Land Use Conflict Risk Assessment

Proposed Restaurant,
Artisan Food and Drink Industry and Artisan Sales Area
Lots 7 & 8 DP8385
103 Yagers Lane Skinners Shoot

HEALTH SCIENCE ENVIROMENTAL EDUCATION
ENVIRONMENTAL AUDITOR

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Proposed Restaurant, Artisan Food and Drink Industry and Artisan Sales Area
Lots 7 & 8 DP8385
103 Yagers Lane Skinners Shoot

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1. Introduction

Tim Fitzroy & Associates (TFA) has been engaged by M. Schreiber to undertake a Land Use Conflict Risk Assessment (LUCRA) to accompany a Development Application to Byron Shire Council for a proposed Restaurant, Artisan Food and Drink Industry and Artisan Sales area to be located at Lots 7 and 8 DP 8385, No 103 Yagers Lane, Skinners Shoot. (see Site Locality Plan **Illustration 1.1**).

The proponents are seeking to develop the site for the purpose of a Restaurant and construct new buildings to be utilised as both an Artisan Food and Drink Industry and Artisan Sales area. The application is inclusive of internal and external building works, carparking, earthworks, landscaping, waste water disposal and vegetation management works.

It is proposed that part of the piggery structures will be modified to allow for the proposed restaurant. New driveway access and parking is proposed to service the restaurant. It is proposed that the artisan food and drink industry and road side stall will be constructed within the new parking area. The proposed development is located in the northern portion of Lot 8.

LUCRA's were initially conceived in the *Living and Working in Rural Areas Handbook* (Department of Primary Industries et.al 2007) by the Centre for Coastal Agricultural Landscapes in partnership with the Northern Rivers Catchment Management Authority as a tool to better manage potential land use conflicts between residential development and rural activities and environmental attributes/assets on the NSW North Coast. The applicant has adopted the LUCRA tool to better identify potential land use conflicts risks associated with the proposed development and where necessary propose mitigation options to address any unacceptable risks.

Potential Land use conflicts for the proposed development include:

- Free range chicken and cattle grazing to the east;
- Cattle Grazing to the north;
- Essential Energy substation to the south east;
- Dwellings located to the south east, west, north west and north; and
- Tourist Accommodation to the north west.

The subject site covers an area of 13ha.

The following environmental guidelines have been considered in the assessment of potential land use conflicts:

1. Noise Policy for Industry (NSW EPA 2017);
2. Byron Shire Council (2004). Design Guidelines for On-site Sewage Management forSingle Households. Protecting the Environment and Health of Byron Shire. Technical Guidelines for System Designers;
3. Department of Local Government, Environment Protection Authority, Department of Health, Department of Land & Water Conservation & the Department of Urban Affairs & Planning (1998). *Environment & Health Protection Guidelines On-site Sewage Management for Single Households*;

4. Stormwater Management of Byron Shire Development Control Plan (DCP 2014) Chapter B3 – Services.
5. National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013;
6. Living and Working in Rural Areas Handbook (2007*)*;
7. Byron Development Control Plan 2014;
8. https://www.arpansa.gov.au/understanding-radiation/radiation-sources/more-radiation-sources/electricity Australian Radiation Proection & Nuclear Safety Agency (accessed 10 November 2021);
9. Egg Industry Environmental Guidelines (Australian Eggs Limited Edition II 2018) and
10. Exposure to extremely low frequency fields, World Health Organisation 2007.

In addition, a review of the following supporting documents for the proposed development has been undertaken:

1. Proposed Design Plans (Stollery Architects, 2022);
2. Onsite Sewage Management Feasibility Assessment (Greg Alderson & Associates Report No 21421_WW_REVA1_September 2022;
3. Traffic Impact Assessment (ttm consulting, 22 August 2022);
4. Stormwater Management Plan (Greg Alderson & Associates October 2022);
5. Biodiversity Assessment (Reconeco, August 2023); and
6. Noise Impact Assessment (TFA, November 2023).

The proposed development should be designed to minimise instances of incompatibility such that adjoining commercial practices are not inhibited and natural ecosystems and attributes are enhanced where possible. Where such instances do arise, measures to ameliorate potential conflicts should be devised wherever possible.

Conflict between commercial land uses agriculture and residential uses is likely to occur where land uses directly abut, or are sufficiently close to, industrial and such that they are likely to be affected by commercial activities. Such conflict can arise from noise, runoff, dust and odour generating activities.

