Land Use Conflict Risk Assessment

Planning Proposal

- 28 Sugarmill Road - Lot 12 DP 243972
- 35 Sugarmill Road - Lot 91 DP 786155
- 89 Sugarmill Road - Lot 17 DP 249273

6 January 2022

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1. Introduction

Keiley Hunter Town Planning has been engaged by three landowners to undertake a Land Use Conflict Risk Assessment (LUCRA) to accompany a Planning Proposal for land located at the following properties in Sapphire Beach north of Coffs Harbour:

- Property 1: 28 Sugarmill Road - Lot 12 DP 243972 (2.034 ha)
- Property 2: 35 Sugarmill Road - Lot 91 DP 786155 (2.367 ha)
- Property 3: 89 Sugarmill Road - Lot 17 DP 249273 (1.855 ha)

The purpose of the Planning Proposal is to amend the Coffs Harbour LEP 2013 to enable large lot residential development of each property.

Planning Proposal Pre-lodgement meeting notes from CHCC (8 April 2021) indicated that a LUCRA is required to support this proposal due to surrounding agricultural land uses.

The subject properties are currently zoned RU2 Rural Landscape. The intent of the Planning Proposal is to rezone the land to enable large lot residential subdivision as shown at Illustration 1,1 below. The primary land use conflict constraint to future residential subdivision is the greenhouses (horticulture), located immediately west of Property 2.

