PLANNING PROPOSAL

COFFS HARBOUR CITY COUNCIL

Planning Proposal PP-2021-4602
Reduce Minimum Lot Size
14-22 Smiths Road, Emerald Beach
Lot 1 DP 726095

November 2021
VERSION 2 Exhibition

PLANNING PROPOSAL STATUS

Stage	**Version / Date** *(blank until achieved)*
Reported to Council – Initiate s3.33 **Version 1 – Pre-Exhibition**	**Version 1 – Pre-Exhibition** **October 2021**
Referred to DPIE s3.34(1) **Version 1 – Pre-Exhibition**	***(insert date on PP)***
Gateway Determination s3.34(2) **Version 1 – Pre-Exhibition**	**Version 2 - Exhibition** **November 2021**
Amendments Required:	***No***
Public Exhibition – Schedule 1 Clause 4 **Version 1 - Exhibition**	***(insert Exhibition Dates xx/xx/xx – xx/xx/xx)***
Reported to Council – Endorsement (or Making of LEP if delegated) s3.36 **Version x - Post Exhibition**	***(insert date on PP)***
Endorsed by Council for Submission to Minister for Notification (or Making where not delegated) s3.36(2) **Version x – Post Exhibition**	***(insert date on PP)***

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EXECUTIVE SUMMARY & EXHIBITION INFORMATION

What is a Planning Proposal?

A planning proposal is a document that explains the intended effect of a proposed local environmental plan (LEP) and sets out the justification for making that plan. Essentially, the preparation of a planning proposal is the first step in making an amendment to *Coffs Harbour Local Environmental Plan 2013* ('Coffs Harbour LEP 2013').

A planning proposal assists those who are responsible for deciding whether an LEP amendment should proceed and is required to be prepared by a relevant planning authority. Council, as a relevant planning authority, is responsible for ensuring that the information contained within a planning proposal is accurate and accords with the *Environmental Planning and Assessment Act 1979* and the NSW Department of Planning, Industry and Environment's *A guide to preparing planning proposals* 2018 and *A guide to preparing local environmental plans 2018*.

What is the Intent of this Planning Proposal?

The intent of this Planning Proposal is to amend the Coffs Harbour Local Environmental Plan (LEP) 2013 Lot Size Map Sheet LSZ_005E, as it relates to 14-22 Smiths Road, Emerald Beach (the site) from 1 hectare to 5000 m^2. The site contains an existing approved detached dual occupancy and an adjustment to the minimum lot size that applies to the property will allow the buildings to be separated via a two lot Torrens Title subdivision.

Background

Proposal	Reduce Minimum Lot Size
Property Details	Lot 1 DP 726095, 14-22 Smiths Road, Emerald Beach
Current Land Use Zone(s)	R5 Large Lot Residential
Proponent	Keiley Hunter Town Planning
Landowner	Estate A.P. Rose & Mrs N. M. Rose
Location	A location map is included below

This planning proposal has been prepared in accordance with the Environmental Planning and Assessment Act 1979 and *A guide to preparing planning proposals* (NSW Department of Planning and Environment 2018) and *A guide to preparing local environmental plans* (NSW Department of Planning and Environment 2018).

This planning proposal explains the intended effects of an amendment to Coffs Harbour LEP 2013 to reduce the minimum lot size affecting the site, from 1 hectare to 5000 m^2. The site contains an existing approved detached dual occupancy and an adjustment to the minimum lot size that applies to the property will allow the buildings to be separated via a two lot Torrens Title subdivision.

The Site

The land affected by this planning proposal is located at 14-22 Smiths Road, Emerald Beach, as shown in Figure 1. The site has an area of 1.0629 hectares and is zoned R5 Large Lot Residential – see Figure 2. The site is located in the Avocado Heights estate, a long-established Large Lot Residential precinct. The site is mapped as bushfire prone, however is clear of any flood planning area. The land is of a uniform north-westerly slope and is predominantly cleared with a small area of mapped Koala habitat on the eastern boundary.

The site is easily accessible via an existing road network which connects Smiths Road to the Pacific Highway via Solitary Islands Way. It is in close proximity to existing shops and services at Moonee Beach and Woolgoolga.

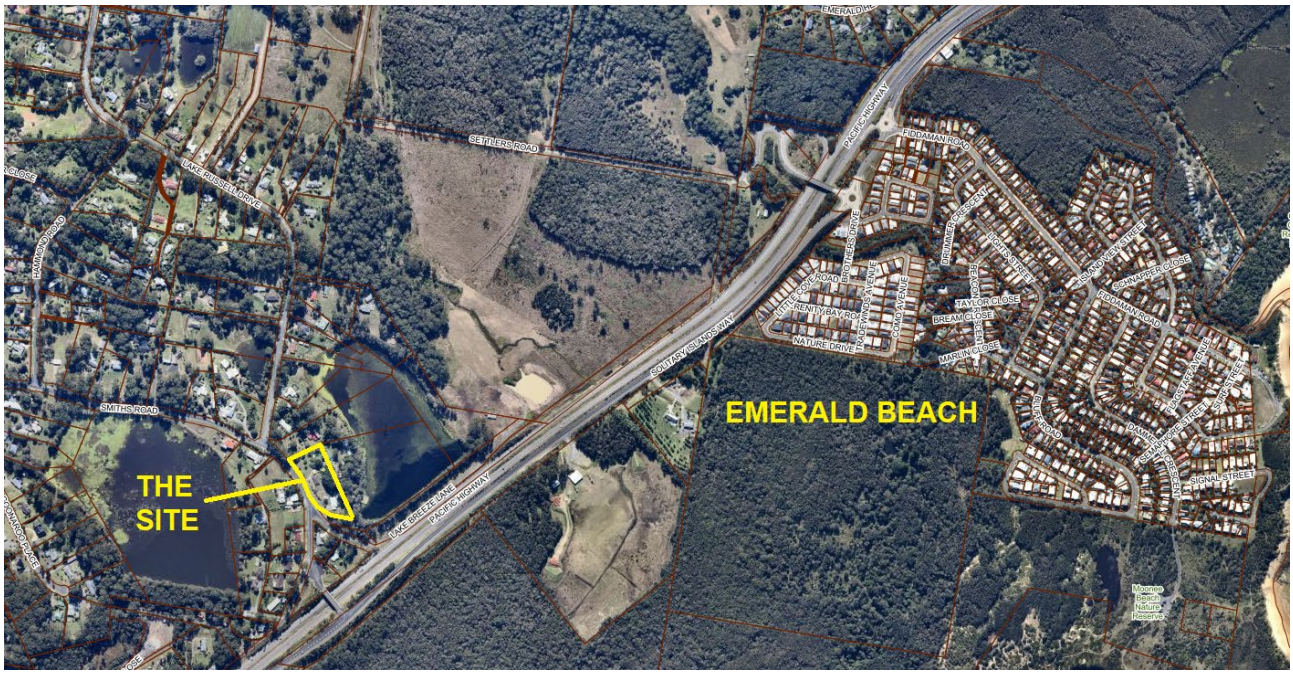

Figure 1: Locality Map: Lot 1 DP 726095

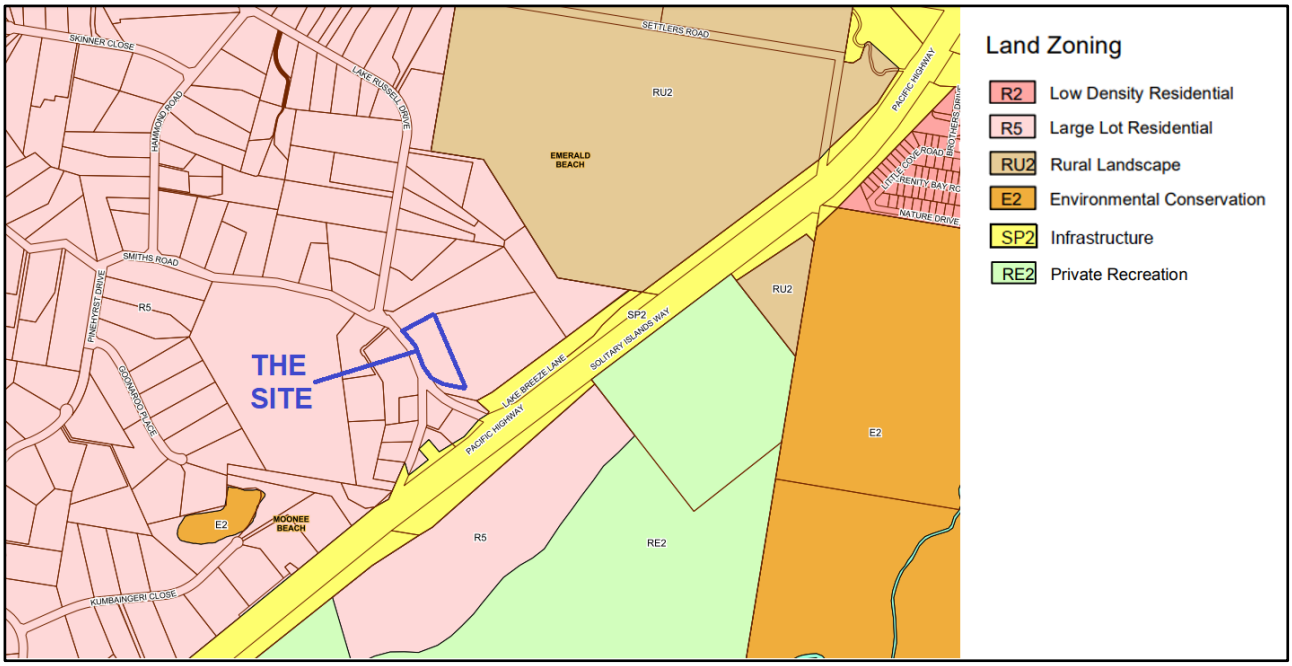

Figure 2: Land Use Zones – Coffs Harbour LEP 2013

The existing minimum lot size applicable to the site under Coffs Harbour LEP 2013 is shown in Figure 3.

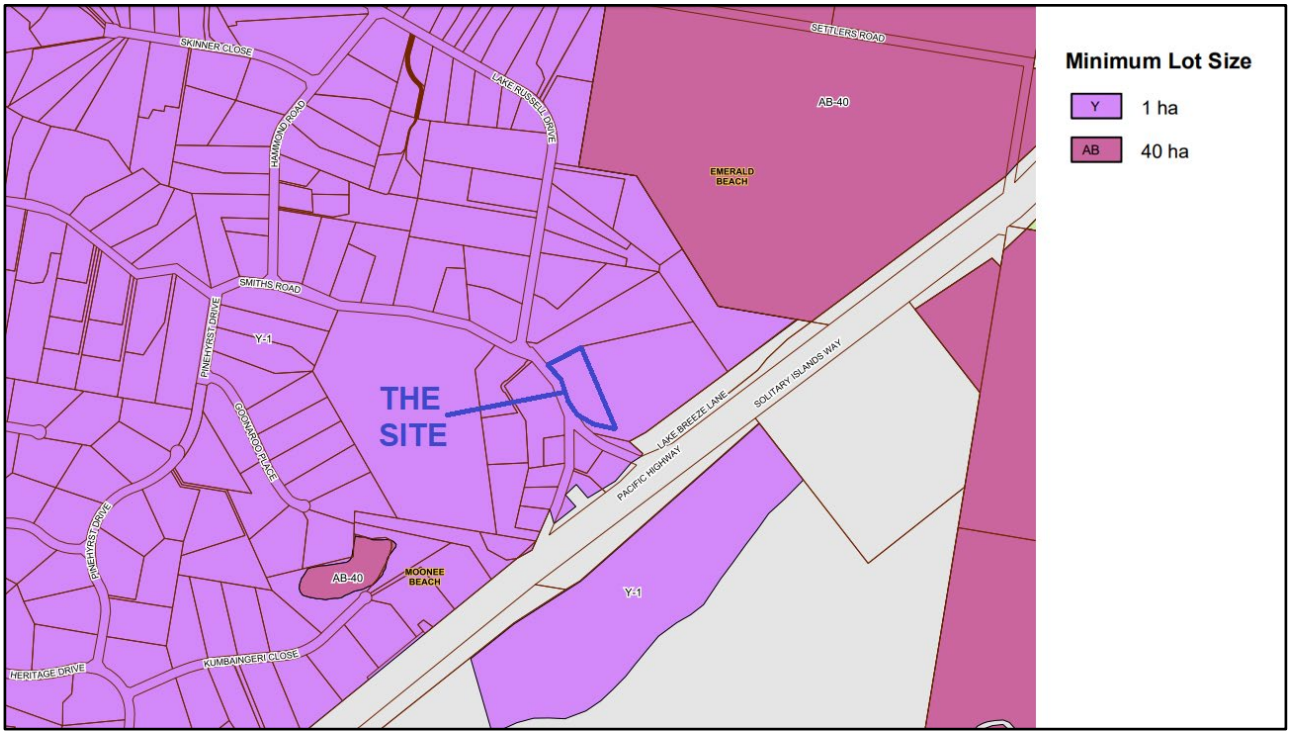

Figure 3: Existing Lot Size Map – Coffs Harbour LEP 2013

Indicative large lot residential subdivision

An indicative large lot residential two-lot layout is shown in Figure 4.

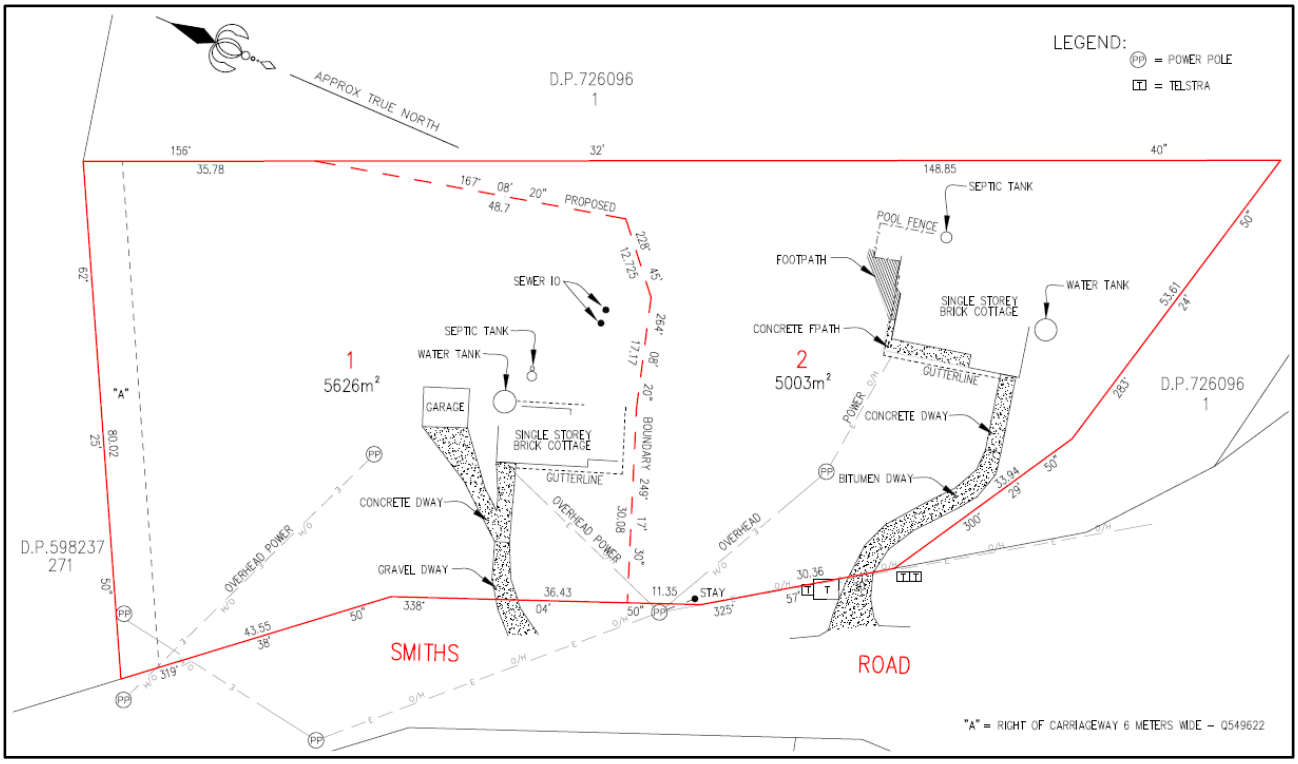

Figure 4: Indicative two-lot subdivision layout

PART 1 – OBJECTIVES OR INTENDED OUTCOMES

The intended outcomes of this planning proposal are to:

- Amend Coffs Harbour LEP 2013 mapping by reducing the minimum lot size that applies to the site, from 1 hectare to 5000 m^2;
- Ensure that the land is able to be developed in accordance with sound planning and design principles; and
- Ensure that the planning proposal is consistent with the broad strategic direction for the locality as described by North Coast Regional Plan 2036 and Council's LGMS 2020.

PART 2 – EXPLANATION OF PROVISIONS

The intended outcomes of the proposed LEP amendment will be achieved by amending Coffs Harbour LEP 2013 Lot Size Map Sheet LSZ_005E, as it relates to 14-22 Smiths Road, Emerald Beach from 1 hectare to 5000 m^2

PART 3 – JUSTIFICATION

This part provides a response to the following matters in accordance with A guide to preparing planning proposals (NSW Department of Planning and Environment 2018):

- Section A: Need for the planning proposal
- Section B: Relationship to strategic planning framework
- Section C: Environmental, social and economic impact

Section A – Need for the planning proposal

1. Is the planning proposal a result of an endorsed local strategic planning statement, strategic study or report?

Yes. The planning proposal has been prepared in response to a landowner's request and is accompanied by a number of detailed environmental studies which are included as appendices to this planning proposal. The land is included in an existing R5 Large Lot Residential zone and Council's Local Growth Management Strategy (LGMS) 2020, Chapter 6 – Large Lot Residential addresses the potential reduction of minimum lot size in the R5 zone, where sufficiently justified. Section 6.7 within Chapter 6 of the LGMS states the following:

'It is also reasonable that if undeveloped land within zone R5 can justify a reduced lot size, then it should be considered through an applicant-initiated planning proposal. This would allow a merit case for a revised minimum lot size LEP amendment request to be submitted to Council, bearing in mind the underlying reasons for the standard in the first place and the objectives of zone R5.'

Coffs Harbour has a range of existing large lot residential lot sizes that reflect past planning subdivision practice. In many cases, lot sizes reflected various constraints including slope, flooding, soil types and water table issues. Minimum lot size requirements were addressed in previous Development Control Plans (e.g. under LEP 2000) prior to being included as a development standard under the Standard Instrument Local Environmental Plan (LEP 2013).

A typical factor affecting lot size in Large Lot Residential zoned areas is onsite sewage management and the potential for the lot/s to be efficiently serviced by an effective onsite sewage management system. When considering the suitability for a lot to sustainably manage wastewater on-site, an assessment will typically refer to 'available effluent management area'. This broadly refers to available areas (i.e. not built out or used for a conflicting purpose) where onsite sewage management systems will not be unduly constrained by site and soil characteristics. Available area on a developed a lot is determined by the following factors:

- total building area (including dwellings, sheds, pools etc.) which includes a defined building envelope but may extend beyond with additional improvements to a property, such as driveways and paths (impervious areas), and gardens/vegetated areas unsuitable for effluent reuse;
- dams, intermittent and permanent watercourses running through lots;
- maintenance of appropriate buffer distances from property boundaries, buildings, driveways and paths, dams and watercourses;
- flood prone land;
- excessive slope;
- excessively shallow soils;
- heavy (clay) soils with low permeability;
- excessively poor drainage, shallow groundwater and/or stormwater run-on; and
- excessive shading by vegetation.

The proposed lot areas and the land improvements on the site are as follows:

Proposed Lot	Area (m2)	Improvements
1	5,626	Dwelling, separate garage, concrete/gravel driveways
2	5,003	Dwelling, adjoining garage, swimming pool, bitumen/concrete driveway

Surrounding lots listed in the following table have a similar (or smaller) area and character to the two lots proposed as a result of this amendment to the minimum lot size map:

Address	Area (m^2)
2 Smiths Road	3,004
9 Smiths Road	3,250
15 Smiths Road	2,561
46 Smiths Road	6,003
6 Lily Pad Lane	2,782
14 Lily Pad Lane	3,784
6 Lake Breeze Drive	3,067
10 Lake Breeze Drive	4,840
32 Lake Russell Drive	6,000
22 Lake Russell Drive	6,000
45A Lake Russell Drive	3,000
59 Lake Russell Drive	3,000
77 Lake Russell Drive	3,205
81 Lake Russell Drive	4,707
81A Lake Russell Drive	4,136
81B Lake Russell Drive	4,081
81C Lake Russell Drive	4,315
12A Hammond Road	3,531
14 Hammond Road	3,413
20 Hammond Road	3,416
22 Hammond Road	3,487

The Land Capability Assessment included with this planning proposal (see Appendix 5) concluded that given the low slopes and limited site and soil constraints, a minimum 5,000m^2 lot sizing at 14-22 Smiths Road would be considered acceptable (also see section 10 of this planning proposal for further information).

2. Is the planning proposal the best means of achieving the objectives or intended outcomes, or is there a better way?

Yes. This planning proposal is not an overall review of the City controls proposed through the preparation of an LGA wide LEP review. Therefore, a site-specific planning proposal accompanied by relevant environmental planning studies is the only way of achieving the intended outcomes associated with the planning proposal.

3. Is there a net community benefit?

The Net Community Benefit Criteria is identified in the NSW Government's publication *The Right Place for Business and Services*. This policy document has a focus on ensuring growth within existing centres and minimising dispersed trip generating development. It applies most appropriately to planning proposals that promote significant increased residential areas or densities, or significant increased employment

areas or the like. This planning proposal will not change the existing zones in Coffs Harbour LEP 2013 or affect directly the range of land uses permitted under LEP 2013. The criteria in the Net Community Benefit test can't be properly applied to this planning proposal.

Section B – Relationship to strategic planning framework

4. Will the planning proposal give effect to the objectives and actions contained within the North Coast Regional Plan 2036?

The proposed LEP amendment is considered to be consistent with the relevant goals, directions and actions within the North Coast Regional Plan 2036 as follows:

GOAL 2 – A THRIVING, INTERCONNECTED ECONOMY

- ***Direction 11 - Protect and enhance productive agricultural lands***

  Action 11.1 - Enable the growth of the agricultural sector by directing urban and more residential development away from important farmland and identifying locations to support existing and small-lot primary production, such as horticulture in Coffs Harbour.

  Action 11.3 - Identify and protect intensive agriculture clusters in local plans to avoid land use conflicts, particularly with residential and rural residential expansion.

  Action 11.4 - Encourage niche commercial, tourist and recreation activities that complement and promote a stronger agricultural sector, and build the sector's capacity to adapt to changing circumstances.

  Action 11.5 - Address sector-specific considerations for agricultural industries through local plans.

  Comment - There is adequate separation from any nearby productive agricultural lands.

GOAL 3 – VIBRANT AND ENGAGED COMMUNITIES

- ***Direction 15 - Develop healthy, safe, socially engaged and well-connected communities***

  Action 15.2 - Facilitate more recreational walking and cycling paths and expanded inter-regional and intra-regional walking and cycling links, including the NSW Coastline Cycleway.

  Action 15.4 - Create socially inclusive communities by establishing social infrastructure benchmarks, minimum standards and social impact assessment frameworks within local planning.

  Action 15.5 - Deliver crime prevention through environmental design outcomes through urban design processes.

  Comment - The site is surrounded by large lot residential development and is located near to services including schools, community facilities and shops.

- ***Direction 16 - Collaborate and partner with Aboriginal communities***

  Action 16.2 - Ensure Aboriginal communities are engaged throughout the preparation of local growth management strategies and local environmental plans.

  Comment - The site does not contain any mapped known or predictive Aboriginal Cultural Heritage (ACH) and an AHIMS search has not revealed any ACH sites on or near the site.

- ***Direction 18 - Respect and protect the North Coast's Aboriginal heritage***

  Action 18.1 - Ensure Aboriginal objects and places are protected, managed and respected in accordance with legislative requirements and the wishes of local Aboriginal communities.

  Action 18.2 - Undertake Aboriginal cultural heritage assessments to inform the design of planning and development proposals so that impacts to Aboriginal cultural heritage are minimised and appropriate heritage management mechanisms are identified.

Action 18.3 - Develop local heritage studies in consultation with the local Aboriginal community, and adopt appropriate measures in planning strategies and local plans to protect Aboriginal heritage.

Comment - The site does not contain any mapped known or predictive Aboriginal Cultural Heritage (ACH) and an AHIMS search has not revealed any ACH sites on or near the site.

GOAL 3 – VIBRANT AND ENGAGED COMMUNITIES

- ***Direction 24 - Deliver well-planned rural residential housing areas***

Action 24.2 - Enable sustainable use of the region's sensitive coastal strip by ensuring new rural residential areas are located outside the coastal strip, unless already identified in a local growth management strategy or rural residential land release strategy approved by the Department of Planning and Environment.

Comment - The site is located outside the coastal strip.

5. Will the planning proposal give effect to a Council's endorsed local strategic planning statement, or another endorsed local strategy or strategic plan?

Coffs Harbour City Council adopted its Local Strategic Planning Statement (LSPS) on 25 June 2020. The LSPS was prepared in accordance with the Environmental Planning and Assessment Act 1979 and Regulations and provides a 20-year land use planning vision for the Coffs Harbour LGA. It identifies 16 Planning Priorities to be delivered in four themes to 2040: connected, sustainable, thriving and leadership. This planning proposal is consistent with the following relevant planning priorities and associated actions within the adopted LSPS:

Planning Priority	Action
5. Deliver greater housing supply, choice and diversity	A5.1 - Review and amend Council's local planning controls relating to housing supply, choice and diversity as outlined in the Local Growth Management Strategy
	A5.5 - Implement remaining actions from the Local Growth Management Strategy as funding allows

6. Is the planning proposal consistent with council's Community Strategic Plan and Local Growth Management Strategy?

MyCoffs Community Strategic Plan 2030

Council's Community Strategic Plan is based on four key themes: Community Wellbeing; Community Prosperity; A Place for Community; and Sustainable Community Leadership. Within each theme there are a number of objectives, and for each objective there are a number of strategies to assist in achieving the objectives. The planning proposal is generally consistent with the following relevant objectives and strategies within the Plan:

Objective	Strategy
Liveable Neighbourhoods with a Defined Identity	C1.1 We create liveable places that are beautiful and appealing

	C1.2 We undertake development that is environmentally, socially and economically responsible

Coffs Harbour Local Growth Management Strategy

The Planning Proposal is consistent with the Coffs Harbour Local Growth Management Strategy. The land is zoned R5 Large Lot Residential under Coffs Harbour LEP 2013 and the eventual separation by subdivision of two existing detached dual occupancy located on the site is considered to be a negligible intensification of development on the site. The proposed amendment to the Minimum Lot Size Map is consistent with the intent of Coffs Harbour LGMS 2020 - *Chapter 6 Large Lot Residential* and is a viable addition to the Emerald Beach Large Lot Residential land stock.

Coffs Harbour Regional City Action Plan 2036

The NSW Government developed the Coffs Harbour Regional City Action Plan (the Plan) to provide a framework to manage and shape the city's future growth so it conforms with the requirements of the North Coast Regional Plan 2036. The Plan was finalised in March 2021 and it identifies 5 overarching goals which incorporate objectives and related actions. This planning proposal is consistent with the following relevant goals, objectives and associated actions within the Plan:

Goal	Objective	Actions	
Live	17. Deliver a city that responds to Coffs Harbour's unique green cradle setting and offer housing choice.	17.1	Promote a sustainable growth footprint and enhance place-specific character and design outcomes.
		17.4	Support a greater variety and supply of affordable housing.

