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LAND USE CONFLICT RISK ASSESSMENT FOR PLANNING PROPOSAL

**Lot 11 DP1141269
9 Gaudrons Road, Sapphire Beach, NSW**



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For: Chris & Chris Bowen
Project No.: LFA20041
Date: 25 January 2021**

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Revision List

Revision No.	Revision Date	Report Title	Report Author	Field Survey By	Status
00	25.01.2021	Land Use Conflict Risk Assessment for Planning Proposal, Lot 11 DP1141269, 9 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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1. Introduction and Background

1.1 Introduction

Land & Fire Assessments Pty Ltd (LFA) has been commissioned by Chris & Chris Bowen to prepare a Land Use Conflict Risk Assessment (LUCRA) to support the **Planning Proposal for Lot 11 DP1141269, 9 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 11 DP1141269 (the Site), which is zoned RU2 Rural Landscape 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 due to existing RU2 Zoning and its past use for the cultivation of bananas and surrounding land uses.

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.



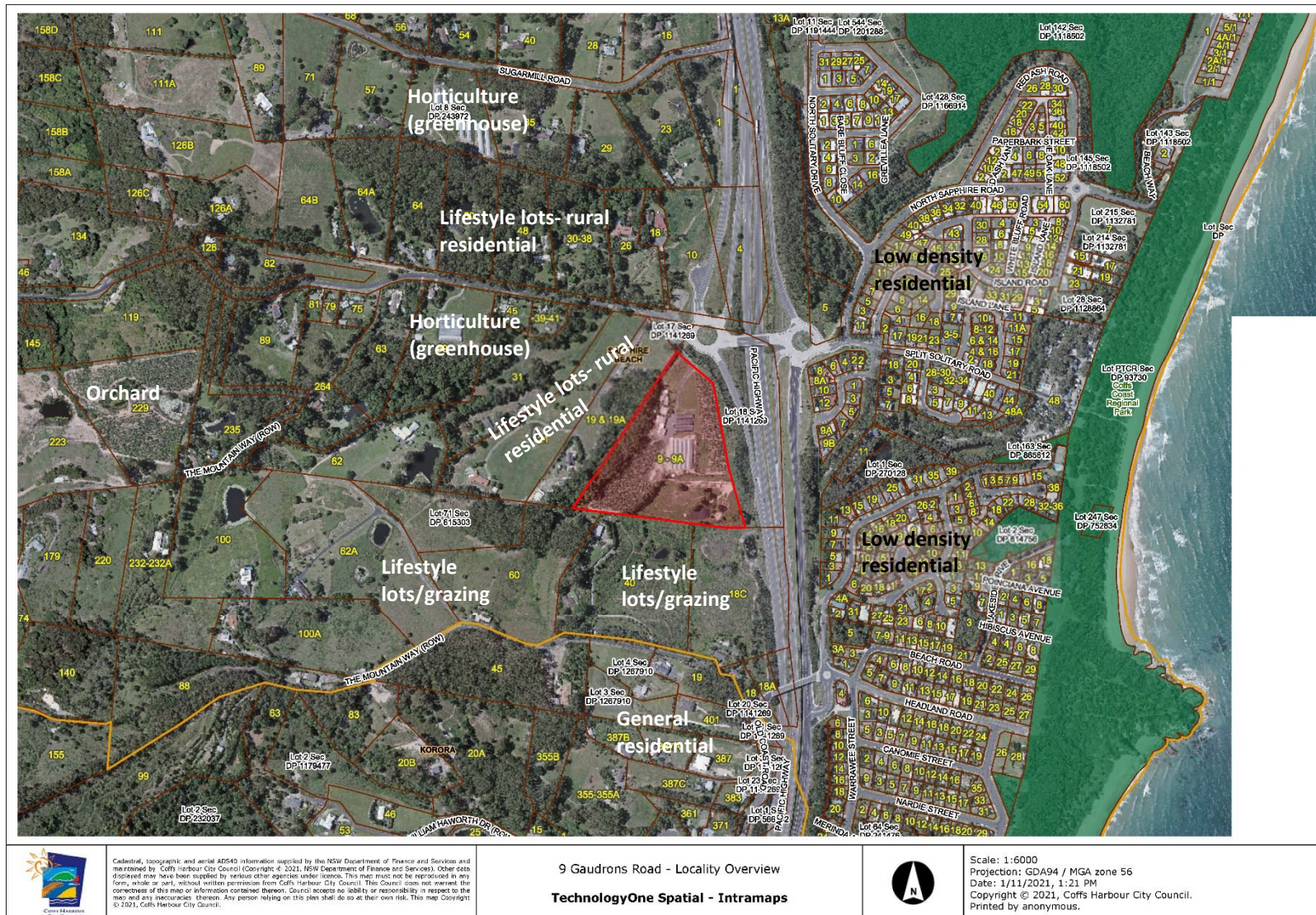


Figure 1. The Site (red boundary) within the locality context & predominant landuse. Source: CHCC Intramaps

2. Information Gathering (Step 1)

2.1 The Subject Site

The Subject Site (i.e. Lot 11 DP1141269), which is 5.268 Ha in size, is directly accessed from Gaudrons Road. The land in context with the locality is shown on Fig. 1. It entails a developed property utilised for horticulture (banana plantation and hydroponics figs). The Site is bounded by Gaudrons Road to the north, the Pacific Motorway to the east, rural lifestyle lots to the west and south. Two residential dwellings are found on Site as well as large greenhouses, sheds, water tanks and sealed driveway access. A dam is found on the south eastern corner of the Site.

The Site is in close proximity (just east of the Motorway) to the established residential areas of Sapphire Beach, as shown on Fig. 1. Whilst rural land is found to the north, south and west, the Site 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 any sensitive ecosystems.