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

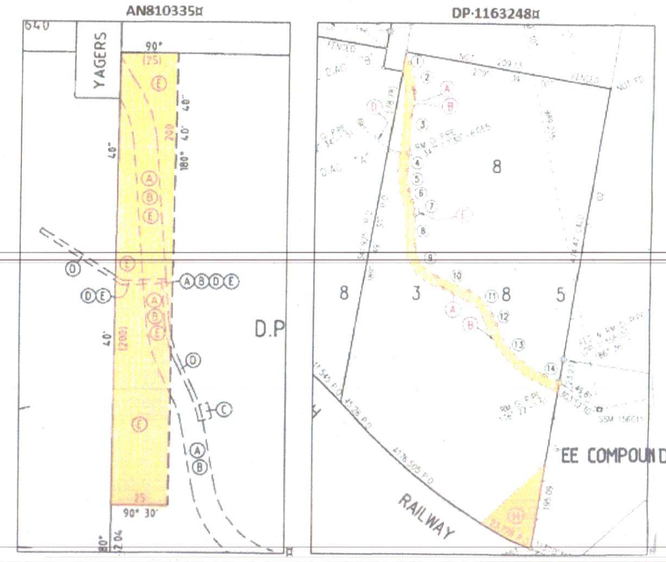
- should incorporate reasonable and practicable measures to protect the environment in accord with the Protection of the Environment Operations Act (POEO) and associated industry specific guidelines; and
- are legally conducted as required by other legislation covering workplace health and safety.

Typical conflicts between light commercial use and residential use as provided in **Table 1** below:

Table 1 Typical Conflicts between Commercial development and adjoining agricultural and residential uses

Noise	• Commercial equipment, machines, transport. • Ancillary equipment associated with commercial processing • Road Traffic
Water	• Runoff
Wastewater	• Surface and groundwater contamination

AERIAL PHOTO



REFERENCE TO EASEMENT LINES				
No	BEARING	DISTANCE	RADIUS	ARC DIST.
1	158°01'50"	10.165		
2	168°22'30"	30.53	55	30.935
3	184°36'55"	61.71		
4	184°36'55"	17.65		
5	173°40'30"	20.885	55	21.01
6	162°44'	11.25		
7	170°39'	15.145	55	15.195
8	178°33'30"	30.19		
9	165°50'50"	37.845	35	39.985
10	113°08'	36.665		
11	135°40'	34.5	45	35.405
12	158°11'50"	9.745		
13	136°19'10"	70.825	95	72.58
14	114°26'30"	16.41		

ESSENTIAL ENERGY EASEMENT

LOCALITY PLAN

PROPOSED RE-PURPOSING EXISTING AGRICULTURAL SHEDS TO PROVIDE A RESTAURANT + ARTISAN FOOD & DRINK INDUSTRY

for
M. SCHREIBER

at
103 YAGERS LANE
SKINNERS SHOOT

architect:
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drawn: r.s

date: sept '22

scale: as shown

LOCALITY PLAN

job no: 2208

drwg no: A1.A

1.1 Scope of Works

This assessment has been undertaken to determine the potential land use conflicts between the future occupiers and patrons of the proposed Restaurant, Artisan Food and Drink Industry and Artisan Sales area and neighbouring agricultural activities, residential dwellings, tourist accommodation and Electrical Substation.

The key constraints regarding the proposed development include:

- Noise impacts from activities within the Commercial Facility;
- Traffic noise impacts from staff and visitors;
- Surface water impacts from stormwater runoff; and
- Surface water impacts from the proposed onsite sewer management system

The site adjoins:

- Yagers Lane to the west to the east;
- Rural properties and Rural Dwellings;
- Cattle grazing to the north and west;
- Tourist Accommodation to the north west;
- Small scale free range chicken farm to the east; and
- Essential Energy substation to the south east.

The tasks involved in undertaking this assessment were to:

Step 1: Gather information

- Determine the nature of the land use change and development proposed.
- Assess the nature of the precinct where the land use change and development is proposed.
- Appraise the topography, climate and natural features of the site and broader locality
- Conduct a site inspection
- Describe and record the main activities of the surrounding land use that have the potential to be a source of complaint or conflict

Step 2: Evaluate the risk level of each activity

- Record each activity on the risk assessment matrix, and identify the level of risk of a land use conflict arising from the activity.