7. Is the planning proposal consistent with applicable state environmental planning policies (SEPP)?

The table provided in Appendix 1 provides an assessment of consistency against each State Environmental Planning Policy relevant to the Planning Proposal.

8. Is the planning proposal consistent with applicable Ministerial Directions (s9.1 directions)?

The table provided in Appendix 2 provides an assessment of consistency against Ministerial Planning Directions relevant to the Planning Proposal.

Section C – Environmental, social and economic impact

9. Is there any likelihood that critical habitat or threatened species, populations or ecological communities, or their habitats, will be adversely affected as a result of the proposal?

No. This Planning Proposal will not alter any zones or development controls in a manner that would result in any adverse impacts on threatened species, populations, or ecological communities. An Ecological Assessment has been undertaken (see Appendix 3), which supports the Planning Proposal from an ecological perspective. The site does not contain land mapped as being of Biodiversity Value (as per the Office of Environment and Heritage (OEH) Biodiversity Values Map and Threshold Tool).

The Ecological Assessment found that:

- The proposed subdivision is not expected to significantly impact native vegetation on the site or threatened species that potentially use the site. No vegetation clearing is proposed at this stage of the development and potential future clearing is likely to be limited to the lot boundaries.

- The proposed subdivision aligns with relevant objectives of both the Coffs Harbour LEP and DCP. Additionally, this report finds the subdivision is unlikely to result in any impact to koala habitat, aligning with all relevant components of the CHCC CKPoM.

- Fauna habitat is restricted to the remaining canopy trees which likely provide foraging and refuge opportunities for a range of birds, insects and some mammals such as grey-headed flying-foxes. A large grey ironbark represents the most important habitat component on the site, potentially containing small hollows. Due to the proximity of the proposed dividing boundary, potential future clearing for fencing should avoid any disturbance to this tree.

10. Are there any other likely environmental effects as a result of the planning proposal and how are they proposed to be managed?

- **Bushfire Risk**

  The land is mapped as Bushfire Prone Land. A Bushfire Risk Assessment was prepared by Midcoast Building and Environmental **(Appendix D).** The assessment found that the bushfire risk is manageable and will be consistent with the requirements of *Planning for Bushfire Protection 2019.*

- **Cultural Heritage**

  An AHIMS Search (Appendix 6) has indicated that no archaeological items or PADs have been recorded as being located within or surrounding the subject land. There are also no items of non- indigenous Heritage listed on the subject land by Coffs Harbour LEP 2013 Schedule 5 Heritage.

- **Contaminated land**

  The land is mapped as including Contaminated Land (former banana cultivation land). This proposal will not enable significant intensification of land uses within the site. The land is already developed for residential purposes with future significant earthworks unlikely. The mapped former banana cultivation area has been used for approved residential purposes since the late 1970's and is highly unlikely to be contaminated above accepted thresholds.

- **Wastewater Capability Assessment**

  Minimum lot size analysis and modelling were undertaken as part of a Wastewater Capacity Assessment by Earth Water Consulting, to determine the maximum lot density suitable for subdivision on the subject land. The Wastewater Capacity Assessment is provided at Appendix 5. The methodology for the study was:

  When considering the suitability for a lot to sustainably manage wastewater on-site, we typically refer to 'available effluent management area'. This broadly refers to available areas (i.e. not built out or used for a conflicting purpose) where OSMS will not be unduly constrained by site and soil characteristics. Available area on a developed a lot is determined by the following factors:

- *total building area (including dwellings, sheds, pools etc.) which includes a defined building envelope but may extend with additional improvements to a property, such as driveways and paths (impervious areas), and gardens/vegetated areas unsuitable for effluent reuse;*
- *dams, intermittent and permanent watercourses running through lots;*
- *maintenance of appropriate buffer distances from property boundaries, buildings, driveways and paths, dams and watercourses;*
- *flood prone land;*
- *excessive slope;*
- *excessively shallow soils;*
- *heavy (clay) soils with low permeability;*
- *excessively poor drainage, shallow groundwater and/or stormwater run-on; and*
- *excessive shading by vegetation.*

The residual areas (areas not otherwise occupied by improvements, buffers, restrictions or conservation vegetation) were then calculated for the selected lots, and the available area compared to the wastewater envelope required.

Minimum Lot Size Comparative Assessment

By means of comparison on similar properties, six nearby R5 zoned representative lots ranging in size from 1,689 m2 to 4,212 m2 were selected that have already been subdivided. This analysis found that 504 m2 is required primary and reserve treatment areas within each proposed lot.

Conclusion

Given the low slopes and limited site and soil constraints, a minimum 5,000 m2 lot sizing at 14-22 Smiths Road is considered acceptable for land application for wastewater disposal.

11. Has the planning proposal adequately addressed any social and economic effects?

Social effects:

- Potential for the intensification of residential development is limited and will not result in any significant change to the population or use of the locality as a residential precinct. It is unlikely that this Planning Proposal will result in any detrimental social effects.
- There is sufficient social infrastructure in the area to support the intention and objectives of this Planning Proposal.
- The new lot will be similar in land use and character, to many nearby properties.
- The proposal will enable separate ownership of a dwelling on each lot.

Economic effects:

- It is unlikely that this Planning Proposal will result in any detrimental economic effects. The Planning Proposal will allow subdivision of the existing lot into two developed Torrens Title lots. As both lots will support existing dwellings, potential for the intensification of residential development is limited.
- The Planning Proposal and the proposed subdivision are fully funded by the proponent.

Section D – State and Commonwealth interests

12. Is there adequate public infrastructure for the planning proposal?

Yes. The planning proposal is unlikely to create significant additional demand on existing public infrastructure. The subsequent amendment to LEP 2013 will enable the creation of one additional Torrens Title lot, which is already used for residential purposes. The subject land is adequately accessed by a public road and the residences on the site are connected to power and telecommunications. The land is not serviced by reticulated water and sewer infrastructure. The proposal will not place an unreasonable demand on public infrastructure. Vehicular access to the new lot is easily and safely achieved from Smiths Road. The land use zone is unchanged by this planning proposal. The National Broadband Network (NBN) is available in the area.

13. What are the views of State and Commonwealth public authorities consulted in accordance with the Gateway determination?

At this stage in the process there does not appear to be any matters of interest to Commonwealth authorities in relation to the planning proposal.

A Gateway determination has not been issued by NSW Planning, Industry and Environment as yet, thus consultation with public authorities and government agencies has not yet been undertaken. It is proposed that the NSW Rural Fire Service be consulted in relation to the planning proposal, and that this consultation be undertaken concurrent with public exhibition of the planning proposal.

PART 4 – MAPPING

Proposed maps amendments to Coffs Harbour LEP 2013, as described in Part 2 of this planning proposal, are shown in Figures 5 and 6.

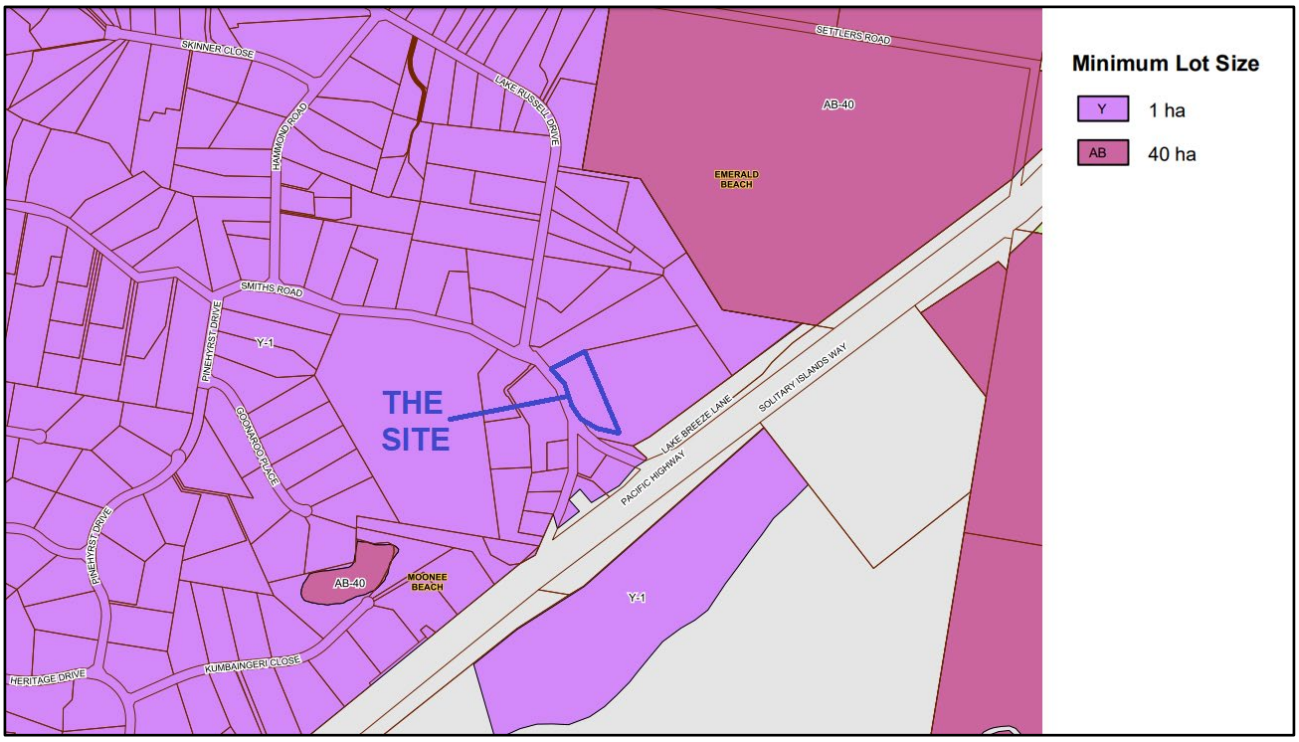

Figure 5: Existing LEP 2013 Minimum Lot Sizes

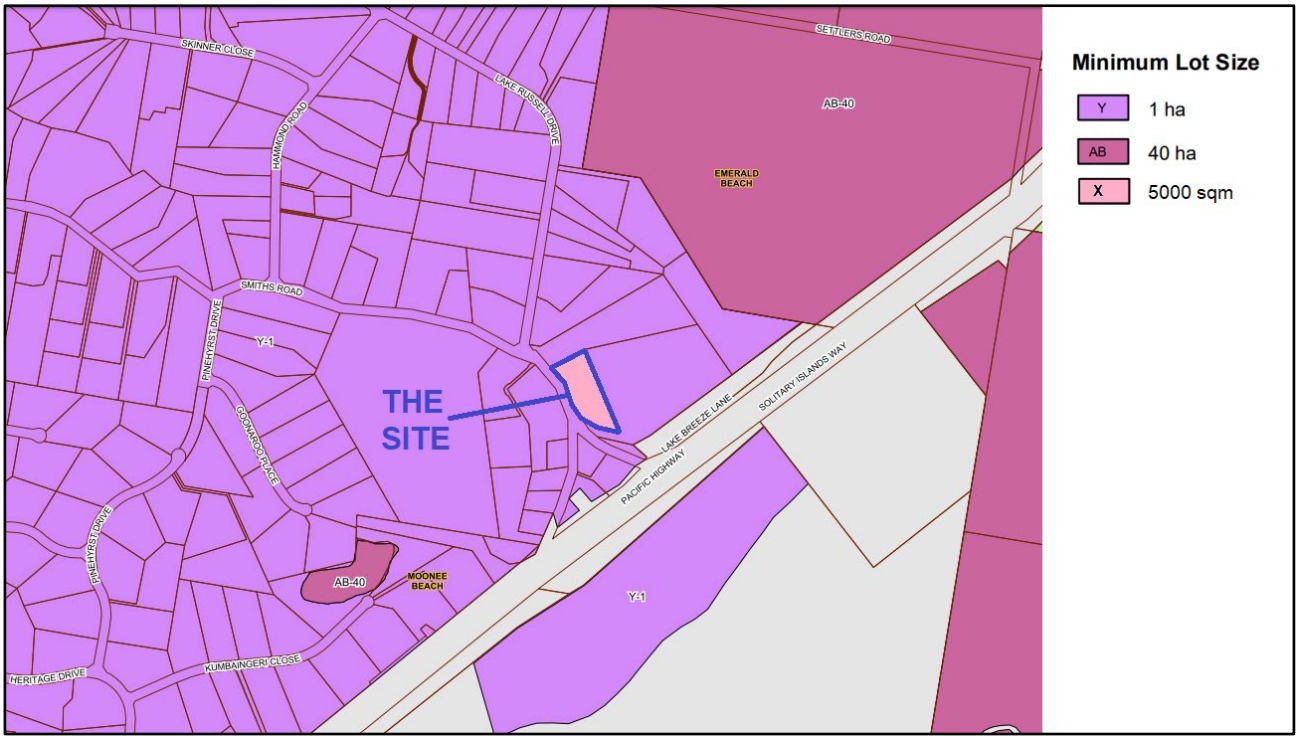

Figure 6: Proposed LEP 2013 Minimum Lot Sizes

PART 5 – COMMUNITY CONSULTATION

The Gateway determination issued by the Department of Planning, Industry and Environment on 1 November 2021 has specified the community consultation requirements that must be undertaken for the planning proposal. In accordance with the Gateway determination, the planning proposal will be exhibited for 14 days.

Public Exhibition of the planning proposal will include the following:

Advertisement

Placement of an online advertisement in the Coffs Newsroom.

Consultation with affected owners and adjoining landowners

Written notification of the public exhibition to the proponent, the landowner and adjoining landowners.

Website

The planning proposal will be made publicly available on Council's Have Your Say Website at: https://haveyoursay.coffsharbour.nsw.gov.au/

Note: Following public exhibition, this section of the planning proposal will be updated to include details of the community consultation.

PART 6 – PROJECT TIMELINE

A project timeline is yet to be determined however the anticipated timeframes are provided below in Table 1, noting that the Gateway Determination issued by the Department of Planning, Industry and Environment will specify the date that the planning proposal is to be completed.

Table 1: Anticipated Timeline

Milestone	Anticipated Timeframe
Decision by Council to initiate the planning proposal	October 2021
Commencement (date of Gateway determination)	November 2021
Peer review & provision of additional information (if required)	December 2021
Public exhibition & agency consultation	December 2021 - February 2022
Consideration of submissions	February 2022 – March 2022
Reporting to Council for consideration	April 2022
Submission to Minister to make the plan (if not delegated) Submission to Minister for notification of the plan (if delegated)	May 2022

APPENDIX 1 – CONSIDERATION OF STATE ENVIRONMENTAL PLANNING POLICIES

State Environmental Planning Policy	Applicable	Consistent	Comment
SEPP No 19 – Bushland in Urban Areas	No	N/A	Coffs Harbour City Council is not listed in Schedule 1 of this policy and thus the policy does not apply to this planning proposal.
SEPP No 21 – Caravan Parks	Yes	Yes	This SEPP is not directly relevant to this planning proposal and nothing in this planning proposal will compromise the efficient application of this SEPP to any future development.
SEPP No 33 – Hazardous and Offensive Development	No	N/A	This policy does not apply. This planning proposal does not contain specific provisions that reference hazardous and offensive development.
SEPP No 36 – Manufactured Home Estates	Yes	Yes	This SEPP is not directly relevant to this planning proposal and nothing in this planning proposal will compromise the efficient application of this SEPP to any future development.
SEPP No 50 – Canal Estate Development	No	N/A	This policy does not apply. This planning proposal does not contain specific provisions that reference or propose canal estate development.
SEPP No 55 – Remediation of Land	Yes	Yes	The land is mapped as including Contaminated Land (former banana cultivation land) – see Figure 7. This proposal will not enable significant intensification of land uses within the site. The land is already approved and developed for residential purposes with future significant earthworks unlikely. The mapped former banana cultivation area has been used for approved residential purposes since the late 1970's and is highly unlikely to be contaminated above accepted thresholds.  ***Figure 7 – Former Banana Cultivation Areas***
SEPP No 64 – Advertising and Signage	Yes	Yes	This SEPP is not directly relevant to this planning proposal and nothing in this planning proposal will compromise the efficient application of this SEPP to any future development.
SEPP No 65 – Design Quality of Residential Apartment Development	No	N/A	This SEPP does not apply to this planning proposal as it will not allow development for the purpose of a residential flat building, shop top housing or mixed use development with a residential accommodation component.

APPENDIX 1 – CONSIDERATION OF STATE ENVIRONMENTAL PLANNING POLICIES

State Environmental Planning Policy	Applicable	Consistent	Comment
SEPP No 70 – Affordable Housing (Revised Schemes)	Yes	Yes	This may become relevant for future development applications but is not a consideration at this stage.
SEPP (Aboriginal Land) 2019	N/A	N/A	This policy does not apply. This policy presently only applies to the Central Coast Local Government Area.
SEPP (Affordable Rental Housing) 2009	Yes	Yes	The planning proposal is consistent with the aims or provisions of this SEPP and nothing in this planning proposal will compromise the efficient application of this SEPP to any future development.
SEPP (Building Sustainability Index: BASIX) 2004	Yes	Yes	This SEPP is not directly relevant to this planning proposal and nothing in this planning proposal will compromise the efficient application of this SEPP to any future development.
SEPP (Coastal Management) 2018	No	N/A	The land is outside of the coastal area and not affected by this SEPP.
SEPP (Concurrences and Consents) 2018	Yes	Yes	The planning proposal is consistent with the aims or provisions of this SEPP. Future development requiring concurrence will be subject to the provisions of this SEPP.
SEPP (Educational Establishments and Child Care Facilities) 2017	Yes	Yes	The planning proposal is consistent with the aims or provisions of this SEPP. Any future development incorporating a child care centre or the like would be subject to the provisions of this SEPP.
SEPP (Exempt and Complying Development Codes) 2008	Yes	Yes	The planning proposal is consistent with the aims or provisions of this SEPP. This SEPP is not specifically relevant in the context of the planning proposal.
SEPP (Housing for Seniors or People with a Disability) 2004	No	N/A	Seniors housing is prohibited in the R5 Large Lot Residential Zone under Coffs Harbour Local Environmental Plan 2013. The land is also not considered by the SEPP to be zoned for 'urban purposes'.
SEPP (Infrastructure) 2007	Yes	Yes	The planning proposal is consistent with the aims or provisions of this SEPP. This planning proposal does not contain provisions that contradict or hinder the application of this SEPP.
SEPP (Koala Habitat Protection) 2020	Yes	Yes	The site does not contain any core Koala Habitat. The Ecological Assessment prepared by Ecosure (2021) found that: *A small area of secondary koala habitat (SKH) and tertiary koala habitat (TKH) is mapped along the eastern boundary of the site (Figure 8). The mapped area extends further north and east of the site with the entire patch comprising approximately 20 ha. The patch*

APPENDIX 1 – CONSIDERATION OF STATE ENVIRONMENTAL PLANNING POLICIES

State Environmental Planning Policy	Applicable	Consistent	Comment
			contributes to a network of mapped koala habitat within the broader area also comprised of SKH and TKH.  ***Figure 8 CHCC Koala Plan of Management*** *SKH is defined in the CKPoM as land that generally has lower koala activity levels than primary habitat, but still supports koala populations away from the coastal fringe, contributing to overall habitat availability and providing a vital connectivity role. Similarly, TKH occurs mostly in rural areas of the LGA and has lower levels of koala activity but still provides habitat and connectivity for koalas (Lunney et al. 1999).* *Under the CKPoM, the consent authority must take into consideration certain factors when assessing development that occurs in areas of SKH and TKH, including denying consent when the proposed works include the removal of preferred koala feed trees, unless the development does not significantly destroy, damage or compromise the values of the land as koala habitat. While both SKH and TKH are mapped on the site, SKH is mapped where the dividing boundary is proposed, therefore management actions relating to SKH have been addressed in Table 3* (of the Ecological Assessment). The proposed dividing boundary has been adjusted to minimise impact to the small area of SKH and TKH. Fencing of the proposed boundary does not necessitate the removal of the single mature iron bark.
SEPP (Koala Habitat Protection) 2021	Yes	Yes	Refer to discussion above.
SEPP (Mining, Petroleum Production and Extractive Industries) 2007	Yes	Yes	The planning proposal is consistent with the aims or provisions of this SEPP. This planning proposal does not contain provisions that contradict or hinder the application of this SEPP.

APPENDIX 1 – CONSIDERATION OF STATE ENVIRONMENTAL PLANNING POLICIES

State Environmental Planning Policy	Applicable	Consistent	Comment
SEPP (Primary Production and Rural Development) 2019	No	N/A	The site is zoned R5 Large Lot Residential and is not used for primary production purposes.
SEPP (State and Regional Development) 2019	Yes	Yes	This Planning Proposal does not contain provisions that contradict or hinder the application of this SEPP.
SEPP (State Significant Precincts) 2005	No	N/A	This planning proposal does not relate to a state significant precinct.
SEPP (Urban Renewal) 2010	No	N/A	This planning proposal does not relate to an urban renewal precinct.
SEPP (Vegetation in Non-Rural Areas) 2017	Yes	Yes	This Planning Proposal does not contain provisions that contradict or hinder the application of this SEPP.

APPENDIX 2 – CONSIDERATION OF MINISTERIAL PLANNING DIRECTIONS

S9.1 Direction	Applicable	Consistent	Comment
1. Employment and Resources			
1.1 Business and Industrial Zones	Applies when a relevant planning authority prepares a planning proposal that will affect land within an existing or proposed business or industrial zone (including the alteration of any existing business or industrial zone boundary).	N/A	This planning proposal does not affect land within an existing or proposed business or industrial zone.
1.2 Rural Zones	Applies when a relevant planning authority prepares a planning proposal that will affect land within an existing or proposed rural zone (including the alteration of any existing rural zone boundary). Under this direction a planning proposal must: (a) not rezone land from a rural zone to a residential, business, industrial, village or tourist zone.	N/A	This planning proposal does not affect land within an existing or proposed rural zone.
1.3 Mining, Petroleum Production and Extractive Industries	Applies when a relevant planning authority prepares a planning proposal that would have the effect of: (a) prohibiting the mining of coal or other minerals, production of petroleum, or winning or obtaining of extractive materials, or (b) restricting the potential development of resources of coal, other minerals, petroleum or extractive materials which are of State or regional significance by permitting a land use that is likely to be incompatible with such development.	Yes	This planning proposal does not: (a) prohibit the mining of coal or other minerals, production of petroleum, or winning or obtaining of extractive materials, or (b) restrict the potential development of resources of coal, other minerals, petroleum or extractive materials which are of State or regional significance.
1.4 Oyster Aquaculture	Applies when a relevant planning authority prepares any planning proposal that proposes a change in land use which could result in: (a) adverse impacts on a Priority Oyster Aquaculture Area or a "current oyster aquaculture	N/A	This planning proposal does not affect land within an existing or proposed oyster aquaculture area.

APPENDIX 2 – CONSIDERATION OF MINISTERIAL PLANNING DIRECTIONS

S9.1 Direction	Applicable	Consistent	Comment
	lease in the national parks estate"; or (b) incompatible use of land between oyster aquaculture in a Priority Oyster Aquaculture Area or a "current oyster aquaculture lease in the national parks estate" and other land uses.		
1.5 Rural Lands	Applies when a relevant planning authority prepares a planning proposal that: (a) will affect land within an existing or proposed rural or environment protection zone (including the alteration of any existing rural or environment protection zone boundary), or (b) changes the existing minimum lot size on land within a rural or environment protection zone.	N/A	This planning proposal does not affect land within an existing or proposed rural zone, or environmental protection zone.
2 Environment and Heritage			
2.1 Environment Protection Zones	(4) A planning proposal must include provisions that facilitate the protection and conservation of environmentally sensitive areas. (5) A planning proposal that applies to land within an environment protection zone or land otherwise identified for environment protection purposes in a LEP must not reduce the environmental protection standards that apply to the land (including by modifying development standards that apply to the land). This requirement does not apply to a change to a development standard for minimum lot size for a dwelling in accordance with clause (5) of Direction 1.5 "*Rural Lands*".	Justifiably inconsistent for reasons listed.	This Planning Proposal will not alter any zones or development controls in a manner that would result in any adverse impacts on threatened species, populations, or ecological communities. An Ecological Assessment has been undertaken (see Appendix 3), which supports the Planning Proposal from an ecological perspective. The site does not contain land mapped as being of Biodiversity Value (as per the Office of Environment and Heritage (OEH) Biodiversity Values Map and Threshold Tool). The Ecological Assessment found that: • The proposed subdivision is not expected to significantly impact native vegetation on the site or threatened species that potentially use the site. No vegetation clearing is proposed at this stage of the development and potential future

APPENDIX 2 – CONSIDERATION OF MINISTERIAL PLANNING DIRECTIONS

S9.1 Direction	Applicable	Consistent	Comment
			clearing is likely to be limited to the lot boundaries. • The proposed subdivision aligns with relevant objectives of both the Coffs Harbour LEP and DCP. Additionally, this report finds the subdivision is unlikely to result in any impact to koala habitat, aligning with all relevant components of the CHCC CKPoM. • Fauna habitat is restricted to the remaining canopy trees which likely provide foraging and refuge opportunities for a range of birds, insects and some mammals such as grey-headed flying-foxes. A large grey ironbark represents the most important habitat component on the site, potentially containing small hollows. Due to the proximity of the proposed dividing boundary, potential future clearing for fencing should avoid any disturbance to this tree. It is noted that the Department correspondence accompanying the Gateway Determination dated 4 November 2021 states that any inconsistency with this Direction has been justified in accordance with the terms of the Direction.
2.2 Coastal Protection	Applies to land that is within the coastal zone, as defined under the Coastal Management Act 2016 – comprising the coastal wetlands and littoral rainforests area, coastal vulnerability area, coastal environment area and coastal use area – as identified in *State Environmental Planning Policy (Coastal Management) 2018.* (4) A planning proposal must include provisions that give effect to and are consistent with:	N/A	The land is outside of the coastal zone.

APPENDIX 2 – CONSIDERATION OF MINISTERIAL PLANNING DIRECTIONS

S9.1 Direction	Applicable	Consistent	Comment
	(a) the objects of the *Coastal Management Act 2016* and objectives of the relevant coastal management areas, (b) the NSW Coastal Management Manual and associated Toolkit; and (c) the NSW Coastal Design Guidelines 2003, and (c) any relevant Coastal Management Program that has been certified by the Minister, or any Coastal Zone Management Plan under the *Coastal Protection Act 1979* that continues to have effect under the *Coastal Management Act 2016*.		
2.3 Heritage Conservation	A planning proposal must contain provisions that facilitate the conservation of: (a) items, places, buildings, works, relics, moveable objects or precincts of environmental heritage significance to an area, in relation to the historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic value of the item, area, object or place, identified in a study of the environmental heritage of the area, (b) Aboriginal objects or Aboriginal places that are protected under the *National Parks and Wildlife Act 1974*, and (c) Aboriginal areas, Aboriginal objects, Aboriginal places or landscapes identified by an Aboriginal heritage survey prepared by or on behalf of an Aboriginal Land Council, Aboriginal body or public authority and provided to the relevant planning authority, which identifies the area,	Justifiably inconsistent for reasons listed.	**European Heritage** The subject site does not contain any items listed as Heritage Items in Schedule 5 of Coffs Harbour Local Environmental Plan 2013 or the State Heritage Register. There are no European Heritage issues that would prevent the rezoning of this site. **Aboriginal Cultural Heritage** An AHIMS search has not revealed any Aboriginal Cultural Heritage sites on or near the site. It is noted that the Department correspondence accompanying the Gateway Determination dated 4 November 2021 states that any inconsistency with this Direction has been justified in accordance with the terms of the Direction.

