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LAND USE CONFLICT RISK ASSESSMENT
FOR PLANNING PROPOSAL
Lot 2 DP 550362
189 Gaudrons Road, Sapphire Beach, NSW

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Land & Fire Assessments Pty Ltd
For: Grenville Duce
Project No.: LFA20041
Date: 17 February 2021

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Revision List

Revision No.	Revision Date	Report Title	Report Author	Field Survey By	Status
00	17.02.2021	Land Use Conflict Risk Assessment for Lot 2 DP 550362, 189 Gaudrons Road, Sapphire Beach, NSW	Main Author: Paola Rickard (LFA - Senior Environmental Planner)	Paola Rickard undertaken on the 04.11.20	Final

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TABLE OF CONTENTS

1. Introduction and Background

1.1 Introduction

Land & Fire Assessments Pty Ltd (LFA) has been commissioned by Grenville Duce to prepare a Land Use Conflict Risk Assessment (LUCRA) to support the **Planning Proposal for Lot 2 DP 550362, 189 Gaudrons Road, Sapphire Beach, NSW**. The site is shown on Figs. 1 & 2. Sapphire Beach is located in the Coffs Harbour City Council (CHCC) Local Government Area (LGA) approximately 10 km north of Coffs Harbour.

This Planning Proposal applies to Lot 2 DP550362 (the Site), which is zoned RU2 Rural Landscape and E2 Environmental Conservation under the Coffs Harbour Local Environmental Plan (LEP) 2013 (refer to Fig. 4). The purpose of this Planning Proposal is to amend LEP 2013 to allow large lot residential development.

Pre-lodgement meeting notes from CHCC dated 17/06/20 indicated that a LUCRA is required to support this planning proposal.

Council planning provisions concerning the preparation of LUCRAs do not specify requirements to support a Planning Proposal. Therefore, this LUCRA has been undertaken following the CHCC Development Control Plan 2015 (DCP) provisions specified to support Development Applications for subdivisions, specifically:

- C1.5 SUBDIVISION-DESIGN REQUIREMENTS FOR RURAL AND LARGE LOT RESIDENTIAL ZONES

  C1.5 also details the provisions regarding the preparation of a LUCRA. The relevant clause states:

  > (2) Subdivisions are to incorporate **adequate buffers between dwelling envelopes and adjoining agricultural land to ensure that the agricultural potential of those lands will not be diminished** (refer to the Land Use Conflict Risk Assessment Guide prepared by the NSW Department of Primary Industries).

The LUCRA will address land use interface issues and risks between rural land uses and a future rural residential development. The LUCRA will be prepared in accordance with the Land Use Conflict Risk Assessment Guide, which has been promoted by the NSW Department of Primary Industries (DPI 2011) and is based on Learmonth *et al* (2007).

The purpose of the LUCRA is to identify landuse compatibility and potential conflict between neighbouring landuses, and therefore, assists in the identification of the potential for future landuse conflict. The LUCRA aims to:

- *Objectively assess the effect and level of proposed landuse on neighbouring land uses;*
- *Accurately identify the risk of conflict between neighbouring land uses;*
- *Complement development control and buffer requirements with an understanding of likely landuse conflict;*
- *Proactively address landuse issues and risks before a new landuse proceeds or before a dispute arises; and*
- *Highlight or recommend strategies to help minimise conflict and contribute to the negotiation, proposal, implementation and evaluation of separation strategies.*

In summary, the LUCRA is a tool aimed at:

- Identifying the effects of the landuse on neighbouring landuse; and
- Evaluate the level of impact of these effects.

In order to achieve those aims, a four-step assessment process is undertaken as follows:

1. **Information Gathering** – The site geophysical characteristics, the nature of the development proposed and the surrounding landuses are described.
2. **Risk Level Evaluation** - Each proposed activity is recorded and an assessment of potential landuse conflict level is assigned. The higher the risk level, the more attention it will require.
3. **Identification of Risk Mitigation Management Strategies** – Management strategies are identified which can assist in lowering the risk of potential conflict.
4. **Record Results –** Key issues, risk level and recommended management strategies are recorded and summarised.

Accordingly, this landuse conflict risk assessment will utilise the aforementioned four-step assessment process**.**

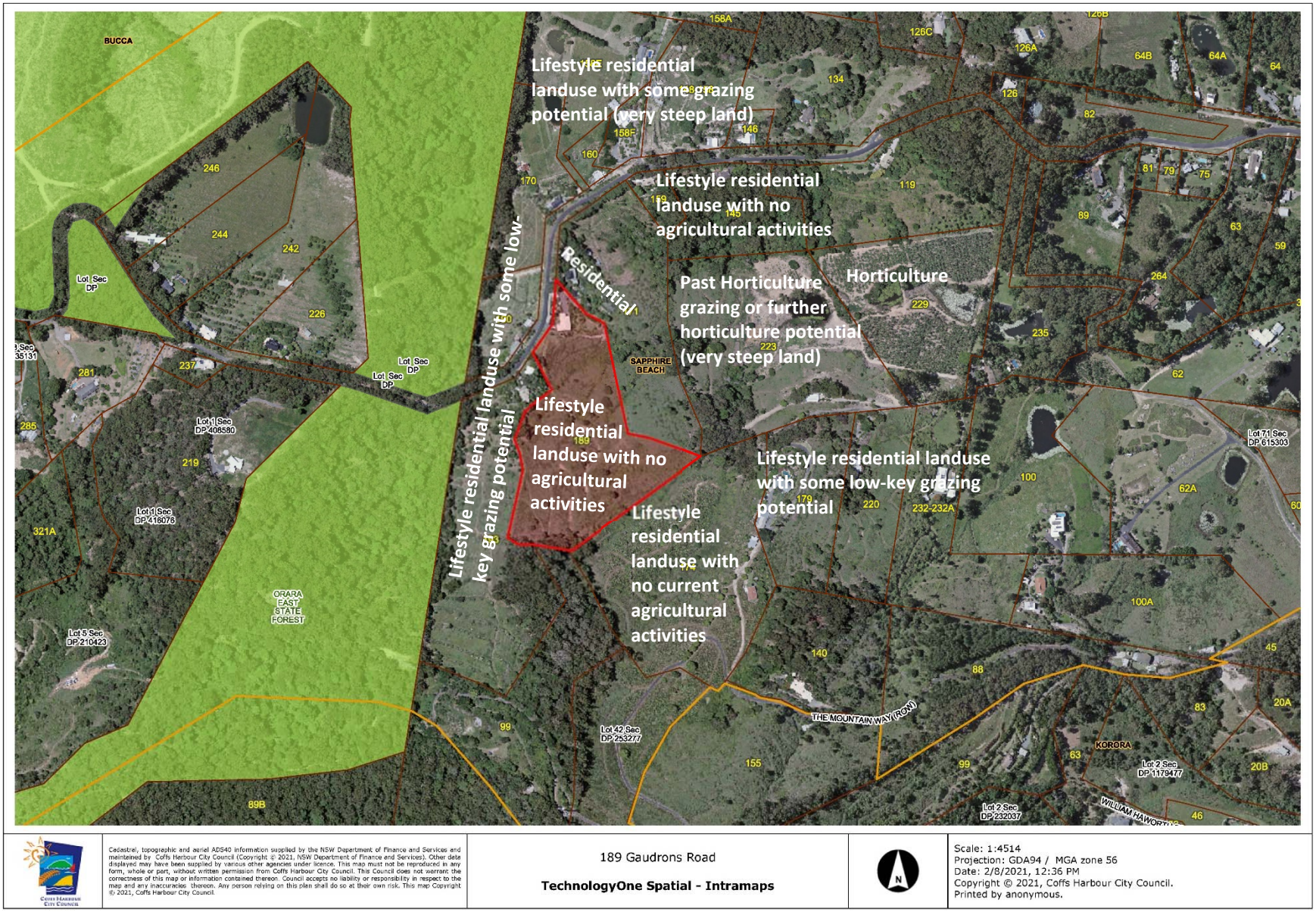


Figure 1. The Site (red boundary) within the locality context & predominant landuse. Source: CHCC Intramaps