Step 3: Identify the management strategies and responses that could help lower the risk of the issue resulting in a dispute and conflict

- Identify management strategies for each activity
- Prioritise Strategies
- Provide Performance targets for each activity

Step 4: Record the results of the LUCRA

- Summarise the key issues, their risk level, and the recommended management strategies

BOUNDARY

EXISTING DAM

EXISTING DAM

EXISTING DAM

EXISTING UN-USED PIGGERY SHEDS

98M BOUNDARY SETBACK

D

E

F

24 800

21 000

11 000

6100

16 200

3400

42 000

EXISTING PLANTINGS TO REMAIN

EXISTING GRASSED AREA

PRIVATE DINING

exist. tank

LANDSCAPED COURTYARD

exist. tank

existing slab to remain

A

EXISTING UN-USED PIGGERY SHEDS TO REMAIN

B

C

RESTAURANT LOUNGE

outdoor Dining

PROPOSED RESTAURANT

existing bamboo planting

ENTRY

RESTAURANT DINING

J

court

Back of House

deliv

plant

deliveries & staff parking

18s

water storage tanks below driveway

open Landscaped Courtyard

12.0

5.0

drop off zone

feature Tree

PROPOSED RESTAURANT SET DOWN

SUITABLE FOR FIRE TRUCK ACCESS

formal vegie growing beds

relocate exist septic tanks

existing retaining wall to remain

existing driveway & 18 relocated parking spaces

EXISTING SHEDS TO REMAIN

G

existing driveway to remain

PROPOSED FOOD & DRINK INDUSTRY

EXISTING AVENUE OF TREES TO REMAIN

PEDESTRIAN ACCESS TO F & D INDUSTRY

ramp

ramp

existing driveway to remain

I

80M BOUNDARY SETBACK

remain

to

access

internal

STAFF PARKING & RESTAURANT DELIVERY ACCESS

18 STAFF SPACES

existing Parking bays for 18 Staff parking

52 VISITOR SPACES

VISITOR CARPARK

layout to follow land contours

PROPOSED FARM SHED

DELIVERIES

EXISTING FIG TREE TO REMAIN

1.0m HIGH ENTRY WALL WITH ENGRAVED "GARDENHOUSE" SIGN

IN/OUT

VISITOR CARPARK ACCESS

existing

BOUNDARY

YAGERS LANE END

SITE PLAN

0 5 10 15 20

LEGEND

A-J EXISTING SHED BUILDINGS TO REMAIN

EXISTING SHED TO BE REPURPOSED

NEW BUILDING

A2A-DEC 2023 -
ADD DIMENSIONS & PARKING NOs

PROPOSED REPURPOSING OF EXISTING AGRICULTURAL SHEDS
TO PROVIDE A
RESTAURANT
&
ARTISAN FOOD & DRINK INDUSTRY

for
M SCHREIBER

at
103 YAGERS LANE
SKINNERS SHOOT

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e. rosaliestollery@bigpond.com

drawn: r.s
date: Sept '22
scale: as shown

SITE PLAN

job no: 2208
drwg no: A2A

2. Gather Information

2.1 Nature of the land use change and development proposed

Development consent is sought from Byron Shire Council to construct a Restaurant within the footprint of a former piggery and construct new buildings to be utilised as an Artisan Food and Drink Industry and Farm Building. The application is inclusive of building works, carparking, earthworks & retaining walls, landscaping, waste water disposal and vegetation management works. Lots 7 & 8 DP 8385 will be amalgamated to facilitate the development as proposed.

2.1.1 Proposed Restaurant

The development proposal seeks to adaptively reuse part of a former piggery building for the purpose of a restaurant. The restaurant involves the construction of a new building incorporating the existing concrete slab and retaining elements of the former piggery as design features. Restaurant operations are proposed to be of a high end/exclusive nature and is intended as a small scale and intimate fine dining experience. The restaurant will have a focus on quality local heirloom and organic produce with a significant proportion of the vegetables and herbs produced on site in dedicated horticultural areas.

The maximum number of guests accommodated within the restaurant is 60. These guests will be accommodated both within the restaurant dining area (up to 45 guests) and the restaurant lounge. The overall dining capacity of 45 seats includes the inside dining area, the outdoor dining area and the private dining area (as shown on the plans). The lounge will provide seating for guests prior to or after their reservation, with patrons able to move between the dining area/s and lounge provided that the maximum number of guests (60) is not exceeded. The lounge area will only be accessible to patrons with a reservation to dine at the restaurant.