APPENDIX 2 – CONSIDERATION OF MINISTERIAL PLANNING DIRECTIONS

S9.1 Direction	Applicable	Consistent	Comment
	object, place or landscape as being of heritage significance to Aboriginal culture and people.		
2.4 Recreation Vehicle Areas	A planning proposal must not enable land to be developed for the purpose of a recreation vehicle area (within the meaning of the *Recreation Vehicles Act 1983*): (a) where the land is within an environment protection zone, (b) where the land comprises a beach or a dune adjacent to or adjoining a beach, (c) where the land is not within an area or zone referred to in paragraphs (a) or (b) unless the relevant planning authority has taken into consideration: (i) the provisions of the guidelines entitled *Guidelines for Selection, Establishment and Maintenance of Recreation Vehicle Areas, Soil Conservation Service of New South Wales, September, 1985*, and (ii) the provisions of the guidelines entitled *Recreation Vehicles Act, 1983, Guidelines for Selection, Design, and Operation of Recreation Vehicle Areas, State Pollution Control Commission, September 1985.*	Yes	This planning proposal does not enable land to be developed for the purpose of a recreation vehicle area.
2.6 Remediation of Contaminated Land	This direction applies when a relevant planning authority prepares a planning proposal for land that is within an investigation area within the meaning of the Contaminated Land Management Act 1997; or on land which development for the purposes referred to in the contaminated land planning guidelines is being	Justifiably inconsistent for reasons listed.	The land is mapped as including Contaminated Land (former banana cultivation land) – see Figure 9. This proposal will not enable significant intensification of land uses within the site. The land is already approved and developed for residential purposes with future significant earthworks unlikely. The mapped former banana cultivation area has been used for approved

APPENDIX 2 – CONSIDERATION OF MINISTERIAL PLANNING DIRECTIONS

S9.1 Direction	Applicable	Consistent	Comment
	carried out, or where development for the purposes of residential, educational, recreational or childcare purposes; or a hospital is proposed. (4) A planning proposal authority must not include in a particular zone (within the meaning of the local environmental plan) any land specified in paragraph (2) if the inclusion of the land in that zone would permit a change of use of the land, unless: (a) the planning proposal authority has considered whether the land is contaminated, and (b) if the land is contaminated, the planning proposal authority is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for all the purposes for which land in the zone concerned is permitted to be used, and (c) if the land requires remediation to be made suitable for any purpose for which land in that zone is permitted to be used, the planning proposal authority is satisfied that the land will be so remediated before the land is used for that purpose. In order to satisfy itself as to paragraph (4)(c), the planning proposal authority may need to include certain provisions in the local environmental plan. (5) Before including any land specified in paragraph (2) in a particular zone, the planning proposal authority is to obtain and have regard to a report		residential purposes since the late 1970's and is highly unlikely to be contaminated above accepted thresholds. As per requirement 4(b) of this particular Direction and bearing in mind that clause 6 of SEPP 55 - Remediation of Land has been repealed, Council is satisfied that the land is suitable in its contaminated state for the purposes for which land in the zone concerned is permitted to be used.  ***Figure 9 – Former Banana Cultivation Areas*** It is noted that the Department correspondence accompanying the Gateway Determination dated 4 November 2021 states that any inconsistency with this Direction has been justified in accordance with the terms of the Direction.

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S9.1 Direction	Applicable	Consistent	Comment
	specifying the findings of a preliminary investigation of the land carried out in accordance with the contaminated land planning guidelines.		
3. Housing, Infrastructure and Urban Development			
3.1 Residential Zones	(3) This direction applies when a relevant planning authority prepares a planning proposal that will affect land within: (a) an existing or proposed residential zone (including the alteration of any existing residential zone boundary), (b) any other zone in which significant residential development is permitted or proposed to be permitted. (4) A planning proposal must include provisions that encourage the provision of housing that will: (a) broaden the choice of building types and locations available in the housing market, and (b) make more efficient use of existing infrastructure and services, and (c) reduce the consumption of land for housing and associated urban development on the urban fringe, and (d) be of good design. (5) A planning proposal must, in relation to land to which this direction applies: (a) contain a requirement that residential development is not permitted until land is adequately serviced (or arrangements satisfactory to the council, or other appropriate authority, have	Yes	The planning proposal seeks to enable the separation of an existing approved detached dual occupancy on the site (creation of one additional Torrens Title lot). Although a minor increase, the provision of an additional Large Lot Residential (Torrens Title) allotment will assist to broaden lifestyle choices in a suitable location. The proposal will increase the supply of residential land adjoining other residential land that is close to local community facilities. Appropriate planning controls are also contained within *Coffs Harbour DCP 2015* to ensure that any subsequent development is of good design.

APPENDIX 2 – CONSIDERATION OF MINISTERIAL PLANNING DIRECTIONS

S9.1 Direction	Applicable	Consistent	Comment
	been made to service it), and (b) not contain provisions which will reduce the permissible residential density of land.		
3.2 Caravan Parks and Manufactured Home Estates	Applies when a relevant planning authority prepares a planning proposal. In identifying suitable zones, locations and provisions for caravan parks in a planning proposal, the relevant planning authority must: (a) retain provisions that permit development for the purposes of a caravan park to be carried out on land, and (b) retain the zonings of existing caravan parks, or in the case of a new principal LEP zone the land in accordance with an appropriate zone under the Standard Instrument (Local Environmental Plans) Order 2006 that would facilitate the retention of the existing caravan park. In identifying suitable zones, locations and provisions for manufactured home estates (MHEs) in a planning proposal, the relevant planning authority must: (a) take into account the categories of land set out in Schedule 2 of SEPP 36 as to where MHEs should not be located, (b) take into account the principles listed in clause 9 of SEPP 36 (which relevant planning authorities are required to consider when assessing and determining the development and subdivision proposals), and (c) include provisions that the subdivision of MHEs by long term lease of up to 20 years or	N/A	Caravan parks are prohibited in the R5 Large Lot Residential zone under *Coffs Harbour LEP 2013*. There are no existing caravan parks located on the subject lands.

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S9.1 Direction	Applicable	Consistent	Comment
	under the *Community Land Development Act 1989* be permissible with consent.		
3.3 Home Occupations	Planning proposals must permit home occupations to be carried out in dwelling houses without the need for development consent.	Yes	This proposal does not affect home occupation provisions under LEP 2013.
3.4 Integrating Land Use and Transport	Applies when a relevant planning authority prepares a planning proposal that will create, alter or remove a zone or a provision relating to urban land, including land zoned for residential, business, industrial, village or tourist purposes. A planning proposal must locate zones for urban purposes and include provisions that give effect to and are consistent with the aims, objectives and principles of: (a) *Improving Transport Choice – Guidelines for planning and development* (DUAP 2001), and (b) *The Right Place for Business and Services – Planning Policy* (DUAP 2001).	Yes	The planning proposal does not alter any land use zones in LEP 2013. It will not affect transport infrastructure.
3.5 Development Near Regulated Airports and Defence Airfields	Applies when a relevant planning authority prepares a planning proposal that will create, alter or remove a zone or a provision relating to land in the vicinity of a licensed aerodrome.	Yes	This proposal does not affect land in proximity to any regulated airports or defence airfields
3.6 Shooting Ranges	Applies when a relevant planning authority prepares a planning proposal that will affect, create, alter or remove a zone or a provision relating to land adjacent to and/or adjoining an existing shooting range.	Yes	This planning proposal does not affect, create, alter or remove a zone or a provision relating to land adjacent to and/ or adjoining an existing shooting range.
4. Hazard and Risk			

APPENDIX 2 – CONSIDERATION OF MINISTERIAL PLANNING DIRECTIONS

S9.1 Direction	Applicable	Consistent	Comment
4.1 Acid Sulfate Soils	Applies when a relevant planning authority prepares a planning proposal that will apply to land having a probability of containing acid sulfate soils as shown on the Acid Sulfate Soils Planning Maps.	Justifiably inconsistent for reasons listed.	The subject site has a low risk of containing acid sulphate soils as the site includes land within Class 5 as shown on the acid sulphate soils risk maps. The site contains an existing approved detached dual occupancy and is not mooted for any particular development as part of this application. However, at any future development application stage, any potential excavations, including earthworks associated with civil works would need to satisfy the ASS provisions of Coffs Harbour LEP 2013 (cl 7.1). For these reasons the provisions of the Planning Proposal that are inconsistent are considered to be "of minor significance". It is noted that the Department correspondence accompanying the Gateway Determination dated 4 November 2021 states that any inconsistency with this Direction has been justified in accordance with the terms of the Direction.
4.2 Mine Subsidence and Unstable Land	Applies when a relevant planning authority prepares a planning proposal that permits development on land that: (a) is within a mine subsidence district, or (b) has been identified as unstable in a study, strategy or other assessment undertaken: (i) by or on behalf of the relevant planning authority, or (ii) by or on behalf of a public authority and provided to the relevant planning authority.	Yes	This planning proposal does not apply to land that: (a) is within a mine subsidence district, or (b) has been identified as unstable in a study, strategy or other assessment undertaken: (i) by or on behalf of the relevant planning authority, or (ii) by or on behalf of a public authority and provided to the relevant planning authority.
4.3 Flood Prone Land	Applies when a relevant planning authority prepares a planning proposal that creates, removes or	N/A	The site is not identified as being flood prone.

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S9.1 Direction	Applicable	Consistent	Comment
	alters a zone or a provision that affects flood prone land. A planning proposal must include provisions that give effect to and are consistent with the NSW Flood Prone Land Policy and the principles of the *Floodplain Development Manual 2005* (including the *Guideline on Development Controls on Low Flood Risk Areas*). A planning proposal must not rezone land within the flood planning areas from Special Use, Special Purpose, Recreation, Rural or Environment Protection Zones to a Residential, Business, Industrial, Special Use or Special Purpose Zone. A planning proposal must not contain provisions that apply to the flood planning areas which: (a) permit development in floodway areas, (b) permit development that will result in significant flood impacts to other properties, (c) permit a significant increase in the development of that land, (d) are likely to result in a substantially increased requirement for government spending on flood mitigation measures, infrastructure or services, or (e) permit development to be carried out without development consent except for the purposes of agriculture (not including dams, drainage canals, levees, buildings or structures in floodways or high hazard areas), roads or exempt development. A planning proposal must not impose flood related development controls above the residential flood planning level for residential development on land, unless a		

APPENDIX 2 – CONSIDERATION OF MINISTERIAL PLANNING DIRECTIONS

S9.1 Direction	Applicable	Consistent	Comment
	relevant planning authority provides adequate justification for those controls to the satisfaction of the Director-General (or an officer of the Department nominated by the Director-General). For the purposes of a planning proposal, a relevant planning authority must not determine a flood planning level that is inconsistent with the *Floodplain Development Manual 2005* (including the *Guideline on Development Controls on Low Flood Risk Areas*) unless a relevant planning authority provides adequate justification for the proposed departure from that Manual to the satisfaction of the Director-General (or an officer of the Department nominated by the Director-General).		
4.4 Planning for Bushfire Protection	Applies when a relevant planning authority prepares a planning proposal that will affect, or is in proximity to land mapped as bushfire prone land. In the preparation of a planning proposal, the relevant planning authority must consult with the Commissioner of the NSW Rural Fire Service following receipt of a Gateway determination under section 56 of the Act, and prior to undertaking community consultation in satisfaction of section 57 of the Act, and take into account any comments so made. A planning proposal must: (a) have regard to *Planning for Bushfire Protection 2006*, (b) introduce controls that avoid placing inappropriate developments in hazardous areas, and	To be confirmed	The land is mapped as bushfire prone. As such, future development applications for all development involving bush fire prone lands will be required to comply with either s4.14 of the EP&A Act 1979 or s100B of the *Rural Fires Act 1997,* depending on the nature of the proposed development and the relevant provisions of *Planning for Bush Fire Protection 2019.* Should Council receive a Gateway Determination from NSW Planning Industry and Environment. The terms of the Gateway Determination will likely require Council to consult with the NSW Rural Fire Service. In which case, the NSW RFS will need to supply comments relevant to S9.1 Direction 4.4 Planning for Bushfire Protection, in order to demonstrate compliance with the requirements of that direction.

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S9.1 Direction	Applicable	Consistent	Comment
	(c) ensure that bushfire hazard reduction is not prohibited within the APZ. A planning proposal must, where development is proposed, comply with the following provisions, as appropriate: (a) provide an Asset Protection Zone (APZ) incorporating at a minimum: (i) an Inner Protection Area bounded by a perimeter road or reserve which circumscribes the hazard side of the land intended for development and has a building line consistent with the incorporation of an APZ, within the property, and (ii) an Outer Protection Area managed for hazard reduction and located on the bushland side of the perimeter road, (b) for infill development (that is development within an already subdivided area), where an appropriate APZ cannot be achieved, provide for an appropriate performance standard, in consultation with the NSW Rural Fire Service. If the provisions of the planning proposal permit Special Fire Protection Purposes (as defined under section 100B of the *Rural Fires Act 1997*), the APZ provisions must be complied with, (c) contain provisions for two-way access roads which link to perimeter roads and/or to fire trail networks, (d) contain provisions for adequate water supply for firefighting purposes, (e) minimise the perimeter of the area of land interfacing the		

APPENDIX 2 – CONSIDERATION OF MINISTERIAL PLANNING DIRECTIONS

S9.1 Direction	Applicable	Consistent	Comment
	hazard which may be developed, (f) introduce controls on the placement of combustible materials in the Inner Protection Area.		
5. Regional Planning			
5.4 Commercial and Retail Development along the Pacific Highway, North Coast	Applies when a relevant planning authority prepares a planning proposal for land in the vicinity of the existing and/or proposed alignment of the Pacific Highway. (4) A planning proposal that applies to land located on "within town" segments of the Pacific Highway must provide that: (a) new commercial or retail development must be concentrated within district centres rather than spread along the Highway; (b) development with frontage to the Pacific Highway must consider impacts that the development has on the safety and efficiency of the highway; and (c) for the purposes of this paragraph, "within town" means areas which prior to the draft LEP have an urban zone (e.g. Village, residential, tourist, commercial and industrial etc.) and where the Pacific Highway is less than 80km/hour. (5) A planning proposal that applies to land located on "out-of-town" segments of the Pacific Highway must provide that: (a) new commercial or retail development must not be established near the Pacific	N/A	This proposal will not affect commercial and retail land along the Pacific Highway, North Coast.

APPENDIX 2 – CONSIDERATION OF MINISTERIAL PLANNING DIRECTIONS

S9.1 Direction	Applicable	Consistent	Comment
	Highway if this proximity would be inconsistent with the objectives of this Direction. (b) development with frontage to the Pacific Highway must consider the impact the development has on the safety and efficiency of the highway. (c) For the purposes of this paragraph, "out-of-town" means areas which, prior to the draft local environmental plan, do not have an urban zone (e.g.: "village", "residential", "tourist", "commercial", "industrial", etc.) or are in areas where the Pacific Highway speed limit is 80 km/hour or greater. (6) Notwithstanding the requirements of paragraphs (4) and (5), the establishment of highway service centres may be permitted at the localities listed in Table 1, provided that the Roads and Traffic Authority is satisfied that the highway service centre(s) can be safely and efficiently integrated into the highway interchange(s) at those localities.		
5.10 Implementation of Regional Plans	Planning proposals must be consistent with a Regional Plan released by the Minister for Planning.	Yes	The North Coast Regional Plan 2036 (NCRP) applies to the Coffs Harbour LGA. The NCRP includes actions on environmental, economic and social (community) opportunities, as well as maintaining character and housing. Specific responses to relevant strategic directions and the accompanying actions contained within the NCRP are provided in Part 3, Section A (3) and Section B (4) above. It is considered that this planning proposal complies with the NCRP.

APPENDIX 2 – CONSIDERATION OF MINISTERIAL PLANNING DIRECTIONS

S9.1 Direction	Applicable	Consistent	Comment
5.11 Development of Aboriginal Land Council Land	This direction applies when a planning authority prepares a planning proposal for land shown on the Land Application Map of State Environmental Planning Policy (Aboriginal Land) 2019; or an interim development delivery plan published on the Department's website on the making of this direction.	N/A	This direction is not applicable to the Coffs Harbour Local Government Area.
6. Local Plan Making			

APPENDIX 2 – CONSIDERATION OF MINISTERIAL PLANNING DIRECTIONS

S9.1 Direction	Applicable	Consistent	Comment
6.1 Approval of Referral Requirements	A planning proposal must: (a) minimise the inclusion of provisions that require the concurrence, consultation or referral of development applications to a Minister or public authority, and (b) not contain provisions requiring concurrence, consultation or referral of a Minister or public authority unless the relevant planning authority has obtained the approval of: (i) the appropriate Minister or public authority, and (ii) the Director-General of the Department of Planning (or an officer of the Department nominated by the Director-General), prior to undertaking community consultation in satisfaction of section 57 of the Act, and (c) not identify development as designated development unless the relevant planning authority: (i) can satisfy the Director-General of the Department of Planning (or an officer of the Department nominated by the Director-General) that the class of development is likely to have a significant impact on the environment, and (ii) has obtained the approval of the Director-General of the Department of Planning (or an officer of the Department nominated by the Director-General) prior to undertaking community consultation in satisfaction of section 57 of the Act.		The Planning Proposal does not include provisions that require the concurrence, consultation or referral of development applications to a Minister or public authority. It does not identify development as designated development.

APPENDIX 2 – CONSIDERATION OF MINISTERIAL PLANNING DIRECTIONS

S9.1 Direction	Applicable	Consistent	Comment
6.2 Reserving Land for Public Purposes	(4) A planning proposal must not create, alter or reduce existing zonings or reservations of land for public purposes without the approval of the relevant public authority and the Director-General of the Department of Planning (or an officer of the Department nominated by the Director-General).	Yes	The planning proposal does not create, alter or reduce land reserved for a public purpose.
6.3 Site Specific Provisions	Applies when a relevant planning authority prepares a planning proposal that will allow a particular development to be carried out. (4) A planning proposal that will amend another environmental planning instrument in order to allow a particular development proposal to be carried out must either: (a) allow that land use to be carried out in the zone the land is situated on, or (b) rezone the site to an existing zone already applying in the environmental planning instrument that allows that land use without imposing any development standards or requirements in addition to those already contained in that zone, or (c) allow that land use on the relevant land without imposing any development standards or requirements in addition to those already contained in the principal environmental planning instrument being amended. (5) A planning proposal must not contain or refer to drawings that show details of the development proposal.	Yes	The planning proposal does not allow a particular development or contain drawings that show details of a particular development.

ecosure
improving ecosystems

ECOLOGICAL ASSESSMENT
SMITHS ROAD EMERALD BEACH

Final Report

July 2021

KEILEY HUNTER PLANNING

Executive summary

Ecosure was contracted by Keiley Hunter Planning on behalf of Christine Frewin to undertake an ecological assessment at 14-22 Smiths Road Emerald Beach in the Coffs Harbour Local Government Area. The assessment will contribute to a Planning Proposal that seeks to amend the Coffs Harbour Local Environmental Plan 2013 to reduce the minimum lot size on the property from 1 ha to 0.5 ha to facilitate a two-lot subdivision.

The desktop assessment identified mapped vegetation communities that include koala habitat on the site and records of threatened species within 1.5 km of the site. The site assessment evaluated the accuracy of mapped plant community types and the on-ground extent of native vegetation. The assessment also considered the presence of, and potential impacts to, threatened species likely to utilise the site including a survey to determine koala usage level, confirmation that the vegetation meets the definition of secondary and tertiary koala habitat, and that the proposed subdivision meets the objectives of the Coffs Harbour Comprehensive Koala Plan of Management.

Native vegetation on the lot is highly modified, limited to scattered canopy trees and a small, sparse area of native understorey which contains numerous introduced species. One eucalypt (a grey ironbark) was identified as significant due to its large size and habitat potential. All other native canopy trees may provide refuge and seasonal foraging opportunities which are potentially utilised by threatened species. Tests of significance undertaken for the koala, grey-headed flying-fox and two microbats, recorded within 1.5 km of the site, determined no significant impact is likely to occur as a result of the proposed development.

While no clearing is expected to occur at this stage of the development, the subdivision design identifies the proposed dividing boundary is in proximity to a grey ironbark tree. Potential future clearing for fencing should avoid any disturbance that could negatively affect the tree.

Glossary, acronyms and abbreviations

BC Act	*Biodiversity Conservation Act 2016*
BOS	Biodiversity Offsets Scheme
BV	Biodiversity Values
CHCC	Coffs Harbour City Council
CKPoM	Comprehensive Koala Plan of Management
DBH	Diameter at Breast Height
DCP	Development Control Plan
DPIE	Department of Planning, Industry and Environment
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
KFT	Koala Feed Tree
LEP	Local Environmental Plan
LGA	Local Government Area
MLS	Minimum Lot Size
NSW	New South Wales
PCT	Plant Community Type
PMST	Protected Matters Search Tool
SAT	Spot Assessment Technique
SKH	Secondary Koala Habitat
TKH	Tertiary Koala Habitat
VIS	Vegetation Information System

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1 Introduction

Ecosure Pty Ltd was contracted by Keiley Hunter Planning on behalf of Christine Frewin to undertake an ecological assessment at Lot 1 DP726095 (the site) at 14-22 Smiths Road, Emerald Beach. The assessment contributes to a Planning Proposal for Coffs Harbour City Council (CHCC) to consider amending the minimum lot size (MLS) from 1 ha to 0.5 ha to facilitate a two-lot subdivision. Design files showing the proposed dividing boundary were provided by surveyors Newnham Karl Weir and Partners Pty Ltd.

1.1 Project scope

The scope of the project included:

- desktop assessment
  - review of relevant documents and databases including New South Wales (NSW) BioNet records for threatened species, *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) Protected Matters Search Tool (PMST), *Biodiversity Conservation Act 2016* (BC Act), CHCC Development Control Plan (DCP) and the CHCC Comprehensive Koala Plan of Management (CKPoM)
- site assessment
  - vegetation assessment and classification of plant community types (PCTs) on the site
  - survey for threatened flora and fauna based on vegetation communities and likelihood of occurrence
  - threatened fauna habitat assessment
  - identification of native and introduced flora species
  - identification of any high conservation value habitat/vegetation including koala feed trees and hollow bearing trees
  - Spot Assessment Technique (SAT) to determine koala usage level.

1.2 Site description

The site is located at 14-22 Smiths Road Emerald Beach in the Coffs Harbour Local Government Area (LGA). The site is 1.065 ha and contains two dwellings and numerous outbuildings. The majority of the site is cleared with vegetation restricted to the northern and southern boundaries (Figure 1).

Figure 1: Site map

Keiley Hunter Planning

Smiths Road Ecological Assessment

Site boundaries

Existing lot boundary

Proposed dividing boundary

ecosure

Job number: PR6396
Revision: 1
Author: VLC
Date: 03/05/2021

0 5 10 15 20 m

GDA 1994 MGA Zone 56
Projection: Transverse Mercator
Datum: GDA 1994
Units: Meter

2 Methods

2.1 Desktop assessment

2.1.1 Threatened flora and fauna

A search of relevant databases was conducted to determine the likely presence of any threatened flora and fauna within 1.5 km of the site, and included:

- EPBC Act (PMST)
- NSW BioNet search.

2.1.2 Mapped vegetation communities

The Coffs Harbour On-line Mapping System was reviewed for the site to identify:

- fine-scale vegetation mapping
- any additional high value habitats mapped on the site
- the extent of mapped koala habitat.

Vegetation mapping layers obtained from the Department of Planning, Industry and Environment (DPIE) Data Portal and data from the NSW BioNet Vegetation Information System (VIS) (NSW Government 2017) were also analysed to determine alignment with CHCC mapping.

2.1.3 Relevant policies and plans

Relevant legislation, plans and policies were reviewed during preparation of this report. Components relating to biodiversity and land use within the Coffs Harbour Local Environmental Plan (LEP) 2013 and the Coffs Harbour DCP were assessed, along with the Coffs Harbour CKPoM which provides a framework for the conservation and management of koala habitat, and the management of threats to koalas within the Coffs Harbour LGA. Key objectives of the CKPoM include protecting important koala habitat, stabilising or reversing threats to koalas, and managing and restoring koala habitat.

This report also considered the NSW Government's Biodiversity Offset Scheme (BOS). The BOS threshold test is used to determine when it is necessary to apply the Biodiversity Assessment Method to assess the impacts of a proposal through preparation of a Biodiversity Development Assessment Report. The Biodiversity Conservation Regulation 2017 specifies the following threshold levels for when the scheme is triggered:

- whether the amount of native vegetation to be cleared exceeds an area threshold; or
- whether the impact of the development is to occur on an area mapped on the Biodiversity Values (BV) map (land identified to have high biodiversity value).

Where a proposed development does not exceed the BOS threshold, proponents are still required to undertake a threatened species 'test of significance' which is prepared under Section 7.3 of the BC Act to determine if an activity is likely to have a significant impact on threatened species, their habitats, and ecological communities.

2.2 Site assessment

A site assessment was carried out by Environmental Scientist Vanessa Cain on 26 April 2021. Flora and fauna habitat assessments were conducted to identify the ecological attributes and potential environmental constraints associated with the site.

2.2.1 Flora

To confirm vegetation communities, the site was traversed to identify dominant native tree species in the canopy. Individual assessments were made for native trees occupying the canopy including the species, diameter at breast height (DBH), presence of hollows and global positioning system location using a Fulcrum™ application. Field observations assessed the alignment of vegetation with mapped Plant Community Types (PCTs) using diagnostic species, position in the landscape and distribution. Searches were also conducted for threatened flora species potentially occurring within the area of mapped native vegetation.

2.2.2 Fauna

The fauna survey included actively searching for tracks, scats, burrows, nests, scratch marks on trees and other signs of fauna activity. Habitat assessments for key habitat features such as food trees, tree hollows and nesting sites were also conducted across the site.

A SAT survey was undertaken at two species of koala feed tree (KFTs) within the area of mapped koala habitat. SAT surveys involved searching for koala faecal pellets beneath each tree within a 1 m radius for two minutes. If no faecal pellets were initially detected, a second search was undertaken where leaf litter and ground cover was disturbed (Phillips and Callaghan 2011).

3 Results

3.1 Desktop assessment

3.1.1 Threatened flora and fauna

A search of the EPBC Act PMST within a 1.5 km radius of the site identified two threatened ecological communities (TECs), 49 nationally listed threatened species and 24 listed migratory species as potentially occurring (Appendix 1).

A search of the NSW BioNet database within 1.5 km of the site returned records of 15 threatened fauna species and four threatened flora species listed under the NSW BC Act and/or EPBC Act (Table 1). No records were returned within the boundary of the site.

Table 1 Threatened species BioNet records within 1.5 km of the site

Class	Scientific name	Common name	NSW status (BC Act)	C'wealth status (EPBC Act)
Aves	*Apus pacificus*	fork-tailed swift		C,J,K
Aves	*Hirundapus caudacutus*	white-throated needletail		V,C,J,K
Aves	*Ardenna pacifica*	wedge-tailed shearwater		J
Aves	*Ardenna tenuirostris*	short-tailed shearwater		C,J,K
Aves	*Ephippiorhynchus asiaticus*	black-necked stork	E1	
Aves	*Haliaeetus leucogaster*	white-bellied sea-eagle	V	
Aves	*Lophoictinia isura*	square-tailed kite	V	
Aves	*Pandion cristatus*	eastern osprey	V	
Aves	*Irediparra gallinacea*	comb-crested jacana	V	
Mammalia	*Phascogale tapoatafa*	brush-tailed phascogale	V	
Mammalia	*Phascolarctos cinereus*	koala	V	V
Mammalia	*Petaurus australis*	yellow-bellied glider	V	
Mammalia	*Pteropus poliocephalus*	grey-headed flying-fox	V	V
Mammalia	*Miniopterus australis*	little bent-winged bat	V	
Mammalia	*Miniopterus orianae oceanensis*	large bent-winged bat	V	
Flora	*Rhodamnia rubescens*	scrub turpentine	E4A	
Flora	*Rhodomyrtus psidioides*	native guava	E4A	
Flora	*Zieria prostrata*	headland zieria	E1	E
Flora	*Quassia sp.* Moonee Creek	Moonee quassia	E1	E

BC Act: E1 Endangered, E4A Critically Endangered, V Vulnerable. **EPBC Act**: C J K Camba Jamba Rokamba migratory bird agreements, V Vulnerable.

