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Concept Plan MP 05_0091 Environmental Assessment

(Subdivision of Lot 1 DP871039
Bayside Way, Brunswick Heads
"Bayside Brunswick")

18 August 2011

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LM080082.000





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Certification of Environmental Assessment

This Environmental Assessment was prepared under Part 3A of the *Environmental Planning and Assessment Act 1979* by:

Name: Steven Smith

Qualifications: BA, Dip Urb. Reg. Plan, MPlA

Address: LandPartners Ltd, 2A Carrington Street, Lismore, NSW

Proposal: Concept Plan for subdivision and residential development of land

Proponent: Codlea Pty Ltd
c/o LandPartners Limited
PO Box 1134
Lismore, NSW 2480

Site Location: Bayside Way, Brunswick Heads, NSW 2483

Property Description: Lot 1 DP 871039
Parish of South Ballina, County of Richmond

Certification:

I certify that I have prepared the contents of the Environmental Assessment in accordance with the requirements of the *Environmental Planning and Assessment Act 1979* and Regulation and that, to the best of my knowledge, the information contained in this report is not false or misleading.

Signature:



Name: Steven Smith

Date: 18 August 2011

Executive Summary

This Concept Plan proposes subdivision of residential land at Brunswick Heads on the NSW Far North Coast. The land is zoned 2(a) Residential Zone under the Byron Local Environmental Plan 1988, and is entirely within the NSW Coastal Zone.

Director-General's requirements (DGR's) for environmental assessment have been issued for the Concept Plan, and are addressed in this report or in appended specialist reports.

A Concept Plan does not approve the construction of development, so the Concept Plan has been progressed while Council builds a new STP that will service the site.

The proponent's consultants have liaised with State agencies, Council and the local community. Plans have been amended in response to input from those consultations.

The Concept Plan proposes 167 residential lots ranging in size from 450m² to in excess of 1,000m². The dominant built form will be detached housing, although provision has been made for an area of medium density development. Approximately 50% of the lots will be large enough for dual occupancy development but traditionally this option is only taken up by a minority of landowners.

The urban footprint is defined by perimeter roads that separate urban development from ecologically sensitive areas and bushfire hazards. Within the urban footprint, several hectares of land will be dedicated as drainage reserves and parks, and a further 1.6 hectares of native vegetation will be located in large privately owned lots.

The ownership and management of undeveloped land, particularly land in the Environmental Protection zones, is yet to be resolved with Council and State agencies. It may not be resolved until a Development Application is lodged for subdivision.

The majority of residential houses are expected to be developed under the NSW Housing Code as a form of complying development. Non-Code developments such as medium density and non-complying houses will be assessed under contemporaneous planning controls in the Byron Local Environmental Plan and Development Control Plan.

Dual occupancy will be possible on large residential lots throughout the subdivision, generally in accordance with Council planning controls other than minimum lot size.

The proposed subdivision retains the majority of mature trees on the site. The use of water sensitive urban design, modification of a channelized watercourse, and appropriate environmental management controls will be required during construction.

There are no matters of national environmental significance under the EPBC Act.

All infrastructure and services are available to the development, although there are local concerns about the capacity of local primary schools.

This Environmental Assessment indicates that residential development of the land is an expected outcome of the planning system, and will facilitate much needed housing supply in the area.

The Concept Plan will inform the next stage of planning, namely an application for subdivision of the land. It is anticipated that an application for subdivision will be lodged immediately upon approval of the Concept Plan.

Note: A subdivision layout was completed in late 2010 and is the subject of reports attached to this Environmental Assessment. Subsequent liaison with the Department of Planning resulted in the removal of several lots and a street at the southeast of the site. The final layout is referred to in this report and in the flora and fauna assessment (Appendix C), but the other reports have not been amended.

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1. Introduction

LandPartners has been engaged by Codlea Pty Ltd ("Codlea") to prepare an Environmental Assessment in support of Concept Plan MP05_0076.

The land proposed for development is entirely within Lot 1 DP871039 and is owned by Codlea.

1.1 Background

Brunswick Heads is a coastal village approximately 15km north of Byron Bay. The village centre and surrounding residential area is bounded by the Brunswick River, Simpsons Creek, and Brunswick Heads Nature Reserve (refer Fig. 1). It is land-locked and unable to expand any further.

The "Bayside Brunswick" residential estate is a relatively new housing estate, south of the Brunswick Heads village. It is separated from the village by a narrow undevelopable area, sportsfields, a bowling club and Crown land.

The Bayside estate, including the land proposed for subdivision in this application, has been zoned for residential development since the Byron Local Environmental Plan 1988.

The first stages of Bayside Brunswick were developed in the 1980's and 1990's. There are now approximately 170 dwellings in the estate.

Codlea owns the remaining land release area, which is the subject of this application. Codlea lodged a development application for subdivision of the remaining zoned land in 1995 but were thwarted by inadequate sewerage capacity in the Brunswick Heads Sewage Treatment Plant. The application was refused by Council, and Codlea appealed to the Land and Environment Court. The appeal was successful but Council then appealed that decision in the Court of Appeal and won, so the application remained refused.

In an effort to gain some traction in the planning system, a preliminary assessment for a Part 3A Concept Plan was submitted in 2006. The Concept Plan has evolved as new information was obtained from site-specific studies and assessments.

A Concept Plan does not approve development and thus would not have offended the sewerage "moratorium" which was in place until recently.

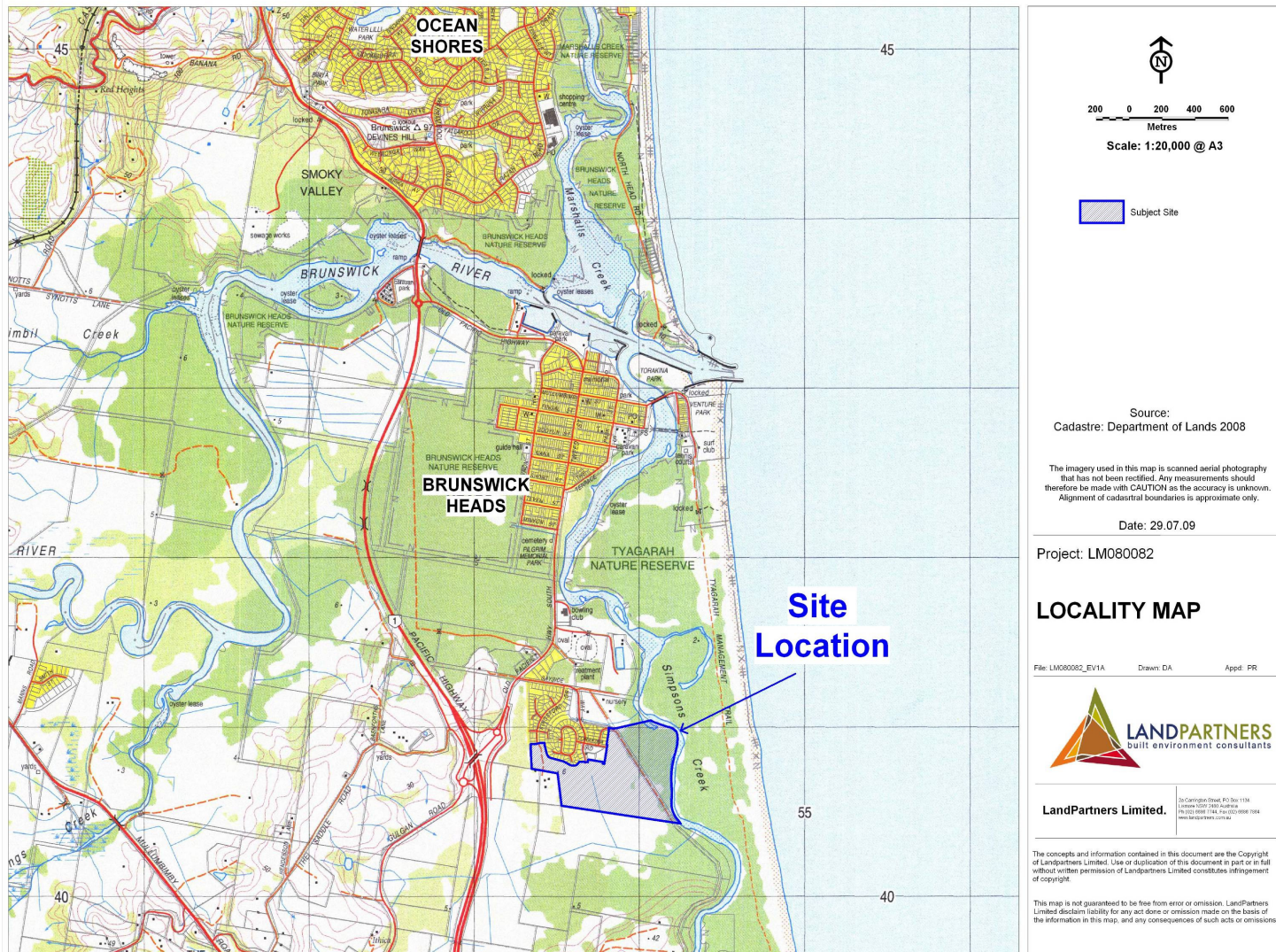


Figure 1. Locality Map

Ref No LM080082.000

Urban Design – Surveying – Urban Planning – Environmental Consulting – Civil & Structural Engineering – Mapping & Spatial Information

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1.2 The Proponent

The proponent for the development is the owner of the site, Codlea Pty Ltd.