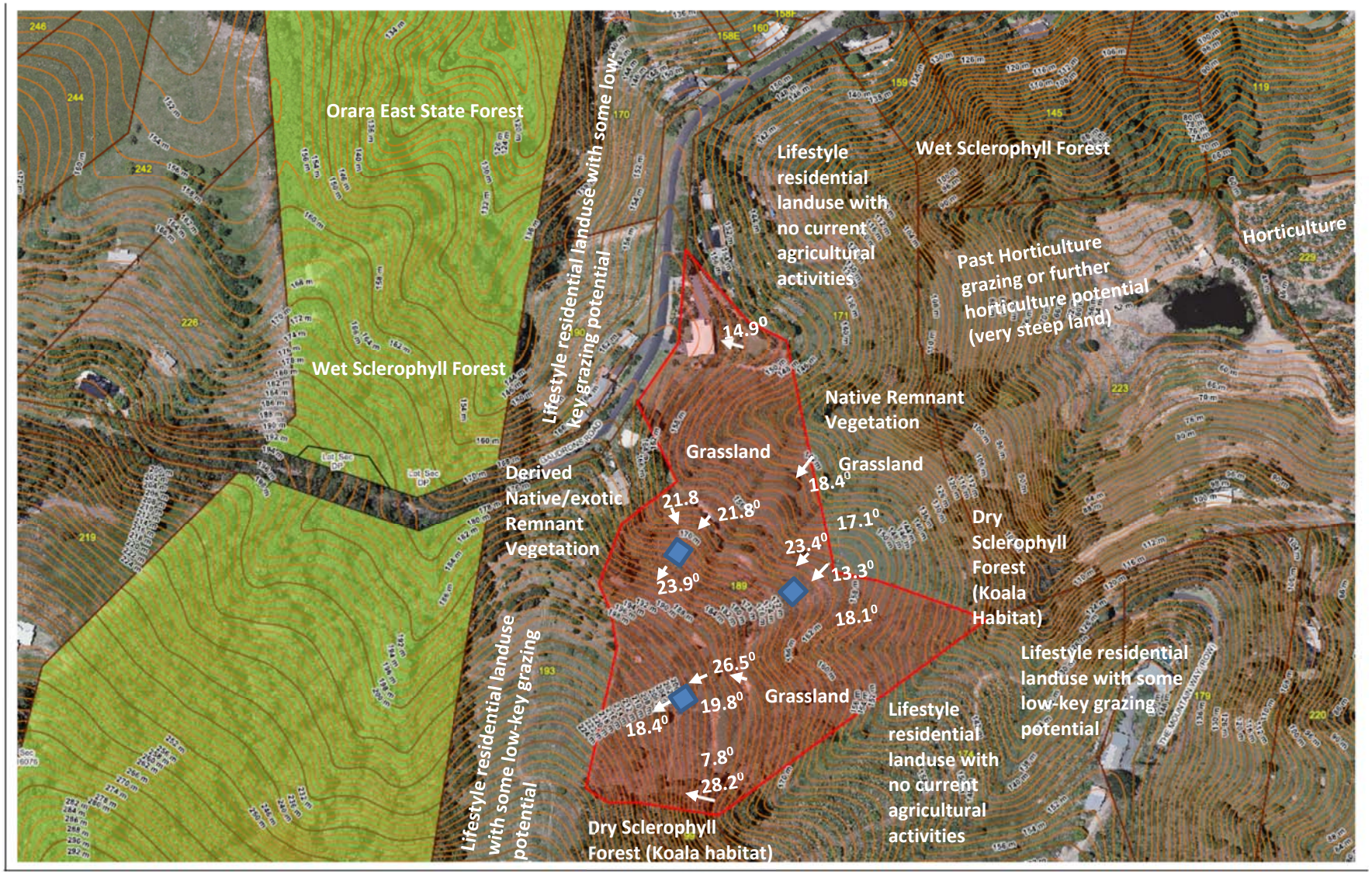


Figure 3. 189 Gaudrons Road - Showing approx. proposed dwelling locations for future subdivision, vegetation, slope analysis and landuse. Source: CHCC Intramaps

2. Information Gathering (Step 1)

2.1 The Subject Site

The Subject Site (i.e. Lot 2 DP550362), which is 4.475Ha in size, is directly accessed to the north west from Gaudrons Road. The land in context with the locality is shown on Figs. 1 & 2 and Plates 1-13. It entails a steep rural property formerly utilised for banana cultivation, but currently fallow, as shown on Plates 10-13. One approved dwelling and associated sheds and water tanks are present on the northern portion of the Site (Fig. 2 & Plates 3-5). The dwelling has two separate accesses to Gaudrons Road (Plates 1, 3, 5 & 6). The Site is bounded by Gaudrons Road to the north west and surrounded by predominantly lifestyle rural residential lots.

The Site is located ~2km west of the established residential areas of Sapphire Beach. Whilst the property and its immediate surrounds are zoned RU2 Rural landscape and E2 Environmental Conservation to the south (see Fig. 4), the Site and the neighbouring land is identified in the 'Korora' potential Large Lot Residential (Zone R5) Candidate Areas in the Coffs Harbour LGA. The Site does not contain Biodiversity Values land and it is not located near High Values Habitats.

The Site, which consists of steep east and north east facing slopes draining to the north east and east, is predominantly cleared with scattered trees and landscaping. To the south of the Site is a forested area consisting of Dry Sclerophyll Forest, as shown on Fig. 2. This vegetation is mapped as Tertiary Koala Habitat in CHCC GIS mapping.

Plate 1. Looking north along Gaudrons Road. Driveway entry to Site to the right

Plate 2. Looking south west up Gaudrons Road towards the Forest vegetation on an upslope. The subject Site is to the left

Plate 3 (left). Looking east across the access driveway to existing dwelling

Plate 4. Existing garage - Looking east to ocean view

Plate 5. Secondary access driveway to existing dwelling

Plate 6. Secondary access point from Gaudrons Road – just north of driveway access shown on Plates 1 &3

Plate 7. Looking east north east from existing dwelling surrounded by landscaped gardens

Plate 8. Looking south east from exiting dwelling across the Site. The steep slope was in the background formerly utilised for banana cultivation

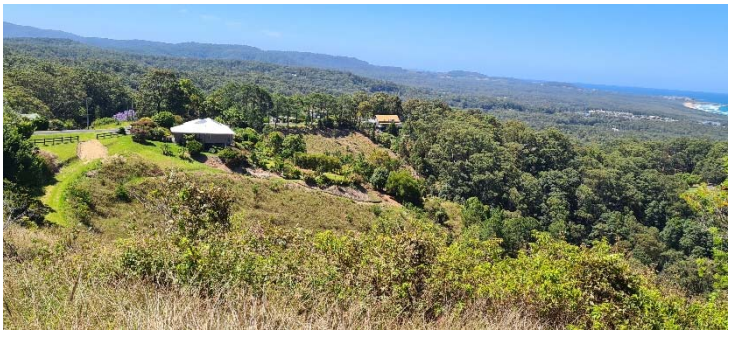


Plate 9. Looking northward to neighbouring rural (lifestyle) residential properties and forested areas

Plate 10. Looking east north east across Site. Lifestyle rural residential to right and nearest remaining banana plantation

Plate 11. Looking east south east across Site. Nearest banana plantation to the left and rural lifestyle residential along neighbouring ridge to the right. Note neighbouring lands to the right, which previously were utilised for horticulture no longer utilised for farming activities and now regenerating