The premises will be strictly 'reservation only'. Bookings will only be accepted at 15 minute intervals to ensure a personal style of greeting guests and catering to the kitchen capacity. There will be no access to the restaurant for the general public on a 'drop-in' basis.

Key statistics for the restaurant are as follows:

Table 2.1 Key development statistics (Restaurant)

Element	Component	Criteria	Comment
Floor area	Reception	61m^2	
	Customer Waiting	10 m^2	
	Indoor dining	100m^2	
	Indoor private dining	38m^2	

	Outdoor dining	45m^2	*Not GFA*
	Lounge	108m^2	
	Mezzanine Lounge	54m^2	
	Open chef stations	42m^2	
	Back of house	175m^2	
	Cellar	15m^2	
	Amenities	45.5m^2	
	Deliveries and plant	31.5m^2	
	Circulation	210m^2	
	Stores and miscellaneous	10m^2	
	Total Floor Area	**945m^2**	
	Total Gross Floor Area	**900m^2**	
Patron Numbers	Dining seating capacity	45	
	Max. Patrons (Dining & lounge)	**60**	
Staff	**Total**	**20**	
Hours of Operation	Wednesday	12noon – 11.00pm	
	Thursday	12noon – 11.00pm	
	Friday	12noon – 11.00pm	
	Saturday	12 noon – 11.00pm	
	Sunday	12 noon – 10pm	

The proposed restaurant will be located within Buildings 'A' and 'J' identified within the architectural design plan set. The remaining buildings (nursery and piggery buildings) will be left vacant. The approved small place of assembly (Building G) will continue to operate from Building G.

2.1.2 Proposed Artisan Food and Drink Industry

Two separate building will be constructed on site which will manufacture gourmet food products for sale primarily online. Examples of products to be created include pickles, salts, teas and oils.

The main building contains a commercial kitchen (including production & packing areas) and an associated sales area and tasting space (in the form of a small 15 seat shared table café space). It is intended that customers will be able to sit and 'meet the makers', taste the produce and purchase a selection of food items produced on site.

A small display & sales space will be provided adjacent to the main building. This area will provide the main retail space for the Artisan Industry. Sales will focus on goods produced within the main building. Ancillary sales of unprocessed produce grown on the property may also occur on a seasonal basis (subject to supply).

As with the proposed restaurant, the Artisan Industry café space & 'meet the maker' experience will be strictly open by appointment only. No 'drop in' customers will be permitted. Only guests with a booking to attend the property (either the restaurant or Artisan café / meet the maker space will be able to visit the Artisan Sales space. Key statistics for this element of the project are as follows:

Table 2.2 Key development statistics (Artisan Food Industry)

Element	Component	Criteria
Floor Area	Artisan Industry: Commercial kitchen, prep, packing, storage, WC.	61m^2
	Artisan Industry: Sales & Display	38m^2
	Cafe	11m^2
	Total	**110m^2**
Seating Capacity	Café / Meet the maker experience	15
Staff	Total (including vegetable pickers, kitchen, packing, café & sales)	5
Hours of Operation	Picking (Rural activity).	Daily (as required) 6am - 10am
	Cooking & Packing	Monday to Friday, 10 am-4 pm
	Packing	Saturday & Sunday, 10am-Noon.
	Tastings / Café / Sales	Monday to Sunday, 10am – 3 pm

2.1.3 Artisan Sales Area

An Artisan Sales area will be provided adjacent to the Artisan Food and Drink Premises. This stall will sell flowers and vegetables grown on site.

2.2 Nature of the precinct where the land use change and development is proposed

The site consists of two allotments, being lot 7, which is vacant with the exception of a large dam. This lot is relatively flat with a slight gradient to the drainage line below the dam to the east. Lot 8, which is to the south of Lot 7 contains numerous structures, including a former piggery and approved nursery.

The site is positioned in a rural precinct, where rural allotments adjoin small scale cattle grazing and free range chicken farm. The area is relatively low lying, secondary agricultural land. The subject site houses a former piggery and associated structures and three dams, one in the southern portion and two along the north eastern boundary Current land use at the site is of mixed agricultural and residential purposes. The north grassed section of the property appears to be grazed by cattle rotation and some of the old dwellings near to Yagers lane are used for residency. There are also numerous small and large structures recently used for residential purposes as well as several large sheds as remnants of the past piggery activities. The site is also scattered with landscaped gardens and informal horticultural rare fruit tree plantings.