Illustration 1.1 Proposed Zone amendments

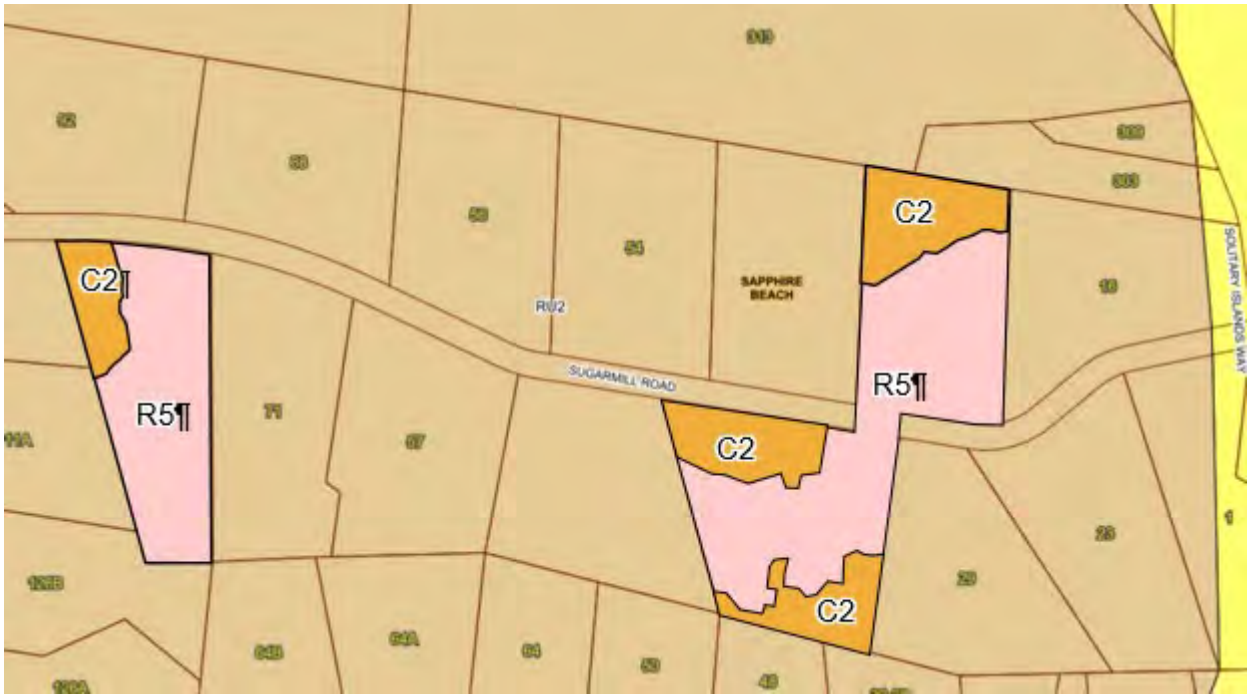
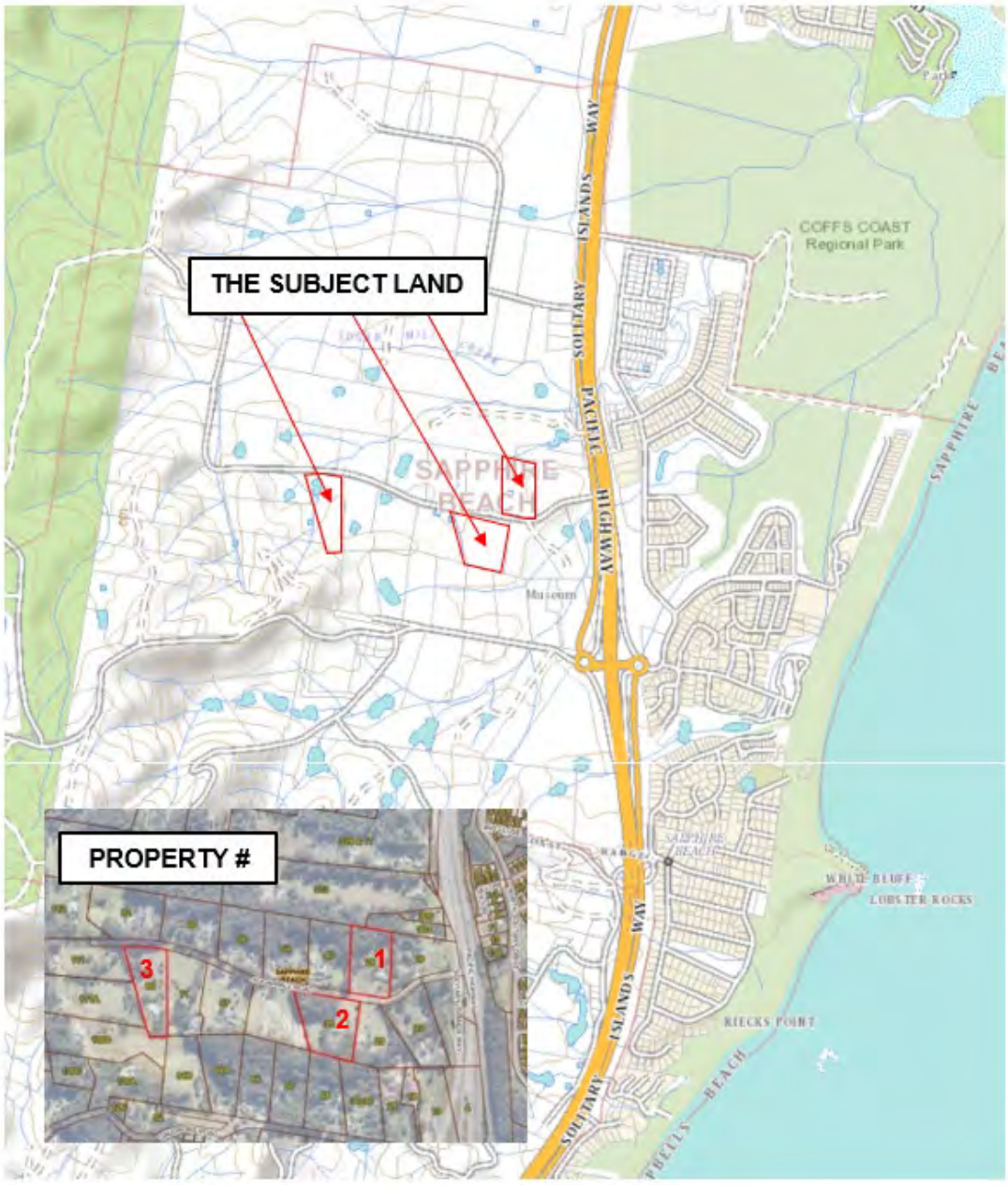
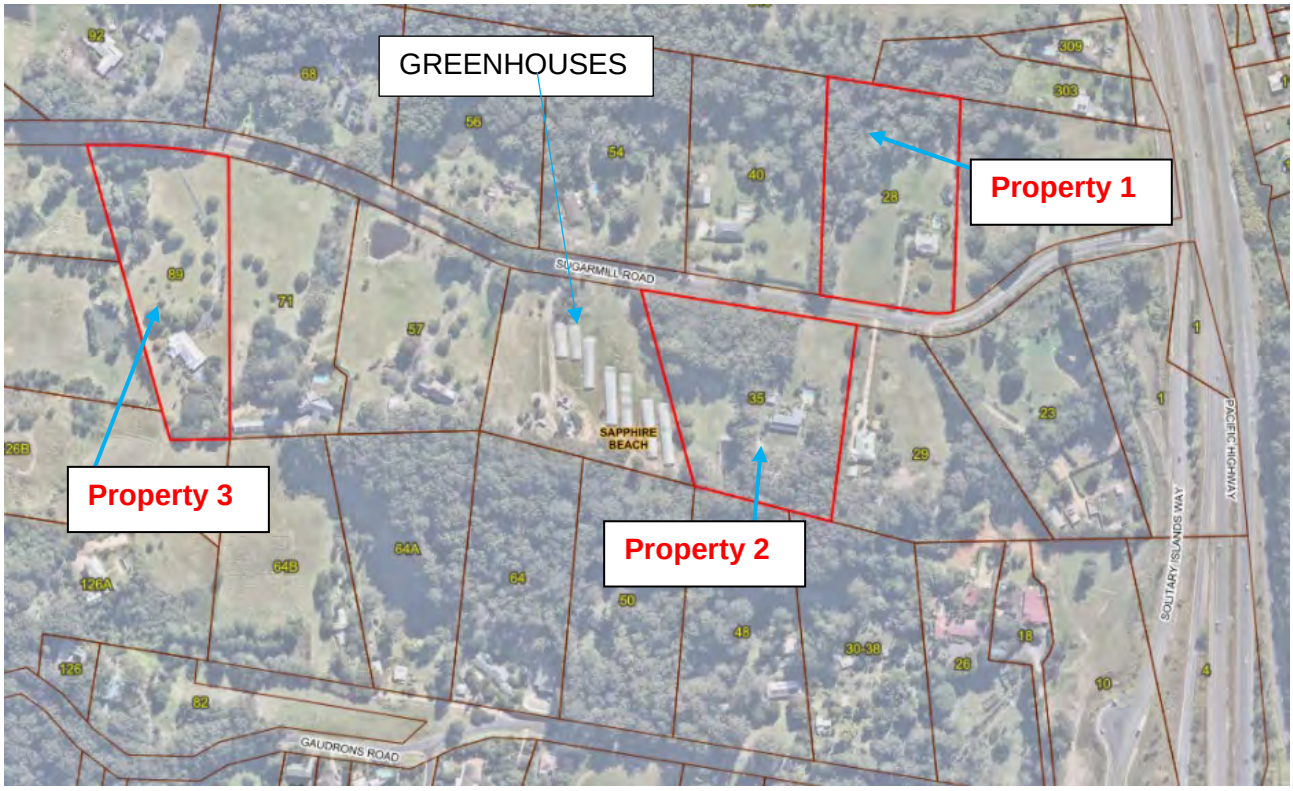


Illustration 1.2 Site Locality



Source: Sixmaps 2021

Illustration 1.2 Subject Land (Aerial)



Source: CHCC 2021

The *Living and Working in Rural Areas Handbook* (Department of Primary Industries et. al 2007) recommends buffer distances from primary industry to residential development. The recommended buffer distances from ***greenhouse and controlled environment horticulture*** to residential areas and rural dwellings 200 metres.