Codlea developed the second of two existing residential subdivision stages in Bayside Brunswick in the mid-1990's. They have attempted to progress residential subdivision several times through a development application and appeal action in the mid and late-1990's, and now through this Concept Plan.

1.3 Project Team

Acid Sulfate Soils	BorderTech
Archaeological and Cultural Heritage	Everick Heritage Consultants Pty Ltd
Bushfire hazard	LandPartners
Contamination	BorderTech
Flooding and coastal processes	BMT WBM
Flora and Fauna	James Warren & Associates
Geotechnical	BorderTech
Planning	LandPartners
Subdivision design and engineering	LandPartners
Traffic	TTM Consulting
Visual & landscape	LandPartners
Water – surface & groundwater	Waste Solutions Australia Pty Ltd
Water Cycle Management	LandPartners

1.4 Director-General's Requirements

The Director-General's requirements (DGR's) for the preparation of this Environmental Assessment were first issued on 12 January 2007 and amended on 28 July 2008. They were reissued on 14 October 2010, with some minor updates to reflect current State planning policy and guidelines. A full copy of the DGRs is provided in Appendix A.

The Key Issues of the DGRs are addressed in different consultants' reports and in different sections of this Environmental Assessment, as per the following table.

General requirements	EA Section
The Environmental Assessment (EA) for the Concept Application must include:	
1. An executive summary;	Exec Summary
2. An outline of the scope of the project including:	2 (2.1 – 2.5)
(a) any development options;	
(b) justification for the project taking into consideration any environmental impacts of the project, the suitability of the site and whether the project is in the public interest;	
(c) outline of the staged implementation of the project if applicable;	3 (3.1 – 3.14)
3. A thorough site analysis including constraints mapping and description of the existing environment;	
4. Consideration of any relevant statutory and non-statutory provisions and identification of any non-compliances with such provisions, in particular relevant provisions arising from environmental planning instruments, Regional Strategies (including draft Regional Strategies) and Development Control Plans;	4 (4.1 – 4.8)
5. Consideration of the consistency of the project with the objects of the <i>Environmental Planning and Assessment Act 1979</i> ;	5
6. Consideration of impacts, if any, on matters of National Environmental Significance under the Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i> ;	6
7. An assessment of the potential impacts of the project and a draft Statement of Commitments, outlining environmental management, mitigation and monitoring measures to be implemented to minimise any potential impacts of the project;	7
8. An assessment of the key issues specified below and a table outlining how and where these key issues have been addressed in the EA;	8
9. The plans and documents outlined in Attachment 2 ; and,	Various appendices
10. A signed statement from the author of the Environmental Assessment certifying that the information contained in the report is neither false nor misleading.	Certification
Key issues	
The Environmental Assessment must address the following key issues:	8
1. Strategic Planning	
1.1 Justify the proposal with reference to relevant local, regional and State planning strategies. Provide justification for any inconsistencies with these planning strategies.	2.4, 8.1
2. Subdivision Design, Layout and Desired Future Character	

2.1 Demonstrate the consistency of the proposal with the character of existing development in terms of the locality, street frontage, scale, building envelopes and future built form controls, aesthetics, energy and water efficiency and safety.	8.2.1
2.2 Demonstrate the consistency of the proposed subdivision design and layout with the <i>Coastal Design Guidelines for NSW, NSW Coastal Policy 1997</i> and <i>State Environmental Planning Policy</i> (SEPP) 71 – Coastal Protection.	8.2.2
2.3 Assess and demonstrate the suitability of the site in terms of integration and compatibility of the proposed land uses and community facilities (schools, aged care, residential properties, hospitals, parks) and potential impacts such as access arrangements for each use, traffic, buffers, density controls, noise impacts and suitability of the proposed development with the surrounding area.	
2.4 Identify the type of subdivision proposed across the site, that is, community, Torrens, strata.	8.2.3
2.5 Provide details of potential building envelope, built form and design quality controls and the means for implementing them.	8.2.4
2.6 Provide details of any staging that demonstrates the lots will be released in an orderly and coordinated manner.	8.2.5
2.7 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.	8.2.6
3. Flora, Fauna and Aquatic Habitats	
3.1 Assess the potential impacts of the development on flora and fauna taking into consideration impacts on any threatened species, populations, ecological communities and/or critical habitat and any relevant recovery plan in accordance with DECC's <i>Guidelines for Threatened Species Assessment</i> (2005), having particular regard for the wallum vegetation and Wallum Froglet identified on the site. Provide measures for the conservation of flora and fauna, where relevant.	7.1.1.2, 8.3, & Appendix C
3.2 Address impacts on migratory species, RAMSAR wetlands and species listed under Section 18 and 18A of the EPBC Act.	
3.3 Address impacts of clearing of native vegetation, and outline measures for the conservation of existing wildlife corridor values and/or connective importance of any vegetation on the subject land. Particular consideration should be given to minimising impacts on the creek line running north/south on the western side of the lot, in consultation with Council.	
3.4 Address direct and indirect impacts on the riparian zone, and identify conservation (riparian) buffer zones between the development areas and adjoining vegetation, having regard to a recommended minimum 50m buffer width and findings, conclusions and recommendations of the Brunswick Estuary Management Study and Management Plan.	
3.5 Address ownership of proposed conservation areas, riparian zones and buffer zones, and management regimes to be undertaken in these areas and zones.	
3.6 Address the preliminary design for the footbridge over Simpson's Creek and its potential impacts on aquatic habitat, including any requirements of Department of Primary Industries (Fisheries) regarding this habitat.	
3.7 Address potential impacts of the proposed beach access through Tyagarah Nature Reserve and any requirements of the Department of Environment and Climate Change (DECC).	

4. Water Cycle Management & Watercourses		
4.1 Address potential impacts on the nearby SEPP 14 wetlands; on local surface water and groundwater quality; and the potential of the development to contaminate groundwater quality or impact on groundwater dependent ecosystems.	7.1.1.4, 8.4, & Appendix D	
4.2 Address and outline measures for an Integrated Water Cycle Management (IWCM) plan for the site, including the impact and treatment of stormwater discharge including overland flows from the site to the local waterways (including the creek line referred to at Section 3.3 above) and potential impacts of stormwater run off to adjoining land and watercourses.		
4.3 A concept erosion and sedimentation control plan or drawing that shows the nature and location of all erosion and sedimentation control measures to be utilised on the site is to be provided.		
4.4 Prepare conceptual design layout plan for preferred stormwater treatment train showing location, size and key functional elements of each part of the system. The plan should also include details of any major overland flow paths though the site and any discharge points to the street drainage system		
4.5 In consultation with Council address appropriateness of the wetland and detention ponds adjoining the proposed park, particularly having regard to potential mosquito habitat. The on-site detention is to be integrated with the proposed landscape design. Site discharge calculations should be provided		
5. Hazard Management and Mitigation		
<i>Coastal Processes</i>		
5.1 Address coastal hazards and the provisions of the <i>Coastline Management Manual</i> . In particular consider impacts associated with wave and wind action, coastal erosion, sea level rise and more frequent and intense storms.	8.5 & Appendix E	
<i>Contamination</i>		
5.2 Identify any contamination on site and appropriate mitigation measures in accordance with the provisions of <i>State Environmental Planning Policy (SEPP) 55 – Remediation of Land</i> .	8.5 & Appendix J	
<i>Acid Sulfate Soils</i>		
5.3 Identify the presence and extent of acid sulfate soils on the site and, where relevant, appropriate mitigation measures.	8.5 & Appendix G	
<i>Bushfire</i>		
5.4 Address the requirements of <i>Planning for Bush Fire Protection 2006</i> (RFS).	8.5 & Appendix H	
<i>Geotechnical</i>		
5.5 Provide an assessment of any geotechnical limitations that may occur on the site and if necessary, appropriate design considerations that address these limitations.	8.5 & Appendix B	
<i>Flooding</i>		
5.6 Provide an assessment of any flood risk on site (for the full range of floods including events greater than the design flood, up to probable maximum flood; and from coastal inundation, catchment based flooding or a combination of the two) and having consideration of any relevant provisions of the <i>NSW Floodplain Development Manual 2005</i> . The assessment should determine: the flood hazard in the area; address the impact of flooding on the proposal, address the impact of the proposal (including filling) on flood behaviour of the site and adjacent lands and address adequate egress and safety in a flood	8.5 & Appendix E	