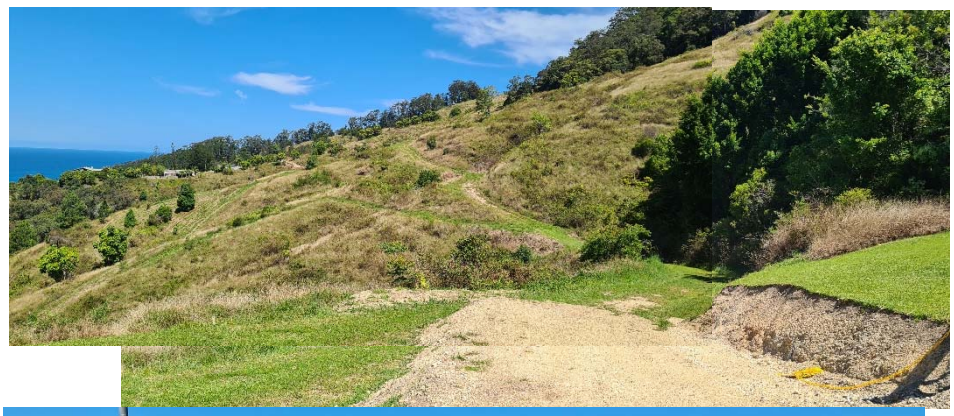


Plate 12. Looking southward across the Planning Proposal Site, which consist of steep east facing slopes crisscrossed by former farm access tracks

Plate 13. Looking eastward across the Planning Proposal Site. Existing dwelling curtilage to the left

Elevation at the Site ranges from 230m AHD to the south west corner to 120m AHD to the east of the Site. The slopes have been previously shaped to assist with agricultural practices and numerous access tracks associated with a former banana plantation crisscross the property.

The surrounding vegetation includes the Dry Sclerophyll Forest to the south and east (see Fig. 2). Otherwise, the predominant vegetation surrounding the Site is Grassland and landscaped/managed land as shown on Figs. 1 & 2.

The soil landscape at Site is the 'Bobo' soil Landscape (Everick Heritage Pty Ltd 2020). The proposal Site is outside of the 100-year ARI Flood Extent.

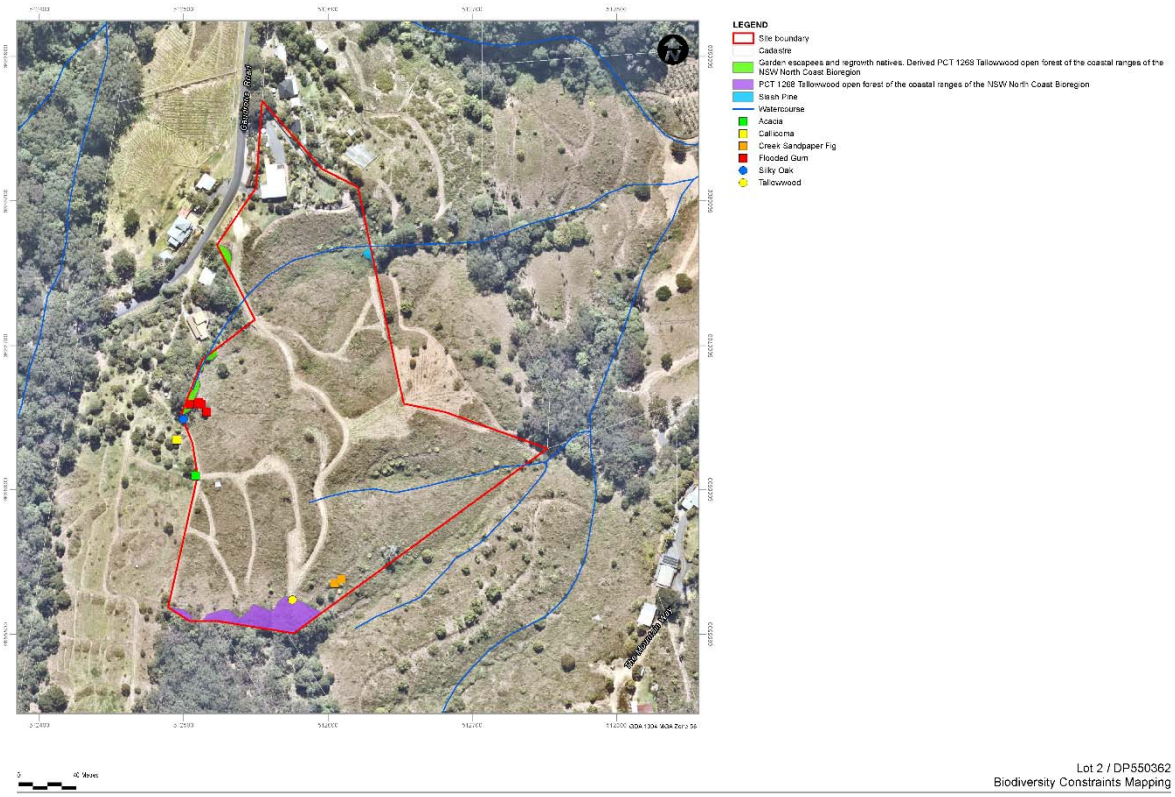


Figure 3. Vegetation mapping for the Site. Source: GeoLINK 2020 - Biodiversity Constraints Mapping

As noted previously, the Site is not mapped or is in proximity to Biodiversity Values land and it is not located near High Values Habitats. The preliminary biodiversity mapping by GeoLINK indicate that no threatened plant species were recorded for the Site, as shown on Fig. 3. GeoLINK identify one Plant Community Types (PCT) as occurring at the Site namely, PCT 1208 Tallowwood open forest of the coastal ranges of the NSW North Coast. This PCT is not identified as a Threatened Ecological Community (TEC). In any case, it is not proposed to impact on the Forest vegetation occurring along the southern portion of the Site, which is already zoned E2 Environmental Conservation (see Fig. 4).

An Aboriginal Cultural Heritage Assessment (ACHA) has been undertaken by Everick Heritage Pty Ltd (2020). The ACHA findings regarding the Site indicate that considerable soil disturbance has occurred historically due to clearing and banana plantings, as well as dwelling construction, cut and fill earthworks and track culvert construction. The ACHA concluded that that subdivision works within 189 Gaudrons Road are unlikely to impact on Aboriginal objects and will not impact on any known places or sites of cultural significance to the Aboriginal community. As such additional consultation and archaeological investigation is not required for this Site.