The neighbouring land use of RU2 Rural Landscape and DM Deferred Matter surround the subject property to the north, east and west boundaries. The wider area surrounding the property contains in addition C2 Environmental Management, and C1 National Parks and Heritage Reserve.

The immediate surrounding area adjoining the subject land is described as follows:

- Dwellings (2) , Free range chicken, cattle grazing to the east (Lot 2 DP 1135605, No 164 Bangalow Rd);
- Dwelling (1), Cattle Grazing to the north (Lot 6 DP 8385, no 83 Yagers Lane);
- Essential Energy substation to the south east (Lot 1 DP1135605, No 105 Yagers Lane);
- Dwellings (2) located to the west (Lot 4 DP 8385, No 104 Yagers Lane);
- Dwelling (1) located to the north west (Lot 5 DP258640, No 80 Yagers Lane);
- Dwelling and Tourist Accommodation (5 Glamping Tents) to the north west (Lot 4 DP258640 No 255 Skinners Shoot Road); and
- Native Vegetation located to the north east (Lot DP 286411).

Illustration 2.1 Subject Site and Surrounding Land Uses

2.3 Local Topography

Slope across the entire site is relatively consistent at approximately 8%. Fall is generally from the west to east and south to north. The development site is located between 15 – 30 m AHD.

2.4 Vegetation

Vegetation comprises grazed paddocks (in the north) , mowed areas, landscaped gardens, and extensive dense regrowth through degraded buildings.

2.5 Soils

The southern half of the property is mapped as Bagotville (*ba*) soil landscape, and the northern half is mapped as Bagotville Variant b (bab). No mapped ASS across or adjacent to property. ASS Probability mapping shows L2 Low probability and H1 High probability located approximately 500 m from northern property boundary.

2.6 Meteorology

The climate and meteorology for the locality has been summarised in **Table 2.1** based on monthly climate statistics for the Ballina Airport AWS with respect to 9am and 3pm statistics.

The Ballina Airport AWS is situated at an elevation of 1 m, approximately 25km south of the site. The records are based on 17 to 22 years of data from 1992 to 2010/2014.

Wind Regime

The wind regime for the site is based on annual wind roses for Ballina Airport AWS.

Annual wind roses for the times of 9am and 3pm are shown in **Illustration 2.2**. The wind roses are based on records from 1992 to 2010. 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 winds from the west and south-west and to a lesser extent from the north;
- winds in the afternoon are typically more moderate winds from the south, north-east, south-east and east; and
- Calm conditions are experienced 8% of the time in the morning and only 1% of the time in the afternoons.

The wind frequency towards any of the sensitive receptors is less than 35% if three quadrants are added together (e.g., south east + south-east + south).

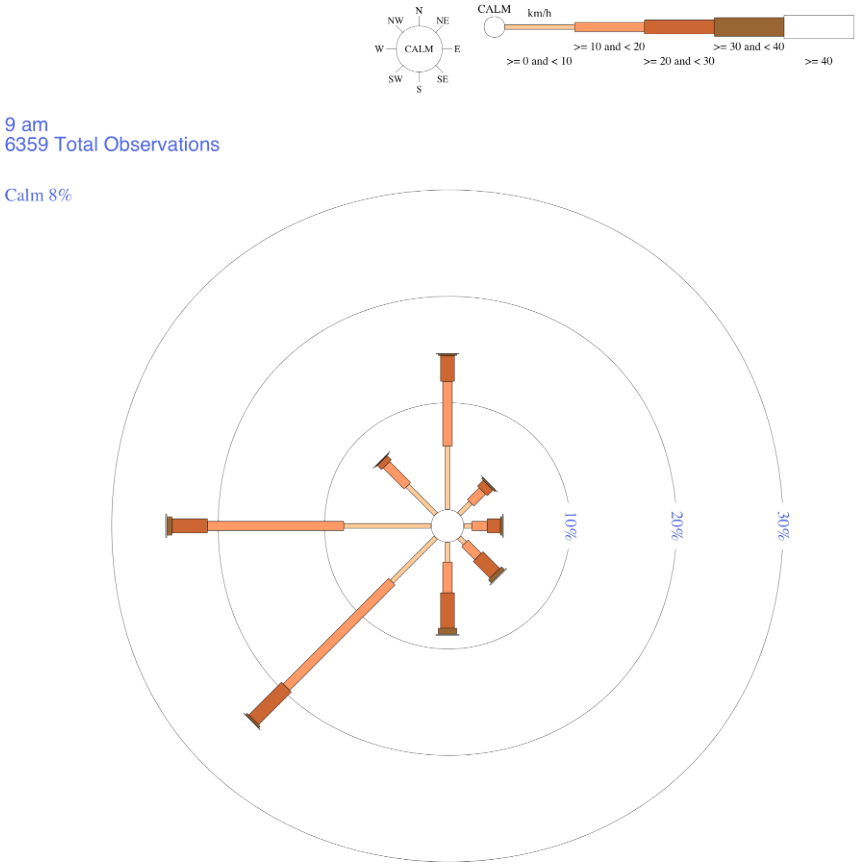
Table 2.3 Monthly Climate Statistics –Ballina Airport AWS)