event. 5.7 Assess the potential impacts of sea level rise and an increase in rainfall intensity on the flood regime of the site and adjacent lands with consideration of <i>NSW Coastal Planning Guideline – Adapting to sea Level Rise</i> (NSW Government 2010) and <i>Practical Consideration of Climate Change – Floodplain Risk Management Guideline</i> (DECC, October 2007).	
6. Traffic Management and Access	
6.1 Prepare a ' <i>Traffic Impact Study</i> ' in accordance with the RTA's <i>Guide to Traffic Generating Development</i> and in particular address road design requirements adjacent to the proposed child care centre. 6.2 Road design should be in accordance with the <i>Brunswick Heads Settlement Strategy</i> 2004 and street layout designed to discourage speeding. 6.3 Identify available public transport, additional demands for such transport, and means of meeting those demands. 6.4 Illustrate pedestrian and cyclist linkages in the vicinity of the site and provide additional walkway/cycleway facilities, where appropriate.	8.6 & Appendix M
7. Visual Impact	
7.1 Address the visual impact of the proposal in the context of surrounding development and relevant mitigation measures. 7.2 Provide a view analysis including artist's impression, photomontages, etc of the proposal in the context of the surrounding development. 7.3 Provide a landscape concept plan or drawing that shows the basic detail of planting design and plant species to be used, listing botanical and common names, mature height and spread, number of plans to be utilized, tree removal/retention, built elements and surface treatments (i.e. pavers, lawn etc).	8.7 & Appendix I
8. Heritage and Archaeology	
8.1 Identify whether the site has significance to Aboriginal cultural heritage and identify appropriate measures to preserve any significance (Aboriginal community consultation should be undertaken in accordance with the draft <i>Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation (DECC 2005)</i> . 8.2 Identify any other items of European heritage significance and provide measures for conservation of such items.	8.8 & Appendix F
9. Socio-economic Impacts	
9.1 Provide a social impact assessment for the proposal. Address the social and economic context of the proposal in terms of infrastructure requirements, public transport, community services and facilities (including schools and medical services) and provision of any affordable housing.	8.9
10. Infrastructure Provision and Services	
10.1 Address existing capacity and requirements of the development for sewerage, water, electricity, waste disposal, telecommunications and gas in consultation with relevant agencies. Identify and describe staging, if any, of infrastructure	8.10 & Appendix K

works.	
10.2 Address and provide the likely scope of any planning agreements and/or development contributions with Council/Government agencies (including relevant community/state infrastructure contributions).	
Consultation	
You should undertake an appropriate and justified level of consultation with relevant parties during the preparation of the Environmental Assessment, including:	9
(a) <i>Agencies or other authorities:</i>	9.1
<ul style="list-style-type: none"> • Commonwealth Department of Environment, Water, Heritage and the Arts; • Byron Shire Council; • NSW Department of Environment and Climate Change; • NSW Department of Primary Industries (Fisheries); • NSW Department of Water and Energy; • NSW Department of Lands; • NSW Rural Fire Service; • Roads and Traffic Authority; • Cape Byron Marine Park Authority; • Northern Rivers Catchment Management Authority; • Local Aboriginal Land Council/s and other Aboriginal community groups; and • Relevant service providers. 	
(b) <i>Public:</i>	9.2
Document all community consultation undertaken to date and/or discuss the proposed strategy for undertaking community consultation. This should include any contingencies for addressing any issues arising from the community consultation and an effective communications strategy.	
The consultation process and the issues raised should be described in the Environmental Assessment.	

1.5 Structure of Environmental Assessment

This Environmental Assessment is structured generally in accordance with the structure of the DGR's:

- Certification
- Executive Summary
- Introduction and Background
- Description of the Proposal
- Site Analysis
- Statutory and Non-Statutory Planning Provisions
- Consistency with the EP & A Act
- EPBC Act
- Potential Impacts
- Key Issues – including a summary of issues and mitigation measures recommended by each specialist consultancy
- Consultation
- Conclusion
- Appendices – DGRs, consultant reports

2. Description of the Proposal

2.1 Objectives of the Proposal

This proposal has the following objectives:

- a) To facilitate supply of urban residential land;
- b) To provide diverse residential lot sizes, within the context of local market preferences;
- c) To obtain a form of approval that does not rely on sewage treatment capacity;
- d) To provide planning guidance to future development application/s;
- e) To conserve significant vegetation and habitats;
- f) To resolve drainage arrangements with regard to existing development, topography and drainage patterns;
- g) To establish a subdivision footprint and layout that will not have adverse impacts on water quality and receiving environments;
- h) To seek feedback from public authorities regarding the dedication of land for public purposes;
- i) To inform the future zoning and other planning controls applying to the land in the new shirewide Local Environmental Plan.

2.2 Description of the Proposal

The proposal, as shown on Fig. 2, is for subdivision of land in the 2(a) Residential Zone to create 175 residential lots, a medium density lot, two large environmental/lifestyle lots, public reserves and parkland.

Lots and dwellings:

Lot size class	Number of lots	Percentage of lot yield
450-500m ²	20	12.2
500-600m ²	63	38.4
600-800m ²	66	40.3
Over 800m ²	15	9.1
Environment/lifestyle lots	2	
Medium density lot	1	
Total	167	100.0

The lots between 450m² and 800m² are conventional house lots.

The lots over 800m² are located and configured for several different purposes:

- One lot is to be created for future Medium Density development. It has an area of approximately 5,000 m² and could accommodate 16 dwellings at a ratio of 300m² site area per dwelling. The type, density and form of medium density development is not subject of this application.
- Two large "environmental lifestyle" lots of approximately 9,650m² and 7,300m².
- Fifteen residential lots scattered around the subdivision, in response to environmental factors (primarily tree retention) or in cul-de-sac locations.

In addition to residential lots, there are two undeveloped drainage areas within the 2(a) zone, of approximately 1.01 and 1.27 hectares. There is also a bushland park with an area of more than 10 hectares containing land zoned 7(a) Wetlands, 7(b) Coastal Habitat and 2(a) Residential.

The maximum dwelling potential of the development is approximately 200 dwellings. This is derived from the basic number of lots plus the development potential for dual occupancy and medium density opportunities.

The take-up of dual occupancy development will be at the discretion of individual landowners. It is likely that some landowners will prioritise the amenity of a single dwelling on a larger allotment, rather than develop dual occupancy.

Secondary dwellings may theoretically provide some additional housing stock. There are few, if any, secondary dwellings in the existing Bayside area. This type of development is more common in the older established part of Brunswick Heads and may be of limited appeal in the proposed development.

The subdivision footprint and internal configuration have been derived from thorough site analysis and consideration of housing demand and market factors.

Assessment of the Concept Plan, and further assessment of environmental factors and market conditions at DA stage, may result in some fine tuning of the proposal.

Streets:

- Road 1 extends from an existing street (Kingsford Drive) into the subdivision. It terminates at a T-intersection with Road 2. Its alignment has been revised many times in order to achieve retention of trees and viable house lots.
- Road 2 is an extension from the other end of Kingsford Drive into the subdivision. In this location, Kingsford Drive provides access to two house blocks and the pre-school. Road 2 becomes a perimeter road for the southwest of the subdivision and terminated at a T-intersection with Road 5.
- Road 3 extends from the end of an existing street (Omega Circuit) into the subdivision. It provides a perimeter road for the northeast of the subdivision,

and provides an edge road to a wet heath swale. The scenic bushland amenity of Road 3 is capitalised by footpaths.