The Site, which consists of a central ridge with downslopes to the east, west and south, is predominantly cleared with scattered trees and windbreaks on the southern portion (Plates 1-10). A row of Bangalow Palms is found along the southern boundary. A narrow stand of predominantly Wet Sclerophyll Forest is found along the western boundary of the Site, as shown on Fig. 2. The southern eastern portion of the Site is dominated by Grassland with scattered trees, whilst the south western portion is under banana cultivation. The eastern and northeaster portion of the Site consists of Grassland and lawns.



Plates 1 & 2. Looking south west towards the two existing residential dwellings. Note the Forest vegetation in the background, which is found along the western boundary



Plate 3. Looking north along the existing sealed access area and the greenhouses in the background

Plate 4. Looking south east at the extensive lawn



Plate 5. Looking north east across Site towards the Pacific Motorway and beyond is the Sapphire Beach residential area





Plate 6. Looking south west at the horticultural farm infrastructure, which will be decommissioned



Plate 7. Looking south east across the Site- one of the greenhouses to the right

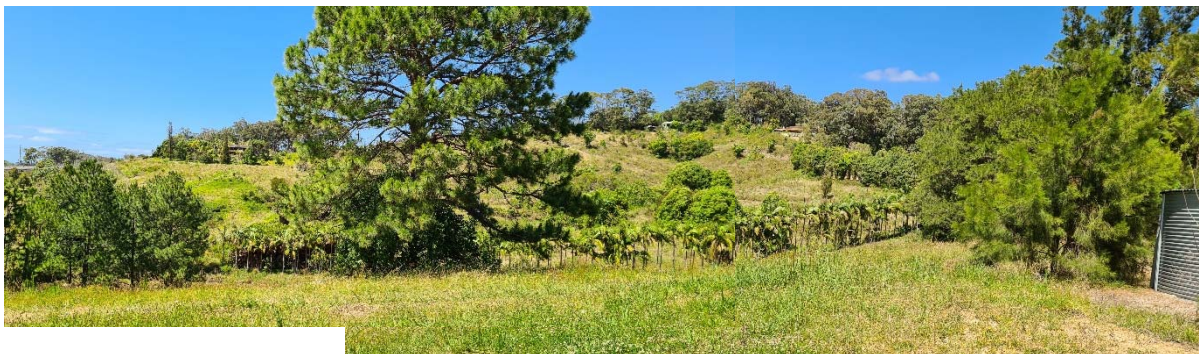


Plate 8. Looking south- south west from the top of the ridge towards southern boundary (marked by row of Bangalow Palms) and neighbouring land.

Plate 9. The banana orchard found to the SW of the Site bounded by windbreak

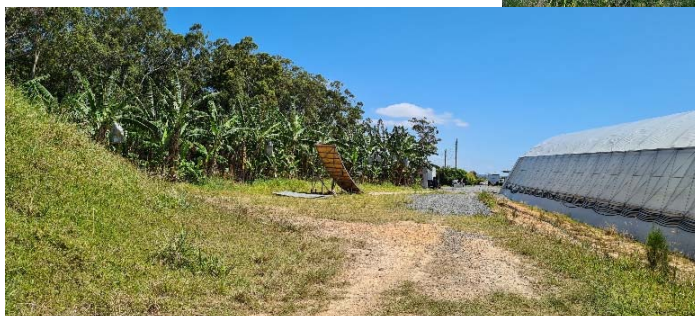


Plate 10. Looking north along western portion of Site with greenhouse to the right and banana orchard to the left. Note the Forest vegetation found along western boundary.



The surrounding vegetation includes the Wet Sclerophyll Forest to the west along a narrow gully further extending upslope to the south west. This vegetation is mapped as Tertiary Koala habitat in the Coffs Harbour Comprehensive Koala Plan of Management (CHCKPoM). Otherwise, the predominant vegetation to the south of the Site is Grassland on upslope, as shown on Fig. 1 & Plate 8. Landuse to the east consist of lifestyle lot rural residential, whilst immediately to the south are rural properties, which can support low level grazing. The Forest vegetation found along and beyond the western boundary provides a thick vegetation buffer between the Site and the neighbouring lot to the east, as shown on Plates 11 & 12. As noted previously, a row of Bangalow Palms is found along the southern boundary providing buffering between the Site and the southern neighbours (Plates 8 & 13).



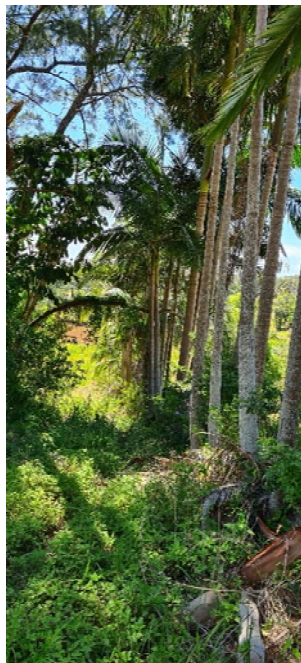
Plate 11. Forest vegetation found along and beyond western boundary providing a thick vegetation buffer between the site and the neighbouring lot to the east



Plate 12. Forest vegetation extending upslope to the south west

To the north is the extensive newly constructed roundabout and overpass over the Pacific Motorway and predominantly lifestyle lots beyond it. To the east is the Pacific Motorway with associated road reserve and Solitary Islands Way (see Figs. 1 & 2), and the residential area of Sapphire Beach (Plates 5 & 14).

The Site consists of a central ridge-oriented north to south with a maximum elevation of 32m AHD. The ridge downslopes to the east, west and south, reaching 10m AHD elevation to the south east. A creek runs along the western boundary. The main soil landscape is 'Megan' with the south east corner featuring the 'Monee' soil Landscape (Everick Heritage Pty Ltd 2020).



The Site is mapped as having Class 5 Acid Sulfate Soils (ASS). The proposal Site is outside of the 100-year ARI Flood Extent.