The *Living and Woking in Rural Areas Handbook (DPI 2007)* is referenced in Councils Development Control Plan (DCP).

NSW DPI has also produced the following guidelines to assist in LUCRA assessments:

- Interim Guidelines *'Buffer Zones to Reduce Land Use Conflict with Agriculture'*, Primefact 1624, November 2018.
- *Land Use Conflict Risk Assessment Guide, Factsheet*, 2011, Primefact 1134.
- *Managing biosecurity risks in land use planning and development guide*, October 2020
- *Guidelines for the Development of Controlled Environmental Horticulture, Planning Greenhouse and Hydroponic Horticulture in NSW,* 2005

Typical conflicts which may arise between agricultural activities and residential development are shown in **Table 1.1** below:

Table 1.1: Typical Conflicts

Noise	• Farming equipment, pumps, spray machines, transport. • Ancillary equipment associated with on-farming processing.
Odour and dust	• Fertilisers and chemicals

	• Vehicle movements
Lights	• Security lights
Health concerns	• Chemicals • Spray Drift
Weed management	• Unmanaged weed incursion onto farmland.
Water	• Access • Pumping • Quantity and quality • Runoff, sedimentation
Domestic animals	• Barking dogs • Feral dogs and cats
Smoke and ash	• Burning of pasture, stubble or 'rubbish'
Visual	• Intrusion in the landscape (greenhouses and supporting farm infrastructure).

Chapter 6 of *Living and Working in Rural Areas Handbook* (NSW DPI et. al 2007) provides guidance in the assessment and mitigation of potential land use conflict matters. This Planning Proposal will enable subdivision of the subject properties, therefore subdivisions, *Chapter C1.5 Subdivision – Design Requirements for Rural and Large Lot Residential Zones of Councils DCP* is referenced below.

> *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).* (Control C1.5(2))

This LUCRA has considered land use interface issues and risks between rural land uses and future Large Lot Residential development and has been prepared in accordance with the *Land Use Conflict Risk Assessment Guide* and aims to:

- Objectively assess the effect and level of proposed land use on neighbouring land uses;
- Identify the risk of conflict between neighbouring land uses;
- Consider development control and buffer requirements within the context of likely land use conflict;
- Recommend strategies to help minimise conflict at Development Application stage for future subdivision proposals.

2. Site Assessments

2.1 Land use change and development proposed.

The subject properties currently support single dwellings and ancillary structures. There are no agricultural activities being undertaken on any of the subject lands. The subject properties are generally cleared, managed land comprising native and exotic vegetation. There are stands of established native vegetation on all three properties, which are proposed to be retained and zoned as C2 Environmental Conservation under the accompanying Planning Proposal.

Land use changes resulting from the rezoning are future subdivisions to create one additional lot within each property. Overall, the rezoning will result in three additional vacant lots suitable for lifestyle dwelling purposes. Property 2 adjoins existing horticulture and is the only property at risk of conflict between the existing rural land use and a future additional dwelling.

Table 2.1: Land Use Change

Property	Proposed Lot	Lot Area	Zone Area (m^2)	Improvements
1	120	1.37 ha	R5 - 7,323 C2 - 6,377	Existing dwelling, ancillary buildings, swimming pool, driveway
	121	6,636 m^2	R5 – 6,636	Vacant, existing dam
2	910	1.172 ha	R5 - 6,888 C2 - 4,832	Existing dwelling, ancillary buildings, swimming pool, driveway
	911	1.195 ha	R5 - 6,393 C2 - 5,557	Vacant, tennis court
3	170	8,325 m^2	R5 – 8,325	Existing dwelling, ancillary buildings, swimming pool, bitumen driveway
	171	1.2 ha	R5 – 8,400 C2 - 3,600	Vacant, bitumen driveway

The adjoining property (Lot 8 DP 243972) is only 2.113 ha in area and is a small scale horticultural farm accommodating seven (7) greenhouses used for vegetable production. Intensive plant agriculture, including horticulture, is permissible without consent in the RU2 zone. It should be noted that Farm Buildings (greenhouses) are development that requires consent. Farm buildings are a structure the use of which is ancillary to an agricultural use of the landholding on which it is situated and includes a hay shed, stock holding yard, machinery shed, shearing shed, silo, storage tank, outbuilding or the like, but does not include a dwelling. The greenhouses are within 85 m of the existing dwelling at Property 2. The following assumptions are made:

1. The farm buildings (greenhouses) are unauthorised, ie, were erected without consent.
2. Development consent was granted for the farm buildings.

There is a direct line of sight from Property 2 (35 Sugarmill Road) westerly towards a greenhouse horticulture activity.

Illustration 2.2 Property 2 – Future Subdivision

Source: MNC, Rev F, Proposed 2 Lot Torrens Subdivision – 35 Sugarmill Road Sapphire Beach

2.2 Site Conditions

The site is located on the southern side of Sugarmill Road on gently undulating terrain.