- Road 4 extends from an existing street (Torakina Road) into the subdivision.
- Road 5 works as part of the grid layout within the subdivision and has intersections with several other streets. It also forms a perimeter road at the southern edges of the subdivision. Road 5 provides access to several car parking spaces and a park at the southeast corner of the subdivision, to provide amenity for recreational users of Simpsons Creek.
- Road 6 is an internal street linking Roads 3 and 5.
- Road 7 is an internal street linking Roads 3 and 5.
- Road 8 is a cul-de-sac off Road 5.
- Road 9 is an internal street, connecting with Road 2 at both ends.
- Road 10 is a cul-de-sac off Road 9.

Cul-de-sac:

It is worthwhile commenting on the use of culs-de-sac due to the contemporary, and generally understandable, trend away from them and towards (or back to) a grid-based street network.

The majority of the proposed street network is based on a grid layout with relatively high levels of connectivity. There are two small culs-de-sac, each containing seven (7) fan-shaped or rectilinear lots (i.e. 14 lots in total). All cul-de-sac lots are larger than 600m² and six (6) are larger than 800m². One lot is hatchet-shaped, and is larger than 1,000m².

The use of these two small culs-de-sac is justified on the grounds that (a) they are quite short and will not substantially hinder connectivity or walkability, (b) they are an acceptable solution to the environmental conditions and constraints that affect the overall layout, (c) only 14 lots or 8% of the total development are in that form, and (d) they provide an urban outcome that some young families perceive as beneficial e.g. for traffic safety reasons.

Environment:

The development footprint has taken the environmental factors of the site into account, with the result that the urban footprint (defined by perimeter roads) is located well inside the 2(a) Residential zone boundary.

Within the urban footprint, all trees at or over 3 m within the land zoned 2(a) residential have been located by precision survey, and the subdivision has been designed for maximum tree retention.

In total, 16.83 hectares (54%) of the site will be subject to development. However, most development will occur in areas of already cleared and disturbed land (70%). There will also be a loss of 141 trees of varying ecological significance (i.e. habitat or food trees for various species).

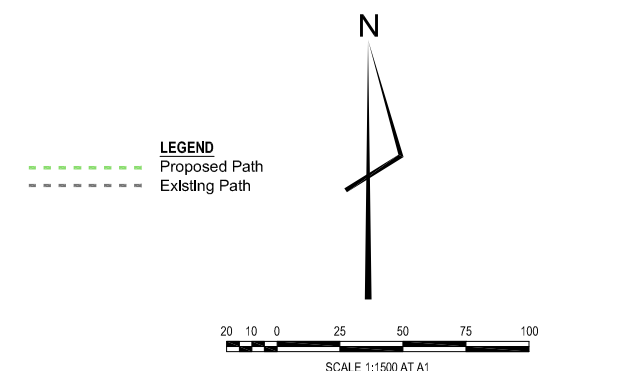
The alignment of Road 1 at the west of the subdivision has been carefully planned to avoid significant tree loss. This has resulted in some lots backing on to adjoining land at the south of the site rather than using a perimeter road. This is an acceptable outcome as the adjoining land is privately owned and is used for rural-residential purposes. A perimeter road in this location has no strong advantage in terms of bushfire protection or buffer distances.

Also at the west, there are areas of significant vegetation that are proposed to be held in private ownership in two large lots of approximately 7,300 and 9,100 square metres.

Wallum froglet habitat in the eastern swale will be conserved. Additional wallum froglet habitat has been incorporated in the redesigned central drain area of 1.27 hectares.

At the east of the site land zoned 7(a) Wetlands and 7(b) Coastal Habitat, and some land zoned 2(a) Residential, has high ecological values and will be conserved. This land has an area of approximately 10 hectares.

The proposed development is shown on the following plans of lot layout (Fig. 2), roadworks (Fig. 3) and services (Fig. 4). Environmental plans are contained in later sections of the report.



Residential Lot Mix		
Area Range	No	% of Total
450m ² -500m ²	20	12.2%
500m ² -600m ²	63	38.4%
600m ² -800m ²	66	40.2%
>800m ²	15	9.1%
	164	100.0%

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C	Updated Land Budget & Lot No's	KGB	WF	17.08.11	-
B	Updated Layout	KGB	WF	08.08.11	-
A	For Discussion	KGB	GC	03.12.10	-
Rev	Description	Des	Drw	Date	Appd

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CODLEA Pty Ltd

BAYSIDE BRUNSWICK
PROPOSED URBAN SUBDIVISION
BAYSIDE WAY, BRUNSWICK HEADS
LOT 1 DP 871039

PROPOSED SUBDIVISION
LOT LAYOUT

Scale: 1:1500 at A1
Datum: AHD

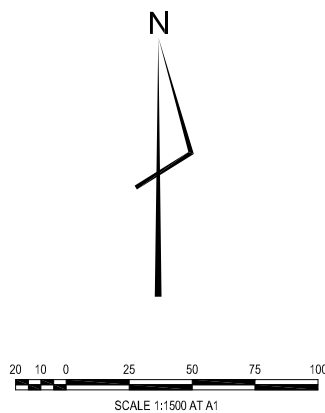


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Sheet No.
1 of 1

Dwg. No. **LM080082-DR31**

Issue **C**



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D	AMENDED LOT NUMBERS	WF	WF	17.08.11
C	AMENDED LAYOUT	WF	WF	24.02.11
B	CONCEPT SUBMISSION	WF	WF	24.02.11
A	CONCEPT SUBMISSION	WF	WF	01.12.10

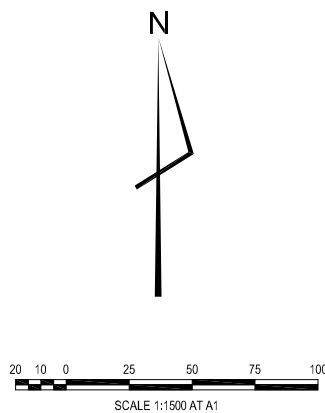
Iss	Description	Des	Drw	Date	Appd
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PROPOSED URBAN SUBDIVISION
BAYSIDE WAY, BRUNSWICK HEADS
LOT 1 DP 871039
PROPOSED SUBDIVISION
ROADWORKS AND LEVELS
CONCEPT PLAN

Scale: 1:1500 at A1 CAD file: LM080082-DR24D.dwg
Datum: AHD CivilCAD file:-



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D	AMENDED LOT NUMBERS	WF	WF	17.08.11
C	AMENDED FILL AREA	WF	WF	14.05.11
B	AMEND FILL AREA	WF	WF	24.02.11
A	CONCEPT SUBMISSION	WF	WF	01.12.10

Iss	Description	Des	Drw	Date	Appd
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PROPOSED URBAN SUBDIVISION
BAYSIDE WAY, BRUNSWICK HEADS
LOT 1 DP 871039

WATER AND SEWER SERVICES CONCEPT PLAN

Scale: 1:1500 at A1 CAD file: LM080082-DR25D.dwg
Datum: AHD CivilCAD file:-



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LEGEND

- PROPOSED LOT POLYGON
(lot layout to be confirmed)
- PROPOSED GRAVITY SEWER
(maintenance hole & junction)
- PROPOSED LOW PRESSURE SEWER
(size and layout to be confirmed)
- PROPOSED WATER RETICULATION
(1000 typical with house connection)

2.3 Options Considered

1. The original 2006 submission for this Concept Plan proposed a homogenous subdivision over the entire 2(a) Residential zone, to create 209 lots. This proposal was abandoned due to numerous problems with environmental impact, drainage and urban design.
2. Some consideration was given to providing small lots for attached housing (terrace houses) in the future village centre. However, the marketing realities in Brunswick Heads, and Bayside in particular, favour traditional detached housing. The proponents do not intend to experiment with small lot attached housing, which would be a first in Brunswick Heads, but it may be considered in the future as one of the options for the medium density site.
3. Subdivision to accommodate environmental sensitivities and to provide diverse lot sizes, catering for a majority of detached housing. This required:
 - a) Assessment of ecological sensitivity on different parts of the site, and consideration of factors to avoid and mitigate environmental impact
 - b) Flood modelling
 - c) Adaptation of streets and lot layouts to bushfire requirements
 - d) Consideration of urban design guidelines

Also informing this approach was the fact that the NSW Housing Code allows for detached housing on lots of 450m² or larger to be assessed as complying development, i.e. without needing a development application. This simpler and quicker assessment process is a substantial benefit to housing affordability.