Plate 13 (left). Row of Bangalow Palms along the southern boundary providing buffering between the Site and the southern neighbours



Plate 14. Pacific Motorway with associated road reserve, Solitary Islands Way and the residential area of Sapphire Beach to the east of the Site

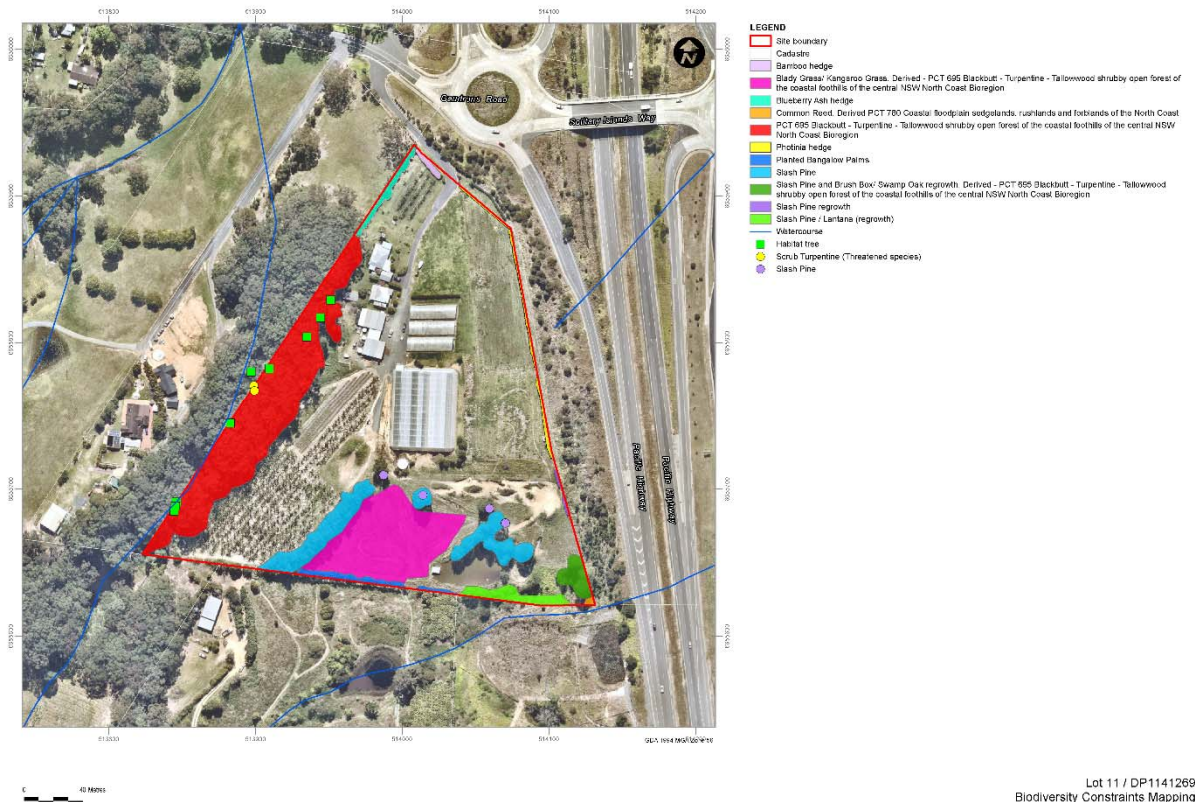
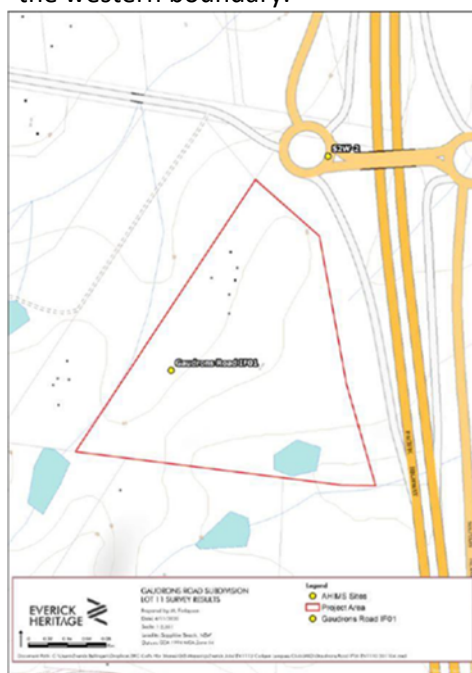


Figure 2. Vegetation mapping for the Site. Source: GeoLINK 2020 - Biodiversity Constraints Mapping

Preliminary biodiversity mapping by GeoLINK indicate that only one threatened plant species, namely the Scrub Turpentine (*Rhodamnia rubescens*) was recorded along the western boundary, as shown on Fig. 2. A number of habitat trees, again along the western boundary, were also recorded. GeoLINK identified a number of Plant Community Types (PCT) as occurring at the Site namely, PCT 695 Blackbutt - Turpentine - Tallowwood shrubby open forest of the coastal foothills of the central North Coast & derived PCTs as shown on Fig. 2. None of these PCTs are identified as Threatened Ecological Communities (TECs). In any case, it is not proposed to impact on the Forest vegetation occurring along the western boundary.



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 banana farm operations, cut and fill earthworks, construction of amenities and landscaping. Nevertheless, one Aboriginal stone tool was identified during survey of the Site. It was found along the western boundary of the banana plantation as shown on Fig. 3. The object is a unifacial greywacke chopper, transversely broken with one visible negative flake scar, identified as Gaudrons Road IF01. The ACHA concluded that there is a potential for further artefacts finds along the ridge crest; therefore, further investigations are recommended. These will be undertaken at the subdivision DA stage.

