning and Assessment Act 1979</i> (EP&A Act)		Section 7.1 and Appendix O
Consideration of impacts on matters of National Environmental Significance under the Commonwealth <i>Environmental Protection and Biodiversity Conservation Act 1999</i>		Section 7.1.1 & 7.21
Assessment of the potential impacts of the project		Section 7
Draft Statement of Commitments		Section 8
Plans and documents		Appendices
Statement of Validity		Page vii
Assessment of the key issues and a table outlining how these issues have been addressed		Sections 6 and 7
Key Issues		Report
1	Consistency with the Concept Plan Demonstrate that the project application is consistent with the approved concept plan.	Section 7.2 & Appendix O
2	Subdivision Design, Layout and Desired Future Character	
2.1	Demonstrate consistency of the subdivision design and layout with the Coastal Design Guidelines for NSW, NSW Coastal Policy 1997 and SEPP 71 - Coastal Protection	Section 7.4 & Section 7.1.9
2.2	Provide a Plan of Development that shows: - location and width of Asset Protection Zones (APZ); - level of construction required for dwellings/ buildings adjacent to APZ; - types of development permissible on each lot; and - fill and finished floor level requirements on flood prone lots	Section 3.6.2 Appendix H
2.3	- Identify types of subdivision proposed; and - Provide a draft community management statement (if community title is proposed)	Section 3.1
2.4	Provide details of any staging	Section 3.11
2.5	Outline the long-term management and maintenance of any areas of open space or conservation including: - ownership and control; - management and maintenance funding; - public access; - revegetation and rehabilitation works; and - bushfire management	Section 3.10 Section 7.13

Requirement		Location in Report
Key Issues		Report
2.6	Provide a study that determines the need for affordable housing for the Kings Forest Estate.	Section 7.5 & Appendix Q
2.7	Provide an Open Space Network Plan of active and passive open space areas in accordance with Council's minimum requirements.	Appendix H
2.8	Provide details of landscaping in accordance with Council's open space landscape guidelines and standards.	Section 3.4.2 and 3.7
2.9	Demonstrate, through the provision of a Bus Network Implementation Plan that adequate provision has been made for public transport.	Appendix H
2.10	Provide a plan which: ▪ details the mix of densities; ▪ details the proposed number and size of dwellings in each stage and precinct; ▪ details site for seniors housing and support facilities; ▪ demonstrates the implementation of the levels of accommodation provided for in the approved concept plan; ▪ details sites for higher density development; and ▪ details discussions with Tweed Shire Council.	Section 3.6 Appendix H
3	Visual Impact Address the visual impact of that part of the project visible from the Tweed Coast Way and discuss any relevant mitigation measures	Section 7.6 and Appendices R & S
4	Infrastructure Provision	
4.1	▪ address existing capacity and capacity and requirements for sewerage, water, electricity, waste disposal, telecommunications and gas; ▪ identify and describe any staging, if any, of infrastructure works.	Section 7.7 Appendix D
4.2	Address and provide the likely scope of any planning agreements and/ or development contributions with Council/ Government agencies.	Sections 3.9 and 3.13
4.3	Provide details on investigations into the accommodation of appropriate facilities for the NSW Ambulance Service, NSW Police and NSW Fire Service.	Sections 5 and 7.7.5
5	Traffic and Access	
5.1	Prepare a traffic impact assessment, which, in particular provides a detailed assessment for the intersection of Tweed Coast Road with the proposed Kings Forest Parkway and the proposed development to the east of Tweed Coast Road.	Section 7.8
5.2	Address the provision of cyclist and pedestrian access to, through and within the proposal.	Section 7.8.2
5.3	Demonstrate that the alignment of the Kings Forest parkway is designed to be a continuous or 'through' alignment to enforce its priority route status as a major collector/ distributor road.	Section 7.8.3 and Appendix H
5.4	Address potential noise impacts, in particular road traffic noise, for future residents and appropriate mitigation measures.	Sections 7.6.2 & 7.9
5.5	Undertake a road traffic impact assessment and provide details of noise attenuation measures.	Sections 7.8 and 7.9
5.6	Demonstrate that provision has been made to maintain safe passage of wildlife between habitat areas through specific road design, lighting and signage requirements and, where considered appropriate, fencing to road verges, fauna underpasses and like measures.	Appendix E
5.7	Demonstrate that road crossings of waterways maintain existing fish passage.	Section 7.1.6 Appendix E