Tests of significance ('5-part tests') have been prepared under Section 7.3 of the NSW BC Act for species determined most likely to utilise the site based on BioNet records and surveyed habitat. Tests of significance are provided for koala, grey-headed flying-fox, little bent-winged bat and large bent-winged bat in Appendix 2. No significant impact to the long-term survival of

each species was determined.

3.1.2 Mapped vegetation communities

The Fine-scale Vegetation Mapping Layer provided in the Coffs Harbour Online Mapping System (CHCC 2016) identifies vegetation on the site as Coast and Escarpment Blackbutt Dry Forest and Foothills Turpentine – Grey Gum – Ironbark Moist Shrubby Forest with an additional small area of unclassified native remnant vegetation.

Vegetation mapping layers from DPIE (2018) identify three native vegetation types on the site including wet and dry sclerophyll forest. These broadly correspond with CHCC vegetation mapping and are detailed in Table 2 and presented in Figure 2.

Table 2 Vegetation communities mapped on the site

Coffs Harbour vegetation community profile name and no.	PCT ID	PCT common name	Vegetation class
Coast and Escarpment Blackbutt Dry Forest (CH_DOF01)	686	Blackbutt - Pink Bloodwood shrubby open forest of the coastal lowlands of the NSW North Coast Bioregion	North Coast Dry Sclerophyll Forests
Foothills Turpentine – Grey Gum – Ironbark Moist Shrubby Forest (CH_WSF17)	1262	Tallowwood - Small-fruited Grey Gum dry grassy open forest of the foothills of the NSW North Coast	Northern Hinterland Wet Sclerophyll Forests
Unmapped	827	Flooded Gum - Tallowwood - Brush Box moist open forest of the coastal ranges of the North Coast	North Coast Wet Sclerophyll Forests
Native remnant vegetation (CH_NRV01)	-	-	Native remnant vegetation

3.1.3 Relevant policies and plans

3.1.3.1 Coffs Harbour LEP and DCP

The Coffs Harbour LEP 2013 identifies land use zoning on the site as R5 (Large Lot Residential) with an MLS of 1 ha. The objectives of the R5 zone include:

- provision of residential housing in a rural setting while preserving and minimising impacts on environmentally sensitive locations and scenic quality
- ensuring large residential lots do not hinder the proper and orderly development of urban areas in the future.

Section C1.5 of Coffs Harbour DCP stipulates design requirements for R5 zones, including an objective to ensure that subdivisions are responsive to the environmental context of the land.

3.1.3.2 Koala habitat

A small area of secondary koala habitat (SKH) and tertiary koala habitat (TKH) is mapped along the eastern boundary of the site (Figure 2). The mapped area extends further north and east of the site with the entire patch comprising approximately 20 ha. The patch contributes to

a network of mapped koala habitat within the broader area also comprised of SKH and TKH.

SKH is defined in the CKPoM as land that generally has lower koala activity levels than primary habitat, but still supports koala populations away from the coastal fringe, contributing to overall habitat availability and providing a vital connectivity role. Similarly, TKH occurs mostly in rural areas of the LGA and has lower levels of koala activity but still provides habitat and connectivity for koalas (Lunney et al. 1999).

Under the CKPoM, the consent authority must take into consideration certain factors when assessing development that occurs in areas of SKH and TKH, including denying consent when the proposed works include the removal of preferred koala feed trees, unless the development does not significantly destroy, damage or compromise the values of the land as koala habitat. While both SKH and TKH are mapped on the site, SKH is mapped where the dividing boundary is proposed, therefore management actions relating to SKH have been addressed in Table 3 below.

Table 3 Consistency with management actions for SKH

Management actions for koala habitat	Consistency with CKPoM
Minimal net loss of SKH.	There will be zero net loss of SKH. Design plans indicate the proposed dividing boundary will avoid any impact to KFTs within the SKH and therefore any future boundary fencing is unlikely to remove SKH.
The level of significance to koalas of the trees proposed to be removed.	Primary KFTs are present on the site (swamp mahogany and flooded gum), however the habitat has been cleared of understorey resulting in a highly modified environment.
The number of trees proposed to be removed in relationship to the extent and quality of adjacent or nearby Primary Koala Habitat and/or SKH.	The proposed subdivision will not require removal of any trees. Koala habitat on the site is located at the southern end of a larger patch (approximately 20 ha) that extends across multiple private properties to the north and east.
Threats to koalas which may result from the development.	The proposed subdivision is not expected to result in threats to koalas.
All other options for protecting koala trees as listed above.	No trees are proposed to be removed from the site.
The impacts to existing or potential koala movement corridors.	No impacts are expected to occur to existing or potential koala movement corridors.
Whether the land is accredited under the Timber Plantation (Harvest Guarantee) Act 1995.	n/a

3.1.3.3 Biodiversity Offsets Scheme

As detailed in Section 2.1.3, the BOS is triggered when:

- the amount of native vegetation to be cleared exceeds an area threshold, or
- the impact of the development is to occur on an area mapped on the BV map.

Potential future vegetation clearing for boundary fencing is not expected to exceed the area threshold and BV mapping does not occur on the site. Threatened species ‘tests of significance’ have been prepared and provided in Appendix 2.

Figure 2: Mapped plant community types and koala habitat

Keiley Hunter Planning

Smiths Road Ecological Assessment

Site boundaries
- Existing lot boundary
- Proposed dividing boundary

Koala habitat
- Secondary
- Tertiary

ecosure

Job number: PR6396
Revision: 1
Author: VLC
Date: 13/07/2021

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GDA 1994 MGA Zone 56
Projection: Transverse Mercator
Datum: GDA 1994
Units: Meter

3.2 Site assessment

3.2.1 Flora

The majority of the site consists of mown lawn interspersed with planted trees and shrubs. A mature stand of introduced weeping fig trees (*Ficus benjamina*) is a dominant feature along the eastern boundary. Native canopy trees are scattered throughout, mainly along the eastern and southern boundaries. A sparse native understorey consisting mostly of grasses and climbers was observed in the eastern portion of the site. Introduced plant species were recorded throughout the site. Two introduced species are listed by North Coast Local Land Services (LLS) as priority weeds and four species are on the North Coast weed watch list (North Coast LLS 2017). A flora list (excluding garden plants) is provided in Table 4.

Native vegetation has been largely cleared from the site. Remaining vegetation has been highly modified and therefore could not be confidently assigned to any PCT mapped for the site. Diagnostic canopy species listed for each PCT in the BioNet VIS database were not recorded within the mapped extent of their associated PCT. For example, no diagnostic canopy species listed for PCT 1262 were recorded on the site, and flooded gum associated with PCT 827 was recorded in PCT 1262. This is likely due to a combination of human modification over time and a margin of error present when mapping boundaries between different vegetation communities. In addition, the mapped extent of native vegetation is greater than the on-ground extent of native vegetation, with the area of PCT 1262 having been reduced north of the house (Figure 2). Surveys did not detect any vegetation consistent with nationally threatened ecological communities.

Table 4 Flora list

Scientific name	Common name
Native species	
Eucalyptus siderophloia	grey ironbark
Corymbia intermedia	pink bloodwood
Eucalyptus pilularis	blackbutt
Eucalyptus grandis	flooded gum
Melaleuca quinquenervia	broad-leaved paperbark
Archontophoenix cunninghamiana	bangalow palm
Cupaniopsis anacardioides	tuckeroo
Notelaea longifolia	mock olive
Breynia oblongifolia	coffee bush
Glochidion ferdinandi	cheese tree
Smilax australis	lawyer vine
Cissus hypoglauca	water vine
Eustrephus latifolius	wombat berry
Calochlaena dubia	rainbow fern
Oplismenus imbecillis	creeping beard grass
Microlaena stipoides	weeping grass

Scientific name	Common name
Introduced species	
*Cinnamomum camphora**	camphor laurel
Ficus benjamina	weeping fig
*Schefflera actinophylla**	umbrella tree
Murraya paniculata	mock orange
*Cestrum nocturnum**	lady of the night
Senna pendula var. *glabrata*	senna
Ardisia crenata	coralberry
Ochna serrulata	Mickey Mouse plant
Lantana camara+	lantana
Asparagus macowanii+	pompom asparagus
Centella asiatica	Indian pennywort
*Passiflora suberosa**	cork passionflower
Wisteria sinensis	Chinese wisteria
Sida rhombifolia	paddys lucerne
Paspalum mandiocanum	broadleaf paspalum

+ denotes priority weed species and * denotes weed watch list within the North Coast Local Land Services Region

3.2.2 Fauna

Fifteen canopy trees were assessed during the site visit (Table 5 and Figure 3). Trees were also included in the assessment if they were located close to the boundary and canopies extended into the lot. Most trees assessed included flooded gum as well as grey ironbark, blackbutt, pink bloodwood and lemon-scented gum. The grey ironbark was assessed as significant having a DBH greater than 80 cm and potentially containing small hollows (Table 5). One lemon-scented gum was also recorded with a large DBH (>80 cm), however it lacked structure likely to contain hollows. It should be noted that lemon-scented gums are native to north Queensland but are naturalised in some areas of NSW.

Koala habitat occupies a small portion of the lot with only one KFT (blackbutt) recorded within the extent of mapped habitat. Additional KFTs occur outside the mapped area of koala habitat and were included in the SAT survey. No faecal pellets were detected during the searches at each of the trees resulting in a low use determination. While the vegetation on the site is fragmented and modified, individual trees with connectivity to the broader area still have potential to provide foraging and refuge habitat for koalas. A lack of detection does not indicate total absence as trees may be used intermittently.

Table 5 Native tree assessment

Scientific name	Common name	DBH category (cm)	Hollow-bearing	KFT/SAT survey
Eucalyptus siderophloia	grey ironbark	>80	Yes	No
Corymbia intermedia	pink bloodwood	≥20 and ≤80	No	No

Scientific name	Common name	DBH category (cm)	Hollow-bearing	KFT/SAT survey
Eucalyptus pilularis	blackbutt	≥20 and ≤80	No	Yes
Corymbia citriodora	lemon-scented gum	>80	No	No
Eucalyptus grandis	flooded gum	≥20 and ≤80	No	Yes
Eucalyptus grandis	flooded gum	≥20 and ≤80	No	Yes
Eucalyptus grandis	flooded gum	<20	No	Yes
Eucalyptus grandis	flooded gum	≥20 and ≤80	No	Yes
Eucalyptus grandis	flooded gum	≥20 and ≤80	No	Yes
Eucalyptus grandis	flooded gum	≥20 and ≤80	No	Yes
Eucalyptus grandis	flooded gum	≥20 and ≤80	No	Yes
Eucalyptus grandis	flooded gum	≥20 and ≤80	No	Yes
Eucalyptus grandis	flooded gum	≥20 and ≤80	No	Yes
Eucalyptus grandis	flooded gum	≥20 and ≤80	No	Yes
Eucalyptus grandis	flooded gum	≥20 and ≤80	No	Yes

The trees on the site are likely to provide seasonal foraging opportunities during flowering periods. Nectar and pollen provide a food resource for numerous native bird and insect species, as well as grey-headed flying-foxes and arboreal mammals such as gliders. Two threatened microbats were returned in the NSW BioNet search as occurring within 1.5 km of the site (Table 1). These species frequently utilise open areas in proximity to vegetation with dense canopy, and roost in a variety of habitats including under bark, in tree hollows and man-made structures.

Figure 3: Tree and habitat assessment

Keiley Hunter

Smiths Road Ecological Assessment

Site boundaries
Existing lot boundary
Proposed dividing boundary

Koala habitat
Secondary
Tertiary

ecosure

Job number: PR6396
Revision: 1
Author: VLC
Date: 13/07/2021

0 10 20 m

GDA 1994 MGA Zone 56
Projection: Transverse Mercator
Datum: GDA 1994
Units: Meter

4 Discussion/recommendations

The proposed subdivision is not expected to significantly impact native vegetation on the site or threatened species that potentially use the site. No vegetation clearing is proposed at this stage of the development and potential future clearing is likely to be limited to the lot boundaries.

The proposed subdivision aligns with relevant objectives of both the Coffs Harbour LEP and DCP. Additionally, this report finds the subdivision is unlikely to result in any impact to koala habitat, aligning with all relevant components of the CHCC CKPoM.

Fauna habitat is restricted to the remaining canopy trees which likely provide foraging and refuge opportunities for a range of birds, insects and some mammals such as grey-headed flying-foxes. A large grey ironbark represents the most important habitat component on the site, potentially containing small hollows. Due to the proximity of the proposed dividing boundary, potential future clearing for fencing should avoid any disturbance to this tree.

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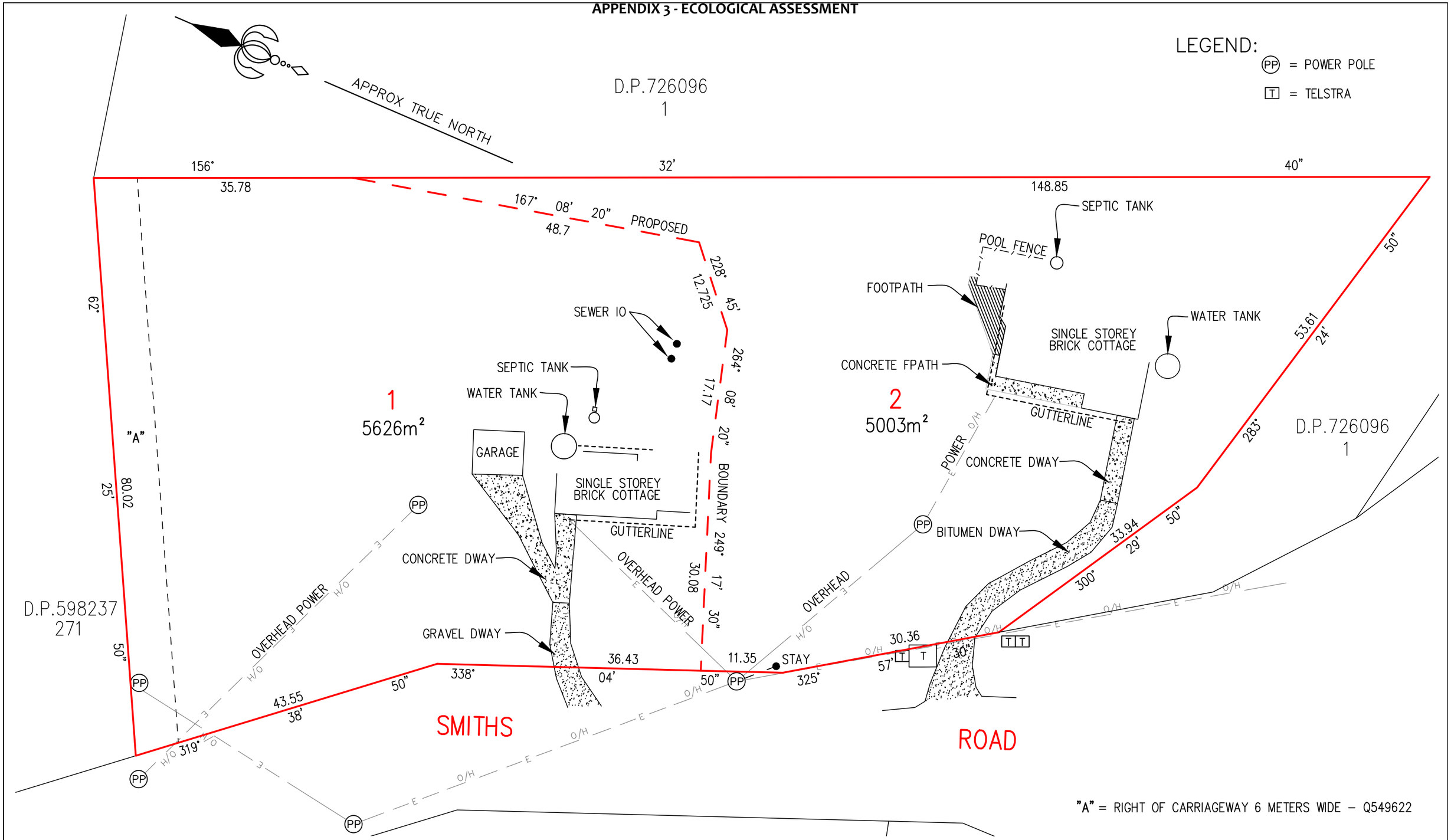
Appendix 1 Design plan



CLIENT: CHRISTINE FREWIN		CONSULTING SURVEYORS|URBAN PLANNERS|PROJECT MANAGERS Newnham Karl Weir and Partners Pty Ltd 5 Murdock Street Coffs Harbour 2450 Phone: 02 6652 6630 Fax: 02 6652 6064 ABN 21 100 904 783 ACN 100 904 783	SERVICES Contour Interval: Sewage: Septic Stormwater: Water: Tank Electricity: Overhead Telephone: Underground Road: Bitumen Kerb: Nil Footpath: Nil	SITE SURVEY PLAN LOT 1 D.P.726095 Street: Smiths Road Suburb: Emerald Beach Local Auth: CHCC Parish: Moonee County: Fitzroy Area: 1.065Ha	STATMENTS A full boundary survey is required to certify the accuracy of the boundary marks found. The title is to be inspected to ensure all easements,covenants,rights & restrictions are shown. This plan represents visual topographical detail only. The nature & position of any underground services was not investigated at the time of survey. Drainage & sewage infomation is to be confirmed by the designer on receipt of the B.A.\ D.A. from council. The position of services may have been obtained through verbal advise from council.	YOUR REF:
RATIO: 1:500	PROPOSED SUBDIVISION					SURVEYED: W.B.
DATE: 04/06/2021	REV. 6					DRAWN BY: W.B. T.L.
DATUM: NIL						CHECKED: A.V.S
SURV REF: 14380						SHEET 1 OF 1

Appendix 2 Protected Matters Search Tool

Australian Government
Department of Agriculture, Water and the Environment

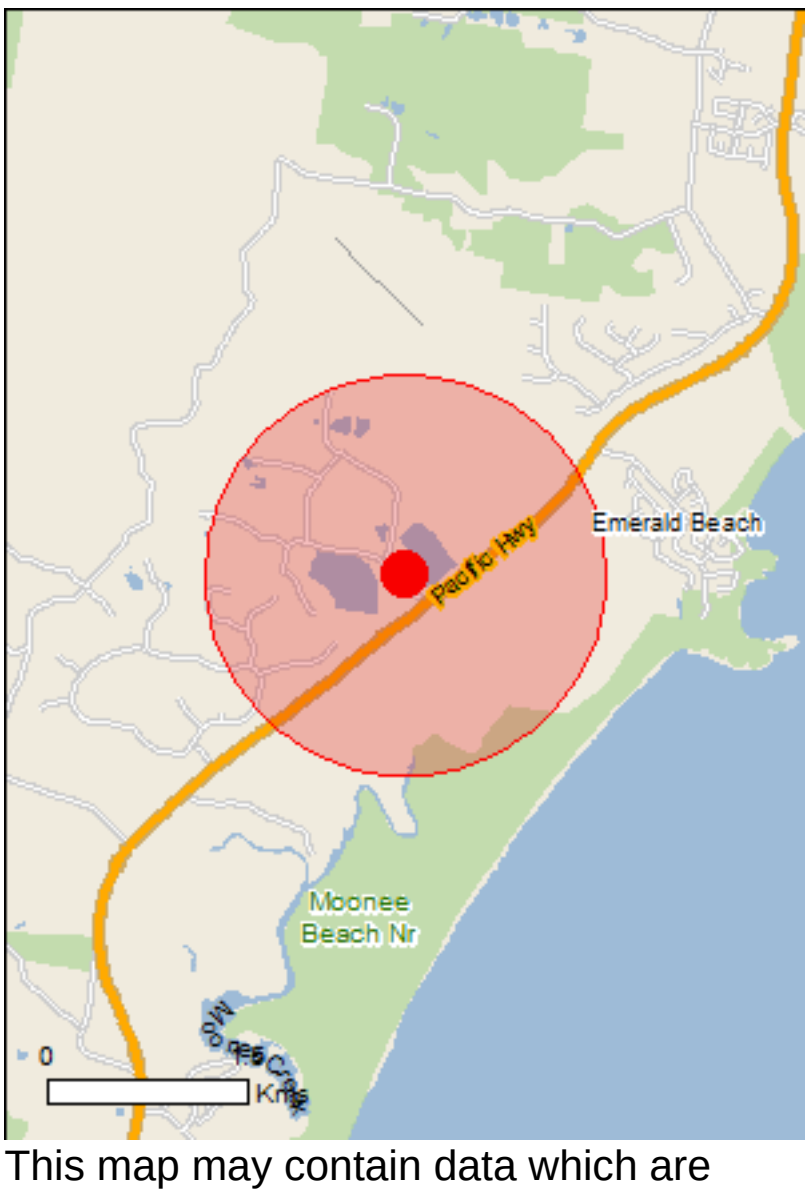
EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected.

Information on the coverage of this report and qualifications on data supporting this report are contained in the caveat at the end of the report.

Information is available about Environment Assessments and the EPBC Act including significance guidelines, forms and application process details.

Report created: 22/04/21 14:07:47



Coordinates

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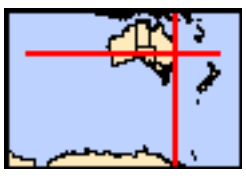

Summary

Matters of National Environmental Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance.

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance:	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	2
Listed Threatened Species:	49
Listed Migratory Species:	24

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at http://www.environment.gov.au/heritage

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Land:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	31
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have nominated.

State and Territory Reserves:	1
Regional Forest Agreements:	1
Invasive Species:	37
Nationally Important Wetlands:	None
Key Ecological Features (Marine)	None

Details

Matters of National Environmental Significance

Listed Threatened Ecological Communities [Resource Information]

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Name	Status	Type of Presence
Coastal Swamp Oak (Casuarina glauca) Forest of New South Wales and South East Queensland ecological community	Endangered	Community likely to occur within area
Lowland Rainforest of Subtropical Australia	Critically Endangered	Community may occur within area

Listed Threatened Species [Resource Information]

Name	Status	Type of Presence
Birds		
Anthochaera phrygia Regent Honeyeater [82338]	Critically Endangered	Foraging, feeding or related behaviour likely to occur within area
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat likely to occur within area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat known to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Erythrotriorchis radiatus Red Goshawk [942]	Vulnerable	Species or species habitat likely to occur within area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat may occur within area
Grantiella picta Painted Honeyeater [470]	Vulnerable	Species or species habitat may occur within area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area
Limosa lapponica baueri Nunivak Bar-tailed Godwit, Western Alaskan Bar-tailed Godwit [86380]	Vulnerable	Species or species habitat likely to occur within area

Name	Status	Type of Presence
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Pachyptila turtur subantarctica Fairy Prion (southern) [64445]	Vulnerable	Species or species habitat likely to occur within area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area
Sternula nereis nereis Australian Fairy Tern [82950]	Vulnerable	Species or species habitat may occur within area
Thinornis cucullatus cucullatus Eastern Hooded Plover, Eastern Hooded Plover [90381]	Vulnerable	Species or species habitat may occur within area
Turnix melanogaster Black-breasted Button-quail [923]	Vulnerable	Species or species habitat may occur within area
Fish		
Hippocampus whitei White's Seahorse, Crowned Seahorse, Sydney Seahorse [66240]	Endangered	Species or species habitat likely to occur within area
Frogs		
Litoria olongburensis Wallum Sedge Frog [1821]	Vulnerable	Species or species habitat may occur within area
Mixophyes iteratus Giant Barred Frog, Southern Barred Frog [1944]	Endangered	Species or species habitat known to occur within area
Insects		
Argynnis hyperbius inconstans Australian Fritillary [88056]	Critically Endangered	Species or species habitat may occur within area
Mammals		
Chalinolobus dwyeri Large-eared Pied Bat, Large Pied Bat [183]	Vulnerable	Species or species habitat likely to occur within area
Dasyurus maculatus maculatus (SE mainland population) Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184]	Endangered	Species or species habitat known to occur within area
Petauroides volans Greater Glider [254]	Vulnerable	Species or species habitat likely to occur within area
Petrogale penicillata Brush-tailed Rock-wallaby [225]	Vulnerable	Species or species habitat may occur within area
Phascolarctos cinereus (combined populations of Qld, NSW and the ACT) Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Vulnerable	Species or species habitat known to occur within area
Potorous tridactylus tridactylus Long-nosed Potoroo (SE Mainland) [66645]	Vulnerable	Species or species habitat likely to occur within area
Pseudomys novaehollandiae New Holland Mouse, Pookila [96]	Vulnerable	Species or species habitat likely to occur within area

Name	Status	Type of Presence
[Pteropus poliocephalus](#) Grey-headed Flying-fox [186]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Plants		
[Acronychia littoralis](#) Scented Acronychia [8582]	Endangered	Species or species habitat likely to occur within area
[Arthraxon hispidus](#) Hairy-joint Grass [9338]	Vulnerable	Species or species habitat likely to occur within area
[Cryptostylis hunteriana](#) Leafless Tongue-orchid [19533]	Vulnerable	Species or species habitat may occur within area
[Cynanchum elegans](#) White-flowered Wax Plant [12533]	Endangered	Species or species habitat likely to occur within area
[Macadamia integrifolia](#) Macadamia Nut, Queensland Nut Tree, Smooth-shelled Macadamia, Bush Nut, Nut Oak [7326]	Vulnerable	Species or species habitat may occur within area
[Macadamia tetraphylla](#) Rough-shelled Bush Nut, Macadamia Nut, Rough-shelled Macadamia, Rough-leaved Queensland Nut [6581]	Vulnerable	Species or species habitat likely to occur within area
[Marsdenia longiloba](#) Clear Milkvine [2794]	Vulnerable	Species or species habitat known to occur within area
[Parsonsia dorrigoensis](#) Milky Silkpod [64684]	Endangered	Species or species habitat likely to occur within area
[Persicaria elatior](#) Knotweed, Tall Knotweed [5831]	Vulnerable	Species or species habitat may occur within area
[Phaius australis](#) Lesser Swamp-orchid [5872]	Endangered	Species or species habitat likely to occur within area
[Rhodamnia rubescens](#) Scrub Turpentine, Brown Malletwood [15763]	Critically Endangered	Species or species habitat known to occur within area
[Rhodomyrtus psidioides](#) Native Guava [19162]	Critically Endangered	Species or species habitat known to occur within area
[Samadera sp. Moonee Creek (J.King s.n. Nov. 1949)](#) [86885]	Endangered	Species or species habitat known to occur within area
[Thesium australe](#) Austral Toadflax, Toadflax [15202]	Vulnerable	Species or species habitat known to occur within area
[Tylophora woollsii](#) [20503]	Endangered	Species or species habitat likely to occur within area
[Zieria prostrata](#) Headland Zieria [56782]	Endangered	Species or species habitat known to occur within area
Reptiles		
[Caretta caretta](#) Loggerhead Turtle [1763]	Endangered	Breeding known to occur within area

Name	Status	Type of Presence
Chelonia mydas		
Green Turtle [1765]	Vulnerable	Breeding likely to occur within area
Dermochelys coriacea		
Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
Eretmochelys imbricata		
Hawksbill Turtle [1766]	Vulnerable	Breeding likely to occur within area
Natator depressus		
Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area

Listed Migratory Species [Resource Information]

* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

Name	Threatened	Type of Presence
Migratory Marine Birds		
Anous stolidus		
Common Noddy [825]		Species or species habitat likely to occur within area
Apus pacificus		
Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Sternula albifrons		
Little Tern [82849]		Breeding known to occur within area
Migratory Marine Species		
Caretta caretta		
Loggerhead Turtle [1763]	Endangered	Breeding known to occur within area
Chelonia mydas		
Green Turtle [1765]	Vulnerable	Breeding likely to occur within area
Dermochelys coriacea		
Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
Eretmochelys imbricata		
Hawksbill Turtle [1766]	Vulnerable	Breeding likely to occur within area
Natator depressus		
Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area
Migratory Terrestrial Species		
Cuculus optatus		
Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat may occur within area
Hirundapus caudacutus		
White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area
Monarcha melanopsis		
Black-faced Monarch [609]		Species or species habitat likely to occur within area
Monarcha trivirgatus		
Spectacled Monarch [610]		Species or species habitat known to occur within area
Myiagra cyanoleuca		
Satin Flycatcher [612]		Species or species habitat known to occur within area
Rhipidura rufifrons		
Rufous Fantail [592]		Species or species habitat known to occur within area
Migratory Wetlands Species		
Actitis hypoleucos		
Common Sandpiper [59309]		Species or species

Name	Threatened	Type of Presence
		habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat known to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat likely to occur within area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Pandion haliaetus Osprey [952]		Breeding known to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat may occur within area

Other Matters Protected by the EPBC Act

Listed Marine Species [Resource Information]

* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

Name	Threatened	Type of Presence
Birds		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area
Anous stolidus Common Noddy [825]		Species or species habitat likely to occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Ardea ibis Cattle Egret [59542]		Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat known to occur within area

Name	Threatened	Type of Presence
[Calidris ferruginea](#) Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
[Calidris melanotos](#) Pectoral Sandpiper [858]		Species or species habitat may occur within area
[Gallinago hardwickii](#) Latham's Snipe, Japanese Snipe [863]		Species or species habitat likely to occur within area
[Haliaeetus leucogaster](#) White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area
[Hirundapus caudacutus](#) White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area
[Lathamus discolor](#) Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area
[Limosa lapponica](#) Bar-tailed Godwit [844]		Species or species habitat known to occur within area
[Merops ornatus](#) Rainbow Bee-eater [670]		Species or species habitat may occur within area
[Monarcha melanopsis](#) Black-faced Monarch [609]		Species or species habitat likely to occur within area
[Monarcha trivirgatus](#) Spectacled Monarch [610]		Species or species habitat known to occur within area
[Myiagra cyanoleuca](#) Satin Flycatcher [612]		Species or species habitat known to occur within area
[Numenius madagascariensis](#) Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
[Pachyptila turtur](#) Fairy Prion [1066]		Species or species habitat likely to occur within area
[Pandion haliaetus](#) Osprey [952]		Breeding known to occur within area
[Rhipidura rufifrons](#) Rufous Fantail [592]		Species or species habitat known to occur within area
[Rostratula benghalensis (sensu lato)](#) Painted Snipe [889]	Endangered*	Species or species habitat likely to occur within area
[Sterna albifrons](#) Little Tern [813]		Breeding known to occur within area
[Thinornis rubricollis rubricollis](#) Hooded Plover (eastern) [66726]	Vulnerable*	Species or species habitat may occur within area
[Tringa nebularia](#) Common Greenshank, Greenshank [832]		Species or species habitat may occur within

Name	Threatened	Type of Presence area
Fish		
Hippocampus whitei		
White's Seahorse, Crowned Seahorse, Sydney Seahorse [66240]	Endangered	Species or species habitat likely to occur within area
Reptiles		
Caretta caretta		
Loggerhead Turtle [1763]	Endangered	Breeding known to occur within area
Chelonia mydas		
Green Turtle [1765]	Vulnerable	Breeding likely to occur within area
Dermochelys coriacea		
Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
Eretmochelys imbricata		
Hawksbill Turtle [1766]	Vulnerable	Breeding likely to occur within area
Natator depressus		
Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area

Extra Information

State and Territory Reserves	[Resource Information]
Name	State
Moonee Beach	NSW

Regional Forest Agreements	[Resource Information]

Note that all areas with completed RFAs have been included.