Figure 3. Location of stone tool. Source: Everick Heritage (2020)



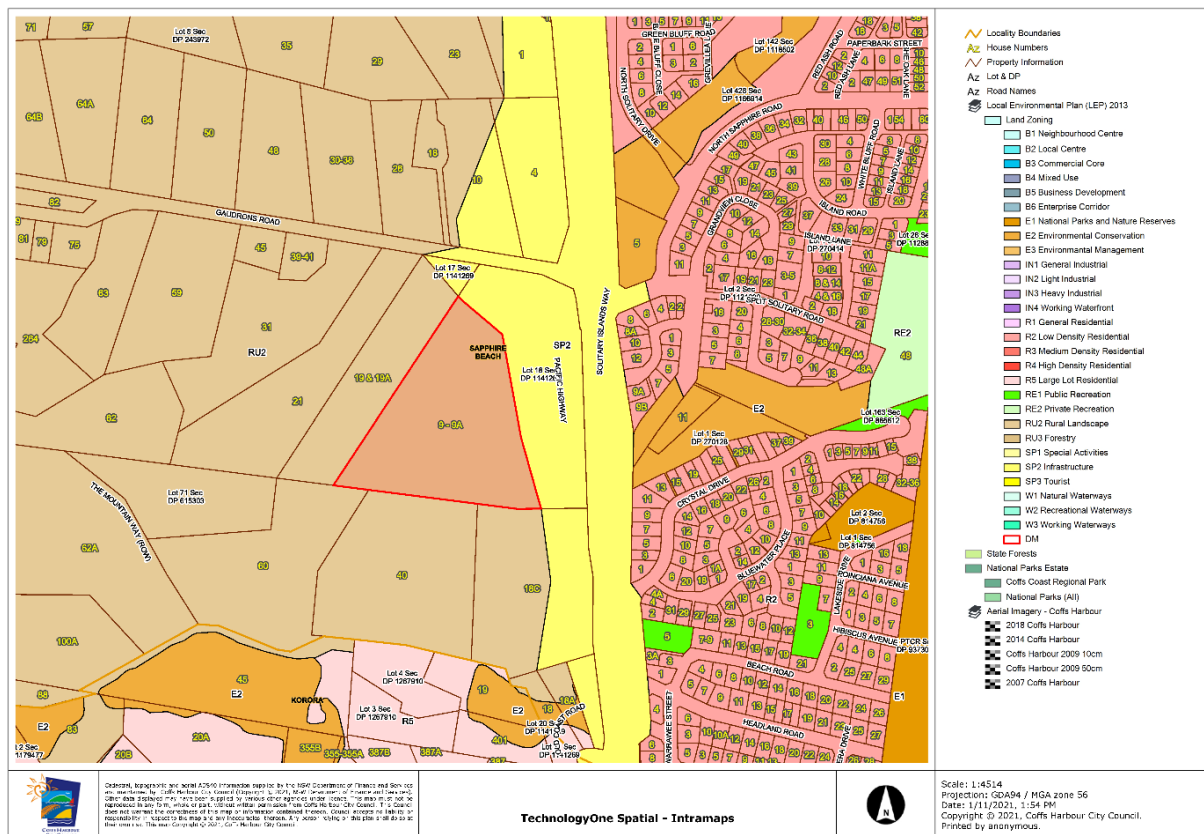


Figure 4. Land zoning applicable to the Site (red boundary).

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 11 DP1141269. The Planning Proposal will:

- rezone the subject land from Zone RU2 Rural Landscape to Zone R5 Large Lot Residential,
- Change to the Minimum Lot Size (MLS) for the new R5 zoned land from the current 40 hectares. A new MLS of 6,000 m², is sought for this precinct.

The proposed subdivision concept layout is shown as Fig. 5. Notably, the exiting dwellings and associated infrastructure would be retained within proposed lots 1 & 2 respectively. Whilst the banana orchard, greenhouses, sheds etc would be removed. The dam to the south east will also be filled in. Vegetation along the western boundary and the planted row of Bangalow Palms will be retained.

As noted in s. 1.1, pre-lodgement meeting notes from CHCC dated 17/06/20 indicated that a LUCRA is required to support this planning proposal due to existing RU2 Zoning and its past use for the cultivation of bananas and surrounding land uses.

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 horticulture (banana plantation and hydroponics figs) and residential landuse. The proposal area is surrounded by predominantly lifestyle rural residential, roads and

medium density residential land. Whilst immediately to the south is rural land, which can support low level grazing. Notably, the predominant landuse surrounding the planning proposal area is of a rural residential nature and does not include intensive agricultural or horticultural landuse.