Requirement		Location in Report
Key Issues		Report
6	Hazard Management and Mitigation	
6.1	Contamination Identify any contamination on site and appropriate mitigation measures in accordance with the provisions of SEPP 55 - Remediation of Land.	Section 7.10
6.2	Acid Sulfate Soils Identify the location and scale of any Acid Sulfate Soil impacts and provide a summary of the management likely to be required.	Section 7.12
6.3	Bushfire A detailed bushfire assessment and management plan must be submitted.	Section 7.13
6.4	Geotechnical A detailed geotechnical assessment, must be submitted.	Sections 7.14 & 7.15 Appendix Y
6.5	Flooding Provide an assessment of any flood risk on site.	Section 7.16 Appendix CC
6.6	The flood assessment must have regard to the following elements to determine the new flood planning level for Kings Forest: ■ a sea level rise scenario of 0.90m; ■ a 10% increase in rainfall intensity; ■ the detailed flood modelling results from the Tweed-Byron Coastal Creek Flood Study; ■ consideration of freeboard of 0.5m; and ■ applying the principle of risk-based approach to the development so that residents remain safe for all flood events up to and including the Probable Maximum Flood event.	Section 7.16
6.7	Consideration of Practical Consideration of Climate Change - Floodplain Risk Management Guideline	Section 7.16
6.8	Provide a preliminary development landform for the entire Kings Forest site to allow comprehensive flood modelling to be carried out, but not in such a way as to preclude necessary modifications to land forms in subsequent stages of development.	Appendix E
6.9	Radiation Identify the presence and extent of radiation levels on site, associated with any areas previously sand mined and, where relevant, provide mitigation measures. Include consideration of the extent, distribution and depth of cut and fill.	Section 7.11
7	Water Cycle Management	
7.1	Address and outline measures for Integrated Water Cycle Management (including stormwater) based on Water Sensitive Urban Design principles and address impacts on the surrounding environment, drainage and water quality controls for the catchment.	Section 7.17 Appendix DD and Appendix OO
7.2	Provide a detailed erosion and sedimentation plan for construction and operational stages to ensure that the water quality of SEPP 14 Wetlands on the site remain unaffected.	Section 7.18 Appendix GG
7.3	Provide a Stormwater Management Plan which includes a detailed design layout plan for the preferred stormwater treatment train showing location, size and key functional elements of each part of the system.	Section 6.17 Appendix FF and Appendix OO
7.4	Assess the impacts of the proposal on surface and groundwater hydrology and quality during both construction and occupation of the site.	Section 7.15

Requirement		Location in Report
Key Issues		Report
7.5	Provide details of a groundwater assessment and monitoring program for the site.	Section 7.15
7.6	- Assess the necessity of drains currently in operation across the site and, those required in the future; - Assess the impact of any ongoing maintenance required to ensure their effectiveness.	Section 7.19 and Appendices HH & II
7.7	Provide an overall water management plan, integrating any discrete water, stormwater, groundwater and Acid Sulfate Soil management plans.	Appendix EE
8	Heritage and Archaeology	
8.1	Demonstrate that further consultation with local Aboriginal stakeholders has taken place in order to determine an appropriate location for a final Keeping Place for all objects recovered/ salvaged as part of the development of the site.	Section 7.20
8.2	Provide details of the Keeping Place, details and evidence of the further consultation and a care and control agreement with DECCW.	Section 7.20
8.3	Demonstrate that the recommendations of the Cultural Heritage Management Plan are to be implemented.	Section 7.20
9	Flora and Fauna	
9.1	Demonstrate that the keeping of cats within the is prohibited and all residential lots will be encumbered to this effect with a Section 88B or 88E instrument under the NSW Conveyancing Act 1919	Section 7.21.3
9.2	Address measures to protect and manage riparian corridors and adjacent to aquatic habitats in consideration of the Tweed Coast Estuary Management Plan	Section 7.24
9.3	Demonstrate that the proposal will result in minimal impacts on the ecological integrity of the wetland habitats on the site.	Sections 7.15, 7.17, 7.21 and 7.24
9.4	Provide updates, where relevant, of the various management plans for koalas, vegetation, threatened species, feral animals, weeds, the buffers, and the golf course providing where relevant details on timelines for implementation of recommended works including maintenance periods and measurable performance and completion criteria.	Appendices N, Z, MM, NN, PP, QQ, RR, SS, TT, UU, VV
9.5	Provide an update to the Koala Plan of Management (KPoM).	Appendix N
9.6	The KPoM update should take into account: - contemporary data/ literature on koala management; - the results of the monitoring of management measures operating as part of any approved stage/s; - the role of additional koala habitat created in protecting koala numbers, and the provision of any additional koala management measures, specifically those relating to dogs.	Appendix N
9.7	The KPoM update should include, but not be limited to: - the identification of dog breeds known to present a significant threat to koalas; and - measures to effectively mitigate the threat posed to koalas by dogs.	Appendix N
9.8	The KPoM update must provide stage specific detail on the following: - revegetation and rehabilitation measures; - measures to ensure that no identified koala food trees are removed within adjacent ecological buffers or identified core koala habitat; - all obligations regarding the keeping of dogs; - specific road design, lighting and signage requirements aimed at protecting koalas and maintaining their safe passage between habitat areas; - fencing to road verges, fauna underpasses and like measures.	Appendix N