This approach resulted in many iterations and refinements of subdivision plans.

4. Residential allotments in the southeast corner of the site, on a relatively high sand ridge. This would have required a road cross through the eastern swale in two locations (to create a loop road, rather than a cul-de-sac). This was the concept submitted to the Department of Planning in late 2010 – 11 lots were proposed. Upon review and discussions with the Department, primarily regarding ecological factors, these lots and the associated road link were removed to create the layout described in this document (a small road to a car park near the creek is still proposed). That earlier plan is still contained in the assessments and reports of the majority of consultants, except for the flora and fauna assessment by James Warren & Associates.

2.4 Justification

This EA contains detailed assessments of various environmental issues, legislation and planning guidelines that demonstrate the appropriateness of the proposed development.

The proposed Concept Plan for subdivision of the land is justified on the basis that:

- Providing a supply of suitable, serviceable residential land is in the public interest;
- The land is already zoned for the purpose;
- The land is identified as a residential release area in the Far North Coast Regional Strategy and the Brunswick Heads Settlement Strategy;
- Urban services including reticulated water, sewer, stormwater drainage, electricity and telecommunication, are available and can be extended into the development in an orderly fashion;
- The environmental attributes of the site have been thoroughly analysed as part of this process;
- The conservation status of various parts of the land has been identified and the potential for adverse environmental impacts has been avoided or mitigated;
- The proposal is consistent with the objectives of applicable planning instruments and legislation.

2.5 Staging

It is proposed to stage the development by extending infrastructure and serviced allotments, starting from the edge of the existing urban area. Central and eastern areas will come first, and areas at the southeast and western edges of the development will come last.

Refer to Fig. 5 for an indication of staging. The number of lots in each stage may be modified in response to market forces at the time.

Staging is also addressed in the Key Issues section.

2.6 Planning controls for future development

Future development applications in Bayside Brunswick will need to be in accordance with the approved Concept Plan and Statement of Commitments. This applies to DA's for subdivision and for any residential development that is not complying development.

This Concept Plan will have superior authority to Council's DCP 2010 and Bayside Brunswick.

As described in Section 2.2, this Concept Plan proposes lot sizes ranging from 450m² to in excess of 800m². Approximately half of the lots in the subdivision will be less than 600m² in size, and down to 450m².

The NSW Housing Code will apply to detached housing on subdivided lots. The Code stipulates a range of criteria that must be met in order for a dwelling to be considered as complying development (i.e. not need a DA). Dwellings that do not comply with the Code will need a DA.

To avoid an unreasonable policy gap between complying development and non-complying development, it is proposed that the provisions of the Housing Code be applied unilaterally. This means that development applications for houses that do not comply with the Code will then need to lodge a DA and justify the proposed variations from the provisions of the Code. Justification will need to address common planning considerations such as building height, bulk and scale, the amenity of the neighbourhood etc., and also address the objectives (but not the detailed planning provisions) of Byron LEP and DCP.

Dual occupancy and medium density development will not be complying development and will need a DA. Existing Byron DCP controls for these types of development are generally appropriate, with the exception of lot sizes and density.

For dual occupancy, Byron DCP requires a minimum lot size of 800m² and a site frontage of 15 metres. For medium density the minimum lot size is 1,200m² and site frontage 25 metres.

These controls were introduced in the late 1990's and were until recently contained in DCP 2002 (now DCP 2010). During exhibition of the draft shirewide DCP 2010, Council's website advised that:

Draft DCP 2010 is an amalgamation of all existing Byron Shire DCP's into one plan to comply with changes to the *Environmental Planning and Assessment Act 1979*, section 74C(2) which states that only one DCP may apply to the Shire. Therefore, all existing Byron Shire DCP's, that is DCP 2002 and DCP's 3 to 21, have been included as a chapter in the draft DCP 2010. Council's existing DCP provisions have been rolled over into the draft DCP 2010. The only changes that have been made to existing provisions are:

- Chapter 1 Part A: minor amendments including the plans new name and inclusion of new definition for public art
- Chapter 1 Part D: new controls for commercial development at the southern end of Jonson Street, Byron Bay. These new controls are highlighted

- Chapter 1 Part E: new section on public art that requires certain development to contribute to the provision of public art
- Legislative and State Government Department name changes

DCP 2010 was adopted on 3 March 2011. It appears that there has been no substantial investigative review of these planning controls for at least 10 years. The sewerage constraint to development prevented dual occupancy and medium density development in most urban settlements in Byron Shire for about 12 years. There has been very little opportunity to review, or anticipate, the impact of these planning controls under contemporary and emerging social and economic conditions. However since these planning controls were introduced, a number of urban design guidelines and architectural studies and documents have been released which demonstrate the benefit of a design-lead approach to residential density. Key reference documents include:

- North Coast Urban Design Guidelines
- NSW Coastal Design Guidelines
- Landcom Housing Diversity guidelines
- SEQ Next Generation Planning Handbook

Given the increasing pressures on housing affordability and development economics, and the availability of contemporary design guidelines, the minimum lot sizes for dual occupancy and medium density development stipulated in Byron LEP and DCP 2010 are considered inefficient and inequitable and likely to produce a monoculture of large detached dwellings, with limited diversity in dwelling type and relative affordability. The combination of 600m² minimum lot size and 0.5:1 floor space ratio in the DCP facilitates dwellings of up to 300m². Low densities result in low population catchments and an orientation towards car-based transport. These are not desirable outcomes in Bayside Brunswick. A reduction in the minimum lot size for dual occupancy to 600m² will facilitate diverse types of housing and should support the future development of a small neighbourhood shop and perhaps other commercial activity in Bayside. This is consistent with the Brunswick Heads Settlement Strategy and contemporary planning practice.

Planning controls for secondary dwellings are established under other legislation outside this Concept Plan.

Proposed planning controls:

Dual occupancy development may be undertaken on residential allotments if:

- (a) the development is in accordance with the development controls in Byron DCP 2010 Chapter 1 Part C Section C5 ("Dual Occupancy") with the exception of minimum site area and minimum street frontage; and
- (b) the combined floor area and site coverage of the two dwellings (whether attached or detached) does not exceed the requirements of the NSW Housing

Code for a single dwelling (e.g. for a lot of 600m², the maximum combined floor area of the 2 dwellings would be 330m² and site coverage 50%).

Multi-dwelling development may be undertaken on land identified as "MD" on the plans in this Concept Plan. On that land:

- Multi-dwelling development may be undertaken on part or all of the land in accordance with the development controls in Byron DCP 2010 Chapter 1 Part C Section C7 ("Medium Density and Residential Flat Buildings") with the exception of minimum site area and minimum street frontage;
- Multi-dwelling development may be undertaken on part or all of the land in the form of further subdivision of the land, if it may reasonably be expected that dwellings on the resultant lots will be able to comply with the complying development provisions of the NSW Housing Code.



Figure 5. Proposed staging plan

3. Site Analysis

Constraints mapping is contained in appended specialist reports, which should be referred to for details. The site constraints of most significance to the proposed development are ecology, flooding and topography. Key constraints are depicted on Fig. 6 and are discussed in the following sections.



Figure 6. Site analysis plan

3.1 Site Location

The site comprises one allotment of approximately 31.3 hectares. It is shown in a regional context at Fig. 7.

The site is:

- in Byron Shire, on the Far North Coast of New South Wales
- adjacent to existing residential development at "Bayside Brunswick", a residential estate at the edge of Brunswick Heads
- between the Pacific Highway and the coast
- 1.5 km south of Brunswick Heads
- 5km south of the village of Ocean Shores
- 7km east of the village of Mullumbimby
- 17km north of the town of Byron Bay
- 50km northeast of the city of Lismore
- 52km south of Coolangatta (gold coast) international airport
- 60km from Palm Beach (south end of the Queensland gold coast)
- 150km south of Brisbane CBD, and 157 km from Brisbane airport



3.2 Topography and Drainage

The site is located on a flat sandy coastal plain, with approximately 2.0 metres of relief across the site between RL 3.0m and 5.0m as shown on Fig. 6.