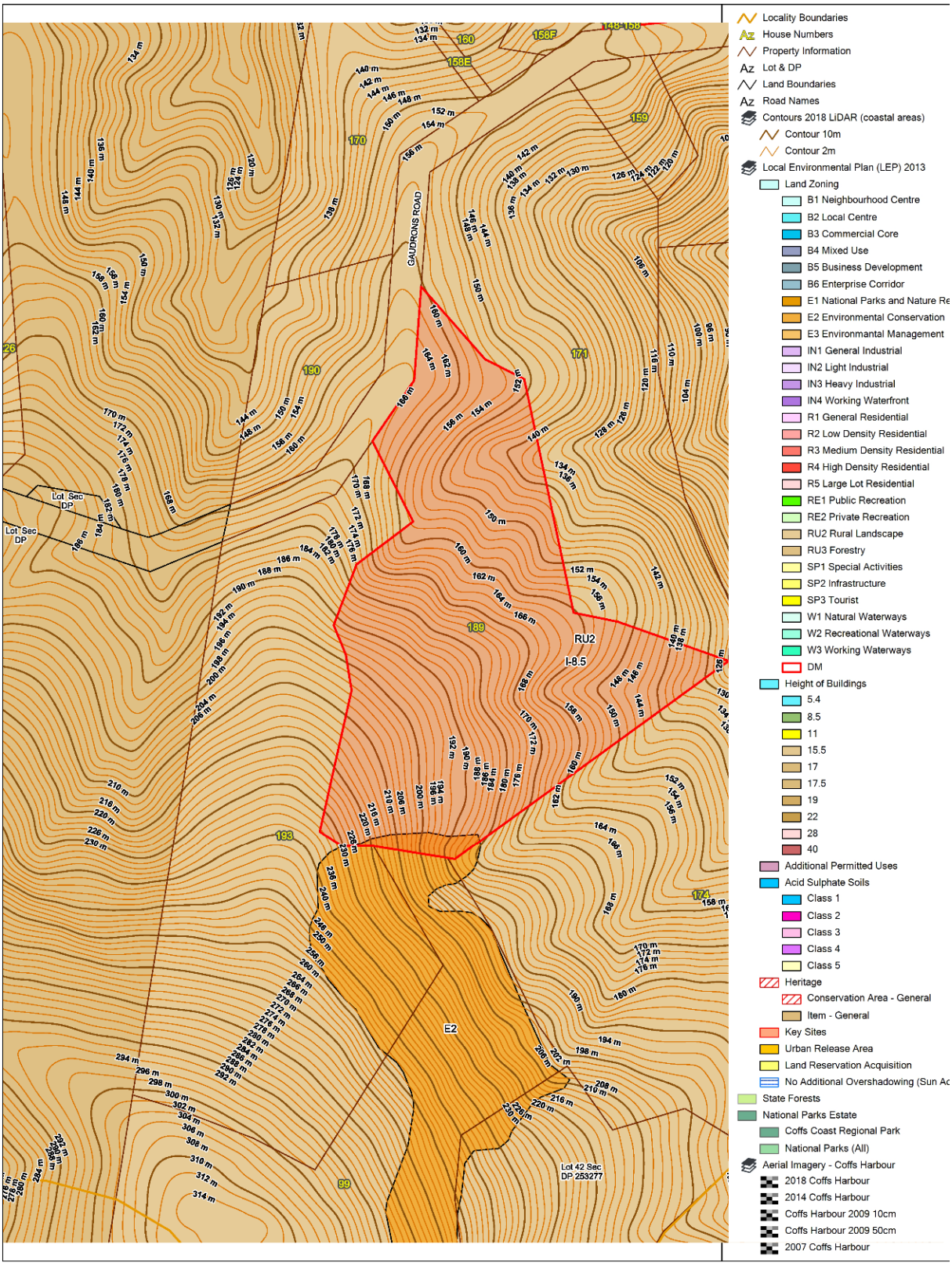


Figure 4. Land zoning applicable to the Site (red boundary).

2.2 Proposed Development & Planning Provisions

The purpose of this Planning Proposal is to amend LEP 2013 to allow large lot residential development on Lot 2 DP5550362. The Planning Proposal will:

- Rezone the subject land from Zone RU2 Rural Landscape to Zone R5 Large Lot Residential and Zone E2 Environmental Conservation; and
- Change to the Minimum Lot Size (MLS) for the new R5 zoned land from the current 40 hectares. A new MLS of 1 ha or less is sought for this precinct.

The proposed subdivision concept layout is shown as Fig. 5. Notably, the exiting dwelling and associated infrastructure would be retained within proposed lot A.

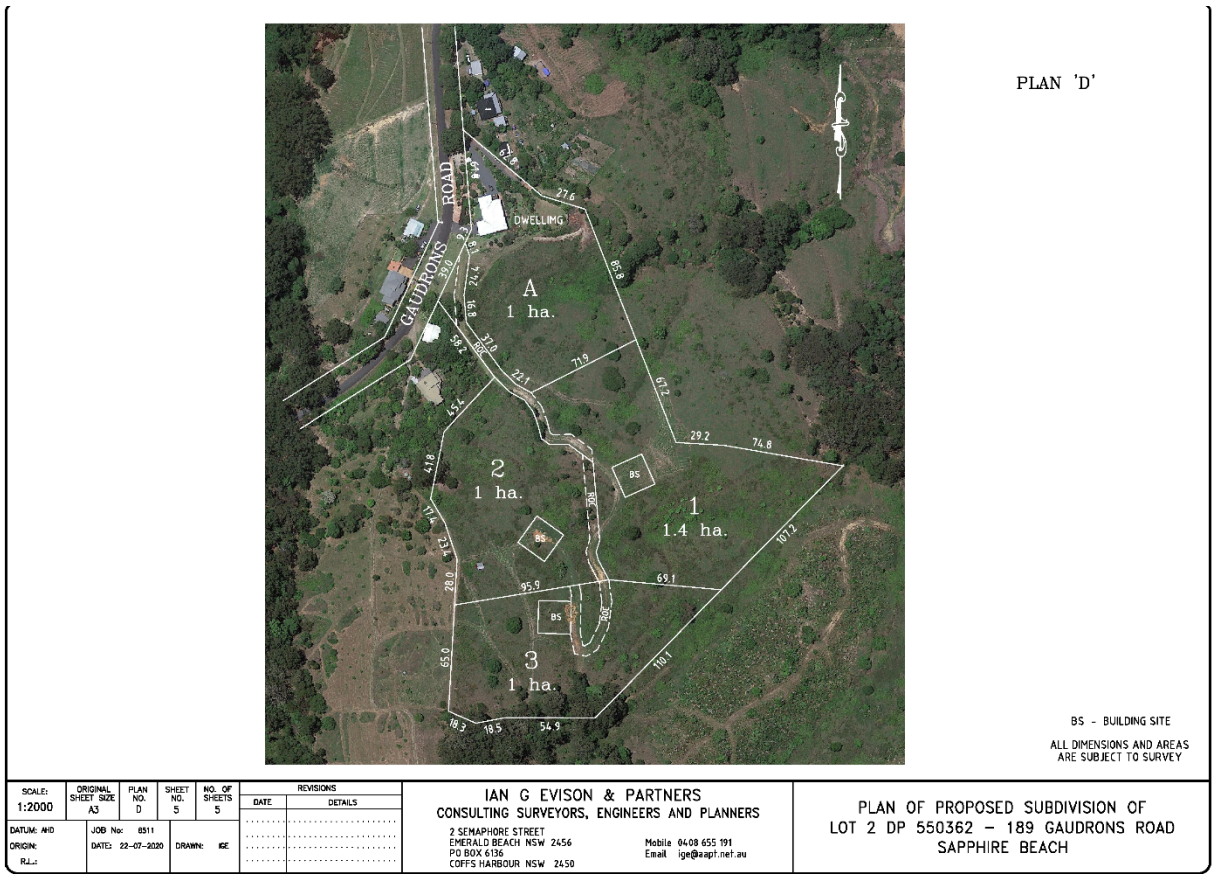


Figure 5. Proposed concept layout

The Site is identified in the 'Korora' potential Large Lot Residential (Zone R5) Candidate Areas in the Coffs Harbour LGA. The proposed rezoning is a compatible landuse on this land as the Site occurs in proximity to similar rural lifestyle residential development, and it is serviced by capable road infrastructure and electricity services. The proposed development Site is surrounded by predominantly rural (lifestyle) residential development and a public road.

As noted in s. 1.1, pre-lodgement meeting notes from CHCC dated 17/06/20 indicated that a LUCRA is nevertheless required to support this planning proposal. Accordingly, a future subdivision will be required to address the CHCC DCP 2015 provisions, specifically:

- C1.5 SUBDIVISION-DESIGN REQUIREMENTS FOR RURAL AND LARGE LOT RESIDENTIAL ZONES

  C1.5 also details the provisions regarding the preparation of a LUCRA. The relevant clause states:

  > (2) Subdivisions are to incorporate **adequate buffers between dwelling envelopes and adjoining agricultural land to ensure that the agricultural potential of those lands will not be**

diminished (refer to the Land Use Conflict Risk Assessment Guide prepared by the NSW Department of Primary Industries).

In summary, the proposed change in landuse from rural to large lot residential is to occur over a property currently utilised for residential landuse on the northern portion only. The remainder of the property is currently unutilised for agriculture or horticulture.

The proposal area is bounded by predominantly lifestyle rural residential with no agricultural activities and Gaudrons Road (Fig. 2). Within the locality, as shown in Fig. 1, some grazing or land potentially utilised for grazing (associated with lifestyle residential landuse) is found to the far north. The closest intensive agricultural use consists of south facing orchards to the north east of the Site more than 350m away from the existing dwelling (see Figs. 1 & 2 and Plates 10 & 11). Accordingly, the predominant landuse surrounding the planning proposal area is of a rural lifestyle residential nature and does not currently include intensive agricultural or horticultural landuse.