Requirement		Location in Report
Key Issues		Report
9.9	The KPoM update detail: - procedures to be adopted in the event that koalas are sighted within construction zones or urban areas; - specifications for any off leash dog exercise areas; - the location and construction specification of dog exclusion fencing adjacent to any Environmental Protection zoned land; - the detail, content and distribution of koala education and awareness measures aimed at contractors and staff engaged in construction and at future residences; and - a protocol for reporting any deaths or injuries to any koala, including collection and recording procedures and post-mortem procedures or lab tests.	Appendix N
9.10	Provide an update to the Vegetation Management Plan.	Appendices UU & VV
9.11	Provide an update to the Feral Animal Management Plan.	Appendix PP
9.12	Provide an update to the Threatened Species Management Plan.	Appendices Z, SS & TT
9.13	Undertake a survey for the Square Stemmed Spike Rush in those areas corresponding to future precincts 13, 14 and 16, and within the updated VMP procedures for the protection and management of any newly identified occurrences of this species that are in accordance with the Approved Recovery Plan for this species.	Appendix TT
10.	Golf Course	
10.1	- Provide further details on how threatened Wallum frog species habitat is to be re-created, managed, monitored and reported on within the golf course. - Adaptive management procedures are to be provided detailing how monitoring and reporting will feed back to corrective actions to optimise habitat for the two Wallum frog species.	Appendix Z
10.2	The Golf Course Management Plan is to demonstrate consistency with the Koala Plan of Management and the Threatened Species Management Plan.	Appendix Z
11.	Earthworks	
11.1	Provide a detailed survey showing existing and proposed levels and quantities of fill required.	Appendices D & E
11.2	Describe the methods for excavation, transportation and spreading of fill and determine whether fill will need to be imported to the site.	Section 3.2 and 8.4
11.3	Address potential dust impacts of earthworks during construction and appropriate mitigation measures.	Section 3.12 and Appendix M
Consultation		Section 5

7.0 Environmental Assessment

This section of the report provides an assessment of the environmental impacts of the proposal in accordance with the DGRs (see Section 6). The draft Statement of Commitments at Section 8 complements the findings of this section.

7.1 Consistency with Relevant Legislation, Strategies and Planning Instruments

The DGRs require the consideration of any relevant statutory and non-statutory provisions and the identification of any non-compliances with such provisions. The following legislation and state environmental planning policies are relevant to the proposal and addressed below.

7.1.1 Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)

The Commonwealth *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act) applies to any activity that is likely to have a significant impact on matters of national environmental significance including threatened species and endangered ecological communities listed under the Act and is declared to be a controlled action that requires approval under the EPBC Act.

The Kings Forest site contains threatened flora and fauna species and endangered ecological communities listed under the EPBC Act. Concurrent with this project application, a referral under the EPBC Act to the Commonwealth Department of Sustainability, Environment, Water, Population and Communities is to be made by the proponent for a matter of national environmental significance - the Wallum sedge frog (see Section 7.21.1).