Name	State
North East NSW RFA	New South Wales

Invasive Species	[Resource Information]

Weeds reported here are the 20 species of national significance (WoNS), along with other introduced plants that are considered by the States and Territories to pose a particularly significant threat to biodiversity. The following feral animals are reported: Goat, Red Fox, Cat, Rabbit, Pig, Water Buffalo and Cane Toad. Maps from Landscape Health Project, National Land and Water Resouces Audit, 2001.

Name	Status	Type of Presence
Birds		
Acridotheres tristis		
Common Myna, Indian Myna [387]		Species or species habitat likely to occur within area
Anas platyrhynchos		
Mallard [974]		Species or species habitat likely to occur within area
Carduelis carduelis		
European Goldfinch [403]		Species or species habitat likely to occur within area
Columba livia		
Rock Pigeon, Rock Dove, Domestic Pigeon [803]		Species or species habitat likely to occur within area
Lonchura punctulata		
Nutmeg Mannikin [399]		Species or species habitat likely to occur within area

Name	Status	Type of Presence
Passer domesticus House Sparrow [405]		Species or species habitat likely to occur within area
Pycnonotus jocosus Red-whiskered Bulbul [631]		Species or species habitat likely to occur within area
Streptopelia chinensis Spotted Turtle-Dove [780]		Species or species habitat likely to occur within area
Sturnus vulgaris Common Starling [389]		Species or species habitat likely to occur within area
Turdus merula Common Blackbird, Eurasian Blackbird [596]		Species or species habitat likely to occur within area
Frogs		
Rhinella marina Cane Toad [83218]		Species or species habitat known to occur within area
Mammals		
Bos taurus Domestic Cattle [16]		Species or species habitat likely to occur within area
Canis lupus familiaris Domestic Dog [82654]		Species or species habitat likely to occur within area
Felis catus Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Feral deer Feral deer species in Australia [85733]		Species or species habitat likely to occur within area
Lepus capensis Brown Hare [127]		Species or species habitat likely to occur within area
Mus musculus House Mouse [120]		Species or species habitat likely to occur within area
Oryctolagus cuniculus Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
Rattus norvegicus Brown Rat, Norway Rat [83]		Species or species habitat likely to occur within area
Rattus rattus Black Rat, Ship Rat [84]		Species or species habitat likely to occur within area
Sus scrofa Pig [6]		Species or species habitat likely to occur within area
Vulpes vulpes Red Fox, Fox [18]		Species or species habitat likely to occur within area
Plants		
Alternanthera philoxeroides Alligator Weed [11620]		Species or species

Name	Status	Type of Presence
		habitat likely to occur within area
Anredera cordifolia Madeira Vine, Jalap, Lamb's-tail, Mignonette Vine, Anredera, Gulf Madeiravine, Heartleaf Madeiravine, Potato Vine [2643]		Species or species habitat likely to occur within area
Asparagus aethiopicus Asparagus Fern, Ground Asparagus, Basket Fern, Sprengi's Fern, Bushy Asparagus, Emerald Asparagus [62425]		Species or species habitat likely to occur within area
Asparagus plumosus Climbing Asparagus-fern [48993]		Species or species habitat likely to occur within area
Cabomba caroliniana Cabomba, Fanwort, Carolina Watershield, Fish Grass, Washington Grass, Watershield, Carolina Fanwort, Common Cabomba [5171]		Species or species habitat likely to occur within area
Chrysanthemoides monilifera Bitou Bush, Boneseed [18983]		Species or species habitat likely to occur within area
Chrysanthemoides monilifera subsp. rotundata Bitou Bush [16332]		Species or species habitat likely to occur within area
Genista sp. X Genista monspessulana Broom [67538]		Species or species habitat may occur within area
Lantana camara Lantana, Common Lantana, Kamara Lantana, Large-leaf Lantana, Pink Flowered Lantana, Red Flowered Lantana, Red-Flowered Sage, White Sage, Wild Sage [10892]		Species or species habitat likely to occur within area
Pinus radiata Radiata Pine Monterey Pine, Insignis Pine, Wilding Pine [20780]		Species or species habitat may occur within area
Rubus fruticosus aggregate Blackberry, European Blackberry [68406]		Species or species habitat likely to occur within area
Salix spp. except S.babylonica, S.x calodendron & S.x reichardtii Willows except Weeping Willow, Pussy Willow and Sterile Pussy Willow [68497]		Species or species habitat likely to occur within area
Salvinia molesta Salvinia, Giant Salvinia, Aquarium Watermoss, Kariba Weed [13665]		Species or species habitat likely to occur within area
Senecio madagascariensis Fireweed, Madagascar Ragwort, Madagascar Groundsel [2624]		Species or species habitat likely to occur within area
Reptiles		
Hemidactylus frenatus Asian House Gecko [1708]		Species or species habitat likely to occur within area

Caveat

The information presented in this report has been provided by a range of data sources as acknowledged at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the Environment Protection and Biodiversity Conservation Act 1999. It holds mapped locations of World and National Heritage properties, Wetlands of International and National Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various resolutions.

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in making a referral may need to consider the qualifications below and may need to seek and consider other information sources.

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species distributions have been derived through a variety of methods. Where distributions are well known and if time permits, maps are derived using either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc) together with point locations and described habitat; or environmental modelling (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where very little information is available for species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc). In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More reliable distribution mapping methods are used to update these distributions as time permits.

Only selected species covered by the following provisions of the EPBC Act have been mapped:

- migratory and
- marine

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

- threatened species listed as extinct or considered as vagrants
- some species and ecological communities that have only recently been listed
- some terrestrial species that overfly the Commonwealth marine area
- migratory species that are very widespread, vagrant, or only occur in small numbers

The following groups have been mapped, but may not cover the complete distribution of the species:

- non-threatened seabirds which have only been mapped for recorded breeding sites
- seals which have only been mapped for breeding sites near the Australian continent

Such breeding sites may be important for the protection of the Commonwealth Marine environment.

Coordinates

-30.17306 153.16686

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

-Office of Environment and Heritage, New South Wales
-Department of Environment and Primary Industries, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment, Water and Natural Resources, South Australia
-Department of Land and Resource Management, Northern Territory
-Department of Environmental and Heritage Protection, Queensland
-Department of Parks and Wildlife, Western Australia
-Environment and Planning Directorate, ACT
-Birdlife Australia
-Australian Bird and Bat Banding Scheme
-Australian National Wildlife Collection
-Natural history museums of Australia
-Museum Victoria
-Australian Museum
-South Australian Museum
-Queensland Museum
-Online Zoological Collections of Australian Museums
-Queensland Herbarium
-National Herbarium of NSW
-Royal Botanic Gardens and National Herbarium of Victoria
-Tasmanian Herbarium
-State Herbarium of South Australia
-Northern Territory Herbarium
-Western Australian Herbarium
-Australian National Herbarium, Canberra
-University of New England
-Ocean Biogeographic Information System
-Australian Government, Department of Defence
Forestry Corporation, NSW
-Geoscience Australia
-CSIRO
-Australian Tropical Herbarium, Cairns
-eBird Australia
-Australian Government – Australian Antarctic Data Centre
-Museum and Art Gallery of the Northern Territory
-Australian Government National Environmental Science Program
-Australian Institute of Marine Science
-Reef Life Survey Australia
-American Museum of Natural History
-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania
-Tasmanian Museum and Art Gallery, Hobart, Tasmania
-Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the Contact Us page.

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Appendix 3 Tests of significance

Prepared under Section 7.3 of the *Biodiversity Conservation Act 2016*

Koala (*Phascolarctos cinereus)* – Vulnerable

Criteria	Assessment
a) In the case of a threatened species, whether the proposed development or activity is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction.	**Viable local population** The site contains scattered native trees with limited connectivity to a 20-ha patch of vegetation mapped as SKH and TKH and which connects to Orara East State Forest in the broader area. Native vegetation on the site is highly modified containing two species of KFTs including flooded gum and blackbutt. Given the site has some connectivity with the broader area, and contains known KFTs, koalas may potentially utilise the site at any given time. **Life cycle factors** A search of NSW BioNet Atlas returned koala records within 1.5 km of the site. Given that the site contains suitable habitat containing KFTs, and limited connectivity remains within the broader area, the site may be potentially utilised by koalas and breeding may occur. **Risk of extinction** There is potential for the proposed development to remove understorey vegetation for future boundary fencing. However, this is expected to be limited and given that no koala activity was detected during surveys, the proposed development is unlikely to have an adverse effect on the life cycle of the species such that the local population will be placed at risk of extinction.
b) In the case of an endangered ecological community or critically endangered ecological community, whether the proposed development or activity: i) is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or ii) is likely to substantially and adversely modify the composition of the ecological	n/a

Criteria	Assessment
community such that its local occurrence is likely to be placed at risk of extinction	
c) In relation to the habitat of a threatened species or ecological community: i) whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed development or activity, and ii) is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction. iii) the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species or ecological community in the locality.	i) The site contains koala habitat containing known species of KFT within an area of highly modified native vegetation. The proposed development is not expected to remove KFTs and will not result in fragmentation of habitat. ii) Limited vegetation removal is expected. It is unlikely to substantially and adversely modify the composition of the habitat to the degree that it will place koalas at risk of local extinction. iii) The habitat will not be fragmented or modified and does not represent high quality habitat. However, native vegetation on the site remains important to maintain connectivity and for species to obtain their required resources both locally and throughout the broader landscape.
d) Whether the proposed development or activity is likely to have an adverse effect on any declared area of outstanding biodiversity value (either directly or indirectly).	n/a
e) Whether the proposed development or activity is or is part of a key threatening process or is likely to increase the impact of a key threatening process.	n/a

Grey-headed flying-fox (*Pteropus poliocephalus*) - Vulnerable

Criteria	Assessment
a) In the case of a threatened species, whether the proposed development or activity is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction.	**Viable local population** Grey-headed flying-foxes (GHFFs) utilise a range of habitats including wet sclerophyll forest which occurs on the site. Three permanent GHFF camps are present in the Coffs Harbour LGA. The closest camp is Woolgoolga Lake camp which is considered nationally important as it has contained greater than 10,000 individuals multiple times in the last 10 years (Australian Government 2020). The camp provides roosting habitat critical to the survival of the species as specified in the GHFF Draft National Recovery Plan (Australian Government 2017). The proposed subdivision site contains suitable foraging habitat for GHFFs and it is highly likely that the species would utilise these resources when available. **Life cycle factors** Breeding exclusively takes place within camps, however the vegetation on the site includes foraging species utilised by GHFFs and therefore it may be utilised by mothers carrying young. **Risk of extinction** Given the proposed development is expected to require no clearing of native trees and to have a limited potential impact on understorey vegetation, the proposed subdivision is unlikely to have an adverse effect on the life cycle of the species such that the local population will be placed at risk of extinction.
b) In the case of an endangered ecological community or critically endangered ecological community, whether the proposed development or activity: i) is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or ii) is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction.	n/a
c) In relation to the habitat of a threatened species or ecological community: i) whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed development or activity, and ii) Is likely to substantially and adversely modify the composition of the ecological	i) The site contains suitable foraging species utilised by GHFFs. Potential vegetation removal is limited to understorey vegetation and will not result in fragmentation of foraging habitat. ii) Limited vegetation removal will potentially occur for future boundary fencing; however it is unlikely to substantially and adversely modify the composition of the habitat to the degree that it will place GHFFs at risk of local extinction. iii) The habitat will not be fragmented or modified. However, the canopy trees provide food resources for GHFFs and therefore potentially remain an important habitat component for the species to obtain their required resources.

Criteria	Assessment
community such that its local occurrence is likely to be placed at risk of extinction. iii) the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species or ecological community in the locality.	
d) Whether the proposed development or activity is likely to have an adverse effect on any declared area of outstanding biodiversity value (either directly or indirectly).	n/a
e) Whether the proposed development or activity is, or is part of a key threatening process or is likely to increase the impact of a key threatening process.	n/a.

Little bent-winged bat (*Miniopterus australis*) & large bent-winged bat (*M. orianae oceanensis*) - Vulnerable

These species are considered together in the '5-part test' due to their similar habitat requirements.

Criteria	Assessment
a) In the case of a threatened species, whether the proposed development or activity is likely to have an adverse effect on the life cycle of the species such that a viable local population of the species is likely to be placed at risk of extinction.	**Viable local population** The site contains vegetation that provides suitable habitat for the little and large bent-winged bats, which forage for insects within and above the vegetation canopy. Little and large bent-winged bats are known to roost during the day in caves, tunnels, tree hollows, abandoned mines, stormwater drains, culverts, bridges, and buildings (NSW Government 2020). Given that the vegetation occurs in association with a range of other suitable roosting habitats nearby, there is potential that the site may be utilised by both species. **Life cycle factors** The little bent-winged bat is thought to mainly utilise caves for maternity sites with only five known locations in Australia. The large bent-winged bat also utilises caves as maternity sites which have very specific temperature and humidity regimes (NSW Government 2020). Both species are known to disperse during non-breeding times and a search of NSW BioNet Atlas returned little and large bent-winged bat records within 1.5 km of the site. While breeding is unlikely to occur in the immediate area, the site potentially provides foraging and roosting habitat in tree hollows. **Risk of extinction** Given potential future clearing is likely to be limited to understorey vegetation, the proposed development is unlikely to have an adverse effect on the life cycle of the species such that the local population will be placed at risk of extinction.
b) In the case of an endangered ecological community or critically endangered ecological community, whether the proposed development or activity: i) is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or ii) is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction.	n/a
c) In relation to the habitat of a threatened species or ecological community: i) whether an area of habitat is likely to become fragmented or isolated from other areas of habitat as a result of the proposed development or activity, and	i) The site contains suitable foraging and roosting opportunities for both species. Potential future vegetation removal is expected to be limited to understorey vegetation and will not result in fragmentation of habitat. ii) Potential future clearing is expected to be limited to understorey vegetation and will not substantially affect foraging habitat utilised by the species, therefore it is unlikely to substantially and adversely

Criteria	Assessment
ii) Is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction. iii) the importance of the habitat to be removed, modified, fragmented or isolated to the long-term survival of the species or ecological community in the locality.	modify the composition of the habitat to the degree that it will place little and large bent-winged bats at risk of local extinction. iii) The habitat will not be fragmented or modified, however the canopy trees provide foraging resources for both species of bent-winged bats and therefore potentially remains an important habitat component for the species to obtain their required resources.
d) Whether the proposed development or activity is likely to have an adverse effect on any declared area of outstanding biodiversity value (either directly or indirectly).	n/a
e) Whether the proposed development or activity is, or is part of a key threatening process or is likely to increase the impact of a key threatening process.	n/a

Revision History

Revision No.	Revision date	Details	Prepared by	Reviewed by	Approved by
00	04/05/2021	Ecological Assessment Smiths Road Emerald Beach	Vanessa Cain, Environmental Scientist	Nigel Cotsell, Senior Ecologist	Con Lokkers, Principal Ecologist
Final	13/07/2021	Ecological Assessment Smiths Road Emerald Beach	Vanessa Cain, Environmental Scientist	Nigel Cotsell, Senior Ecologist	Con Lokkers, Principal Ecologist

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Midcoast
Building and
Environmental

BUSH FIRE ASSESSMENT REPORT

Subdivision
Two (2) x Lots

Lot 1 DP 726095
No 14-22 Smiths Road
Emerald Beach

May 2021

Amended July 2021

PO Box 353 Kempsey NSW 2440 – phone 0265660413 – mecham@bigpond.com – ABN 32098436812

APPENDIX 4 - BUSHFIRE ASSESSMENT

1.0 INTRODUCTION

A Bush Fire Assessment has been carried out for a proposed subdivision at Lot 1 DP 726095 No 14-22 Smiths Road, Emerald Beach.

It is proposed to subdivide the lot into two (2), with existing dwellings on proposed Lots 1 and 2.

The report assumes that the existing dwellings were constructed prior to the introduction of PBP.

This report is based on a site assessment carried out in April 2021 and provides a basis for compliance with respect to NSW Rural Fire Services, Planning for Bush Fire Protection 2019 (PBP, 2019) and AS3959 (2018).

The subdivision is an integrated development and has a requirement for a Bushfire Safety Authority under Section 100B of the *Rural Fires Act 1997.*

NOTE

The report has been prepared with all reasonable skill, care and diligence.

The information contained in this report has been gathered from field survey, experience and has been completed in consideration of the following legislation.

1. Rural Fires Act 1997.
2. Environmental Planning and Assessment Act 1979 No 203.
3. Building Code of Australia.
4. Council Local Environment Plans and Development Control Plans where applicable.
5. NSW Rural Fire Services, Planning for Bushfire Protection, 2019 (PBP, 2019).
6. AS 3959-2018 Construction of Buildings in Bushfire Prone Areas.

The report recognizes the fact that no property and lives can be guaranteed to survive a bushfire attack.

The report examines ways the risk of bushfire attack can be reduced where the subdivision site falls within the scope of the legislation.

The report is confidential and the writer accepts no responsibility of whatsoever nature, to third parties who use this report or part thereof is made known.

Any such party relies on this report at their own risk.

1.1 Objectives

The objectives of this report are to:

- Ensure that the proposed subdivision and the existing dwellings meet the aims and objectives of NSW Rural Fire Services, *Planning for Bushfire Protection*, 2019 and has measures sufficient to minimize the impact of bushfires; and
- Reduce the risk to property and the community from bushfire; and
- Comply where applicable with AS3959 – 2018.

1.2 Legislative Framework

In NSW, the bushfire protection provisions of the BCA are applied to Class 1, 2, 3, Class 4 parts of buildings, some Class 10 and Class 9 buildings that are Special Fire Protection Purposes (SFPPs).

The BCA references AS3959 – 2018 as the deemed-to-satisfy (DTS) solution for construction requirements in bushfire prone areas for NSW.

All development on bushfire prone land in NSW should comply with the requirements of the bushfire protection measures identified within NSW Rural Fire Service, Planning for Bushfire Protection, 2019**.**

It should be noted that the Rural Fire Service (RFS) does produce guidelines for upgrading existing buildings, which will be referenced later in the report.

The proposed subdivision is required to obtain a bushfire safety authority from the NSW Rural Fire Service.

1.3 Location

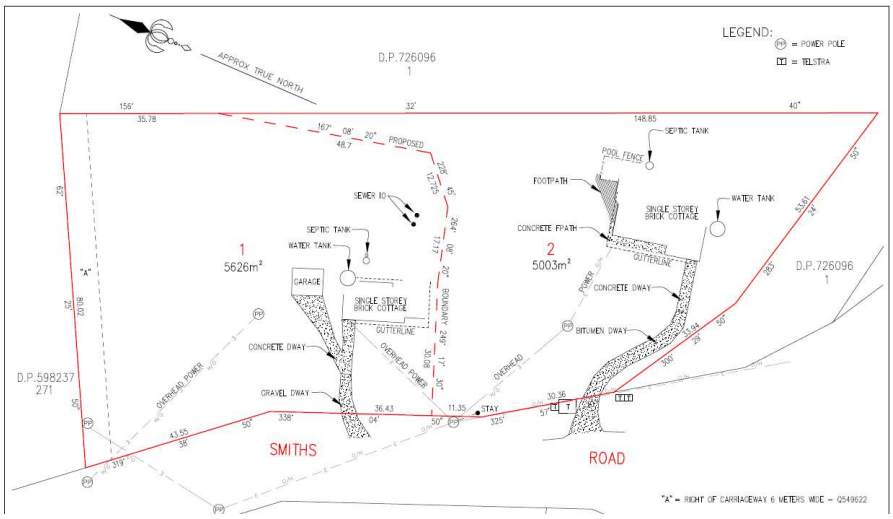
The site is located at Lot 1 DP 726095 No 14-22 Smiths Road, Emerald Beach.

Locality – Emerald Beach
Local Government Area – Coffs Harbour City Council
Closest Rural Fire Service – Moonee Brigade
Closest Fire Control Centre – Coffs Harbour

Figure 1 – Topographic Map

Figure 2 – Aerial View

Figure 3: Aerial View Close Up



1.4 Development Proposal and History

The subject site is approximately 1.065 hectares in size.

It is proposed to subdivide the lot into two (2), with the existing dwellings on proposed Lots 1 and 2.

1.5 Bushfire Risk Management Planning

Figure 4 for the bushfire mapping.

Figure 4: Bushfire Mapping

2.0 BUSHFIRE ASSESSMENT

2.1 Assessment Methodology

An assessment was completed with respect to the subdivision.

Several factors need to be considered in determining the bushfire hazard.

These factors are slope, vegetation type, and distance from hazard, access/egress and fire weather.

Each of these factors has been reviewed in determining the bushfire protection measures.

The assessment of slope and vegetation being carried out in accordance with NSW Rural Fire Service, Planning for Bushfire Protection, 2019.

2.2 Slope Assessment

Slope is a major factor to consider when assessing the bushfire risk.

The slopes were measured using a Suunto PM-5/360 PC Clinometer.

The dominant hazard vegetation on the subject lot and the adjacent land was identified and the slopes within the vegetation measured.

The following table shows the results:

Table 1 – Hazard Vegetation Slopes

Hazard Aspect	Slope	Upslope/Downslope or Flat
East	0-5°	Downslope

2.3 Vegetation Assessment

The vegetation on and surrounding the subject site was assessed over a distance of 140m.

The vegetation formations were classified using the vegetation formation as detailed in Planning for Bush Fire Protection, 2019.

2.3.1 Vegetation on the Subject Lot

The vegetation on the subject lot consists of mostly managed land however there is an area of unmanaged land to the east of the existing dwellings.

The existing dwelling on Lot 1 has an unmanaged area of approximately 20m in depth and the existing dwelling on proposed Lot 2 has an unmanaged area of approximately 5m in depth.

These areas have the characteristics of forest vegetation.

2.3.2 Vegetation adjacent and adjoining the Subject Lot

The proposed lots are located in an existing rural residential area where there are mostly areas of managed land however, there are some pockets of unmanaged land.

Directly to the east is mostly managed ground cover and shrub layer however, there are areas where the canopy and gardens may not meet the requirements of an Asset Protection Zone (APZ).

Table 2 – Hazard Vegetation

Hazard Aspect	Vegetation
East	Forest

Photo 1 – Showing the forest vegetation to the east behind the existing dwelling on proposed Lot 1

Photo 2 – Showing the forest vegetation to the east behind the existing dwelling on proposed Lot 2

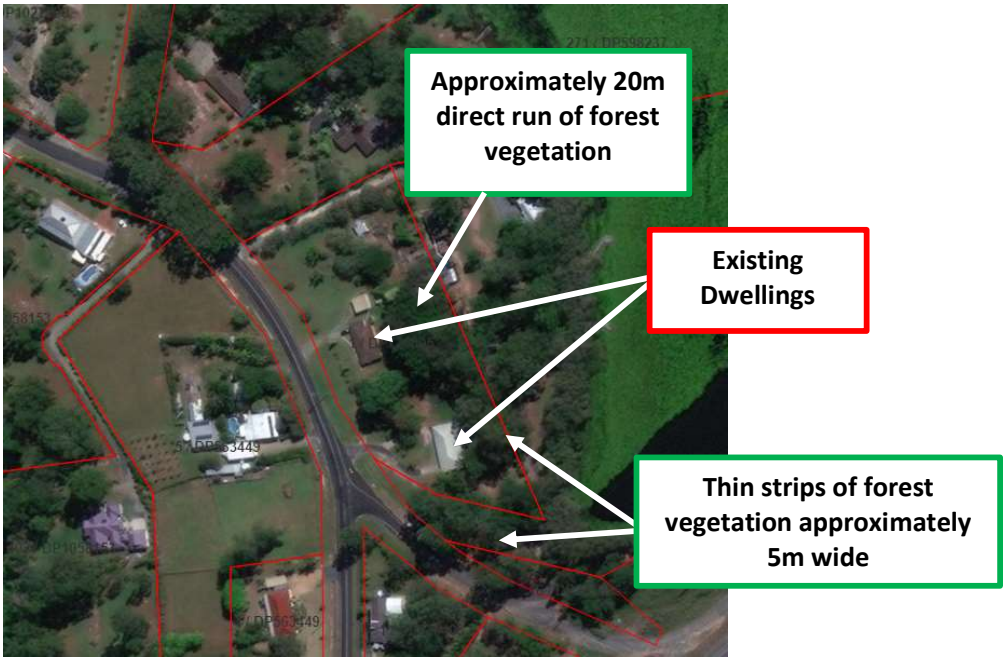
Photo 3 – Showing the vegetation behind both existing dwellings

Photo 4 - Looking to the south of the existing dwelling on proposed Lot 2

2.4 Hazard

The hazard is located to the east of both proposed lots.