The soils within the subject site consist of duplex soil comprising light to medium clay. Runoff from the existing greenhouse horticulture activities is minimal and contained, and any runoff will be in a south to south-westerly direction, away from any existing dwellings or proposed building envelopes.

The greenhouses adjoining Property 2 (35 Sugarmill Road) are located within Lot 8 DP 243972. These are the only horticultural activities within the rezoning area.

2.3 Meteorology

Due to its latitude and proximity to the coast, Sapphire Beach has a coastal sub-tropical climate. As a result, daily temperatures are in the warm to very warm range during summer months (18 – 25^{o}C) and are milder during the winter months 9 – 19^{o}C).

Rainfall is mainly distributed throughout November to May with 1,121mm (72) of the mean annual rainfall of 1563mm falling during this period. The highest monthly rainfall occurs in February/March while the months July-October are much drier, generally receiving less than 100mm each.

Evaporation levels between September and January often exceed rainfall levels. However, as evaporation rates are low during the winter months, rainfall exceeds evaporation on an annual basis.

The Coffs Harbour MO AWS is situated at an elevation of 5m, approximately 25km south of the site. The site opened in 1943 and closed on 29 August 2015. The records include the period 1943 to 2015 (see Table 2.2).

Table 2.2. Monthly Climate Statistics – Coffs Harbour MO (1943 – 2010)

Statistics	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual		Years
Temperature															
Mean maximum temperature (°C)	27.0	26.8	26.0	24.1	21.4	19.4	18.8	19.8	22.0	23.7	25.0	26.3	23.4	65	1943 2015
Mean minimum temperature (°C)	19.5	19.5	18.1	15.2	11.7	9.1	7.6	8.2	11.0	13.8	16.2	18.1	14.0	65	1943 2015
Rainfall															
Mean rainfall (mm)	187.5	224.8	234.6	178.4	160.8	120.8	72.5	79.5	59.9	96.3	144.7	144.9	1699.0	63	1943 2015
Decile 5 (median) rainfall (mm)	151.2	179.0	205.1	135.9	117.4	90.0	54.3	40.7	35.4	74.7	130.4	114.0	1612.2	67	1943 2015
Mean number of days of rain ≥ 1mm	9.4	9.7	10.8	8.5	7.7	6.3	4.5	4.5	4.5	6.7	8.2	8.4	89.2	59	1943 2015
Other daily elements															
Mean daily sunshine (hours)	7.6	7.3	7.1	7.2	6.7	6.6	7.2	8.3	8.5	8.1	7.9	7.9	7.5	47	1967 2015
Mean number of clear days	7.0	5.9	8.3	9.8	10.3	11.2	14.1	15.2	13.9	10.4	8.1	7.9	122.1	62	1943 2010
Mean number of cloudy days	12.8	12.8	12.2	10.7	10.7	9.7	8.0	6.8	6.5	9.8	11.2	12.0	123.2	62	1943 2010
9 am conditions															
Mean 9am temperature (°C)	23.9	23.4	22.5	20.5	17.3	14.6	13.8	15.4	18.5	20.6	21.9	23.4	19.7	62	1943 2013
Mean 9am relative humidity (%)	72	75	74	71	71	71	67	60	56	61	65	68	68	59	1943 2013
Mean 9am wind speed (km/h)	14.5	13.4	13.0	12.0	10.7	10.5	10.3	11.5	14.4	15.6	15.8	15.1	13.1	61	1943 2010
3 pm conditions															
Mean 3pm temperature (°C)	25.3	25.3	24.5	22.7	20.2	18.4	17.7	18.5	20.2	21.5	22.9	24.4	21.8	62	1943 2010
Mean 3pm relative humidity (%)	69	71	69	65	62	59	54	53	57	63	65	68	63	59	1943 2010
Mean 3pm wind speed (km/h)	22.4	20.9	19.4	17.0	14.6	14.7	15.5	18.2	21.7	22.9	23.7	22.5	19.5	62	1943 2010

Red = highest; Blue = lowest

Wind Regime

The wind regime for the site is based on annual wind roses for Coffs Harbour Meteorological Observations Automatic Weather Station (MO AWS).

Annual wind roses for the times of 9am and 3pm are shown in Plate 2.1. the wind roses are based on records from 1943 to 2015. The annual wind roses indicate that light to moderate winds are generally experienced from all directions. The wind roses also indicate the following:

Winds in the mornings are typically light to moderate to heavy winds form the south west, with lighter winds from the south, north and west

Winds in the afternoon are typically more moderate winds form the north-east, south, south east and east; and

Calm conditions are experienced 15% of the time at 9am in the morning and only 3% of the time at 3pm in the afternoons.

**The Coffs Harbour Weather Station results whilst not necessarily reflective as the exact wind patterns at the subject site have nevertheless been used to provide a guide as to the long-term wind regime patterns in the locality.*

2.4 Site Inspection

A site assessment was undertaken on 2 November 2021 by Keiley Hunter. On the day of the site assessment the weather was generally fine and partly cloudy. The site inspection confirmed the presence of greenhouses at Lot 8 DP 243972. Site photos are provided below.

Property 1: 28 Sugarmill Road.

Property 2: 35 Sugarmill Road.

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Property 3: 89 Sugarmill Road.

Greenhouses at Lot DP 243972

View of the greenhouse activity from Property 2

Greenhouse viewed to the southwest from Sugarmill Road, near the entry gate.