Nevertheless, this landuse conflict assessment will evaluate potential landuse conflict arising from the proposed large lot residential land uses and the surrounding RU2 Rural Landscape zoned land (see Fig. 4).

2.3 Site History and Land Use

Council GIS mapping indicate that banana cultivation has occurred at the Site from 1943 to 1994. However, any banana cultivation was long gone by 2004. In fact, review of Google aerial imagery shows that the current landuse (residential with no agricultural enterprises) at the Site has not significantly changed since at least 2004. Some earthworks and access track reshaping has been undertaken since 2004, otherwise the land remained cleared, with little regeneration.

The surrounding properties have similarly remained consistent with the current landuse in recent years. However, as late as 2013-14 the properties to the south east, east, north east and south west of the Site, supported banana plantations. Since then, the banana plantations have been steadily cleared and only portion of the surrounding land is currently under horticultural landuse (see Fig. 1), as noted in s. 2.2. Council GIS mapping indicate that banana cultivation has occurred in the locality from 1943 to 1994. As noted previously, the land is bounded by Gaudrons Road to the north west and rural lifestyle lots to the north, east and west. One residential dwelling is found on Site as well as sheds, water tanks and two driveway accesses.

The land is zoned RU2 Rural landscape and E2 Environmental Conservation in the Coffs Harbour LEP 2013 (refer to Fig. 4).

2.4 Surrounding Land Use

Adjoining landuse to the planning proposal Site, which are illustrated on Figs. 1 & 2, are as follows:

- North & North east: Lifestyle residential landuse with no agricultural activities
- West: Lifestyle residential landuse with some grazing potential
- South East & further north east: Past horticulture/grazing or further horticulture potential (very steep land). The closest intensive agricultural use consists of south facing orchards to the far north east of the Site more than more than 350m away and downslope from the existing dwelling (see Figs. 1 & 2 and Plates 10 & 11)
- South: Forested land zoned E2

The proposed large lots residential subdivision will be generally consistent with surrounding landuse. The predominant landuse surrounding the planning proposal area is of a rural residential nature and, apart for an orchard more than 350m away to the south east, does not include intensive agricultural or horticultural landuse. Nevertheless, this landuse conflict assessment will evaluate potential landuse

conflict arising from the proposed residential land uses and the surrounding RU2 Rural Landscape zoned land (see Fig. 4).

2.5 Landuse Summary & Activities Arising from the Proposal

As noted, this landuse conflict assessment will evaluate potential landuse conflict arising from the proposed large lot residential land uses and the surrounding RU2 Rural Landscape zoned land (see Fig. 4). It is necessary to identify any potential causes for conflict, which may arise from the development of the Site. Table 1 summarises the proposal within the context of the locality and surrounding landuse and the activities/impacts which may occur on neighbouring properties.

Table 1. Activities likely to occur as a result of the proposal

Parameter	Details
The nature of the landuse change & development proposed	The proposal will result in the introduction of large lot residential landuse within land currently utilised for one residential dwelling and otherwise unutilised and fallow.
The nature of the precinct where the land use change & development is proposed	The proposed change in lot size and potential large lot residential subdivision is to occur over currently rural land utilised only for rural residential landuse. The proposal area is surrounded by some potential agricultural land (currently unutilized), rural lifestyle lots, roads and rural residential development.
Topography, climate & natural features	The Subject Site consists of a slope, which is step to moderately steep with a north-easterly aspect. The main ridge crest comprises Gaudrons Road. A small spur crest is located in the north-western corner of the Site. Two mapped tributaries of Sugarmill Creek run eastward towards Sugarmill Creek. These are normally dry due to land steepness (Everick Heritage Pty Ltd 2020). Elevation at the Site ranges from 230m AHD to the south west corner to 120m AHD to the east. The slopes have been previously shaped to assist with agricultural practices and numerous access tracks associated with a former banana plantation crisscross the property. The surrounding vegetation includes the Dry Sclerophyll Forest to the south and east (see Fig. 2). Otherwise, the predominant vegetation surrounding the Site is Grassland and landscaped/managed land as shown on Figs. 1 & 2. The soil landscape at Site is the 'Bobo' Soil Landscape (Everick Heritage Pty Ltd 2020), which is characterised by very steep to precipitous hills on Coffs Harbour Association metasediments. This soil landscape consists of moderately deep (<150 cm), well-drained weakly structured Red Earths (Gn3.11, Gn4.11), with deep (>200 cm), imperfectly drained Red Podzolic Soils (Dr2.11) on footslopes and very shallow (<50 cm), well-drained Lithosols (Um1.23) on very steep slopes with shallow soils (Milford 1999). The soils are strongly acid, stony, shallow (localised) soils with low fertility, high aluminium toxicity potential and low wet bearing strength. Very steep slopes, high mass movement hazard, high water erosion hazard, severe foundation hazard, shallow soils (localised on steepest slopes), rock fall hazard (localised on steepest slopes), rock outcrop (localised) (Milford 1999). The proposal Site is outside of the 100-year ARI Flood Extent. The climate in the Coffs Harbour LGA is typical of subtropical northern NSW, with warm summers and mild winters. The prevailing morning wind is from the southwest with calm conditions being experienced 15% of the time, and the prevailing afternoon winds are from the north east and south with calm conditions being experienced 3% of the time (refer to Appendix B - Wind Direction Rose from Coffs Harbour MO Weather Station - Site number: 059040)

Parameter	Details
Typical industries & land uses in the area	Industries: Limited grazing & horticulture Land uses: Residential, grazing, horticulture and rural lifestyle
The main activities of the proposed land use for the development & regularity of activity	The main activities associated with a proposed large lot residential subdivision are the same as the ones associated with the existing surrounding development these are: o Lifestyle rural residential development: o Activities: mowing, traffic = some noise - ongoing; o Construction activities = noise, dust, loss of amenity- high intensity short duration

The main activities of adjoining land uses & their regularity	Land to the north and west:
	o Lifestyle residential landuse with some grazing potential and Residential immediately north, west and south west –
	o Activities: mowing, slashing, tractor use - some odour & noise– ongoing
	o Activities: mowing, traffic = some noise - ongoing;
	o Construction activities = noise, dust, loss of amenity- high intensity short duration
	Land to the far north east (more than 350m away from closest dwelling):
	o Horticulture (orchard) –
	o Activities: spraying, fertilising, slashing, tractor use - some spray drift, odour & noise– ongoing
	Land to east and south east:
	o Rural landuse with no current agricultural activities, but with horticulture potential -
	o Activities: slashing = some noise - ongoing;
	o Potential horticultural activities = spraying, fertilising, slashing, tractor use - some spray drift, odour & noise– ongoing

Compatibility of the proposal with surrounding land use issues	The proposal is generally compatible with the predominant surrounding landuse, i.e. lifestyle residential landuse with no current agricultural activities or with some grazing potential. However, there is a potential landuse conflict with possible intensification of rural activities (eg. horticulture) to the east and south west, in particular, where cleared land is found.

3. Risk Level Evaluation (Step 2)

3.1 Risk Evaluation & Ranking

As noted in Table 1, the main activities associated with the proposed development are the same as the ones associated with the predominant surrounding development (i.e. lifestyle residential landuse with no current agricultural activities or with some grazing potential). There is extensive forested vegetation bounding the proposal area to the south, accordingly any potential rural landuse intensification on this neighbouring land in unlikely. Still, there is a potential landuse conflict with possible intensification of rural activities (eg. horticulture) to the east and south west, in particular, where cleared land is found. Accordingly, the DCP provisions requires that buffers between dwelling envelopes and adjoining agricultural land are to be considered to ensure that the agricultural potential of those lands will not be diminished.

Thus, this assessment focuses on the adequacy of the following existing separation buffers between the exiting dwelling and proposed future dwelling (see Figs. 2 & 5), which interface with the rural landuse (currently uncultivated) to the west and east, namely:

- Dwelling on proposed Lot A – exiting dwelling separation to potential rural land intensification to the east including extensive landscaping = ~44m.
- Dwelling on proposed Lot 1 – proposed dwelling separation to potential rural land intensification to the east = ~22m.
- Dwelling on proposed Lot 2 – proposed dwelling separation to potential rural land intensification to the west = ~46m.
- Dwelling on proposed Lot 3 – proposed dwelling separation to potential rural land intensification to the west = ~72m.