The management of the biodiversity of the site is addressed in Section 7.21.

7.1.2 Threatened Species Conservation Act 1995

The *Threatened Species Conservation Act 1995* (TSC Act) identifies and protects threatened and endangered species, populations and ecological communities. The site contains threatened flora and fauna species listed in the TSC Act. The impact and management of threatened flora and fauna is addressed in Section 7.21.

7.1.3 Environmental Planning & Assessment Act 1979

The DGRs require that the consistency of the project with the objects of EP&A Act be considered. The Objects of the Act are:

(a) *to encourage:*

- (i) *the proper management, development and conservation of natural and artificial resources including agricultural land, natural areas, forests, minerals, water, cities, towns and villages for the purpose of promoting the social and economic welfare of the community and a better environment,*
- (ii) *the promotion and co-ordination of the orderly and economic use and development of land,*
- (iii) *the protection, provision and co-ordination of communication and utility services,*
- (iv) *the provision of land for public purposes,*
- (v) *the provision and co-ordination of community services and facilities, and*

- (vi) *the protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats, and*
- (vii) *ecologically sustainable development, and*
- (viii) *the provision and maintenance of affordable housing, and*
- (b) *to promote the sharing of the responsibility for environmental planning between the different levels of government in the State, and*
- (c) *to provide increased opportunity for public involvement and participation in environmental planning and assessment.*

The Project Application is consistent with the Objects of the EP&A Act, particularly for the following reasons:

- It provides for the co-ordinated and orderly development of the land for predominantly residential uses and the proper management, development and conservation of natural vegetation which will support future urban development and promote the social and economic welfare of the community.
- It comprises the first stage of the new residential estate, provided in accordance with the approved Concept Plan, Major Development SEPP zoning controls and the Kings Forest Development Code.
- It ensures the site is suitable for future development through, amongst other things, the undertaking of bulk earthworks to establish residential pad levels, mitigate flooding impacts and enable acceptable site drainage; the subdivision of the site; and the construction of roads and infrastructure.
- It includes substantial works for the future provision of utility services.
- It sets aside land for public purposes such as for open space and recreation, accommodation for a range of emergency services.
- It includes measures to manage and mitigate any adverse impact to native animals and plants, including threatened species, populations, ecological communities and their habitats.
- It commits to the provision of affordable housing to meeting accommodation need within the local area subject to a successful application for funding from the National Rental Affordable Housing Scheme.
- It provides opportunities will be provided to the public for involvement and participation in the environmental planning and assessment of the proposal through a program of consultation to be undertaken by the proponent (see Section 5).

7.1.4 State Environmental Planning Policy (Major Development) 2005

The Kings Forest site is listed as a State Significant Site in Schedule 3 of the SEPP (Major Development) 2005. Part 6 of Schedule 3 refers to Kings Forest and sets out the planning provisions which apply to development within the site. The relevant planning provisions are addressed below.

Clause 4 - Land use zones and objectives

The provisions of Tweed Local Environmental Plan 2000 apply to land within a zone [clause 4(2)] and the consent authority must have regard to the objectives for development in a zone [(clause 4(3))]. The land is zoned:

- 2(c) Urban Expansion;
- 7(a) Environmental Protection (Wetlands and Littoral Rainforests); and
- 7(l) Environmental Protection (Habitat).

The approved Concept Plan sets out the proposed uses in the above zones and the project application is consistent with these.

All proposed development in all three zones is permissible with consent. The proposed development is also consistent with the objectives of the zones.

An assessment of the proposal against the relevant clauses within the Tweed LEP is contained in the Table of Compliance at **Appendix O**.

Clause 5 - Subdivision and dwelling houses in the 2(c) zone

As subdivision of land zoned 2(c) is permitted with consent regardless of size, the proposed subdivision of Precinct 5 is permissible.

Clause 6(1) and (2) - Subdivision in the 7(a) and 7(l) zones

Subdivision on land zoned 7(a) and 7(l) is only permitted where boundary adjustments and the minor realignment of boundaries to reflect zone boundaries do not involve the creation of a greater number of lots.