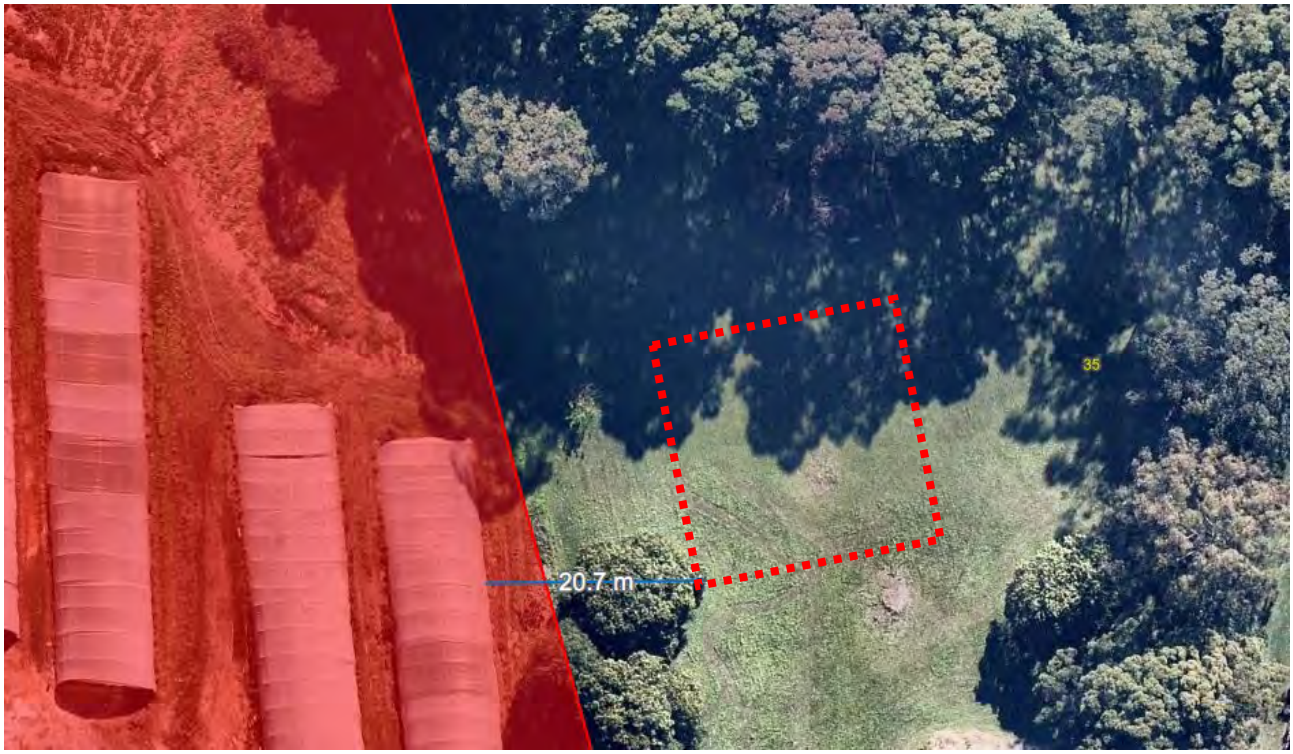
View of the greenhouse activity, viewed to the west from Sugarmill Road.

2.5 Greenhouse Horticulture

The existing greenhouse horticulture activity (Lot 8 DP 243972) is located approximately 20 m west of the proposed building envelope within proposed Lot 911 at Property 2 (35 Sugarmill Road).

The matters at Section 2.6 below have been identified as potential land use conflicts between the existing greenhouses and the future building envelope at proposed Lot 911.

Illustration 2.3 Building Envelope – Proposed Lot 911



Source: CHCC 2021

2.6 Agricultural Chemical Spray Drift

The off-target movement of agricultural chemicals can be a cause for concern to future residents in proximity to horticultural areas, largely based on fears of exposure to agricultural chemicals but also due to detection of odours associated with the chemical (https://chemqual.com.au/chemical-use-risk-assessment/).

Living and Working in Rural Areas guidelines for greenhouse horticulture setbacks to residential development recommend a minimum separation width of 200m where open ground conditions apply.

Separation distances may be reduced where a vegetated and/or landscaped buffer element can be satisfactorily implemented and maintained. *Buffers created by vegetation planting and physical landscaping work. These buffers can reduce airborne-created conflict such as chemical spray drift.* (*Managing Biosecurity Risks in Land Use Planning and Development Guide).*

2.7 Odour

Odour from horticulture can arise from use of chemical sprays, fertilisers (inorganic and organic), effluent disposal and composting, however, odour impacts are more prevalent from agriculture such as feedlots, piggeries, chicken farms, dairies and the like.

2.8 Noise

The most likely types of noise associated with agricultural activity which may lead to land use conflict is noise from pumps and machinery (tractors, mowers) operation.

Given the low intensity of the adjoining land use it is unlikely that noisy activities will occur at night. Noise from general farming operations (tractor use, spraying etc), vehicle movements, pruning of trees and general farm activities is a normal part of farming and horticultural production.

2.9 Dust

The main sources of dust from the adjoining greenhouses is from vehicle movements. The ground around the greenhouses is under grass and unlikely to raise dust. Winds in the mornings are typically light to moderate to heavy winds from the south-west. Winds in the afternoon are typically more moderate winds from the north-east. Calm conditions are experienced 15% of the time at 9am in the morning and only 3% of the time at 3pm in the afternoons.

Separation distances and vegetated buffers will be effective in reducing conflict resulting from dust.