Figure 5: Hazards



For the purposes of the report, the forest vegetation on and adjoining the subject lot (direct run of fire 20m and 5m) has been considered similar to rainforest hazard in accordance with A1.11.1 of PBP, 2019.

The hazard to the south, See **Figure 5**, has been compared to a garden hazard and will be considered in the Construction Section 3.2, referenced later in the report.

Table 3 – Summary of Hazard Characteristics

Hazard Aspect	Hazard	Slope	Upslope/Downslope or Flat
East	Similar to Rainforest	0-5°	Downslope

2.5 Fire Danger Index

The fire weather for the site is assumed on the worst-case scenario. In accordance with NSW Rural Fire Service the fire weather for the site is based upon the 1:50 year fire weather scenario and has a Fire Danger Index (FDI) of 80.

3.0 BUSHFIRE THREAT REDUCTION MEASURES

3.1 NSW Rural Fire Services, *Planning for Bushfire Protection*, 2019

The following provisions of NSW Rural Fire Service, *Planning for Bushfire Protection*, 2019 have been identified:

3.1.1 Defendable Space/Asset Protection Zone (APZ)

To ensure that the aims and objectives of NSW Rural Fire Services, PBP, 2019, a defendable space between the asset and the hazard should be provided. The defendable space provides for, minimal separation for safe firefighting, reduced radiant heat, reduced influence of convection driven winds, reduced ember viability and dispersal of smoke.

The proposed subdivision is not considered to be subject to the Special Fire Protection Purpose requirements which are applicable to schools, (the proposed development is not a school).

It is recommended that the defendable space be based upon the minimum requirements for Asset Protection Zones as set out in Planning for Bush Fire Protection, 2019.

Table 4 - APZ Requirements (PBP 2019) on Proposed Lot 1

Hazard Aspect	Vegetation Type	Slope	IPA	OPA	Total Minimum APZ Required (IPA + OPA)	Total APZ existing
East	Similar to Rainforest	0-5° Downslope	12m	-	12m	Approx 23m

Table 5 - APZ Requirements (PBP 2019) on Proposed Lot 2

Hazard Aspect	Vegetation Type	Slope	IPA	OPA	Total Minimum APZ Required (IPA + OPA)	Total APZ existing
East	Similar to Rainforest	0-5° Downslope	12m	-	12m	Approx 17m

It is recommended that the existing grassland/managed area of the lots is to be managed as Inner Protection Area (IPA).

Inner Protection Area (IPA) Requirements

Inner: The IPA is the area closest to the building and creates a fuel managed area which can minimise the impact of direct flame contact and radiant heat on the development and act as a defendable space. Vegetation within the IPA should be kept to a minimum level. Litter fuels within the IPA should be kept below 1cm in height and be discontinuous.

In practical terms the IPA is typically the curtilage around the building, consisting of a mown lawn and well-maintained gardens.

When establishing and maintaining an IPA the following requirements apply:

Trees

- Tree canopy cover should be less than 15% at maturity;
- Trees at maturity should not touch or overhang the building;
- Lower limbs should be removed up to a height of 2m above the ground;
- Tree canopies should be separated by 2 to 5m; and
- Preference should be given to smooth barked and evergreen trees.

Shrubs

- The creation of large discontinuities or gaps in the vegetation, to slow down or break the progress of fire towards buildings, should be provided;
- Shrubs should not be located under trees;
- Shrubs should not form more than 10% ground cover; and
- Clumps of shrubs should be separated from exposed windows and doors by a distance of at least twice the height of the vegetation.

Grass

- Grass should be kept mown (as a guide grass should be kept to no more than 100mm in height; and
- Leaves and vegetation debris should be removed.

An APZ should be maintained in perpetuity to ensure ongoing protection from the impact of bushfires.

3.1.2 Operational Access and Egress

The two (2) existing dwellings, access and egress, is from Smiths Road.

3.1.3 Services - Water, Gas and Electricity

As set out in Section 6.8.3 of NSW Rural Fire Services, Planning for Bushfire Protection, 2019, developments in bushfire prone areas must maintain a water supply for firefighting purposes.

Reticulated water supply is not available to the site however each dwelling has a 20,000 concrete litre tank and the owners also advise that Brigade does draft water out of the large dams.

Electricity supply is connected to the site.

Reticulated gas services are not available to the site; however, any reticulated or bottled gas is to be installed and maintained in accordance with AS 1596 and the requirements of the relevant authorities. Metal piping is to be used. All fixed gas cylinders are kept clear of all flammable materials to a distance of 10m and shielded on the hazard side of the installation.

If gas cylinders need to be kept close to a building, the release valves are to be directed away from the building and at least two (2) metres away from any combustible material, so that they do not act as a catalyst to combustion. Connections to and from gas cylinders need to be metal. Polymer sheathed flexible gas supply lines to gas meters adjacent to buildings are not to be used.

Figure 6 - Showing the large dams

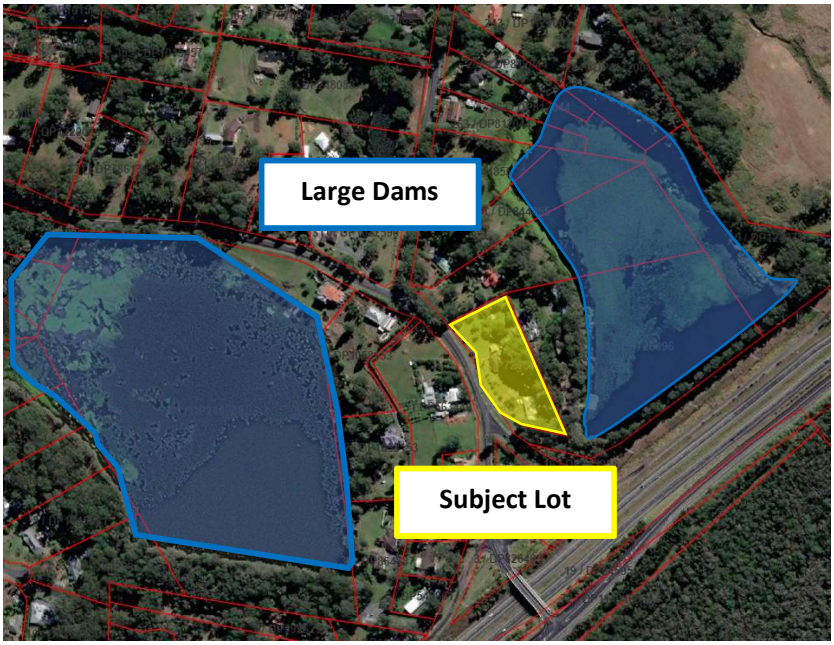


Photo 5 - Showing the dam to the east

3.1.4 Landscaping

Landscaping is a major cause of fire spreading to buildings, and therefore any landscaping will need consideration when planning, to produce gardens that do not contribute to the spread of a bushfire.

When planning any future landscaping surrounding any proposed building or subdivision, consideration should be given to the following:

- The choice of vegetation – consideration should be given to the flammability of the plant and the relation of their location to their flammability and on-going maintenance to remove flammable fuels.
- Trees as windbreaks/firebreaks – Trees in the landscaping can be used as windbreaks and also firebreaks by trapping embers and flying debris.
- Vegetation management – Maintain a garden that does not contribute to the spread of bushfire.
- Maintenance of property – Maintenance of the property is an important factor in the prevention of losses from bushfire.

Appendix 4 of NSW Rural Fire Services, *Planning for Bushfire Protection*, 2019, contains standards that are applicable to the provision and maintenance of Asset Protection Zones.

For a complete guide to APZs and landscaping download the NSW RFS document Standards for Asset Protection Zones at the RFS *www.rfs.nsw.gov.au*.

3.1.5 Fences and Gates

Fences and gates may play a significant role in the vulnerability of structures during a bush fire. With regard to new fences and gates:

a) All new fences in bush fire prone areas should be made of either hardwood or non-combustible material.
b) Where the fence is within 6m of the building or in areas of BAL 29, they should only be made of non-combustible material.

3.1.6 Emergency Evacuation Planning

It is recommended that the owners develop a bushfire survival plan with respect to the site.

Any bushfire survival plan should consider the advice offered by the RFS website *www.rfs.nsw.gov.au*.

3.2 Construction of Buildings

3.2.1 General

The deemed-to-satisfy provisions for construction requirements are detailed in AS 3953-2018.

The relevant Bushfire Attack Level and construction requirements have been determined in accordance with PBP, 2019 and AS 3959-2018.

3.2.2 AS3959 – 2018 Construction of Buildings in Bushfire Prone Areas

The following construction requirements in accordance with AS 3959 – 2018 Construction of Buildings in Bushfire Prone Areas is required for the bushfire attack categories.

Table 6

Bushfire Attack Level (BAL)
BAL - LOW No construction requirements under AS 3959-2018
BAL - 12.5
BAL - 19
BAL - 29
BAL - 40
BAL - FZ

The following table indicates the Bushfire Attack Levels applicable once the recommended APZs have been established:

Table 7 – Categories of Attack/Construction Standard Assessment for the Dwelling on Proposed Lot 1

Aspect	Hazard Vegetation	Slope	Min Distance to Hazard once APZ Applied	AS 3959-2018 Bushfire Attack Level (BAL)
East	Similar to Rainforest	0-5° Downslope	23m	**BAL 12.5**

Table 8 – Categories of Attack/Construction Standard Assessment for the Dwelling on Proposed Lot 2

Aspect	Hazard Vegetation	Slope	Min Distance to Hazard once APZ Applied	AS 3959-2018 Bushfire Attack Level (BAL)
East	Similar to Rainforest	0-5° Downslope	17m	**BAL 19 (See Note)**

Note: It should be noted that there is an eastern and southern hazard for Lot 2. The eastern hazard has been considered above however, it is noted that it is a strip of forest vegetation with a fire run of approximately 5m; with both the eastern and southern hazards, thin strips of forest vegetation. The southern hazard has not been considered, it has less of a fire run and more likely to act as a garden hazard; there is 7m of managed land between the hazard and the carport.

It is recommended that consideration be given to the upgrading the existing dwellings in accordance with the Rural Fire Services: Best Practice Guide to Bushfire Protection-Upgrading of Existing Buildings (minimal Protection Measures) can be seen in **Appendix 2**.

5.0 RECOMMENDATIONS

The following recommendations are made:

1. An Asset Protection Zone as detailed in Section 3.1.1 of this report is provided.
2. Services are considered as detailed in Section 3.1.3 of this report.
3. Adopt landscaping principals in accordance with Section 3.1.4 of this report.
4. It is recommended that consideration be given to the existing dwelling in accordance with the Rural Fire Services: Best Practice Guide to Bushfire Protection-Upgrading of Existing Buildings.
5. In addition to the requirements of this report it is recommended that a bushfire survival plan be developed and implemented for the subject site. In this regard your attention is drawn to the Rural Fire Service website.

6.0 CLAUSE 44 CONSIDERATIONS

Table 9

Environmental/Heritage Feature	Comment
Riparian Corridor	Not considered in this report
SEPP 14 – Coastal Wetland	Not considered in this report
SEPP 26 – Littoral	Not considered in this report
SEPP 44 – Koala Habitat	Not considered in this report
Areas of geological interest	Not considered in this report
Environment protection zones	Not considered in this report
Land slip	Not considered in this report
Flood prone land	Not considered in this report
National Park Estate or other reserves	Not considered in this report
Threatened Species, populations, endangered ecological communities and critical habitat	Not considered in this report
Aboriginal Heritage	Not considered in this report

7.0 CONCLUSION

It is suggested that with the implementation of this report, and its recommendations, that the bushfire risk is manageable and will be consistent with the acceptable bushfire protection measure solutions, provided for in NSW Rural Fire Services, PBP, 2019.

The report details the available defendable space between the hazard and the existing dwellings and recommends building upgrades. See **Appendix 2**.

This report is however contingent upon the following assumptions and limitations:

Assumptions

1. For a satisfactory level of bushfire safety to be achieved, regular inspection and testing of proposed measures, building elements and methods of construction, specifically nominated in this report, is essential and is assumed in the conclusion of this assessment.
2. There are no revegetation plans in respect to hazard vegetation and therefore the assumed fuel loading will not alter.
3. It is assumed that the building works will comply with the DTS provisions of the BCA including the relevant requirements of Australian Standard 3959 – 2018.
4. The proposed subdivision is constructed and maintained in accordance with the risk reduction strategy in this report.
5. The vegetation characteristics of the subject site and surrounding land remains unchanged from that observed at the time of inspection.

Limitations

1. The data, methodologies, calculations and conclusions documented within this report specifically relate to the proposed subdivision and existing dwellings and must not be used for any other purpose.
2. A reassessment will be required to verify consistency with this assessment if there are any alterations and/or additions, or changes to the risk reduction strategy contained in this report.

Regards

Tim Mecham
Midcoast Building and Environmental

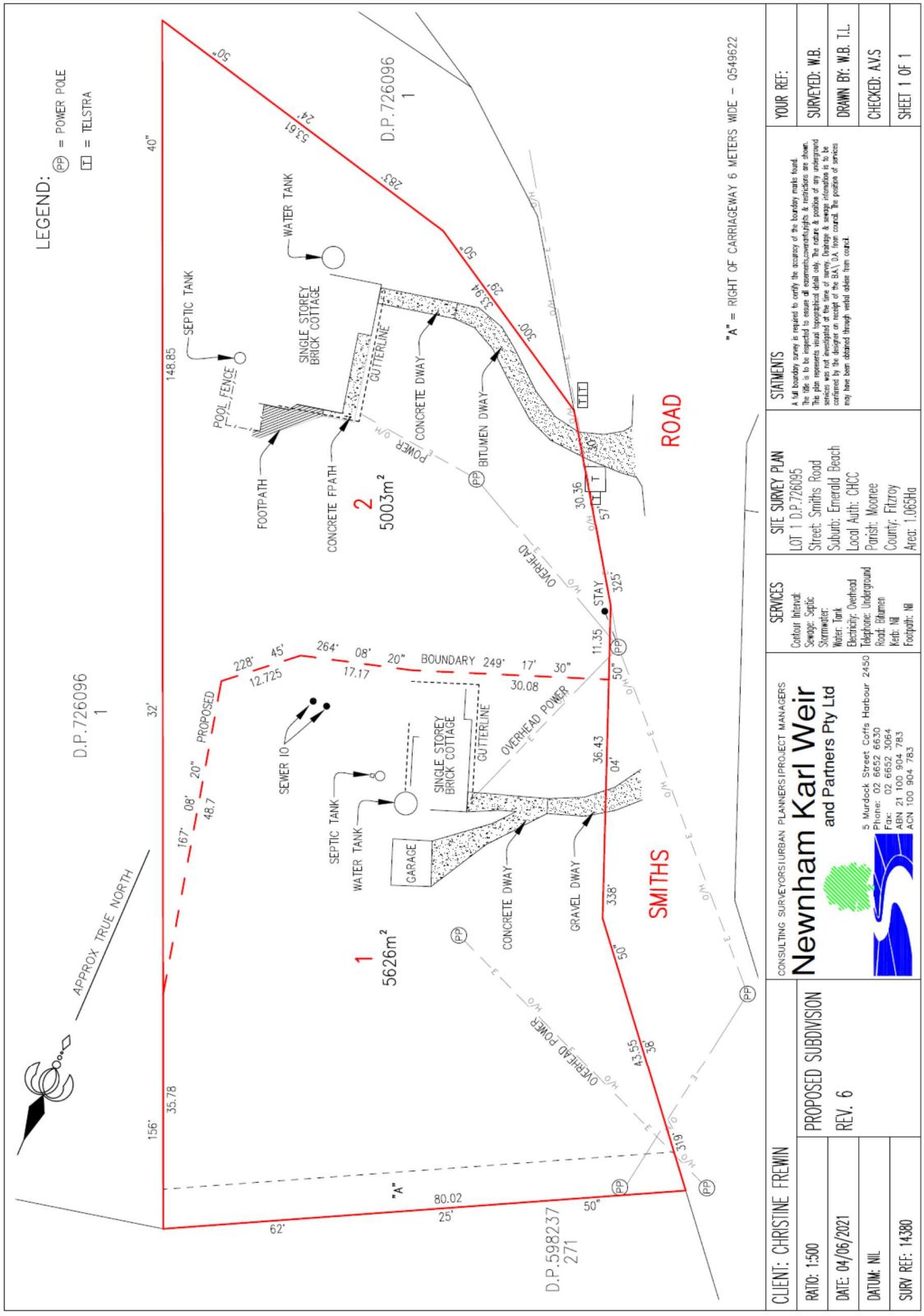
8.0 DISLCLAIMER

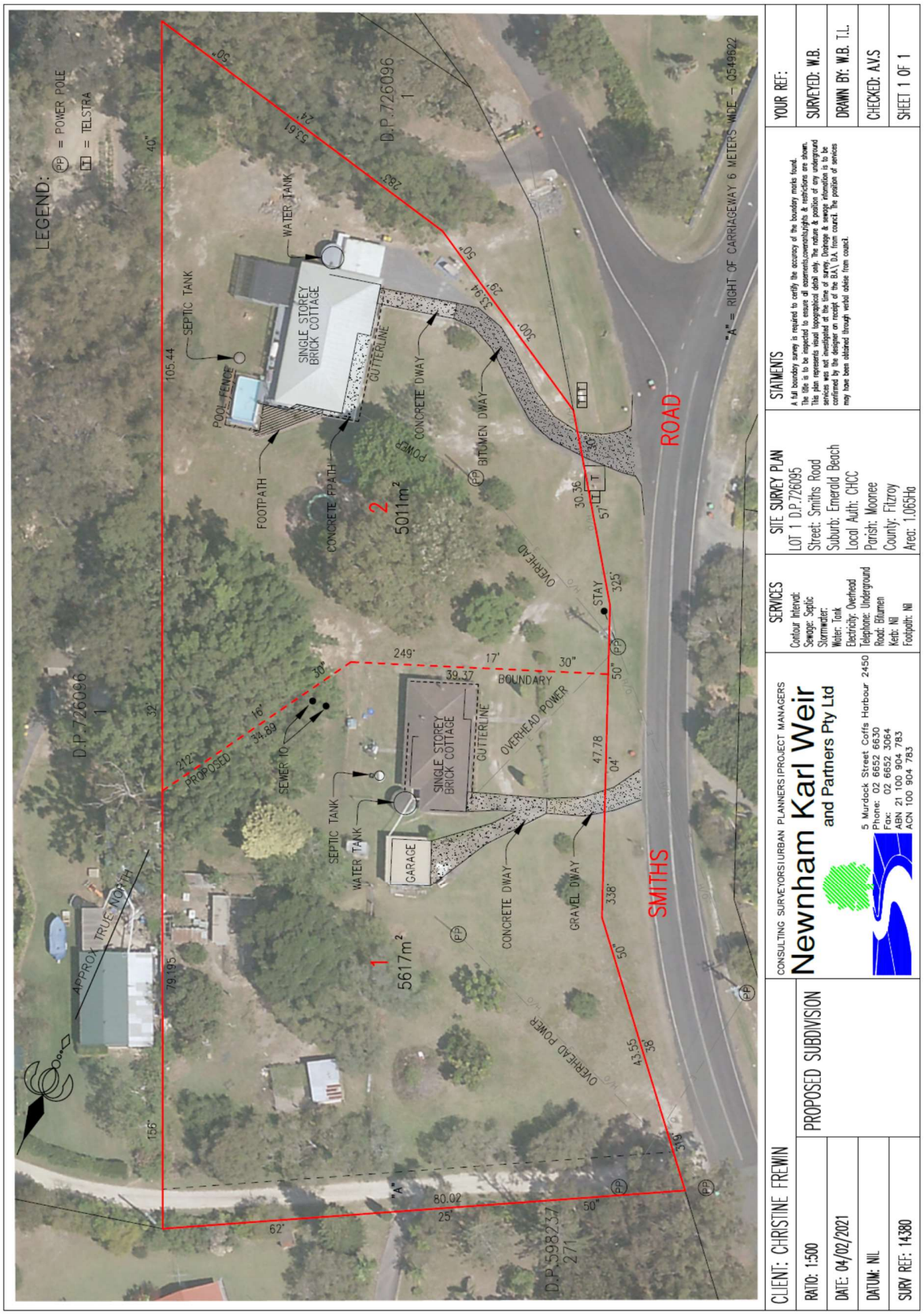
This report is not intended for or to be used where aluminium composite panels are proposed. The report is not to be construed as an assessment of the building material or compliance with the recommended bushfire attack level/s.

9.0 REFERENCES

NSW Rural Fire Services, ***Planning for Bushfire Protection***, 2019
AS 3959-2018 ***Construction of Buildings in Bushfire Prone Areas***
Keith David 2004, Ocean ***Shores to Desert Dunes, The Native Vegetation of New South Wales and the ACT***, Department of Environment and Conservation
NSW State Government (1997) Rural Fires Act 1997
NSW Rural Fire Service – ***Guideline for Bushfire Prone Land Mapping 2002***

APPENDIX 1 – Subdivision Layout




LEGEND:
PP = POWER POLE
T = TELSTRA
SINGLE STOREY BRICK COTTAGE
GARAGE
SEPTIC TANK
WATER TANK
POOL FENCE
FOOTPATH
CONCRETE PATH
CONCRETE DWAY
BITUMEN DWAY
GRAVEL DWAY
GUTTERLINE
OVERHEAD POWER
SEWER
BOUNDARY
PROPOSED
APPROX TRUE NORTH
SMITHS ROAD
"A" = RIGHT OF CARRIAGEWAY 6 METERS WIDE - 0549822
D.P.726096
D.P.598237
1
2
271
5617m²
5011m²
CLIENT: CHRISTINE FREWIN
RATIO: 1:500
DATE: 04/02/2021
DATUM: NIL
SURV REF: 14380
PROPOSED SUBDIVISION
CONSULTING SURVEYORS|URBAN PLANNERS|PROJECT MANAGERS
Newnham Karl Weir
and Partners Pty Ltd
5 Murdock Street Coffs Harbour 2450
Phone: 02 6652 6630
Fax: 02 6652 3064
ABN 21 100 904 783
ACN 100 904 783
SERVICES
Contour Interval:
Sewage: Septic
Stormwater:
Water: Tank
Electricity: Overhead
Telephone: Underground
Road: Bitumen
Kerb: Nil
Footpath: Nil
SITE SURVEY PLAN
LOT 1 D.P.726095
Street: Smiths Road
Suburb: Emerald Beach
Local Auth: CHCC
Parish: Moonee
County: Fitzroy
Area: 1.065Ha
STATEMENTS
A full boundary survey is required to certify the accuracy of the boundary marks found.
The title is to be inspected to ensure all easements,covenants,rights & restrictions are shown.
This plan represents visual topographical detail only. The nature & position of any underground services was not investigated at the time of survey. Drainage & sewage information is to be confirmed by the designer on receipt of the DA1 D.A. from council. The position of services may have been obtained through verbal advise from council.
YOUR REF:
SURVEYED: W.B.
DRAWN BY: W.B. T.L.
CHECKED: A.V.S
SHEET 1 OF 1

APPENDIX 2

NSW RURAL FIRE SERVICE

NSW GOVERNMENT

DEVELOPMENT ASSESSMENT & PLANNING

Upgrading of Existing Buildings

WORKING TOWARDS A SAFER COMMUNITY

INTRODUCTION

Bush fire is a major challenge for the community. It has been a natural part of our landscape for thousands of years and remains an ever-present threat.

Due to historic settlement patterns and the need to provide housing for people, development has occurred in areas that are bush fire prone placing lives and property at risk.

The NSW Rural Fire Service (NSW RFS) has a statutory obligation to protect life, property and the environment through fire suppression and fire prevention. Improved land use planning and construction of buildings in bush fire prone areas are intrinsic to the fire management strategies of the NSW RFS.

Through a working relationship with local Councils and the NSW Department of Planning, the NSW RFS has been able to refine and implement bush fire protection for new developments through the NSW planning system. Since the introduction of these planning and building regulations in August 2002, all new development on bush fire prone land in NSW must comply with the requirements of *Planning for Bush Fire Protection 2006* and Australian Standard 3959-2009 – *Construction of buildings in bushfire-prone areas* (AS3959).

This means that people who are building or renovating have a clear direction on how to design and build their homes to be better protected from the impacts of bush fires. The types of protection measures include asset protection zones (vegetation management), access, landscaping, water supply, building design and construction. These measures assist building survival during a bush fire. They also contribute to the safety of fire-fighters and members of the community occupying buildings during the passage of a bush fire front.

Unfortunately, the majority of buildings in bush fire prone areas pre-date these regulations, meaning that most existing houses are at an increased risk of damage or loss from a bush fire.

BUSH FIRE INFORMATION LINE
1800 NSW RFS
1800 679 737
www.rfs.nsw.gov.au

NSW RFS DEVELOPMENT ASSESSMENT 0914 1/4

With this in mind, the NSW RFS has developed a practical guide for those living in bush fire prone areas who may wish to take the opportunity to upgrade their existing building to increase its resilience from bush fire attack.

The guide provides a range of options that homeowners may wish to consider in determining the level of protection appropriate for their circumstances and risk. These include minimal protection measures such as basic ember proofing, establishment of Asset Protection Zones (APZs) to higher level protection measures such as re-building or upgrading construction elements of the building.

While this guide identifies protection methods, it is vital that such building enhancements are considered in conjunction with any upgrade works undertaken, consideration of other bush fire protection measures such as maintenance of Asset Protection Zones, services and landscaping.

The guide is not intended to be a comprehensive bush fire assessment of the risk to your property or an indication of compliance with *Planning for Bush Fire Protection 2006* and AS3959-2009. In this regard, home owners are advised to seek professional advice with regards to further upgrades or reconstruction to improve their resistance to bush fire attack.

For further assistance, details regarding suitably qualified consultants can be found on the NSW RFS website **www.rfs.nsw.gov.au**

IS UPGRADING MANDATORY?

Upgrading of existing elements of the building to Planning for Bush Fire Protection is not mandatory. However, in the interests of achieving a better bush fire outcome, the NSW RFS strongly recommends improvement of existing elements including upgrade of buildings.

Anyone whose land is bush fire prone should have regard to this document for practical guidance in protecting your property against bush fire attack. For all new developments on bush fire prone land, following the Development Application process or the Exempt and Complying Development process, the advice in this document should be applied as a minimum standard to the existing situation. This is in addition to any other bush fire protection measures that may be required by the development consent or complying development certificate.