Each proposed activity is recorded in Table 2 and an assessment of known landuse conflict level is assigned accordingly. Ranking is given before and after ameliorating measures are applied to mitigate the given activity impacts. The higher the risk level, the more attention it will require in order to reduce the ranking level. Risk rankings are derived from the risk ranking table attached as Appendix A.

Table 2. Risk Evaluation & Ranking

Activity	Identified Hazard	Risk Ranking	Control Methods	Controlled Ranking
o Building, access and services construction - intense activity, limited duration	Noise/Dust/Loss of Amenity	4C	o Adherence to approved daytime construction hours o Adherence to relevant legislation specifically re dust/noise management and implementation of erosion control measures o Good communication with neighbour	5C
Horticulture o Pesticide control- off-target movement of agricultural chemical - intense activity, limited duration o Fertiliser use, effluent disposal – intense activity, moderate duration o Noise from tractor use- occasional	Agricultural Chemical Spray Drift Odour noise	3B	o The likelihood of intensive horticulture being undertaken immediately to the east, south east and south west of the Site is low, since the former banana cultivation has been abandoned and is unlikely to be re-established (economically unviable). Any other horticulture potential is limited by the low soil fertility, very steep slopes, high	5C

Activity	Identified Hazard	Risk Ranking	Control Methods	Controlled Ranking
			aluminium toxicity potential, high mass movement hazard and high-water erosion hazard (see Table 1). Landuse history confirms that neighbouring landuse has been uncultivated since 2014. o Nearest existing orchard to the far north east (see Fig. 1) is more that 350m away from the closest dwelling (current or future) o The orchard extent has been consistently reduced over the years and is separated by patches of thick forest (see Plates 10 & 11) o The orchard occurs from an elevation of 50m AHD on a south facing slope, downslope from the Site (elevation 230 to 120m AHD) o Adherence to relevant legislation specifically re herbicide use/dust/noise management and implementation of erosion control measures	
Grazing o animals freely moving, some odour & noise o noise from occasional slashing	Some odour Some noise	4B	o Good communication with neighbour o ~22m – 72m wide respective current and or future buildings setbacks to potential (none currently undertaken) low-key grazing to the east and south west o The potential grazing land include regenerating land and very steep land not conducive to grazing (apart from goats)	5C
o Mowing - activity common within surrounding rural residential landuse and not significantly increased because of the proposal	Noise	N/A	none	N/A

3.2 Potential Conflict Issues (Risk Ratings)

In summary, the main issues arising from the proposed rezoning to residential use in respect to impact to current or future agricultural pursuits on the surrounding RU2 zoned land are:

- Noise/Dust/Loss of Amenity (temporary only) – from the building construction works
- Noise/Odour – from potential low-key grazing to east and south west (although neighbouring cleared land appears unutilized presently and it is also identified for potential Large Lot Residential Candidate Areas)

- Noise/Dust/Spray Drift – from intensive horticulture to the far north east. Notably, it is highly unlikely that intensive horticulture will be undertaken in the future in the immediate proximity of the Site because the former banana cultivation has been abandoned and is unlikely to be re-established (economically unviable). Any other horticulture potential is limited by the low soil fertility, very steep slopes, high aluminium toxicity potential, high mass movement hazard and high-water erosion hazard (see Table 1). Landuse history confirms that neighbouring landuse has been uncultivated since 2014.

Table 2 gives a risk value for each of the above identified potential conflict areas before (Risk Ranking) and after (Controlled Ranking) a mitigating measure is applied. A rating of High, Medium and Low is then assigned to each risk ranking based on a combination of 'Probability' of occurrence and 'Consequence' from the activity. Thus, the rating of the potential landuse conflict risks identified on Table 2 is displayed on Table 3. **It must be noted that, the highlighted scoring shown on Table 3 reflects the impact rating for the Controlled Ranking values.**

Table 3. Landuse Conflict Risk Assessment Matrix (Yellow highlight = Risk Rating for Controlled Ranking)

		Likelihood of a dispute/conflict over land use/activity				
		Almost Certain (A)	**Likely (B)**	**Possible (C)**	**Unlikely (D)**	**Rare (E)**
Likely consequence from a dispute/conflict over land use/activity	**Major consequences & impacts almost certain (1)**	HIGH (25)	HIGH (24)	HIGH (22)	MEDIUM (19)	LOW (15)
	High consequences & impacts likely (2)	HIGH (23)	HIGH (21)	MEDIUM (18)	LOW (14)	LOW (10)
	Moderate consequences & impacts possible (3)	HIGH (20)	MEDIUM (17)	LOW (13)	LOW (9)	LOW (6)
	Minimal consequences & impacts unlikely (4)	MEDIUM (16)	LOW (12)	LOW (8)	LOW (5)	LOW (3)
	Low consequence & impacts rare (5)	LOW (11)	LOW (7)	LOW (4)	LOW (2)	LOW (1)

The resulting risk rating of 4 shown on Table 3, which corresponds to the Controlled Ranking values of 5C is deemed an acceptable risk (refer to Appendix A). **This is because the identified potential conflict areas can be mitigated effectively with appropriate controls (summarised in s.3.1 and detailed in s. 4) and therefore yields a 'Low' likelihood of conflict and impact**.

4. Risk Mitigation Management Strategies (Step 3)

4.1 Control Measures

A number of measures (including existing mitigating circumstances) have been listed on Table 2 to lessen the potential landuse conflict which might arise from the proposal. These are as follows:

1. Good communication with neighbour
2. Adherence to relevant legislation
3. ~22m to 72m wide current and or future buildings setbacks to potential (none currently undertaken) low-key grazing to the east and south west. The potential grazing land include regenerating land and very steep land not conducive to grazing (apart from goats).
4. Current separation buffer to nearest existing orchard to the far north east (see Fig. 1) is more that 350m away from the exiting dwelling, which is the nearest dwelling (future or current), and
    a. The orchard extent has been consistently reduced over the years and in any case is separated by patches of forested land, and
    b. The orchard occurs from an elevation of 50m AHD on a south facing slope, downslope from the Site (elevation 230-120m AHD).
5. The likelihood of intensive horticulture being undertaken in the immediate proximity of Site where clear land is found is low because of the following reasons:
    a. the former banana cultivation has been abandoned and is unlikely to be re-established (economically unviable).
    b. Any other horticulture potential is limited by the low soil fertility, very steep slopes, high aluminium toxicity potential, high mass movement hazard and high-water erosion hazard (see Table 1).
    c. Landuse history confirms that neighbouring landuse has been uncultivated since 2014.

The following section will address in more detail the landuse buffer provisions.

4.2 Landuse Buffers

The DCP does not prescribe minimum buffers to adjoining agricultural landuse. Similarly, the LUCRA Guide (DPI 2011) does not specifically propose minimum buffers to agriculture landuse including grazing. It instead notes that the LUCRA process prompts land use managers to identify operators of adjacent properties to the effects of a proposed land use on neighbouring land, describe and record the main activities of the land uses, evaluate the type of activities on adjacent properties and their frequency, and finally identify the level of management strategies required to minimise such effects.

Accordingly, this assessment has evaluated this proposal in the context of the locality characteristics. It is noted that the current large lot residential and lifestyle rural residential landuse in the locality coexist, where still undertaken, with horticulture and grazing landuse. As identified in the historical review, the occurrence of banana plantations in the locality has steadily declined in recent times. The tendency to rural lifestyle occupancy rather than traditional rural landuse activities have similarly reshaped the locality. This is further evidence by the fact that the whole area surrounding the Site is identified in the 'Korora' potential Large Lot Residential (Zone R5) Candidate Areas in the Coffs Harbour LGA.