2.10 Weeds and Pests

Pests primarily include flies and rodents. Weed incursion between properties can occur from self-seeding and runners. In the subject case, both properties are regularly maintained and managed, reducing the likelihood of weed invasion. The greenhouses are used for vegetable production with produce harvested well before ripening, reducing the likelihood of pest invasion.

2.11 Operating Times

General farm operations are usually during daylight hours. This is expected to remain the case.

2.12 Chemical Use

Volatile components of chemicals sprayed may affect neighbours if not used in accordance with manufacturer and workplace health and safety requirements. Spraying during adverse weather conditions should also be avoided that may impact on neighbours. The greenhouse structures mitigate spraydrift to the surrounding environment.

2.13 Surface Water and Sediment Runoff

Runoff from the existing greenhouse horticulture activities is minimal and contained, with runoff directed towards the dam to the north of the property, well away from Property 2.

A future dwelling within the building envelope nominated within proposed Lot 911 will not result in any additional surface runoff impacting upon the adjoining greenhouse horticulture activity.

2.14 Traffic and Access

Access for the future proposed large lot residential properties is from Sugarmill Road, which connects to Solitary Islands Way. It is considered that there will be no significant land use conflicts with respect to the traffic and access between the proposed rezoning of the subject lands for large lot residential use and the existing greenhouse horticulture activity.

3. Land Use Conflict Risk Assessment

3.1 Introduction

In this report, a risk assessment matrix is used to rank the potential Land Use Conflicts in terms of significance. The matrix assesses the environmental/public health and amenity impacts according to the:

- Probability of occurrence; and
- Severity of impact

The procedure of environmental/public health and amenity hazard identification and risk control are performed in three stages:

1. Environmental/public health and amenity hazard identification;
2. Risk assessment and ranking;
3. Risk control development

Procedure:

1. Prepare LUCRA Hazard Identification and Risk Control form
2. List all hazards associated with each activity
3. Assess and rank the risk arising from each hazard before "controls" are applied on the LUCRA form.
4. Develop controls that minimise the probability and consequence of each risk using the five level methods. Record these controls on the form.
5. Re-rank each risk with the control in place to ensure that the risk has been reduced to an acceptable level. If the risk ranking is not deemed to be acceptable consideration should be given to whether the proposed activity should be allowed to proceed.

Source: Land Use Conflict Risk Assessment Guide - October 2011, NSW DPI

3.2 Risk Assessment and Risk Ranking

It is necessary to differentiate between an 'environmental hazard' and an 'environmental risk'. 'Hazard' indicates the potential for harm, while 'risk' refers to the probability of that harm occurring. For example, the presence of chemicals stored in a building is a hazard, but while the chemicals are stored appropriately, the risk is negligible. **Table 3.1** defines the hazard risks used in this report.

The Risks Ratings (severity of the risks) have been established by assessing the consequences of the risks and the likelihood of the risks occurring.

Table 3.1: Measure of Consequence

Level	Descriptor	Description	Examples/Implications
1	Severe	• Severe and/or permanent damage to the environment • Irreversible with management	• Damage 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.
2	Major	• Serious and/or long-term impact to the environment • Long-term management implications	• Water, soil or air impacted badly, possibly in the long term. • Limited damage to animals, fish or birds or plans • Some public complaints – impacts pass quickly • Contravenes the conditions of Council's licences, permits and the POEO Act • Likely prosecution.
3	Moderate	• Moderate and/or medium-term impact to the environment • Some ongoing management implications	• Water, soil or air known to be affected, probably in the short term • No damage to plants or animals • Public unaware and no complaints to Council • May contravene the conditions of Council's Licences and the POEO Act • Unlikely to result in prosecution.
4	Minor	• Minor and/or short-term impact to the environment • Can be effectively managed as part of normal operations	• Theoretically could affect the environment or people but no impacts noticed • No complaints to Council • Does not affect the legal compliance status of Council.
5	Negligible	• Very minor impact to the environment • Can be effectively managed as part of normal operations	• No measurable or identifiable impact on the environment.

Source: Table 4: Land Use Conflict Risk Assessment Guide - October 2011, NSW DPI

This report utilises an enhanced measure of likelihood of risk approach 1, which provides for five levels of probability (A-E). The five levels of probability are set out below in **Table 3.2.**

Table 3.2: Probability Table

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

3.3 Risk Ranking Method

For each event, the appropriate 'probability' (ie. a letter A to E) and 'consequence' (ie. a number 1 to 5) is selected. The consequences (environmental impacts) are combined with a 'probability' (of those outcomes) in the Risk Ranking Table (**Table 3.3**) to identify the risk rank of each environmental impact (eg. a 'consequence' 3 with 'probability' D, yields a risk rank 9). The table yields a risk rank from 25 to 1 for each set of 'probabilities' and 'consequences'. A rank of 25 is the highest magnitude of risk that is a highly likely, very serious event. A rank of 1 represents the lowest magnitude or risk, an almost impossible, very low consequence event.

Table 3.3: Risk Ranking Table

PROBABILITY	A	B	C	D	E
Consequence					
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

Source: Land Use Conflict Risk Assessment Guide - October 2011, NSW DPI

NOTE:

- A risk ranking of 25-11 is deemed as an unacceptable risk
- A risk ranking of 10-1 is deemed as an acceptable risk

Thus, the objective is to endeavour to identify and define controls to lower risk to a ranking of 10 or below.

3.4 Risk Reduction Controls

The process of risk reduction is one of looking at controls that have an effect on probability such as the implementation of certain procedures; new technology or scientific controls that might lower the risk probability values.