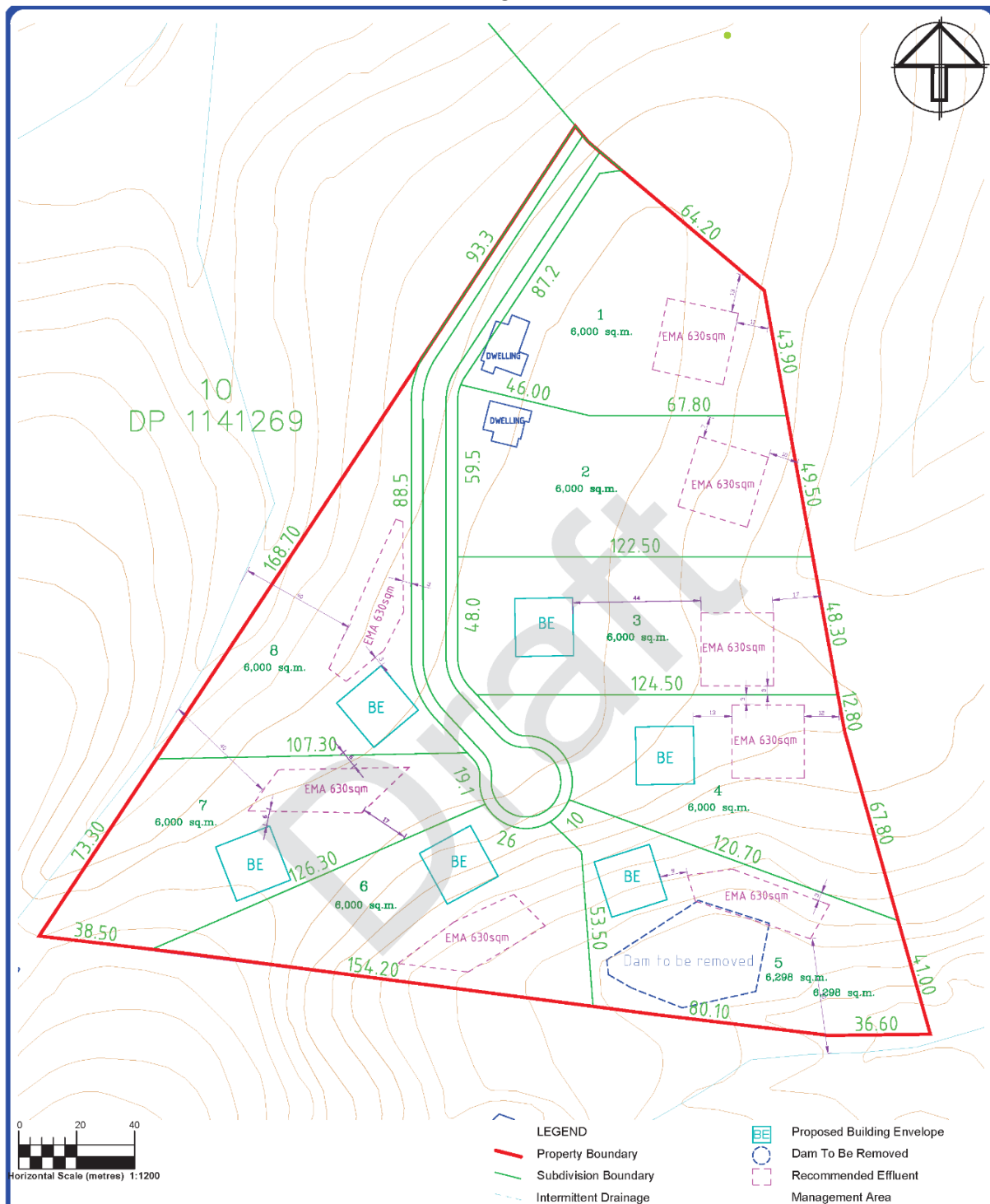


Figure 5. Proposed subdivision concept layout. Source: Earth Water Consulting (2020)

Nevertheless, this landuse conflict assessment will evaluate potential landuse conflict arising from the proposed **residential land uses and the RU2 Rural Landscape zoned land (see Fig. 4) found to the west, northwest and south**. Importantly, the LUCRA will not address the potential land contamination issue within the Site due to its past use for the cultivation of bananas. The latter is to be addressed by undertaking a preliminary site investigation in accordance with the NSW EPA Guidelines for Assessing Banana Plantation Sites (1997) and Council's Contaminated Land Policy to assess the suitability of the land for residential use by certified contaminated land practitioner.



2.3 Site History and Land Use

The Site has been utilised as a banana plantation and intensive horticulture (greenhouses) for a number of decades. Review of Google aerial imagery shows that the Site has been utilised for banana plantation since at least 2004. In 2011, the eastern portion of the Site became part of the Pacific Motorway upgrade including the construction of the major interchange to the north east. By 2014 one of the large greenhouses was constructed to be utilised for intensive edible figs production. A second greenhouse was constructed by 2017. In the meantime, the area utilised for banana plantation steadily decreased and by 2019 only the south western corner of the property was under banana production.

The surrounding properties have similarly remained consistent with the current landuse apart from the properties to the south of the Site, which supported banana plantation until around 2011. Since then, the banana plantation has been cleared, and the land has remained vacant and possibly utilised for low-key grazing. Council GIS mapping indicate that banana cultivation has occurred at the Site and to the south, west and east from 1943 to 1994. As noted previously, the land is bounded by Gaudrons Road to the north, the Pacific Motorway to the east, rural lifestyle lots to the west and south. Two residential dwellings are found on Site as well as large greenhouses, sheds, water tanks and sealed driveway access.

The land is zoned RU2 Rural Landscape in the Coffs Harbour Local Environmental Plan 2013 (refer to Fig. 4).

2.4 Surrounding Land Use

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

- North: Extensive interchange roundabout and overpass over the Pacific Motorway and predominantly lifestyle lots beyond it
- East: Pacific Motorway with associated road reserve, Solitary Islands Way (see Figs. 1 & 2) and the residential area of Sapphire Beach
- South: Rural lots currently unutilised and further south general residential
- West: Rural land predominantly utilised as lifestyle lots

The proposed large lots residential subdivision will be consistent with surrounding landuse to the east, north east and further south. To the west, north west and south, the predominant landuse surrounding the planning proposal area is of a rural residential nature and, apart for a couple of greenhouses to west, north west, 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 RU2 Rural Landscape zoned land (see Fig. 4) found to the west, northwest and south.