Although, mostly cleared rural land is found immediately to the east and south west of the Site, no apparent agricultural pursuits are currently being undertaken and natural regeneration leading to an eventual open forest community was observed (see Plates 10-13). Landuse activities that could be implemented would be likely limited to low level grazing (eg. goats) and are unlikely to support intensive agriculture in the future. As discussed, the former banana cultivation has been abandoned and is unlikely to be re-established. This trend has been observed in the Coffs Harbour region, where

over the past 10-15 years, the banana industry has reduced as the blueberry sector has had a major increase in production. In 2001, there were 22 blueberry farms within the Coffs Harbour LGA, and by 2017 there were 127 blueberry farms. By comparison, there are currently 111 banana farms in the Coffs Harbour LGA. Blueberry are now the most significant sector, where many banana growers have transitioned to growing blueberries (Coffs Harbour Bypass EIS 2019). Nevertheless, blueberries prefer a deep, well-drained fertile soil, high in organic matter, whilst the soil found in the immediate proximity of the Site, where banana where grown, is characterised by low soil fertility, very steep slopes, high aluminium toxicity potential and high mass movement hazard.

To the immediate north and west are lifestyle lots with manicured extensive lawns and no apparent agricultural pursuits. The closest intensive horticultural pursuit, separated by patches of extensive forested vegetation, is an orchard more than 350m to the north east from the exiting dwelling, which is the nearest dwelling (future or current).

There is extensive forested vegetation bounding the proposal area to the south, accordingly any potential rural landuse intensification on this neighbouring land is unlikely.

As noted, the only areas in proximity of the Site, which could support potential low-key grazing occur to the east and south west. Any potential impacts (some odour and noise) on the existing dwelling and potential future dwelling at the Site from neighbouring grazing land are considered to be minor (risk raking of 4B = Low likelihood of conflict and impact), as shown on Table 2 even before available separation buffers are considered. In any case, setbacks are available ranging from ~22m to 72m in width from the current and proposed dwellings. The setbacks areas include in some cases neighbouring residential properties with landscaped gardens and extensive lawns.

In summary, the proposed change in landuse from rural to large lot residential is to occur over a property currently utilised for residential landuse only and otherwise unutilised land.

Accordingly, this LUCRA has duly appraised the potential conflicts, which could arise from the proposal and has deemed that the control measures (including existing mitigating circumstances) detailed in s. 4.1 are adequate to minimise future potential conflicts and ensure that the agricultural potential of the neighbouring rural lands will not be diminished.

5. Summary, Conclusion & Recommendations (Step 4)

This LUCRA has been commissioned by Grenville Duce to support the **Planning Proposal for Lot 2 DP 550362, 189 Gaudrons Road, Sapphire Beach, NSW.**

Essentially, it was found that the proposed rezoning is a compatible landuse on this land as the Site occurs in proximity to similar rural lifestyle residential development. The main activities associated with the proposed development are the same as the ones associated with the predominant surrounding development (i.e. lifestyle residential landuse with no current agricultural activities or with some grazing potential). There is extensive forested vegetation bounding the proposal area to the south, accordingly any potential rural landuse intensification on this neighbouring land in unlikely. Still, there is a potential landuse conflict with possible intensification of rural activities (eg. horticulture) to the east and south west, in particular, where cleared land is found.

Accordingly, the DCP provisions requires that buffers between dwelling envelopes and adjoining agricultural land are to be considered to ensure that the agricultural potential of those lands will not be diminished. The DCP does not prescribe minimum buffers to adjoining agricultural landuse. Similarly, the LUCRA Guide (DPI 2011) does not specifically propose minimum buffers to agriculture landuse including grazing and horticulture.

This assessment has evaluated this proposal in the context of the locality characteristics. It is noted that the current large lot residential and lifestyle rural residential landuse in the locality coexist, where still undertaken, with horticulture and grazing landuse. As identified in the historical review, the occurrence of banana plantations in the locality has steadily declined in recent times. The tendency to rural lifestyle occupancy rather than traditional rural landuse activities have similarly reshaped the locality. This is further evidence by the fact that the whole area surrounding the Site is identified in the 'Korora' potential Large Lot Residential (Zone R5) Candidate Areas in the Coffs Harbour LGA.

Although, mostly cleared rural land is found immediately to the east and south west of the Site, no apparent agricultural pursuits are currently being undertaken and natural regeneration leading to an eventual open forest community was observed. Landuse activities that could be implemented would be likely limited to low level grazing (eg. goats) and are unlikely to support intensive agriculture in the future. This is because the former abandoned banana cultivation would be economically unviable to be re-established. Although, there is potential for the more lucrative blueberry plantations to be established, potential is limited by the low soil fertility, very steep slopes, high aluminium toxicity potential, high mass movement hazard and high-water erosion hazard. Finally, landuse history confirms that neighbouring landuse has been uncultivated since 2014.

Thus, the rural landuse activities to the east and south west of the proposal Site are likely limited to potential low-level grazing and are unlikely to support intensive agriculture in the future. To the immediate north and west are lifestyle lots with manicured extensive lawns and no apparent agricultural pursuits. The closest intensive horticultural pursuit, separated by extensive forested vegetation, is an orchard more than 350m to the north east from the nearest dwelling (current or future).

Following the risk evaluation, ranking and rating step by step process, a risk rating of 4 (see Table 3) was determined, which is deemed an acceptable risk. This is because the identified potential conflict areas can be mitigated effectively with appropriate control and therefore results in a 'Low' likelihood of conflict and impact. The control measures (including existing mitigating circumstances) to be implemented to reduce the risk of landuse conflict are detailed in s.4.1.

In conclusion, this LUCRA has duly appraised the potential conflicts, which could arise from the proposal and has deemed that the control measures (including existing mitigating circumstances) detailed in s. 4.1 are adequate to minimise future potential conflicts and ensure that the agricultural potential of the neighbouring rural lands will not be diminished.

6. References

GeoLINK 2020, *Biodiversity Constraints Mapping Lot 11 DP1141269*, dated 2 November 2020.

Earth Water Consulting 2020, *MLS and LCA at Nos. 9, 148 and 189 Gaudrons Road, Sapphire Beach*, Report ver. A, dated 25/11/2020.

Everick Heritage Pty Ltd 2020, *Gaudrons Road Subdivision Sapphire Beach, Draft Aboriginal Cultural Heritage Assessment,* written for Stephen Sawtell, November 2020.

Learmonth R., Whitehead R., Boyd B., & Fletcher S., 2007, *Living and Working in Rural Areas. A handbook for managing land use conflict issues on the NSW North Coast,* Centre for Coastal Agricultural Landscapes.

Department of Primary Industry (DPI) 2011, *Land Use Conflict Risk Assessment (LUCRA) Guide*, <http://www.dpi.nsw.gov.au/land-and-water/land-use/lup/development-assessment2/lucra>.

Milford H.B. 1999, *Soil Landscapes of the Coffs Harbour 1:100 000 Sheet - Department of Land and Water Conservation*, Sydney.

Appendices

Appendix A – Risk Ranking & Rating

Risk Ranking

The consequences (environmental/public health and amenity) are combined with a 'probability' (of those outcomes) in the Risk Ranking table to identify the risk rank of each environmental/public health and amenity impact.