The site is adjacent to Simpsons Creek. Most of the site frontage to the creek is in the form of a steep embankment, although there is one area with moderate slope down to the water at the southeast of the site.

Simpsons Creek runs generally parallel to the coast from south to north and, consistent with this, there are very low ridges and drainage lines within and near the site, oriented north/south. The east of the site contains hind dunes of the beach barrier system, whereas the west of the site has low gently undulating beach ridge plain (source: Border-Tech, Appendix B). The main drainage swale at the east of the site drains to the north, to Simpsons Creek.

A channelized watercourse in the middle of the site is fed by other smaller drains, and flows to the south through adjoining land and eventually to Simpsons Creek.

3.3 Geology and Soils

The geology and soils of the site are uniform and form part of a larger sandy coastal plain, formed from a combination of fluvial (alluvial) and dune formation processes.

Soils are characterised by a layer of dark grey medium dense to dense sand overlying pale grey dense sand. Soil depths range between 2 metres and 6.3 metres, typically terminating at indurated sand.

Refer to the geotechnical report at Appendix B for details.

3.4 Vegetation

Refer to the Flora and Fauna Assessment report at Appendix C. Ecological considerations are the main determinant of the urban development footprint, internal lot layout and street alignment.

The area of land proposed for subdivision is predominantly slashed grassland and scattered mature native trees in open woodland. There is an area of dense undisturbed native vegetation at the east of the site, and small patches of native vegetation at the west of the site.

According to the Flora and Fauna Assessment report at Appendix C, 165 flora species were recorded at the Subject site in total. No Threatened or ROTAP (Rare or Threatened Australian Plant, Briggs & Leigh 1995) species were recorded.

Three (3) Endangered Ecological Community (EEC's) occurs on the site:

- Swamp Sclerophyll Forest on Coastal Floodplains of the NSW North Coast, Sydney Basin and South East Corner bioregions.
- Swamp Oak Floodplain Forest.
- Coastal Saltmarsh in the NSW North Coast, Sydney Basin and South East Corner Bioregions.

Seven (7) broad vegetation communities were recorded; these are listed on Table 1. Description of these communities is provided in Appendix C - Section 5.3.4.

Table 1. Vegetation communities present at the site (Source: Flora and Fauna Assessment report - Appendix C)

Community	Description
1	Swamp sclerophyll communities
	1a Tall closed swamp sclerophyll forest (<i>Eucalyptus robusta</i>)
	1b Tall closed swamp sclerophyll woodland (<i>E. robusta</i>)
	1c Tall closed swamp sclerophyll forest (<i>Melaleuca quinquenervia</i>)
	1d Tall closed wet sclerophyll forest (<i>E. signata</i> , <i>E. robusta</i>)
	1e Tall closed wet sclerophyll forest (<i>E. robusta</i> , <i>M. quinquenervia</i>)
	1f Regenerating swamp sclerophyll forest (<i>E. robusta</i> , <i>M.</i>
2	Dry sclerophyll communities
	2a Tall closed sclerophyll forest (<i>E. signata</i> , <i>Endiandra sieberi</i>)
	2b Tall open dry sclerophyll forest (<i>E. signata</i> , <i>Allocasuarina littoralis</i> ,
3	Heath communities
	3a Tall closed heath (<i>B. aemula</i> , <i>A. littoralis</i>)
	3b Low closed slashed heath
	3c Low closed wet heath /sedgeland
4	Estuarine communities
	4a Mid-high mid-dense mangrove forest (<i>Avicennia marina</i> , <i>Aegiceras</i>
	4b Mid-high forest (<i>Casuarina glauca</i> , <i>M. quinquenervia</i>)
	4c Brackish swamp (<i>Juncas kraussii</i> , <i>Acrostichum speciosum</i>)
5	Tall closed grassland (<i>Andropogon virginicus</i>)
6	Scattered trees (<i>E. robusta</i>)
7	Drainage lines

3.5 Fauna

Refer to the Flora and Fauna Assessment report at Appendix C. Fauna surveys carried out by James Warren and Associates in 2003, 2004, 2008 and 2009 resulted in the detection of a number of fauna species.

Fauna surveys recorded 61 fauna species including: 9 amphibians; 4 reptiles; 42 birds and 6 mammal species.

Seven threatened species were recorded including: the Common planigale; Glossy black cockatoo; Grey headed flying fox; Koala; Little bentwing bat; Osprey and the Wallum froglet. In addition, a further 16 species were considered either *likely* to occur or a *possible* occurrence on the site based on the availability of suitable habitat.

The most sensitive habitat areas in the 2(a) Residential zone have been identified as:

- The expanse of bushland at the east of the site, some of which encroaches into the 2(a) zone;
- The eastern drainage swale, which provides habitat for the wallum froglet;
- Patches of bushland at the edge of the site

Within the 2(a) Residential zone, there are isolated mature native trees which have habitat value. Many of these trees are to be retained wherever possible.

3.6 Hydrogeology

Water samples were taken from bores and from Simpsons Creek and the central drain. These were assessed for pH, conductivity, nutrient levels, metals, dissolved oxygen, turbidity, and faecal coliforms. Refer to Surface and Groundwater Assessment at Appendix D for details.

Groundwater investigations indicated a shallow water table generally between 0.3m and 0.8m deep, and no deeper than 1.8m. The depth of the water table fluctuates, being generally higher during wet periods and lower when it is dry, as shown at Figs. 8 and 9 respectively. It is likely that the site is underlain by a continuous sand aquifer.

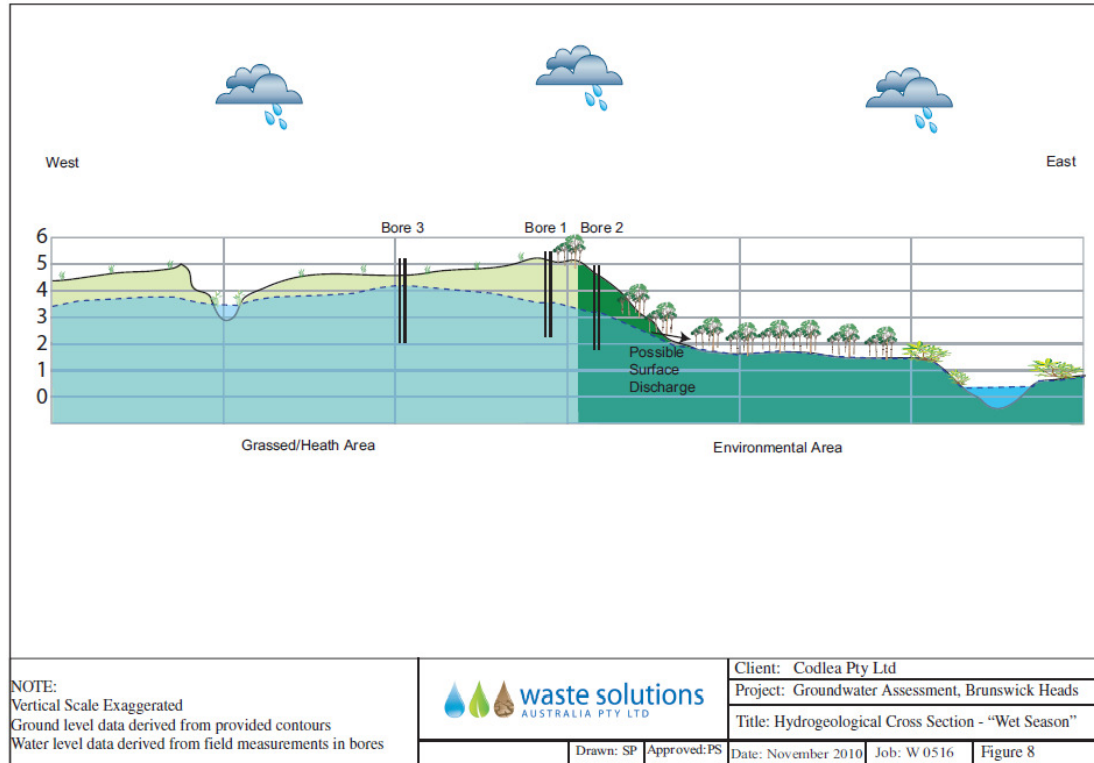


Figure 8. Hydrogeological cross section – wet season. Source: Waste Solutions (Appendix D)