It is also appropriate to look at controls which affect consequences eg. staff supply with a mechanism to change impacts or better communications established. Such matters can sometimes lead to the lowering of the consequences.

Table 3.4: LUCRA Site Assessments

Site Feature	Condition/comments	Potential Conflict
Residential Development/ buffer Distances	Default Buffer distances to Residential development: • 200m to greenhouse and controlled environment horticulture. The closest point of the existing greenhouses to the existing dwellings and the proposed building envelopes are approximately: <u>Property 1:</u> Ex. dwelling: 245m BE on proposed Lot 121: 185m <u>Property 2:</u> Ex. dwelling: 90m **BE on proposed Lot 911: 20m** <u>Property 3:</u> Ex. dwelling: 240m BE on proposed Lot 171: 250m	<u>Property 1:</u> Minor <u>Property 2:</u> Moderate <u>Property 3:</u> Negligible
Site Location: Vehicular Access	Access for all properties is from Sugarmill Road which connects to Solitary Islands Way. There will be no significant land use conflicts with respect to the traffic and access arising from the three additional lots resulting from the proposed rezoning and the existing greenhouse horticulture activity.	Minor
Exposure	At 9am the dominant wind is from the south west (32%), while at 3pm the dominant wind direction is mixed between north east (29%) and southerly (21%) (BOM 2018). The annual wind roses indicate that light to moderate winds are generally experienced	Low-Moderate

Site Feature	Condition/comments	Potential Conflict
	from all directions. The wind roses also indicate the following: • Winds in the mornings are typically light to moderate to heavy winds from the south west, with lighter winds from the south, north and west; • Winds in the afternoon are typically more moderate winds from the north-east, south, south east and east; and • Calm conditions are experienced 15% of the time at 9am in the morning and only 3% of the time at 3pm in the afternoons.	
Site Drainage and Water Pollution	No change to existing drainage.	Negligible
Agricultural Chemical Spray Drift	Any chemical spray is expected to be confined to within the greenhouses.	Minor
Odour	Odour from greenhouse horticulture can arise from use of chemical sprays, fertilisers (inorganic and organic) and composting. Any effect from odours is expected to be confined to within the greenhouses.	Minor
Noise	Given the intermittent use of machinery, the likelihood of noise impacts from the existing greenhouse activities are deemed to be low to negligible.	Low to negligible
Dust	The land surrounding the greenhouses is managed grassland. The horticultural farm is small (7 greenhouses) with low traffic generation.	Low to moderate

Separation Distance

Based on the proximity of the existing greenhouse horticulture activity located to the west (Lot 8 DP 243972) to Property 2 (35 Sugarmill Road), it is recommended that a vegetated buffer be planted to provide an effective safeguard to any residual spray drift or odour which may escape the confines of the greenhouses.

At Development Application stage (for subdivision and/or dwelling), a vegetated screen is to be planted as part of a Vegetation Management Plan (VMP) to be lodged concurrently with any Development Application.

Note: The *Pesticides Act 1999* regulates the use of pesticides in NSW. Management practices must either eliminate spray drift or at least minimise it to a level where it will not cause adverse health impacts.

4. Discussion

4.1 Separation Distances

A default separation distance of 200 m width is recommended between *greenhouse and controlled environment horticulture* and residential development. In practice, the actual width of the buffer is dependent on existing site conditions. In the subject case, the existing greenhouses are separated from the existing dwelling at Property 2 by a distance of 90 m.

The indicative building envelope for proposed Lot 911 is 20 m from the existing greenhouses.

The LUCRA identified that the highest risk factor is agricultural spray drift and odour.

Future residential development should be designed to minimise instances of incompatibility such that normal farming practices are not inhibited. Where such instances do arise, measures to ameliorate potential conflicts should be devised wherever possible.

When considering potential land use conflict between residential and agricultural activities is important to recognise that all agricultural activities:

- Should incorporate reasonable and practicable measures to protect the environment in accordance with the *Protection of the Environment Operations Act (POEO)* 2010 and associated industry specific guidelines; and
- Are legally conducted as required by other legislation covering workplace health and safety, and the use and handling of agricultural chemicals.

Nevertheless, certain activities practised by even the most careful and responsible farmer may result in a nuisance to adjacent residential areas through, for example, unavoidable odour drift and noise impacts.