2.5 Landuse Summary & Activities Arising from the Proposal

As noted, this landuse conflict assessment will evaluate potential landuse conflict arising from the proposed **residential land uses and the RU2 Rural Landscape zoned land (see Fig. 4) found to the west, northwest and south.** 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 higher density (0.6ha minimum lot size) large lot residential landuse within land currently utilised for horticulture. There are exiting dwellings/rural infrastructures at the Site.
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 for horticulture. The proposal area is surrounded by grazing land, rural lifestyle lots, roads and low-density residential development.
Topography, climate & natural features	<p>The Subject Site consists of a central ridge-oriented north to south with a maximum elevation of 32m AHD. The ridge downslopes to the east, west and south, reaching 10m AHD elevation to the south east. The Planning Proposal area is predominantly cleared with scattered trees and windbreaks on the southern portion. A row of Bangalow Palms is found along the southern boundary. A narrow stand of predominantly Wet Sclerophyll Forest is found along the western boundary of the Site. The southern eastern portion of the Site is dominated by Grassland with scattered trees, whilst the south western portion is under banana cultivation. The eastern and northeaster portion of the Site consists of Grassland and lawns.</p> <p>A creek runs along the western boundary. The main soil landscape is 'Megan' with the south east corner featuring the 'Monee' soil Landscape (Everick Heritage Pty Ltd 2020). The 'Megan' Soil Landscape consists of moderately deep to deep (>100 cm), well drained structured Red Earths, Brown Earths, Brown Podzolic Soils and Red Podzolic Soils. The 'Monee' Soil Landscape consists of moderately deep to deep (>100 cm), poorly drained Humic Gleys.</p> <p>The Site is mapped as having Class 5 Acid Sulfate Soils. The proposal Site is outside of the 100-year ARI Flood Extent.</p> <p>The climate in the Coffs Harbour LGA is typical of subtropical northern NSW, with warm summers and mild winters.</p> <p>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)</p>
Typical industries & land uses in the area	<p>Industries: Predominantly grazing & horticulture</p> <p>Land uses: Residential, grazing, horticulture and rural lifestyle</p>
The main activities of the proposed land use for the development & regularity of activity	<p>The main activities associated with the proposed residential subdivision are the same as the ones associated with the existing surrounding development to the east (beyond the M1), north east and further south, these are:</p> <ul style="list-style-type: none"> ○ Low Density and Large Lots Residential development: <ul style="list-style-type: none"> ○ Activities: mowing, traffic = some noise - ongoing; ○ Construction activities = noise, dust, loss of amenity- high intensity short duration
The main activities of adjoining land uses & their regularity	<p>Land to the north west, west and immediately south:</p> <ul style="list-style-type: none"> ○ Grazing - Activities: slashing, tractor use - some odour & noise— ongoing ○ Horticulture (greenhouses) - Activities: spraying, fertilising, slashing, tractor use - some spray drift, odour & noise— ongoing <p>Land to east and far south:</p> <ul style="list-style-type: none"> ○ General & Low Density Residential development: <ul style="list-style-type: none"> ○ Activities: mowing, traffic = some noise - ongoing; ○ Construction activities = noise, dust, loss of amenity- high intensity short duration



Parameter	Details
Compatibility of the proposal with surrounding land use issues	The proposal is wholly compatible with the predominant surrounding landuse, i.e. general and low density residential landuse to the east, north east & far south. However, there is a potential landuse conflict with the grazing land on neighbouring properties to the south and lifestyle rural residential and small-scale rural activities to the west & north west



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 to the east, north east and far south. However, there is a potential landuse conflict with the grazing land on neighbouring properties to the south and lifestyle rural residential and small-scale rural activities to the west & north west. 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 buffers between the proposed dwelling envelopes on the potential lots (refer to Fig. 5), which interface with the rural landuse to the west and/or south, namely:

- Proposed lot 1 – exiting dwelling separation to rural land to the west including exiting Forest vegetation buffer = ~94m
- Proposed Lot 2 – exiting dwelling separation to rural land to the west including exiting Forest vegetation buffer = ~97m
- Proposed Lot 3 - dwelling envelope separation to rural land to the west including exiting Forest vegetation buffer = ~128m
- Proposed Lot 4 - dwelling envelope separation to rural land to the south including exiting Bangalow Palms planted row along boundary = ~83m
- Proposed Lot 5 - dwelling envelope separation to rural land to the south including exiting Bangalow Palms planted row along boundary = ~42m
- Proposed Lot 6 - dwelling envelope separation to rural land to the south including exiting Bangalow Palms planted row along boundary = ~42m
- Proposed Lot 7 - dwelling envelope separation to rural land to the west including exiting Forest vegetation buffer = ~ 87m
- Proposed Lot 8 - dwelling envelope separation to rural land to the west including exiting Forest vegetation buffer = ~90m

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
<ul style="list-style-type: none"> ○ Building, access and services construction - intense activity, limited duration 	Noise/Dust/Loss of Amenity	4C	<ul style="list-style-type: none"> ○ Adherence to approved daytime construction hours ○ Adherence to relevant legislation specifically re dust/noise management and implementation of erosion control measures ○ Good communication with neighbour 	5C
Greenhouse horticulture <ul style="list-style-type: none"> ○ Pesticide control- off-target movement of agricultural chemical - 	Agricultural Chemical Spray Drift	3B	<ul style="list-style-type: none"> ○ Nearest existing greenhouse (see Fig. 1) is more that 370m away from any proposed dwelling 	5C



Activity	Identified Hazard	Risk Ranking	Control Methods	Controlled Ranking
intense activity, limited duration ○ Fertiliser use, effluent disposal – intense activity, moderate duration ○ Noise from tractor use- occasional	Odour noise		○ If a new greenhouse was established immediately west of the Site, there would be a current separation buffer ~87m to 128m wide including a thick forested buffer from future dwellings at the Site ○ Adherence to relevant legislation specifically re herbicide use/dust/noise management and implementation of erosion control measures ○ Prevailing morning winds are from the southwest, and the prevailing afternoon winds are from the southeast and north east and south (Appendix B). Thus, the prevailing winds do not blow directly onto the future residential dwellings from a westerly or northerly direction	
Grazing ○ animals freely moving, some odour & noise ○ noise from occasional slashing	Some odour Some noise	4B	○ Good communication with neighbour ○ ~42m – 83m wide respective building envelopes setbacks from southern boundary of future subdivision ○ Planted Bangalow Palms row along southern boundary providing buffering	5C
○ 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 RU2 zoned land to the north west, west and immediately south are:

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

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 have been listed on Table 2 to mitigate 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. Current separation buffer ~87m to 128m wide including a thick forested buffer to the west from potential future dwellings at the Site (see Fig. 5), specifically:
 - a. Proposed lot 1 – exiting dwelling separation to rural land to the west including exiting Forest vegetation buffer = ~94m
 - b. Proposed Lot 2 – exiting dwelling separation to rural land to the west including exiting Forest vegetation buffer = ~97m
 - c. Proposed Lot 3 - dwelling envelope separation to rural land to the west including exiting Forest vegetation buffer = ~128m
 - d. Proposed Lot 7 - dwelling envelope separation to rural land to the west including exiting Forest vegetation buffer = ~ 87m
 - e. Proposed Lot 8 - dwelling envelope separation to rural land to the west including exiting Forest vegetation buffer = ~90m
4. Current separation buffer ~42m – 83m wide from respective building envelopes (see Fig. 5) from southern boundary of future subdivision, and planted Bangalow Palms row along southern boundary providing buffering, specifically
 - a. Proposed Lot 4 - dwelling envelope separation to rural land to the south including exiting Bangalow Palms planted row along boundary = ~83m
 - b. Proposed Lot 5 - dwelling envelope separation to rural land to the south including exiting Bangalow Palms planted row along boundary = ~42m
 - c. Proposed Lot 6 - dwelling envelope separation to rural land to the south including exiting Bangalow Palms planted row along boundary = ~42m

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 low density, general residential and lifestyle rural residential landuse in the locality coexist with adjoining horticulture (particularly greenhouse horticulture) and grazing landuse. As noted from the historical review, the occurrence of banana plantations in the locality has steadily declined in recent times. The further development of the M1 and nearby Sapphire Beach, and 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 west of the M1 is identified in the 'Korora' potential Large Lot Residential (Zone R5) Candidate Areas in the Coffs Harbour LGA.



The rural landuse activities to the west, north west and immediately south of the proposal Site are currently limited. To the south the land is predominantly unutilised or used for low-level grazing. To the west are lifestyle lots with manicured extensive lawns and no apparent agricultural pursuits. The closest intensive horticultural pursuits are a set of greenhouses more than 370m to the west of the Site. Even if the land to the west and northwest was developed for more intensive agricultural landuse, there is a thick forest buffering the Site along the west and south west including setback separation from potential future dwellings at the Site ranging from ~87m to 128m to the land immediately to the west. In addition, the prevailing morning winds are from the southwest, and the prevailing afternoon winds are from the southeast and north east south. Thus, the prevailing winds do not blow directly onto the future residential dwelling from a westerly or northerly direction.

Concerning the land immediately to the south, which is identified in the 'Korora' potential Large Lot Residential Candidate Areas, appears to be unutilised or used for low-level grazing. Further south is land zoned General Residential (see Fig. 4), accordingly any rural landuse intensification on this neighbouring land would have to be limited by the already zoned residential land further south. Assuming that stock grazing would be the predominant pursuit, any potential impacts (some odour and noise) on the proposed residential lots from neighbouring grazing land are considered to be minor (risk rating 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 ~42m – 83m wide from respective building envelopes (see Fig. 5) from southern boundary of future subdivision including a planted Bangalow Palms row.

In summary, this LUCRA has duly appraised the potential conflicts which could arise from the proposal and has deemed that the building envelopes setbacks (i.e. buffers) detailed at points 3 & 4 (s. 4.1) and shown on Fig. 4 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 Chris & Chris Bowen to support the **Planning Proposal for Lot 11 DP1141269, 9 Gaudrons Road, Sapphire Beach, NSW**.

Essentially, it was found that the potential future large lot residential subdivision will be consistent with surrounding landuse to the east, north east and further south. To the west, north west and south, the predominant landuse surrounding the planning proposal area is of a rural residential nature and, apart for a couple of greenhouses to west, north west, does not include intensive agricultural or horticultural landuse. Nevertheless, this landuse conflict assessment has evaluated potential landuse conflict arising from the proposed residential land uses and the RU2 Rural Landscape zoned land (see Fig. 4) found to the west, northwest and south.

The main activities associated with the proposed development are the same as the ones associated with the predominant surrounding development to the east, north east and far south. However, there is a potential landuse conflict with the grazing land on neighbouring properties to the south and lifestyle rural residential and small-scale rural activities to the west & north west. 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. Accordingly, the separation distances (buffers) between the proposed dwelling envelopes on the lots (refer to Fig. 5), which interface with the grazing to the south and potential horticultural landuse to the west and north west were assessed for adequacy.

Notably, the occurrence of banana plantations in the locality has steadily declined in recent times. The further development of the M1 and nearby Sapphire Beach, and 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 west of the M1 is identified in the 'Korora' potential Large Lot Residential (Zone R5) Candidate Areas in the Coffs Harbour LGA.

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 to be implemented to reduce the risk of landuse conflict are as follows:

1. Good communication with neighbour
2. Adherence to relevant legislation
3. Current separation buffer ~87m to 128m wide including a thick forested buffer to the west from potential future dwellings at the Site (see Fig. 5), specifically:
 - a. Proposed lot 1 – exiting dwelling separation to rural land to the west including exiting Forest vegetation buffer = ~94m
 - b. Proposed Lot 2 – exiting dwelling separation to rural land to the west including exiting Forest vegetation buffer = ~97m
 - c. Proposed Lot 3 - dwelling envelope separation to rural land to the west including exiting Forest vegetation buffer = ~128m



- d. Proposed Lot 7 - dwelling envelope separation to rural land to the west including exiting Forest vegetation buffer = ~ 87m
- e. Proposed Lot 8 - dwelling envelope separation to rural land to the west including exiting Forest vegetation buffer = ~90m
- 4. Current separation buffer ~42m – 83m wide from respective building envelopes (see Fig. 5) from southern boundary of future subdivision, and planted Bangalow Palms row along southern boundary providing buffering, specifically:
 - a. Proposed Lot 4 - dwelling envelope separation to rural land to the south including exiting Bangalow Palms planted row along boundary = ~83m
 - b. Proposed Lot 5 - dwelling envelope separation to rural land to the south including exiting Bangalow Palms planted row along boundary = ~42m
 - c. Proposed Lot 6 - dwelling envelope separation to rural land to the south including exiting Bangalow Palms planted row along boundary = ~42m