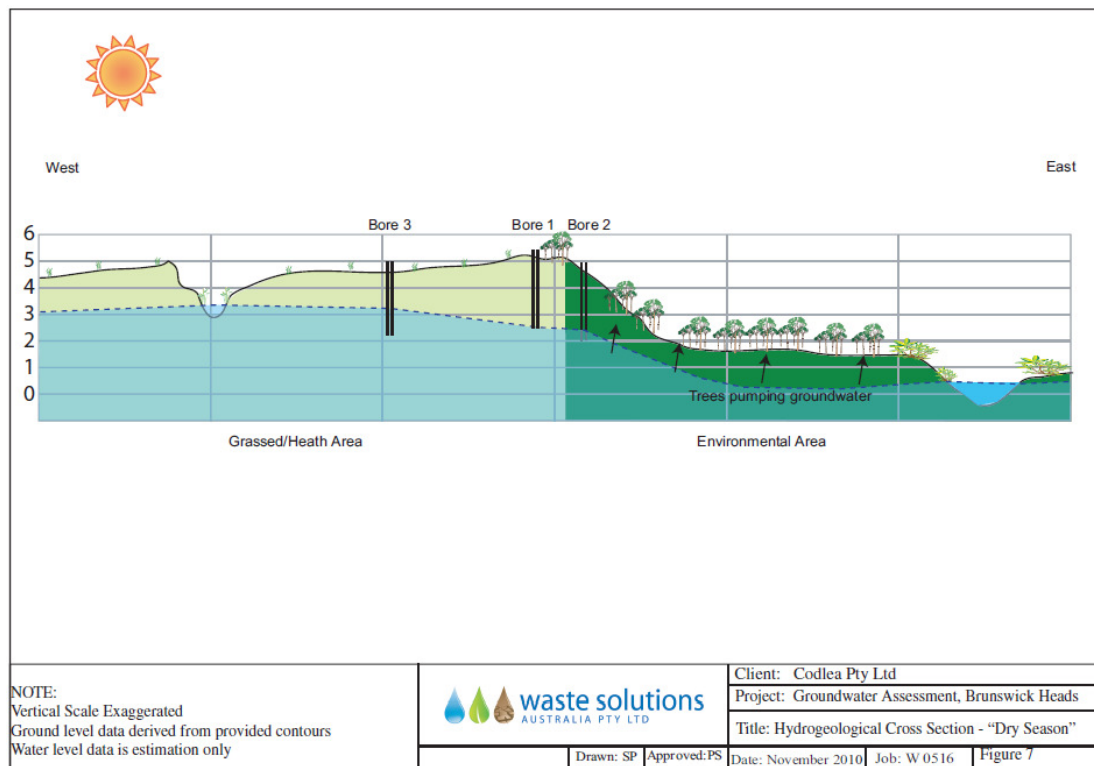


Figure 9. Hydrogeological cross section – dry season. Source: Waste Solutions (Appendix D)

3.7 Flooding

Apart from undevelopable land in the 7(a) Wetlands and 7(b) Coastal Habitat zones closer to Simpsons Creek, the majority of the site is above the 1-in-100 flood level.

Taking the State government's climate change policy scenario into account, the northern part of the eastern drainage swale (within Park 1) is floodprone at the 1 in 100 level, as shown at Fig. 10. This is mainly due to floodwaters backing up from Simpsons Creek into that drainage path. Refer to the Flood and Coastal Advice Report on Appendix E for details.

Modelling of Council's adopted climate change scenario produces slightly higher flood levels but, due to the flat topography, the lateral extent of flooding expands across the site. Refer to Appendix E for details.

Flood consultants for the project have advised that the State government policy provides an "adequate degree of conservatism for the establishment of minimum fill levels."

The area that is subject to flooding is also ecologically constrained.

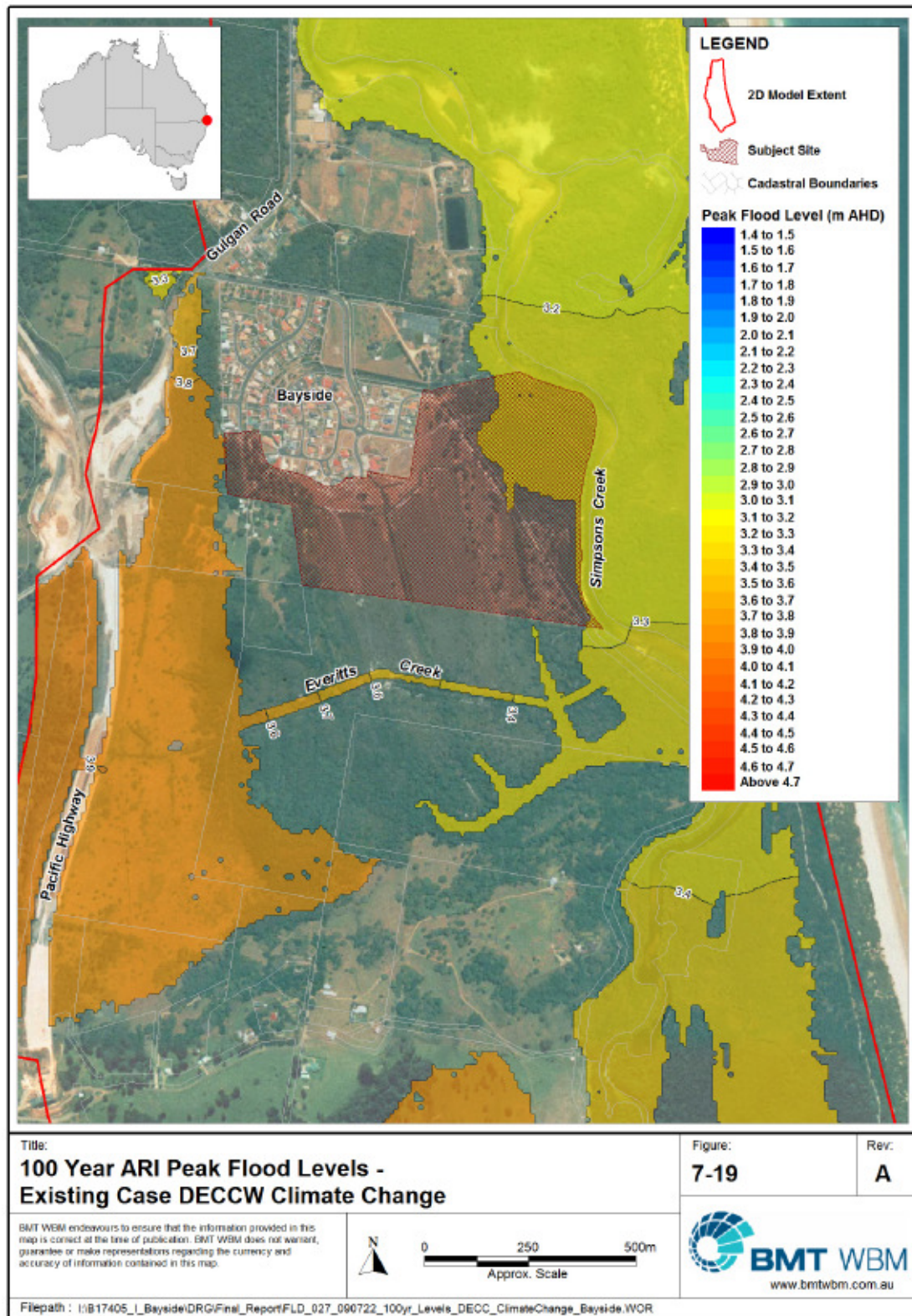


Figure 10. Flood Levels. Source: BMT WBM (Appendix E)

3.8 Archaeology

A cultural heritage assessment, incorporating consultation in accordance with guidelines, has been conducted (refer to Appendix F - Cultural Heritage Assessment).

Investigations and consultations indicate that there are no areas, sites or relics of archaeological significance on or near the site.

Refer to Appendix F for details.

3.9 Acid Sulfate Soils

The site has been investigated for acid sulfate soils as part of the geotechnical assessment. Indications are that acid sulfate soils may occur at a depth of 2 metres.