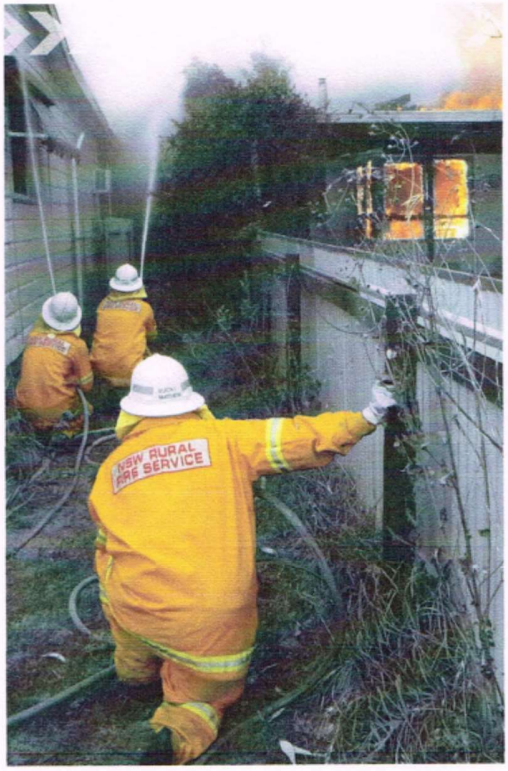
These upgrading measures will contribute to making your home safer against the impact of the different elements of attack in the event of a bush fire; however, they form only part of the solution. Undertaking routine property maintenance and preparing a Bush Fire Survival Plan are other important parts to your bush fire protection and survival.

UPGRADE PROVISIONS

85% of houses are lost from ember attack.
The following provisions are designed to give existing buildings improved protection from ember attack during a bush fire event. Ember attack can occur over distances greater than 100 metres from the bush fire front. Any gaps, cracks or areas where embers and fuel can lodge (leaves, twigs, debris) significantly reduces a building's resistance to bush fire attack.

To mitigate against ember attack you should consider the minimal upgrades as detailed in the table below. Additional protection measures may also be considered and this will be dependent on the individual circumstances of the building commensurate with the level of threat from bush fire attack. The potential level of threat to the property from bush fire attack should also be taken in to account when deciding what level of protection should be used. Factors to be taken in to consideration include the isolation of the development and how easily you can react in the event of a bush fire.

Owners are cautioned that existing buildings may contain materials made from asbestos or have painted surfaces that contain lead. These materials should be handled in accordance with appropriate guidelines.



BUILDING ELEMENT	MINIMAL PROTECTION MEASURES	ADDITIONAL PROTECTION MEASURES
GENERAL	Seal all gaps (>3mm) around the house (excluding subfloor) with: • appropriate joining strips; • flexible silicon based sealant; or • mesh with a maximum aperture of 2mm, made from corrosion resistant steel, bronze or aluminium.	• Install a bush fire sprayer system. (Please contact a bush fire consultant or relevant industry expert to discuss options) Seal all gaps (>3mm) around the house (excluding subfloor) with: • appropriate joining strips • flexible silicon based sealant; or mesh with a maximum aperture of 2mm, made from corrosion resistant steel, bronze or aluminium.
WALLS	Install sarking with a flammability index of not more than 5 behind weatherboards or other external cladding when they are being replaced for maintenance or other reasons.	• Replace wall materials with non-combustible materials • Install sarking with a flammability index of not more than 5 behind weatherboards or other external cladding.
SUBFLOOR	Removal of combustible materials and keeping areas clear and accessible.	• Enclose subfloor with non-combustible material.
DOORS	Install weather strips, draught excluders or draught seals at the base of side-hung doors.	• Replace external doors with non-combustible or solid timber doors with minimum thickness of 35mm. • Replace or over-clad parts of door frames less than 400mm above the ground, decks and similar elements or fittings with non-combustible material. • Install weather strips, draught excluders or draught seals at the base of side-hung doors.
VENTS & WEEPHOLES	Seal vents and weepholes in external walls with mesh (with an aperture size of 2 mm) of corrosion resistant steel, bronze or aluminium.	• Seal vents and weepholes in external walls with mesh (with an aperture size of 2 mm) of corrosion resistant steel, bronze or aluminium.
ROOFS	Seal around roofing and roof penetrations with a non-combustible material. Install sarking with a flammability index of not more than 5 beneath existing roofing when it is being replaced for maintenance or other reasons. If installed, gutter and valley leaf guards shall be non-combustible.	• Replace fascia and roof materials with non-combustible materials. • Seal around roofing and roof penetrations with a non-combustible material. • Install sarking with a flammability index of not more than 5 beneath existing roofing. • If installed, gutter and valley leaf guards shall be non-combustible.
WINDOWS	Install mesh with a maximum aperture of 2mm, made from corrosion resistant steel, bronze or aluminium to all external doors and openable windows	• Installing appropriately tested shutters to doors and windows • Install mesh with a maximum aperture of 2mm, made from corrosion resistant steel, bronze or aluminium to all external doors and windows • Replacing glass with toughened or laminated safety glass • Replace overhead glazing with 'grade a' safety glass
EXTERNAL STRUCTURES		• External structures to be located >10 metres from the main dwelling.
DECKING		• Replace decking with non-combustible material

NSW RFS DEVELOPMENT ASSESSMENT 0914 3/4

OTHER REQUIREMENTS

ASSET PROTECTION ZONES

Development on bush fire prone land requires suitable separation from the bush fire hazard. This separation is referred to as an asset protection zone (APZ) and should be located wholly within the development property.

The APZ separates the building from the hazard. It is designed to minimize the presence of fuels, which could burn in a fire. Therefore, the impact of direct flame contact, radiant heat and ember attack on the development is reduced.

In order to ensure appropriate levels of safety, the NSW RFS recommends that an APZ is always provided. Where a building has been newly developed or alterations and additions have been undertaken, recommended levels of construction are reliant upon the ongoing maintenance of the APZ. In this regard, the suitability of the design and construction of the building will be significantly compromised should the APZ not be maintained or implemented as intended.

APZ should be managed in accordance with section 4.1.3 and Appendix 5 of '*Planning for Bush Fire Protection 2006*' and the NSW Rural Fire Service's document *Standards for asset protection zones.*

SERVICES

During major bush fire events, the preparedness of the dwelling and its occupants may be seriously jeopardised with the loss of basic services, particularly water and electricity.

Adequate water supply is critical for any firefighting operation, particularly where property protection is envisaged. A reticulated water supply should be provided which is easily accessible and located at regular intervals. Where no reticulated water supply is available, a water supply of 5,000L reserve (i.e. water tank or dam) dedicated to firefighting purposes should be installed and maintained.

Electricity services should be located so that the possibility of ignition of the surrounding bushland or fabric of the buildings is limited. Regular inspection of the electricity lines should be undertaken to ensure they are not impacted by branches.

The location of gas services should vent facing away and not lead to the ignition of surrounding bushland or the fabric of the buildings.

LANDSCAPING

Vegetation can burn during a bush fire. With this in mind, careful attention must be paid to species selection, their location relative to their flammability, avoidance of continuity of vegetation (horizontally and vertically), and ongoing maintenance to readily remove flammable fuels (leaf litter, twigs and debris).

Homeowners are advised to contact their local Council before undertaking any work that involves modifying or removing existing trees.

The following additional information relating to landscaping is available at www.rfs.nsw.gov.au:

1. Standards for Asset Protection Zones
2. Appendix 5 of *Planning for Bush Fire Protection 2006.*

For more information please visit www.rfs.nsw.gov.au or contact Development Assessment & Planning on 8741 5175 or email development.assessment@rfs.nsw.gov.au.

NSW RFS DEVELOPMENT ASSESSMENT 0914 4/4

APPENDIX 5 - LAND CAPABILITY ASSESSMENT

Strider Duerinckx
Telephone 0402608396
Email strider@ewcon.com.au
Web: www.ewcon.com.au

Christine Frewin, C/- Keiley Hunter

By email: keiley@keileyhunter.com.au

Date: 16 June 2021

Project Ref: 2021-161-02

Re: Land Capability Assessment for 14-22 Smiths Road, Emerald Beach

Dear Madam

Please find attached the Land Capability Assessment (LCA) for the proposed subdivision of 14-22 Smiths Road, Emerald Beach. The LCA has been undertaken in reference to:

- Coffs Harbour City Council (2015). *On-site Sewage Management Strategy*;
- DLG (1998). *Environment & Health Protection Guidelines: On-site Sewage Management for Single Households; and*
- Standards Australia / Standards New Zealand (2012). AS/NZS 1547:2012 *On-Site Domestic-wastewater Management.*

In summary, the proposed subdivision of the Site into two lots will formalise the existing two dwellings onto separate lots. A reserve EMA of 252m^2 has been calculated and located on Proposed Lot 1 and Lot 2.

Further details are provided in the attached report. If you have any questions, please contact me.

Regards,

Strider Duerinckx

APPENDIX 5 - LAND CAPABILITY ASSESSMENT

1. SITE EVALUATORS			
Name:	Strider Duerinckx	Date of Inspection:	05 May 2021
Phone:	0402608396	**Council area:**	Coffs Harbour

2. ACCOMPANYING INFORMATION	
FIGURES	
Figure 1	Site Location
Figure 2	Proposed Development Layout
Figure 3	Existing Features
Figure 4	Recommended Effluent Management Areas
Figure 5	Minimum Lot Size Comparison
APPENDICES	
Appendix A	Borehole Logs
Appendix B	Soil Chemistry
Appendix C	Water Balance

3. SITE INFORMATION	
Address/locality of site: 14-22 Smiths Road. Emerald Beach	**Owner/developer:** Christine Frewin

Proposed Development:

Based on plans provided by Newnham Karl Weir & Partners (NKWP) (Figure 2), it is proposed to subdivide the 10,629m^2 Site into two lots (Figure 2). Proposed Lot 1 containing the existing dwelling in the northern portion would be 5,626m^2. Proposed Lot 2 would contain the remainder of the lot with the existing dwelling in the southern portion, 5003m^2 in area.

Size/shape/layout:

The property is situated in the R5 large lot residential zone on the northeastern side of Smiths Road. The southern corner of the block is approximately 200m north of the Smiths Road/Pacific highway interchange, and approximately 40m from a large manmade freshwater dam. The site sits on a slight ridge line, with a slope of approximately 7% downhill from west to east. The site has some large trees and areas of maintained lawns.

Existing On-site Sewage Management System:

An existing OSMS is present on Proposed Lot 1, consisting of a concrete septic tank and three absorption trenches. The trench locations were surveyed by existing Inspection Outlets (IOs) (Figure 3).

3. SITE INFORMATION	
An existing OSMS is also present on Proposed Lot 2 (Figure 3). The OSMS consists of a concrete septic tank, and a single absorption trench. No information exists regarding the length of the absorption trench, however when inspected the system was not failing and the trench location is well away from any proposed lot boundaries.	
Water supply:	Tank water.

Photograph 1: Proposed Lot 1 dwelling, and reserve Effluent Management Area (EMA) on LH side of the photo.

Photograph 2: Proposed Lot 2 dwelling, and reserve EMA on LH side of the photo.

4. SITE ASSESSMENT		Limitation		
		Minor	Moderate	Major
Climate: Sub-tropical to temperate climate Average maximum high temperature range <15°C? No.		Both lots		
Flood potential:				
Land application area above 1 in 20 year flood level?	Yes	Both lots		
Land application area above 1 in 100 year flood level?	Yes	Both lots		
Electrical components above 1 in 100 year flood level?	Yes	Both lots		
Exposure: The proposed EMAs will be located on a northeast facing slope cleared of trees.		Both lots		
Slope: Slopes of 6-8% to the east.		Both lots		
Landform: Lot 1 - The proposed EMA will be situated on a waxing divergent landform. Lot 2 - The proposed EMA will be situated on a waxing divergent landform.		Both lots		
Run-on and seepage: The proposed EMAs are in a mid-slope position. Catchment from road boundary. No seepage noted.		Both lots		
Erosion potential: There is minimal risk of erosion when soil is disturbed due to the slope and soils.		Both lots		
Site drainage: Lot 1 – Eastward drainage. The nearest drainage to the proposed EMA a large manmade dam approximately 40m downslope. Lot 2 – Eastward drainage. The nearest drainage to the proposed EMA is a large manmade dam approximately 75 downslope.		Both lots		
Fill: None noted in the EMA.		Both lots		
Surface rocks: None evident.		Both lots		
Groundwater: (NSW Office of Water Groundwater Bore Search)				Both lots

Horizontal distance to groundwater well used for domestic water supply: There is one registered domestic bore approximately 130m from the proposed EMAs. The bore (GW051796) I located over the ridgeline to the south. **Groundwater vulnerability?** The risk to groundwater is minor given the clay subsoil, expected fractured bedrock aquifer and buffer distance.			

5. SOIL ASSESSMENT	Limitation
Number of boreholes drilled: One borehole was drilled. See Appendix A and Figure 4.	
Depth to bedrock or hardpan (m): The borehole was extended to 1.2m depth without refusing.	Minor
Depth to high soil watertable (m): Permanent groundwater is expected at >10m depth based on position in the landscape.	Minor
Soil landscape unit: Ulong Soil Landscape is an erosional/residual soil landscape located on undulating rises and rolling low hills on Late Carboniferous-aged metasediments of the Coramba and Brooklana Beds. Soils are typically deep (>1m), moderately well-drained red and brown earth, with variability depending on landscape position. Limitations include high erodibility, localised sodicity and dispersibility, hardsetting with low subsoil permeability and strong acidity. **Soil Profile:** - Approximately 150mm of clay loam, dark brown, with some orange mottling and <10% coarse fragments, strong structure; overlying - Approximately 350mm of light clay, light brown and pale yellow, with some orange and grey mottling and <10% sub-angular gravel fragments, some charcoal fragments, strong structure; overlying - At least 700mm of light to medium clay, pale orange brown, with pale grey mottling and <10% sub-angular coarse fragments, moderate structure. Hydraulic loading rate Soil structure: Strong Soil texture: Light to medium clay 0.15-1.2m Permeability category: Category 5a Hydraulic loading recommended: 12mm/day secondary treated effluent.	

5. SOIL ASSESSMENT	Limitation
Reasons for the hydraulic loading recommendation: Good soil structure and light clay soil profile.	Moderate
Coarse fragments % (>2mm): <15% qtz	Minor
Soil chemical testing was undertaken of one sample from 0.4-0.6m depth in BH2 by EAL at Lismore, for their standard wastewater soil capability suite. The analytical report is included in Appendix B.	
pH: 4.65 pH Units. Strongly acidic soils.	Moderate
Electrical conductivity (dS/m): 0.432dS/cm.	Minor
Dispersiveness: Class 3/6 (Slake 3).	Major
Cation Exchange Capacity: 6.4 cmol+/kg	Minor
Exchangeable Sodium Percentage: 1.4 cmol+/kg	Minor
PSorp: 11,416 kg/ha	Minor

6. SYSTEM SELECTION

Consideration of connection to a centralised sewerage system: Unlikely due to rural location.

Type of treatment and land application system considered best suited to site:

Given the resultant lot size, in case of failure of the existing OSMS, future treatment to a secondary standard and subsurface application into an appropriately sized absorption bed field is considered a reasonable minimum combination.

7. WASTEWATER ENVELOPE SIZING

Expected wastewater quantity (litres/day):

4-bedroom dwelling modelled 4 x 1.5 x 150L/p/day = 720L/day

Hydraulic Balance:

Monthly nominated area water balance modelling undertaken. See Appendix C.

Data Parameter	Units	Value	Comments
Hydraulic load	L/day	720	
Precipitation	mm/month	Coffs Harbour	Median rainfall from BOM.

7. WASTEWATER ENVELOPE SIZING			
Pan Evaporation	mm/month	Coffs Harbour MO	Average evaporation from BOM.
Retained rainfall	unitless	0.95	Proportion of rainfall that remains onsite and infiltrates the soil
Crop Factor	unitless	0.6-0.8	Typical annual range expected in an open position with no shading.
Design Loading Rate (DLR)	mm/day	12	Based on strongly-structured light clay soil and absorption beds from AS/NZS 1547:2012.
Area required for hydraulic sizing	m^2	**70**	Equals 158m^2 bed field.
Area required for Nitrogen	m^2	**252**	Limiting
Area required for Phosphorus	m^2	**223**	

Effluent Management Area:

Based on water and nutrient balance modelling of a conservative 4 bedroom dwelling, a reserve EMA of 252m^2 is required to allow for hydraulic and nutrient loading.

This footprint has been allowed as a reserve area on Proposed Lot 1 and Lot 2 in case of failure of the existing OSMS (Figure 4).

8. MINIMUM LOT SIZE ANALYSIS

A minimum lot size analysis and modelling were completed to determine the maximum lot density suitable for subdivision on the Site. When considering the suitability for a lot to sustainably manage wastewater on-site, we typically refer to 'available effluent management area'. This broadly refers to available areas (i.e. not built out or used for a conflicting purpose) where OSMS will not be unduly constrained by site and soil characteristics. Available area on a developed a lot is determined by the following factors:

- total building area (including dwellings, sheds, pools etc.) which includes a defined building envelope but may extend beyond with additional improvements to a property, such as driveways and paths (impervious areas), and gardens/vegetated areas unsuitable for effluent reuse;
- dams, intermittent and permanent watercourses running through lots;
- maintenance of appropriate buffer distances from property boundaries, buildings, driveways and paths, dams and watercourses;

8. MINIMUM LOT SIZE ANALYSIS

- flood prone land;
- excessive slope;
- excessively shallow soils;
- heavy (clay) soils with low permeability;
- excessively poor drainage, shallow groundwater and/or stormwater run-on; and
- excessive shading by vegetation.

The residual areas (areas not otherwise occupied by improvements, buffers, restrictions or conservation vegetation) were then calculated for the selected lots, and the available area compared to the wastewater envelope required.

MLS Buffers:

Buffer distances from EMAs are typically enforced to minimise risk to public health, maintain public amenity and protect sensitive environments. Generally, adopted environmental buffers for secondary treated effluent land applied into absorption trenches/ beds based on DLG (1998) are:

- 250m from domestic groundwater bores;
- 100m from permanent watercourses;
- 40m from intermittent watercourses and dams;
- 6m from downslope property boundaries and 3m from upslope property boundaries; and
- 6m from downslope buildings and 3m from upslope buildings.

In addition, developed areas such as inground water tanks and swimming pools were also buffered.

Secondary treatment was selected for modelling purposes. Primary treatment may be possible on a case by case for the proposed lots on No.9 and 189 Gaudrons Road subject to soil depth and buffer requirements for such OSMS.

MLS Comparative Lots Assessed:

Six nearby R5 zoned representative lots were selected that have already been subdivided (Figure 5). The lots ranged in size from 1,689-4,212m^2 area.

- 39-41 Gaudrons Road 4,005m^2
- 45 Gaudrons Road 4,001m^2
- 75 Gaudrons Road 4,212m^2
- 79 Gaudrons Road 1,689m^2
- 81 Gaudrons Road 1,788m^2
- 160 Gaudrons Road 2,830m^2

The properties typically included a dwelling, garage/shed, landscaped trees, shrubs and gardens, driveways, water tanks, and recreational space. This development style will be similar to that proposed for the Site and therefore minimum lot size and development potential should be consistent.

8. MINIMUM LOT SIZE ANALYSIS

MLS Assessed Available EMA:

The assessment of available effluent management areas for each of the assessed lots is presented below. As is evident, the variability of lot sizes, on-lot improvements and restrictions of developed lots makes selection of a "typical" lot difficult, however comparison of the site constraints indicates that minimum lot size is the most significant issue to address.

From the sample selection of lots investigated, three of the lots are significantly smaller than the nominated minimum 5,000m^2 lot size, being 1,689 1,788 and 2,830m^2. Of these only the 2,830m^2 property (No. 160) has available effluent management area. This is because the existing dwelling is located hard against the southern boundary with no associated sheds, garages, swimming pools etc. The other two small lots by nature of the lot size and buffer constraints to site features have in effect no available effluent management area and wastewater application is compromised;

The remaining three properties of 4,001-4,212m^2 have each about 1,800m^2 of available unconstrained area for effluent application. Allowing for additional developed footprint such as sheds and swimming pools that may not be present currently, and constraints such as buffers to gullies and protected forest vegetation, the minimum 504m^2 footprint required for a secondary treatment and land application OSMS (primary and reserve envelopes) would still be able to be met

As such, given the low slopes and limited site and soil constraints, a minimum 5,000m^2 lot sizing at 14-22 Smiths Road would be considered acceptable.

Id	Lot Area (m^2)	Developed Area (m^2)[1]	Total Restricted Area (m^2) [2]	Available Eff. Application Area (m^2)	Percent of Lot Available for Eff. Disp. (%)	>504m^2 Area Available for Secondary Treatment?
39-41	4,005	1,293	2,142	1,873	47	Yes
45	4,001	1,166	2,154	1,843	46	Yes
75	4,212	1,564	2,377	1,827	43	Yes
79	1,689	630	1,546	143	8	No
81	1,788	771	1,788	0	0	No
160	2,830	560	1,808	1,022	36	Yes

1. House, driveway, shed etc

2. Includes developed area, protected vegetation and buffers to waterways and boundaries

9. BUFFERS		
Buffer distances from EMA to:		**Meets Buffers**
Permanent waters	>100m	Yes
Other waters	40m	Yes
Domestic Groundwater Bore	250m	No, 130m
Boundary of premises	6/12m	Yes
Driveways	3/6m	Yes
Buildings	3/6m	Yes

Buffers:

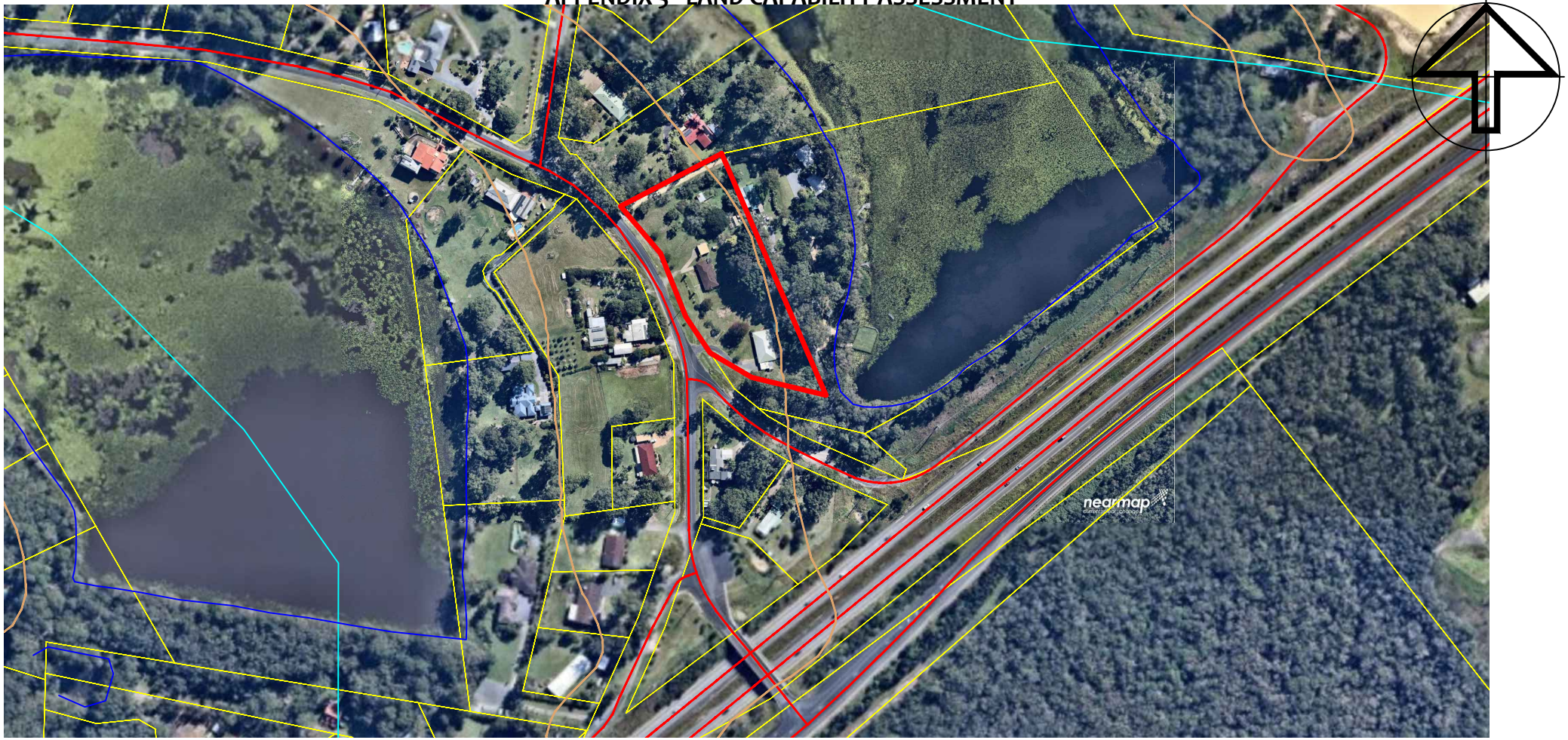
Buffers to all constraints are achievable for the existing OSMS except to licensed domestic groundwater bores. A buffer of 130m is available, but a 250m buffer is suggested by DLG (1998) Guidelines.

The OSMS are existing, and the bore is located over a topographical ridgeline, and as such the proposed subdivision does not increase the risk.

Appendix R of AS/NZS1547:2012 provides for risk assessable buffers to constraints including bores. A maximum buffer of 50m is allowed for high risk situations such as shallow sand extraction aquifers; unlike the existing conditions of a deep bedrock aquifer beneath clays.

As such the available 130m is considered acceptable.