Measure of Consequence (Severity of Environmental Impact) table

Level: 1	**Descriptor: Severe**
Description	• Severe and/or permanent damage to the environment • Irreversible • Severe impact on the community • Neighbours are in prolonged dispute and legal action involved
Example/ Implication	• Harm or death to animals, fish, birds or plants • Long term damage to soil or water • Odours so offensive some people are evacuated or leave voluntarily • Many public complaints and serious damage to Council's reputation • Contravenes Protection of the Environment & Operations Act and the conditions of Council's licences and permits. Almost certain prosecution under the POEO Act
Level: 2	**Descriptor: Major**
Description	• Serious and/or long-term impact to the environment • Long-term management implications • Serious impact on the community • Neighbours are in serious dispute
Example/ Implication	• Water, soil or air impacted, possibly in the long term • Harm to animals, fish or birds or plants • Public complaints. Neighbour disputes occur. Impacts pass quickly • Contravenes the conditions of Council's licences, permits and the POEO Act • Likely prosecution
Level:3	**Descriptor: Moderate**
Description	• Moderate and/or medium-term impact to the environment and community • Some ongoing management implications • Neighbour disputes occur
Example/ Implication	• Water, soil or air known to be affected, probably in the short term • No serious harm to animals, fish, birds or plants • Public largely unaware and few complaints to Council • May contravene the conditions of Council's Licences and the POEO Act • Unlikely to result in prosecution
Level: 4	**Descriptor: Minor**
Description	• Minor and/or short-term impact to the environment and community • Can be effectively managed as part of normal operations • Infrequent disputes between neighbours

Example/ Implication	• Theoretically could affect the environment or people but no impacts noticed • No complaints to Council • Does not affect the legal compliance status of Council
Level: 5	**Descriptor: Negligible**
Description	• Very minor impact to the environment and community • Can be effectively managed as part of normal operations • Neighbour disputes unlikely
Example/ Implication	• No measurable or identifiable impact on the environment • No measurable impact on the community or impact is generally acceptable

Probability (Measure of Likelihood of Risk) table

Level	Descriptor	Description
A	Almost certain	Common or repeating occurrence
B	Likely	Known to occur, or it has occurred
C	Possible	Could occur or 'I've heard it happening'
D	Unlikely	Could occur in some circumstances, but not likely to occur
E	Rare	Practically impossible

Risk Rating

The risk ranking matrix yields a risk ranking from 25 to 1. It covers each combination of five levels of 'probability' - a letter A to E as defined in **Probability (Measure of Likelihood of Risk) table** - and 5 levels of 'consequence', - a number 1 to 5 as defined in **Measure of Consequence (Severity of Environmental Impact) table** - to identify the risk ranking of each impact. For example an activity with a 'probability' of D and a 'consequence' of 3 yields a risk rank of 9

	Probability				
Consequence	**A**	**B**	**C**	**D**	**E**
1	25	24	22	19	15
2	23	21	18	14	10
3	20	17	13	9	6
4	16	12	8	5	3
5	11	7	4	2	1

	HIGH
	MEDIUM
	LOW

A risk rating of 20-25 would normally be deemed as an unacceptable risk
A risk rating of less than 20 would normally be deemed as an acceptable risk

Appendix B - Wind Direction Rose

Source: Coffs Harbour MO Weather Station - Site number: 059040

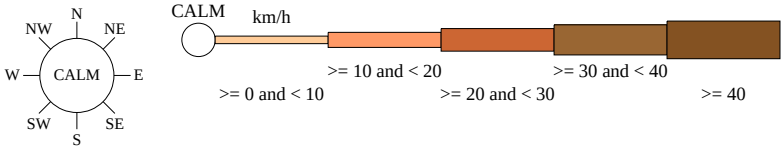
Rose of Wind direction versus Wind speed in km/h (01 Feb 1943 to 24 Aug 2015)

Custom times selected, refer to attached note for details

COFFS HARBOUR MO

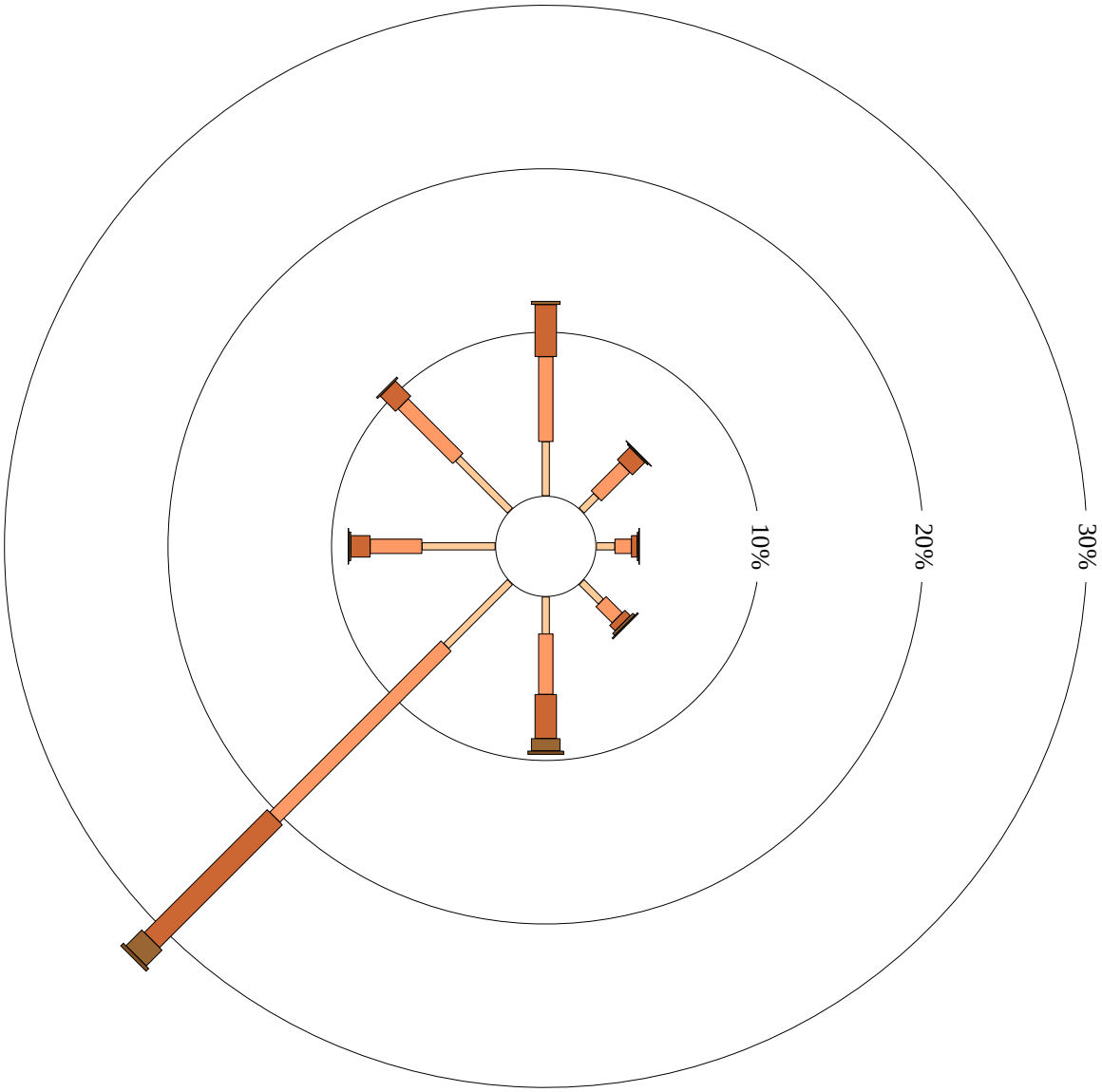
Site No: 059040 • Opened Jan 1943 • Closed Aug 2015 • Latitude: -30.3107° • Longitude: 153.1187° • Elevation 5m

An asterisk (*) indicates that calm is less than 0.5%.
Other important info about this analysis is available in the accompanying notes.



9 am
24228 Total Observations

Calm 15%



Rose of Wind direction versus Wind speed in km/h (01 Feb 1943 to 24 Aug 2015)

Custom times selected, refer to attached note for details

COFFS HARBOUR MO

Site No: 059040 • Opened Jan 1943 • Closed Aug 2015 • Latitude: -30.3107° • Longitude: 153.1187° • Elevation 5m

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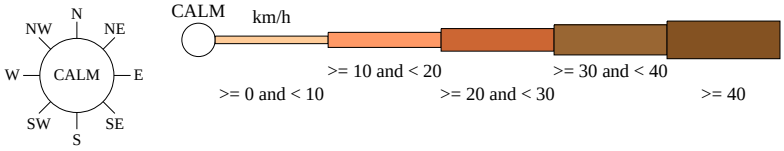

3 pm
24262 Total Observations

Calm 3%