The amalgamation and subsequent subdivision of the lots within the Kings Forest site is to create lots for future urban development, and lots which are to be dedicated to the NPWS and Tweed Shire Council for their long term conservation and protection and to augment the Cudgen Nature Reserve (see Section 3.9 of this report).

The proposed subdivision of land in the 7(a) and 7(l) zones is specifically necessary to facilitate the above dedication of land in the Environmental Protection zones as proposed by the approved Concept Plan.

If the subdivision of land within the 7(a) and 7(l) zones were to create a greater number of allotments it would be prohibited under the terms of clause 6(1) of Part 6 in the Schedule 3 of the Major Development SEPP. However, in this case the subdivision of the land is to align zone and lot boundaries and not to create a greater number of lots within the zone. The overall result will be to reduce the number of lots as explained below and shown at **Appendix F**.

- The land titles across the Kings Forest site are highly fragmented and fourteen (14) lots contain land affected by the 7(a) and 7(l) zones. Three of the lots actually designate closed Council roads.
- In most cases the 7(a) and 7(l) zones cross a number of different lots.
- Two of the 14 lots will not be subdivided but consolidated with others to form proposed Lot 3 which is the land to be dedicated to NPWS.
- The 7(a) and 7(l) land to be dedicated to NPWS currently covers nine (9) lots. It will be consolidated into one continuous lot (proposed Lot 3).

The only time the 7(a) and 7(l) land will be split to create any additional lots will be:

- for the Country Energy substation;
- to separate the land to be dedicated to NPWS from land to be dedicated in the future to TSC; and
- to separate the Environmental Protection land that will remain in private ownership in the vicinity of the proposed golf course.

Overall, the current 14 lots affected by the Environmental Protection zones will be reduced to four. Two are for land to be dedicated to NPWS and TSC, and the remaining two have 7(a) and 7(l) land of which most in the future will be dedicated to TSC.

The proposal complies with clauses 6(1)(a) and (b) in that the subdivision is for the following dual purposes:

- to make adjustments to a boundaries between lots that do not involve the creation of a greater number of lots overall in the 7(a) and 7(l) zone; and
- to effect minor boundary realignments to reflect the zone boundaries, without creating a greater number of lots.

The proposed adjustments are considered acceptable as they are necessary to:

- Meet the environmental protection objectives of the 7(a) and 7(l) zones (in Tweed LEP 2000), including to:
 - protect and conserve significant wetlands and littoral rainforests;
 - protect areas of scenic value, including of wetlands and littoral rainforests;
 - protect areas or features which have been identified as being of particular habitat significance;
 - preserve the diversity of habitats for flora and fauna; and
 - protect and enhance land that acts as a wildlife corridor.
- Achieve the environmental conservation intent of the Concept Plan
- Enable the dedication of land as set out in the approved Concept Plan.

It is noted that there are no restrictions on the number and size of lots that may result in the 2(c) zone as a consequence of the above sub-division.

Clause 6(5) - Earthworks in the 7(l) zone

No bulk earthworks are proposed in the 7(l) zone, however, as part of the construction of roads and their associated infrastructure (earthworks, sewer, water, stormwater and other services), earthworks will be necessary over a small area of land in the 7(l) zone, namely:

- for the Kings Forest Parkway; and
- to provide access to the urban areas and golf course in the south east of the site.

The location of the works is shown in **Figure 5** and their extent in the Bulk Earthworks and Engineering Plans at **Appendix E**.

In accordance with clause 6(5)(a) the works would be permissible with consent for the following reasons:

- They are required to construct the entry road to the site.
- They are necessary to create the road which will access and service the southern areas of the site zoned for future urban development.
- There are no other appropriate sites in reasonable proximity for the roads.
- The development is consistent with the following relevant aims of the Tweed LEP 2000:
 - to give effect to the desired outcomes, strategic principles, policies and actions of the Tweed Shire 2000 + Strategic Plan; and
 - to encourage sustainable economic development of the area of Tweed compatible with the area's environmental and residential amenity qualities.
- The development is consistent with the following relevant objective of the 7(l) zone namely, to allow for other development that is compatible with the primary function of the zone.

Notwithstanding the above, extensive measures are proposed and detailed in this report to manage and mitigate any impacts as a result of the proposed works.