FIGURES



0 80 120 160

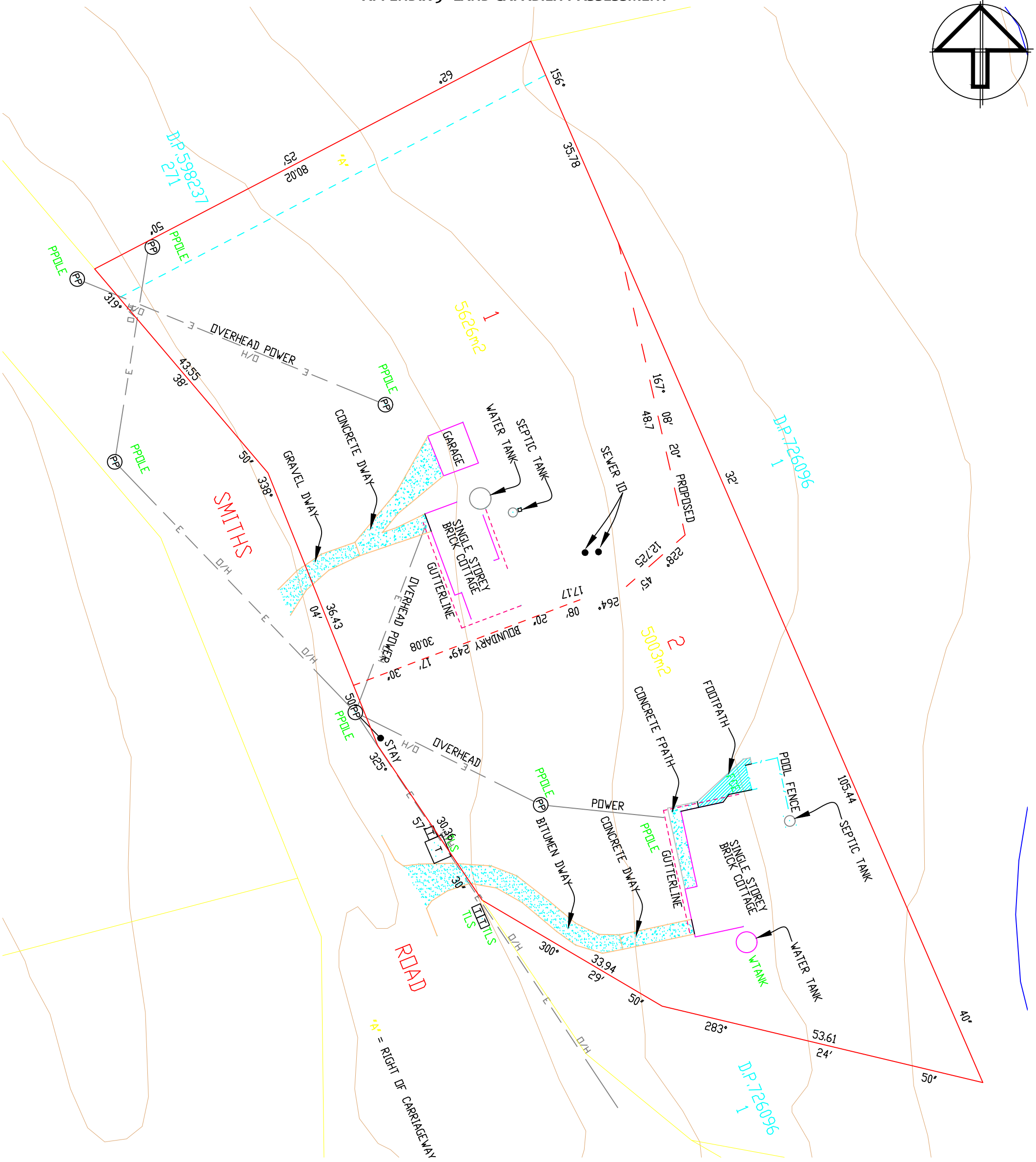
Horizontal Scale (metres) 1:4000

EARTH WATER CONSULTING

LEGEND

- Property Boundary
- Contour (10m)
- Drainage Alignment

TITLE: Site Location			PROJECT: LCA for 14-22 Smiths Road, Emerald beach		CLIENT: Christine Frewin
FIGURE: Figure 1					
SHEET: 1 OF 1	ISSUE: A	AUTHOR: SD	DATE: 24/5/21	SCALE: 1:4000	PROJECT: 2021-161



EARTH WATER CONSULTING

TITLE: Proposed Development Layout			FIGURE: Figure 2
			SHEET: 1 OF 1 / ISSUE: B
PROJECT: LCA for 14-22 Smiths Road, Emerald Beach			CLIENT: Christine Frewin
AUTHOR: SD	DATE: 16/6/21	SCALE: 1:600	PROJECT: 2021-161

0 10 20 30

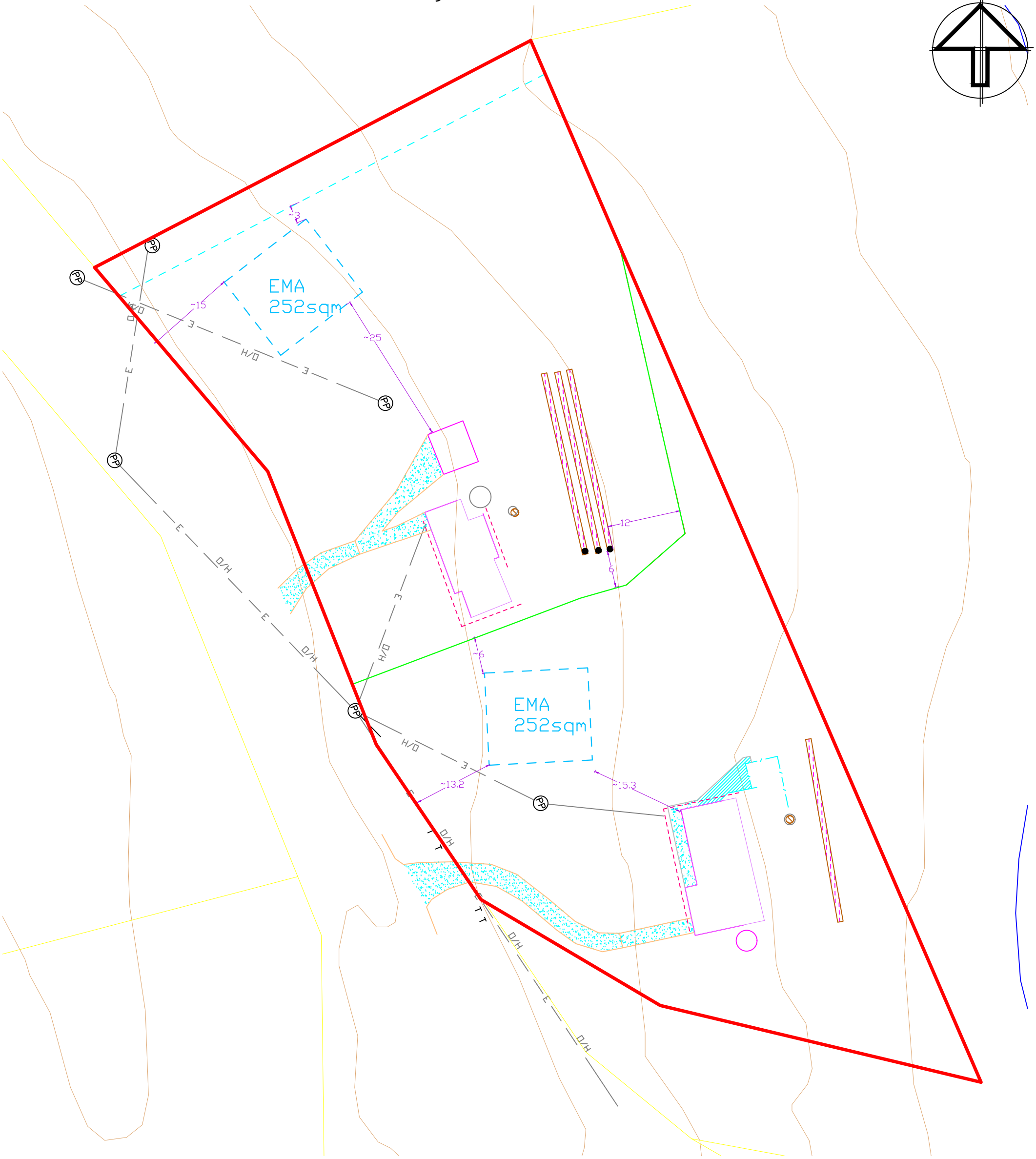
Horizontal Scale (metres) 1:600

LEGEND

- Property Boundary
- Contour Line (2m)
- Drainage Alignment
- Existing Septic Tank
- Existing EMA
- Slope % Slope Direction
- Borehole Location

EARTH WATER CONSULTING

TITLE: Existing Site Layout			FIGURE: Figure 3
			SHEET: 1 OF1 ISSUE: A
PROJECT: LCA for 14-22 Smiths Road, Emerald Beach			CLIENT: Christine Frewin
AUTHOR: SD	DATE: 24/5/21	SCALE: 1:600	PROJECT: 2021-161



EARTH WATER CONSULTING

TITLE: Recommended Effluent management Areas			FIGURE: Figure 4
			SHEET: 1 OF1 ISSUE: B
PROJECT: LCA for 14-22 Smiths Road, Emerald Beach			CLIENT: Christine Frewin
AUTHOR: SD	DATE: 16/6/21	SCALE: 1:600	PROJECT: 2021-161

160 Gaudrons Road

MLS 75-81 Gaudrons Road

39-41 and 45 Gaudrons Road

EARTH WATER CONSULTING

0 20 30 40

Horizontal Scale (metres) 1:1000

LEGEND

- Property Boundary
- Adjacent Lot
- Drainage Alignment
- EMA Restricted Area
- EMA Available Area

TITLE: Minimum Lot Size Comparison			FIGURE: Figure 5
			SHEET: 1 OF1 ISSUE: A
PROJECT: LCA for 14-22 Smiths Road, Emerald Beach			CLIENT: Christine Frewin
AUTHOR: SD	DATE: 16/6/21	SCALE: 1:1000	PROJECT: 2021-161

APPENDIX A

APPENDIX 5 - LAND CAPABILITY ASSESSMENT

Soil Borelog

Borehole No:	**BH1**
Logged by:	NS
Drilling date:	5/05/2021
Drilling method:	Hand auger
Borehole location:	Figure 2
Borehole coords:	0516023, 6662069

Project ref:	2021-161
Client:	Christine Frewin
Address:	22 Smiths Drive

PROFILE DESCRIPTION

Depth (m)	Sampling depth/name	Graphic Log	Horizon	Texture	Structure	Colour	Mottles	Coarse Fragments	Moisture Condition	Comments
0.1			A1	Clay Loam	Strong	Dark brown	Orange	<10%	SM	Topsoil
0.2			B1	Light Clay	Strong	Light brown pale yellow	Grey orange	<10%	SM	Residual
0.3	BH1_ 0.2-0.4									
0.4										
0.5										
0.6	BH1_ 0.5-0.7		B2	Light Clay to Medium Clay	Strong	Light brown pale yellow becoming orange	Nil Pink	<5%	SM	Residual
0.7										
0.8										
0.9										
1.0										
1.1										
1.2										
1.3					Borehole terminated at 1.2m					
1.4										
1.5										

Moisture condition

D	Dry	M	Moist	W	Wet / saturated
SM	Slightly moist	VM	Very moist		

APPENDIX B

WASTEWATER DISPOSAL SOIL ASSESSMENT

1 sample supplied by Earth Water Consulting Pty Ltd on the 30th April, 2021 - Lab Job No. K6423
Analysis requested by Strider Duerinckx. - **Your Project: BH2**
PO BOX 50 BELLINGEN NSW 2454

	SAMPLE 1 BH2 0.3-0.5m
Job No.	*K6423/1*
Description	Medium Clay
Moisture Content (% moisture)	16.7
Emerson Aggregate Stability Test (SAR 5 Solution) note 12	*3/6, Slake 3 see note 12
Soil pH (1:5 $CaCl_2$)	4.65
Soil Conductivity (1:5 water dS/m)	0.050
Soil Conductivity (as EC_e dS/m) note 10	0.432
Native NaOH Phosphorus (mg/kg P)	40.62
Residual phosphorus remaining in solution from the initial phosphate phosphorus	
Initial Phosphorus concentration (ppm P)	**30.00**
72 hour - 3 Day (ppm P)	14.10
120 hour - 5 Day (ppm P)	11.73
168 hour - 7 Day (ppm P)	12.09
Equilibrium Phosphorus (ppm P)	9.97
EXCHANGEABLE CATIONS	
Calcium (cmol+/kg)	2.36
Magnesium (cmol+/kg)	2.30
Potassium (cmol+/kg)	0.17
Sodium (cmol+/kg)	0.09
Aluminium (cmol+/kg)	0.77
Hydrogen (cmol+/kg)	0.67
ECEC (effective cation exchange capacity)(cmol+/kg)	6.4
Exchangeable Calcium %	37.1
Exchangeable Magnesium %	36.2
Exchangeable Potassium %	2.7
Exchangeable Sodium % (ESP)	1.4
Exchangeable Aluminium %	12.1
Exchangeable Hydrogen %	10.5
Calcium/ Magnesium Ratio	1.02

Notes:

1: ECEC = Effective Cation Exchange Capacity = sum of the exchangeable Mg, Ca, Na, K, H and Al
2: Exchangeable bases determined using standard Ammonium Acetate extract (Method 15D3) with no pretreatment for soluble salts. When Conductivity ≥0.25 dS/m soluble salts are removed (Method 15E2).
3. ppm = mg/kg dried soil
4. Insitu P determined using 0.1M NaOH and shaking for 24 hrs before determining phosphate
5. Soils were crushed using a ceramic grinding head and mill; five 1g subsamples of each soil were used to which 40ml of 0.1M NaCl with Xppm phosphorus was added to each. The samples were shaken on an orbital shaker
6. Exchangeable sodium percentage (ESP) is calculated as sodium (cmol+/kg) divided by ECEC
7. All results as dry weight DW - soils were dried at 60C for 48hrs prior to crushing and analysis.
8. Phosphorus Capacity method from Ryden and Pratt, 1980.
9. Aluminium detection limit is 0.05 cmol+/kg; Hydrogen detection limit is 0.1 cmol+/kg. However for calculation purposes a value of 0 is used.
10. For conductivity 1 dS/m = 1 mS/cm = 1000 µS/cm; EC_e conversions: sand loam 14, loam 9.5; clay loam 8.6; heavy clay 5.8
11. 1 cmol+/kg = 1 meq/100g
12. Emerson Aggregate Stability Test (EAST) for Wastewater applications (see Sheet 3 - Patterson, 2015), MEAT Class 1: Slaking, complete dispersion; Class 2: Slaking, some dispersion; Class 3-6: Slaking 1 slight to 3 complete, No dispersion; Class 7: No slaking, yes swelling; Class 8: No slaking, no swelling.
13. Analysis conducted between sample arrival date and reporting date.
14. .. Denotes not requested.
15. This report is not to be reproduced except in full.
16. All services undertaken by EAL are covered by the EAL Laboratory Services Terms and Conditions (refer scu.edu.au/eal or on request).

NATA
WORLD RECOGNISED ACCREDITATION
Accreditation No. 14960
Accredited for compliance with ISO/IEC 17025 - Testing

Checked:.....

PHOSPHORUS SORPTION TRIAL

1 sample supplied by Earth Water Consulting Pty Ltd on the 30th April, 2021 - Lab Job No. K6423
Analysis requested by Strider Duerinckx. - Your Project: BH2

Calculations for Equilibrium Absorption Maximum for Soil provided

I.D.	JOB NO.	Equilibrium P mg P/L (in solution)	Added P mg P/L	P Sorb at Equil. mg P/kg	Native P mg P/kg	Equilibrium P Sorption Level µg P/g soil	Divide Ø (from Table)	Equilibrium Absorption Maximum (B) µg P/g soil
BH2 0.3-0.5m	**K6423/1**	10.0	30	801	41	842	0.77	**1,094**

Calculations for phosphorus sorption capacity

	JOB NO.	Equilibrium Absorption Maximum (B) µg P/g soil	multiply by theta of wastewater to be applied (=X)	minus the native P (=Y)	**kg P sorption / hectare (to a depth of 15cm)** (1.95 is a correction factor for density, etc)	**kg P sorption / hectare (to a depth of 100cm)** (1.95 is a correction factor for density, etc)
BH2 0.3-0.5m	*K6423/1*	1094	(=B x theta)	(=X -native P)	(=Y x 1.95)	(=Y x 1.95 x 100/15)

EXAMPLE 1 - Calculations for phosphorus sorption capacity using a wastewater phosphorus of 15mg/L P

	JOB NO.	Equilibrium Absorption Maximum (B) µg P/g soil	multiply by theta of wastewater to be applied (ie. 0.84)	minus the native P (=Y)	**kg P sorption / hectare (to a depth of 15cm)** (1.95 is a correction factor for density, etc)	**kg P sorption / hectare (to a depth of 100cm)** (1.95 is a correction factor for density, etc)
BH2 0.3-0.5m	*K6423/1*	1094	919	878	**1,712**	**11,416**

Checked:.....

APPENDIX C

APPENDIX 5 - LAND CAPABILITY ASSESSMENT

Nominated Area Water Balance & Storage Calculations

Site Address: **14-22 Smiths Road, Emerald Beach**

Proj Ref: 2021-161

Notes:

Flow Allowance		120	l/p/d
No. of Persons		4	p
Occupancy		1.5	p/room
Design Wastewater Flow	Q	720	L/day
Daily DLR		12.0	mm/day
Crop Factor	C	0.6-0.8	unitless
Retained Rainfall Coefficient	RRc	0.95	untiless
Void Space Ratio	V	0.3	unitless
Nominated Land Application Area	N	70	sqm
Trench/Bed wetted thickness	Ww	0.1	m
Rainfall Data	Coffs Harbour Rainfall Data (monthly median)		
Evaporation Data	Coffs Harbour Evap Data (monthly average)		

Parameter	Symbol	Formula	Units	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Days in month	D	\	days	31	28	31	30	31	30	31	31	30	31	30	31	**365**
Median Rainfall	R	\	mm/month	151.2	179	205.1	135.9	117.4	90	54.3	40.7	35.4	74.7	130.4	114.1	1612.2
Average Evaporation	E	\	mm/month	192.2	156.8	148.8	117	86.8	69	77.5	105.4	135	161.2	171	192.2	**0**
Crop Factor	C			0.80	0.80	0.80	0.70	0.70	0.60	0.60	0.60	0.70	0.70	0.80	0.80	
OUTPUTS																
Evapotranspiration	ET	ExC	mm/month	154	125	119	82	61	41	47	63	95	113	137	154	**1189.94**
Percolation	B	DLRxD	mm/month	372.0	336	372.0	360.0	372.0	360.0	372.0	372.0	360.0	372.0	360.0	372.0	**4380.0**
Outputs		ET+B	mm/month	525.8	461.44	491.0	441.9	432.8	401.4	418.5	435.2	454.5	484.8	496.8	525.8	**5569.9**
INPUTS																
Retained Rainfall	RR	R*RRc	mm/month	143.64	170.05	194.845	129.105	111.53	85.5	51.585	38.665	33.63	70.965	123.88	108.395	**1261.79**
Effluent Irrigation	W	(QxD)/L	mm/month	318.9	288.0	318.9	308.6	318.9	308.6	318.9	318.9	308.6	318.9	308.6	318.9	**3754.3**
Inputs		RR+W	mm/month	462.5	458.1	513.7	437.7	430.4	394.1	370.4	357.5	342.2	389.8	432.5	427.3	**5016.1**
STORAGE CALCULATION																
Storage remaining from previous month			mm/month		0.0	0.0	75.5	61.5	53.6	29.1	0.0	0.0	0.0	0.0	0.0	
Storage for the month	S	(RR+W)-(ET+B)	mm/month	-210.9	-11.3	75.5	-14.1	-7.9	-24.4	-160.2	-259.1	-374.3	-316.7	-214.5	-328.4	**-401.4**
Cumulative Storage	M		mm	0.0	0.0	75.5	61.5	53.6	29.1	0.0	0.0	0.0	0.0	0.0	0.0	**219.7**
Maximum Bed Storage Depth for Area	BS		mm	**75.54**	Is the calculated storage acceptable?			Yes, storage is conservative								

Nominated trench width	0.9	
Total length based on nominated width	77.8	
No. of beds	4	
Individual bed lengths	19.4	
Individual Bed footprints	17.5	
Spacing between beds	1.5	
Width of bed area	8.1	
Total bed area	158	
Nutrient uptake zone	284	2m buffer nutrient uptake allowance

Nutrient Balance

Proj Ref: 2021-161

Site Address: 14-22 Smiths Road, Emerald Beach

Notes:

INPUT DATA

Hydraulic Load		720	L/Day	
Effluent N Concentration		30	mg/L	
% Lost to Soil Processes		0.2	Decimal	
Total N Loss to Soil		4320	mg/day	
Effluent P Concentration		12	mg/L	
Design Life of System		50	yrs	
Crop N Uptake	250	kg/ha/yr =	68	$mg/m^2/day$
Crop P Uptake	25	kg/ha/yr =	7	$mg/m^2/day$
P-sorption analytical result in soil		11416	kg/ha	
% of Predicted P-sorp		0.75	Decimal	

Nitrogen Balance

Nitrogen uptake ability in vegetation	68	$mg/m^2/day$
Nitrgen loading in wastewater	17280	mg/day
Area required for nitrogen	**252**	m^2

Phosphorus Balance

P adsorbed	0.8562	kg/m^2
P uptake	0.125	kg/m^2
P generated	219	kg
Area required for Phosphorus	**223**	m^2

Office of Environment & Heritage

AHIMS Web Services (AWS)
Search Result

Purchase Order/Reference : 2804215

Client Service ID : 586652

Grahame Fry

Date: 28 April 2021

10 Bailey Avenue
Coffs Harbour New South Wales 2450

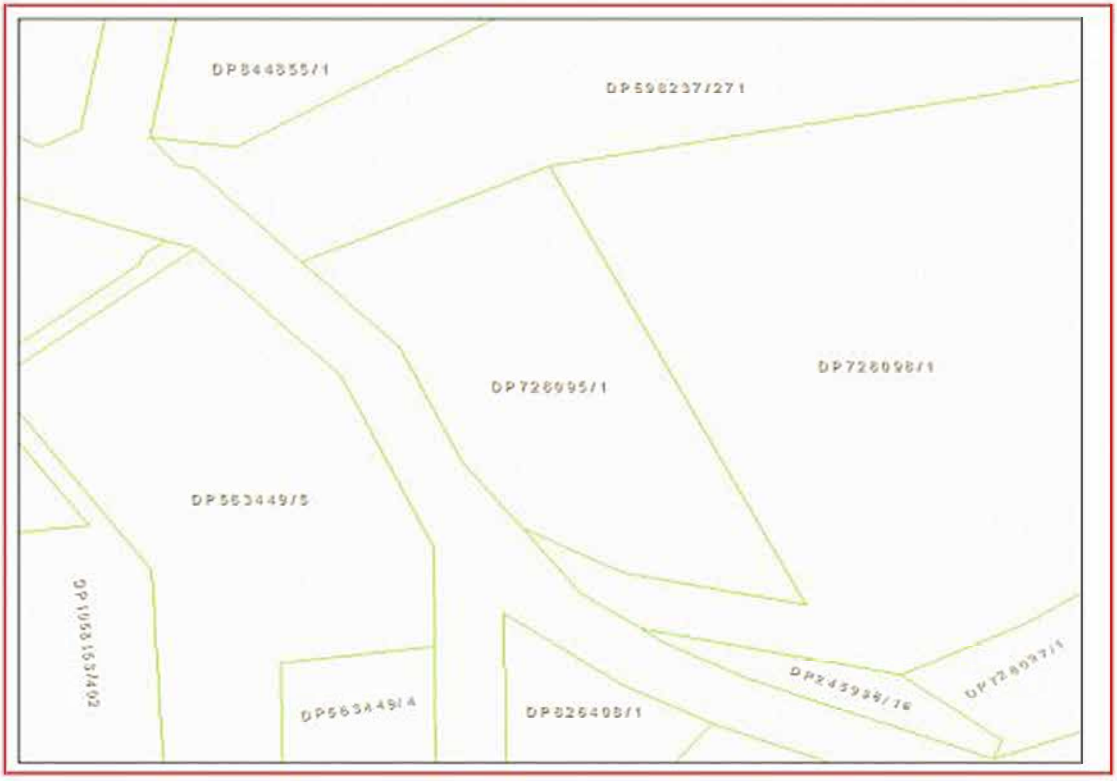
Attention: Grahame Fry

Email: grahamecfry@yahoo.com.au

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lot : 1, DP:DP726095 with a Buffer of 50 meters, conducted by Grahame Fry on 28 April 2021.

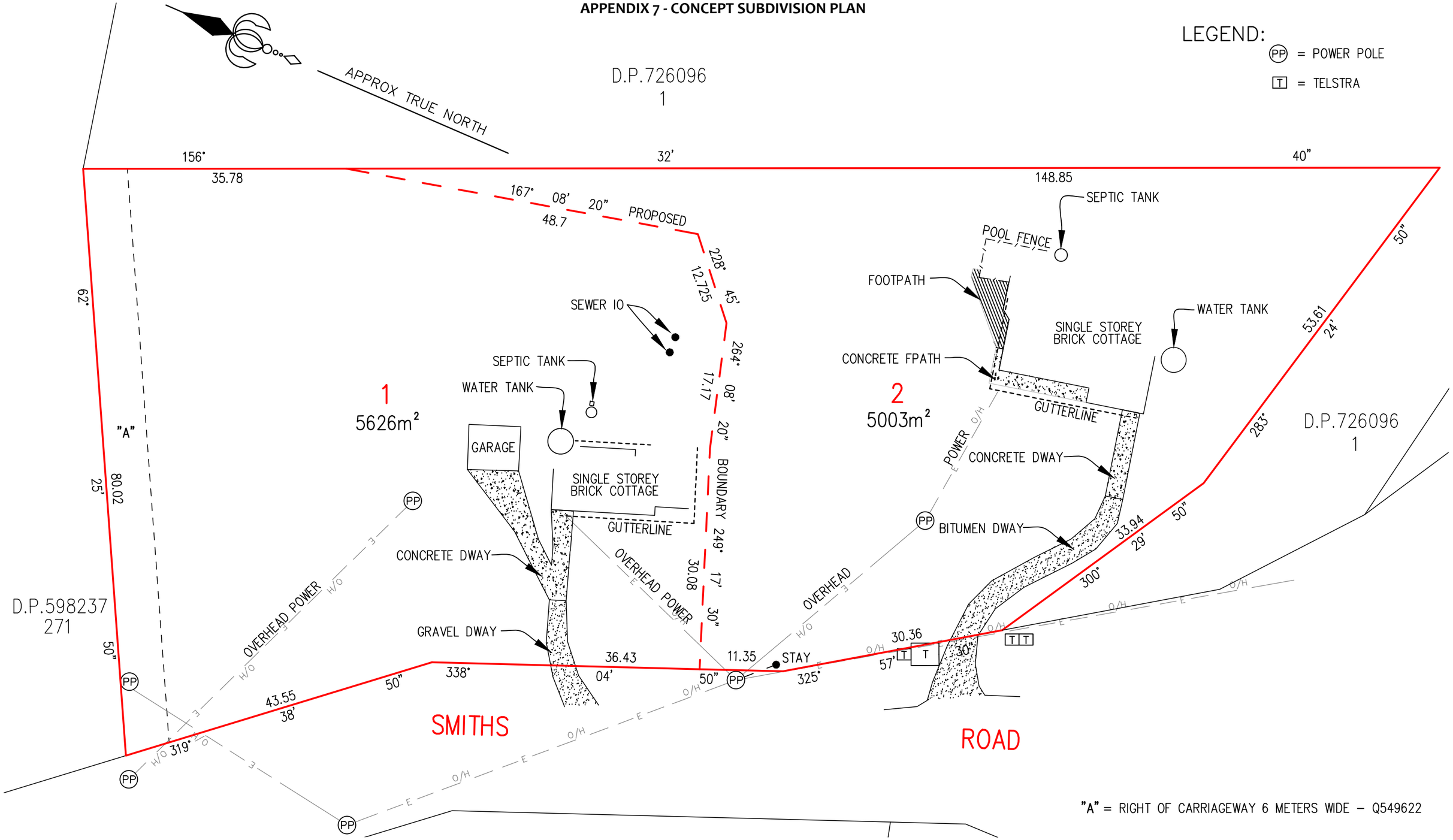
The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

0	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

APPENDIX 7 - CONCEPT SUBDIVISION PLAN



CLIENT: CHRISTINE FREWIN

RATIO: 1:500

DATE: 04/06/2021

DATUM: NIL

SURV REF: 14380

PROPOSED SUBDIVISION

REV. 6

CONSULTING SURVEYORS | URBAN PLANNERS | PROJECT MANAGERS

Newnham Karl Weir

and Partners Pty Ltd

5 Murdock Street Coffs Harbour 2450
Phone: 02 6652 6630
Fax: 02 6652 3064
ABN 21 100 904 783
ACN 100 904 783

SERVICES

Contour Interval:
Sewage: Septic
Stormwater:
Water: Tank
Electricity: Overhead
Telephone: Underground
Road: Bitumen
Kerb: Nil
Footpath: Nil

SITE SURVEY PLAN

LOT 1 D.P.726095
Street: Smiths Road
Suburb: Emerald Beach
Local Auth: CHCC
Parish: Moonee
County: Fitzroy
Area: 1.065Ha

STATMENTS

A full boundary survey is required to certify the accuracy of the boundary marks found. The title is to be inspected to ensure all easements,covenants,rights & restrictions are shown. This plan represents visual topographical detail only. The nature & position of any underground services was not investigated at the time of survey. Drainage & sewage infomation is to be confirmed by the designer on receipt of the B.A.\ D.A. from council. The position of services may have been obtained through verbal advise from council.

YOUR REF:

SURVEYED: W.B.

DRAWN BY: W.B. T.L.

CHECKED: A.V.S

SHEET 1 OF 1