In summary, this LUCRA has duly appraised the potential conflicts which could arise from the proposal and has deemed that the building envelopes setbacks (i.e. buffers) detailed at points 3 & 4 are adequate to minimise future potential conflicts so that the agricultural potential of those 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Moderate and/or medium-term impact to the environment and community Some ongoing management implications Neighbour disputes occur
Example/ Implication	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Very minor impact to the environment and community Can be effectively managed as part of normal operations Neighbour disputes unlikely
Example/ Implication	<ul style="list-style-type: none"> 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



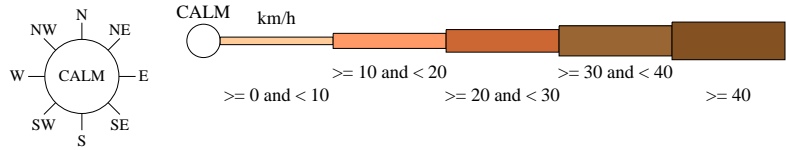
Rose of Wind direction versus Wind speed in km/h (01 Feb 1943 to 24 Aug 2015)

Custom times selected, refer to attached note for details

COFFS HARBOUR MO

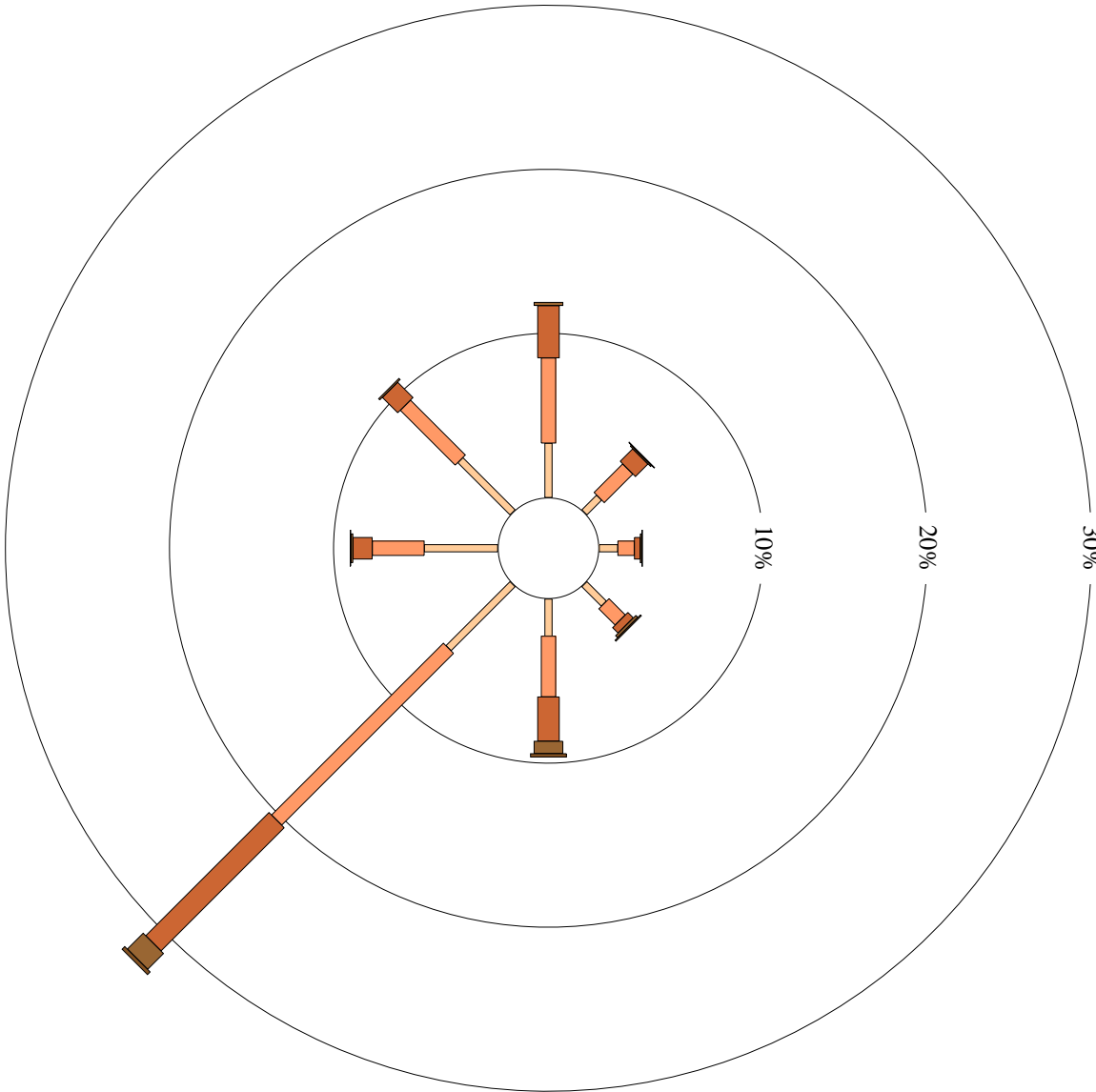
Site No: 059040 • Opened Jan 1943 • Closed Aug 2015 • Latitude: -30.3107° • Longitude: 153.1187° • Elevation 5m

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%



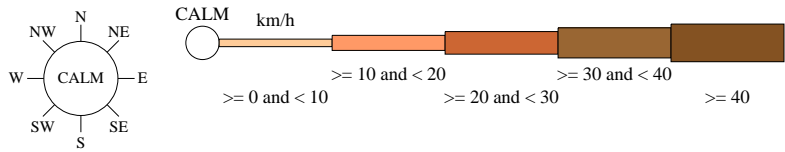
Rose of Wind direction versus Wind speed in km/h (01 Feb 1943 to 24 Aug 2015)

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

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



3 pm
24262 Total Observations

Calm 3%