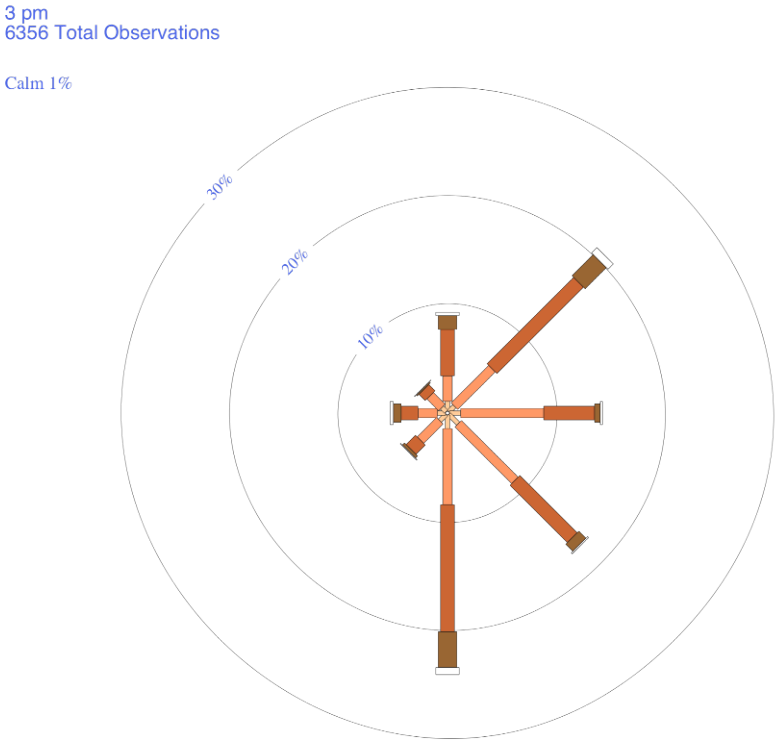
Statistics	*Month*												*Annual*
	J	*F*	*M*	*A*	*M*	*J*	*J*	*A*	*S*	*O*	*N*	*D*	
Mean Max. Temp. (°C)	27.8	27.5	26.4	23.9	21.2	19.3	18.6	20	22	23.6	25.1	26.4	23.5
Mean Min. Temp. (°C)	21.1	21	19.9	17.6	14.9	13.1	12	13.1	15.2	16.9	18.6	19.8	16.9
Mean Rain (mm)	164.4	166.6	127.7	183.5	99.4	164.9	96.3	75.4	47	95.8	93.4	139.3	1509.2
Mean no. rain days	10.8	12	11.6	12.6	10.3	11.5	9.2	5.5	5.5	8.3	8.3	10.6	116.2
The following statistics are from Ballina Airport AWS													
9 am conditions													
Mean Temp. (°C)	24.5	23.9	22.5	21.1	18.1	15.5	15.0	16.5	19.7	21.5	22.3	23.9	20.4
Mean Rel. Humid. (%)	74	78	80	75	75	75	72	66	63	66	72	70	72
Mean Wind Spd. (km/h)	13.3	12.8	12.5	13.2	13.5	12.7	13.3	13.3	14.5	15.7	14.2	14.2	13.6
Dominant Direction[1]	SW	SW	SW	SW	W	W	W	W	N & SW	N	N	N	W
3 pm conditions													
Mean Temp. (°C)	26.7	26.5	25.4	23.4	21.0	19.0	18.7	19.8	21.6	22.8	24.4	25.9	22.9
Mean Rel. Humid. (%)	67	68	67	65	64	62	59	55	59	62	65	64	63
Mean Wind Spd. (km/h)	24.4	23.0	21.5	18.9	16.8	15.9	18.1	19.9	23.7	24.8	24.8	24.7	21.4
Dominant Direction[1]	NE	NE	SE	S	S	S	S	S	NE	NE	NE	NE	S