4.2 Control Measures

4.2.1 Buffers

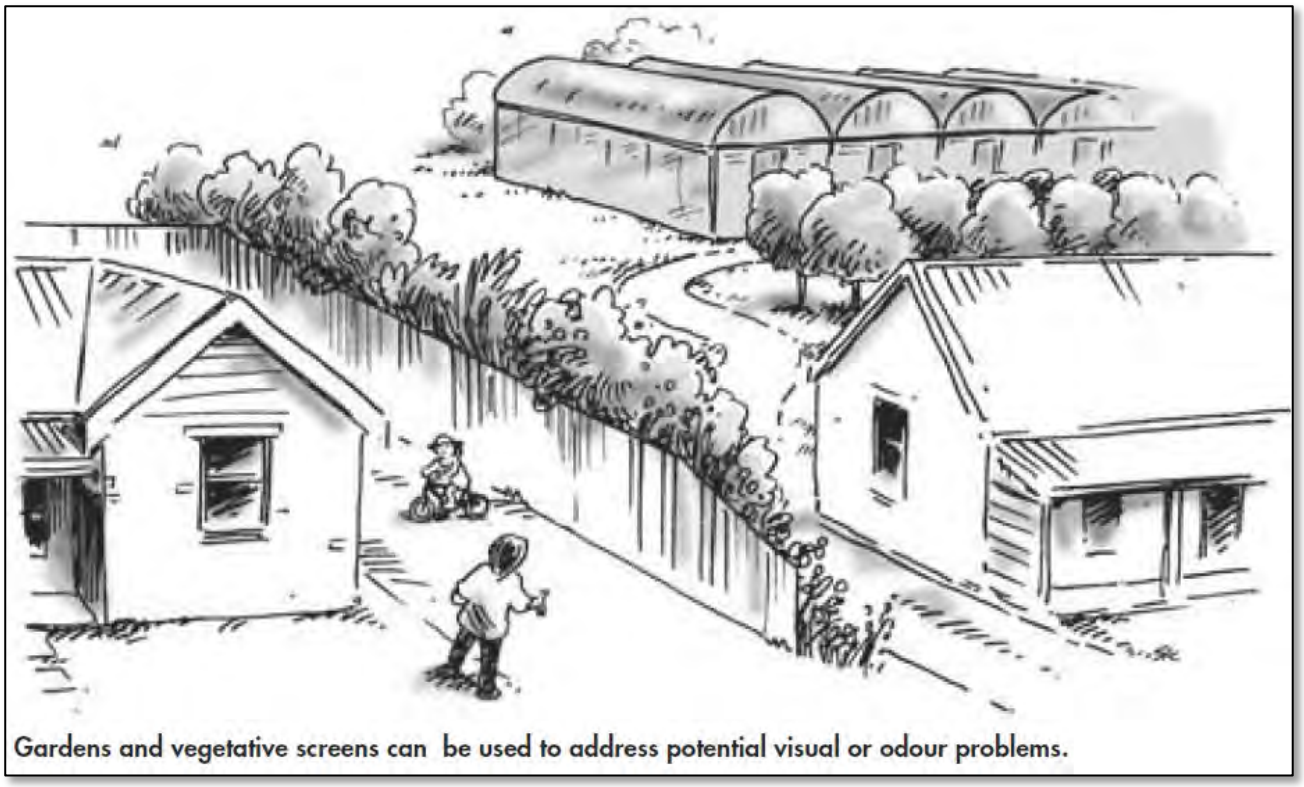
The use of vegetated buffers to separate incompatible land uses reduces the need for separation distances.

Vegetated/landscaped buffers can also contribute to increased biodiversity, shade, visual improvements, soil stability, water quality and amenity. The role of appropriately designed vegetative buffers in intercepting chemical drift and providing visual barriers is noted in *Managing Biosecurity Risks in Land Use Planning and Development Guide*. Vegetated buffers have other advantages in that they:

- Create habitat and corridors for wildlife
- Increase the biological diversity of an area, thus assisting in pest control;
- Favourably influence the microclimate;
- Are aesthetically pleasing;
- Contribute to the reduction of noise, odour and dust impacts.

Vegetated/landscaped buffers take time to establish, therefore it is recommended that suitable trees/plants are established as soon as possible along part of the western boundary between Property 2 and the existing greenhouses.

It is recommended that, pending the rezoning, at Development Application stage for either a subdivision or a dwelling, a Vegetation Management Plan and a suitable Section 88B instrument to secure the planting area, is prepared for the landscaped buffer and approved by Council.



Source: NSW DPI, Guidelines for the Development of Controlled Environment Horticulture, 2005.

4.2.2 Competing land values – Agriculture of Residential?

The existing greenhouses are an established adjoining landuse and should not be jeopardised by future development resulting from the rezoning. To date, there has been no conflict between neighbours.

The continued use of Lot 8 DP 243972 for intensive plant agriculture (horticulture) may be contingent upon a number of factors including the higher value of the land for residential development than for agriculture given the size of the property and its location nearby Sapphire Beach.

Lot 8 DP 243972 is predominantly cleared land with potential land capability to accommodate at least two separate lots with dwelling areas.

4.2.3 Agricultural land use guidelines and controls

Controlled environment horticulture is managed by a number of legislative framework of environmental requirements, controls and guidelines *(Managing Biosecurity Risks in Land Use Planning and Development Guide).*

5. Conclusions and Recommendations

This LUCRA has been prepared to support the Planning Proposal for the rezoning of three properties at Sugarmill Road for large lot residential and environmental protection purposes and is based on:

- Site visits to each property.
- A review of aerial photography.
- A review of surrounding land uses.
- Discussions with each property owner.

The LUCRA concludes that the *Planning Proposal - Sugarmill Road R5 Large Lot Residential* is considered suitable and will be consistent with surrounding land uses subject to the recommendations provided further below:

- Future residential development will be guided by the Coffs Harbour DCP controls aimed to ensure that the agricultural potential of surrounding land is not diminished.
- The potential land use conflict between a future building envelope at 35 Sugarmill Road and the existing greenhouse horticulture land use can be mitigated utilising a vegetation buffer, ensuring that:
  - A Vegetation Management Plan is to be prepared by the landowner and approved by Council; and
  - The vegetated buffer is to be legally secured via a S88B restriction on the land.

Despite the potential for land use conflict between the existing greenhouses and a future building envelope at 35 Sugarmill Road, the following factors have led to this conclusion including:

- The adjoining horticultural land use occurs within a small farm of just over 2 ha in area and involves vegetable cultivation within the confines of seven (7) greenhouse enclosures.
- Land values in the area will inevitably lead to the decline of horticulture and increase in residential land use.
- No aerial agricultural spraying is known to occur in the area.
- A vegetated landscaped buffer is considered appropriate in terms of impact mitigation and will provide a valuable visual asset between the two properties regardless of the eventual land uses.