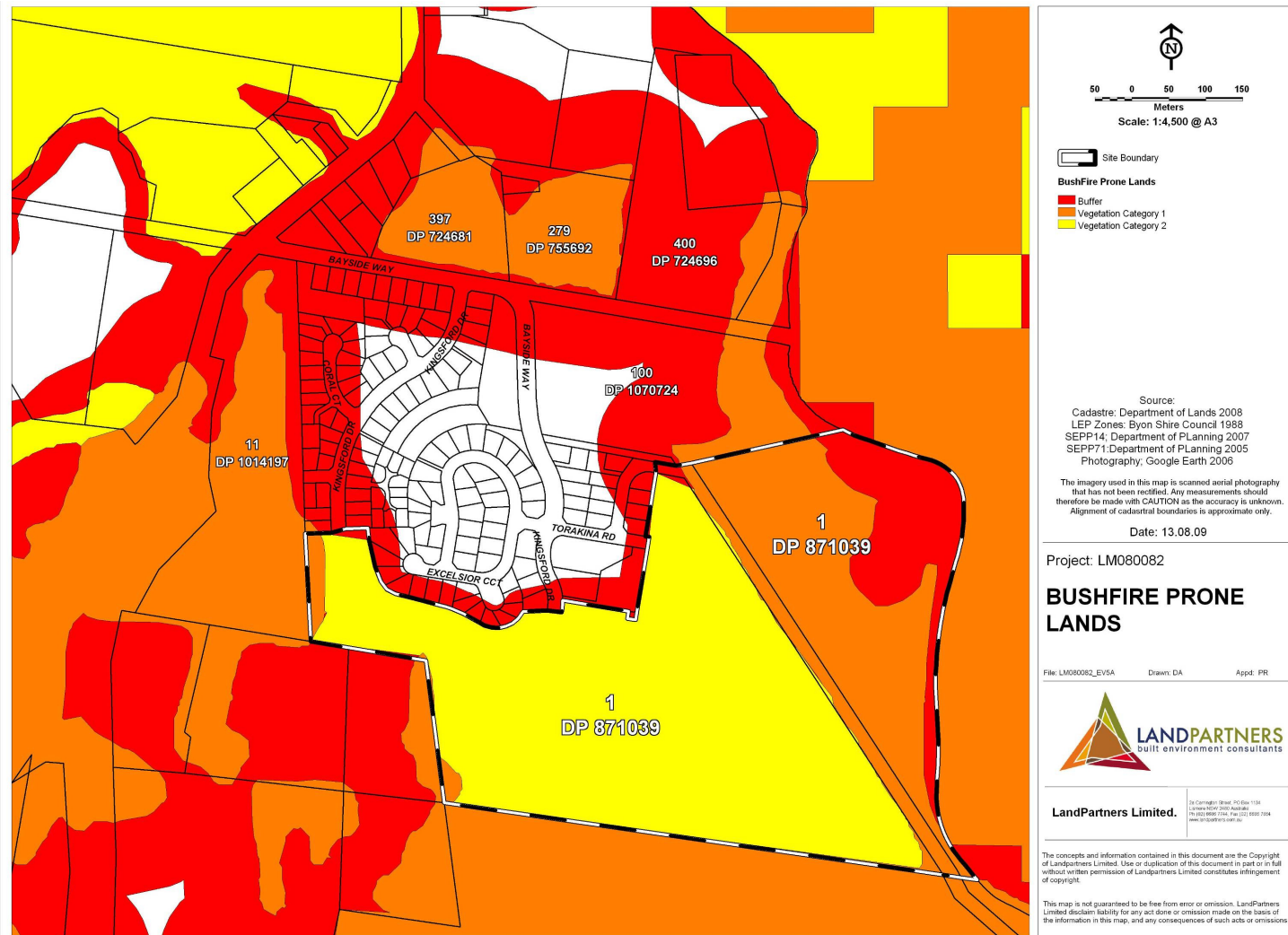
Refer to the Acid Sulfate Soils assessment in Appendix G for details.

3.10 Bushfire Hazard

The site is mapped as bushfire prone land (refer to Fig. 11). Category 1 vegetation encroaches into the 2(a) Residential zone at the east and west of the site. The majority of the 2(a) Residential zone contains Category 2 vegetation. Adjoining land to the southwest of the site is classified as "buffer."

Field assessment in February 2009 determined that the Site would have a moderate to high bushfire risk due to the occurrence of significant stands of native vegetation to the east, and the occurrence of Swamp Forest communities in the west, and neighbouring unmanaged Heathland to the south. There is no threat of bushfire from the north, which is an established residential area, or from the south-west where two rural residential lots adjoin.

Refer to the Bushfire Assessment in Appendix H for details.



3.11 Visual Sensitivity

The site is isolated by its geography and surrounding vegetation. It is not a visually sensitive site from external viewpoints or public roads, but it does have some local visual significance for the Bayside community.

The land parcel, particularly at the east, contains vegetation that is visually significant and contributes strongly to the local identity of the site and its relationship with the Simpsons Creek estuary and the nearby Tyagarah Nature Reserve.

There are smaller vegetated areas at the west of the site, some of which adjoin the existing residential development, which also contribute to the scenic amenity of the area.

3.12 Contamination

Land uses have been altered over time, primarily through clearing and drainage works.

The site has been investigated for contamination as part of geotechnical investigations, and no evidence of contamination has been found.

Refer to the Stage 1 Preliminary Contaminated Land Assessment in Appendix J for details.

3.13 Climate

The site has a typical subtropical climate with warm summers, mild winters and gradual transitions through spring and autumn. Seasonal and diurnal temperature variations are low due to the low altitude and proximity to the coast.

The coastal location of the site exposes it to afternoon sea breezes in summer.

Average annual rainfall for Brunswick Heads is 1745mm. The following table shows temperatures and rainfall for nearby Byron Bay:

Brunswick Heads climate averages:				
Month	Daily minimum (°C)	Daily maximum (°C)	Number of days of rain	Monthly rainfall (mm)
January	20.8	27.5	14.8	165.0
February	20.6	27.6	15.4	186.1
March	19.5	26.5	16.9	208.0
April	17.2	24.5	15.1	183.1
May	15.0	22.0	14.2	179.6
June	12.5	19.7	12.1	164.4
July	11.7	19.3	10.2	105.9
August	12.5	20.3	9.4	93.2
September	14.3	22.2	9.4	66.5
October	16.1	23.3	11.4	102.9
November	17.8	24.7	12.2	120.3
December	19.5	26.4	12.6	143.1

Source: Bureau of Meteorology

3.14 Existing Infrastructure

There is no existing infrastructure within the site, with the exception of excavated stormwater drains.

The existing Bayside Brunswick estate has the usual urban services: sealed road surfaces, reticulated water and sewer, kerbing and guttering and stormwater drainage, electricity. These can be easily extended into the proposed subdivision. There is no reticulated gas supply.

All services, as shown at Fig. 6, terminate at the edge of the existing subdivision, in readiness for extension into future development stages as described in the current proposal.

4. Statutory and Non-Statutory Provisions

4. Consideration of any relevant statutory and non-statutory provisions and identification of any non-compliances with such provisions, in particular relevant provisions arising from environmental planning instruments, Regional Strategies (including draft Regional Strategies) and Development Control Plans;

The relevant "*environmental planning instruments, Regional Strategies (including draft Regional Strategies) and Development Control Plans*" are:

1. Byron Local Environmental Plan 1988
2. Far North Coast Regional Strategy
3. Settlement Planning Guidelines for the Far North Coast
4. State Environmental Planning Policy No. 44 Koala Habitat
5. State Environmental Planning Policy – Major Development
6. North Coast Regional Environmental Plan (SEPP)
7. Byron Development Control Plan No. 6 Bayside Brunswick
8. Byron Development Control Plan 2002 (shirewide)
9. Byron Development Control Plan No. 21 Social Impact DCP

SEPP 71 is also relevant but it is specifically addressed in the "Key Issues" section later in this report.

Refer to the Flora and Fauna assessment in Appendix C regarding the provisions of:

- *Threatened Species Conservation Act 1995*
- *Native Vegetation Act 2003*
- *Fisheries Management Act 1994*

4.1 Byron Local Environmental Plan 1988

The LEP does not provide controls on lot size, building envelope, floor space ratio or other matters pertaining to residential subdivision.

The relevant provisions of the LEP are:

Clause 2 Aim, objectives and guiding principles:

(1) Aim

The aim of this plan is to promote sustainable development in Byron by furthering the objects of the [Environmental Planning and Assessment Act 1979](#), particularly in regard to:

- (a) the application to proposed development of guiding principles for the management, development and conservation of natural and human made resources (including natural areas, forests, coastal areas, water, agricultural*