Table 2.4 Annual Wind Directions and Strength

Direction	*9am*	*9am Wind Speed*	*3pm*	*3pm Wind Speed*
N	15%	light	9%	moderate
NE	3%	light	21%	moderate
E	3%	light-moderate	14%	light-moderate
SE	5%	light-moderate	18%	light-moderate
S	9%	light-moderate	24%	light-moderate
SW	24%	light	5%	light
W	25%	light	5%	light-moderate
NW	8%	light	3%	light

Direction	9am	9am Wind Speed	3pm	3pm Wind Speed
Calm	8%	-	1%	-





Source: Bureau of Meteorology

Illustration 2.2 Annual Wind Roses (9am and 3pm) for Ballina Airport

2.7 Site Inspection

A site assessment was undertaken on the 21 July 2022 by Tim Fitzroy. On the day of the site assessment the weather was clear. A walk - over was undertaken of the site and environs. The development site has a mixture of grassed paddocks, degraded piggery sheds, sealed roadway, small and large dwelling structures, and dense vegetation stands. The piggery has not been operational for over 25 years and associated structures have been left unmaintained. Absence of piggery operations has led to the site being revegetated in overrun in some places by both native and invasive vegetation. The structures across the site are generally degraded with some visible attempts to retore to repurpose infrastructure.

At the time of inspection there was no evidence of offensive noise or odour permeating from any of the adjoining agricultural sites within the vicinity of the subject site. The principal background noise was natural sounds, including bird calls. Photographs of the site subject and surrounds were taken (see **Appendix B**).

2.8 Potential Land Use Conflicts

The following key items have been identified as potential land use conflicts as a result of the proposed development.

2.8.1 Free Range Poultry & Cattle Grazing Lot 1 DP 1135605, No 164 Old Bangalow Road

On 26 July 2022 discussions were held with Mr. Hugh Trevor Jones, the owner of Lot 1 DP 1135605, No 164 Old Bangalow Road Skinners Shoot. Lot 1 DP 1135605 comprises 31.55 ha to the east, north east and south east of 103 Yagers Lane.

Mr. Trevor Jones currently runs 45-50 head of cattle and free range hens located in 4 mobile caravans. Each caravan can accommodate up to 2,000 hens. Currently each caravan houses 500 hens. The caravans are regularly moved around the farm to distribute nutrients, minimise erosion and dust, reduce compaction, lessen impacts on surface water quality. Odour from hen production is minimal as chickens are moved around to fertilizer the ground, same applies to cattle.

Some early morning and night work is required when hens are relocated. There are a small number of deaths due to hens being sold before that are too old. Hens are placed in a burial pit and composted with woodchips and carbon. The burial pit is located adjacent to the Essential Energy Substation about 220m south east of the proposed development site at 103 Yagers Lane

A Tractor is used from time to time for slashing and grass seeding.

Currently there is no use of chemicals on the subject site. Mr. Trevor Jones advised that consideration is being given to the potential future establishment of an orchard, however no definitive plans or types of crops have been confirmed.

A review of the Egg Industry Environmental Guidelines (Australian Eggs Limited Edition II 2018) confirms that the free range poultry farm at Lot 1 DP 1135605 is a small scale enterprise.

Stocking rate of range areas is an important consideration as it relates to the capacity of the range area to assimilate and utilise nutrients. With a land area of 31.55 ha, at a

maximum of 8,000 birds which is equivalent 39 birds per ha the stocking rate is very low (Australian Eggs Limited Edition II 2018). The maximum stocking rate for cattle is 1.6 per ha which again is very low.

2.8.2 Electrical Substation

An Essential Energy substation is located about 220m south east of the proposed development site.

Electricity powerlines, substations, transformers and other electrical sources such as common electrical appliances and wiring, all emit extremely low frequency (ELF) electric and magnetic fields (EMF). As we are surrounded by electrical sources in our daily lives we are all exposed to some level of ELF EMF constantly. This fact sheet has been prepared to address concerns that exposure to ELF EMF may cause health effects, particularly leukaemia in children.

Exposure to ELF EMF at high levels can affect the functioning of the nervous system. However, exposure to high levels of ELF EMF is not normally found in the everyday environment from electrical sources. While such exposures are very unusual, there are international guidelines on limits of exposure which are aimed at preventing established harmful effects.

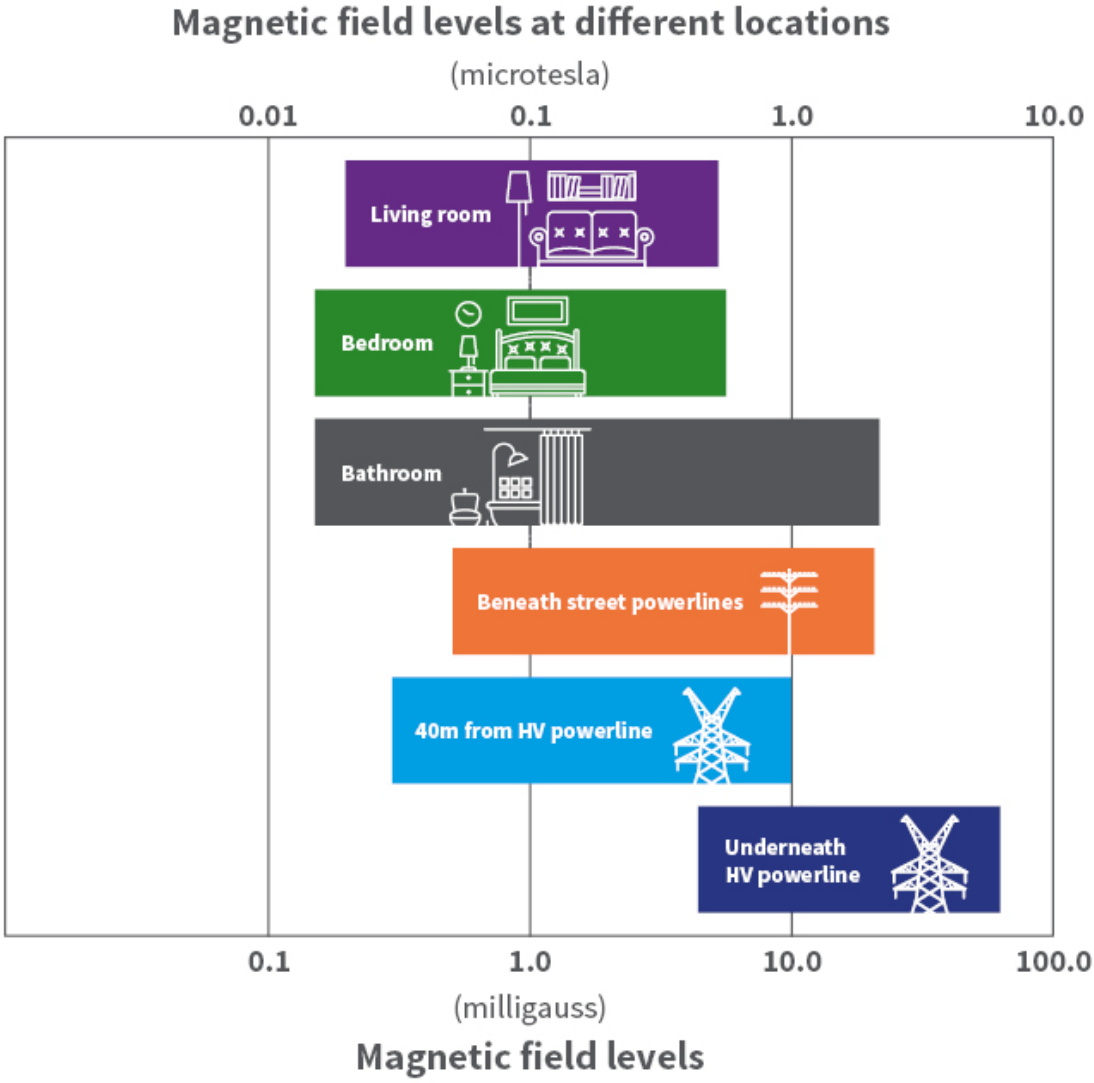
There has been a lot of research on whether exposure to ELF EMF from electrical sources below the exposure limits causes any health effects. Most of the research indicates that ELF EMF exposure normally encountered in the environment, including in the vicinity of powerlines, does not pose a risk to human health. However, there are some epidemiological (population) studies that have reported a possible association between prolonged exposure to ELF magnetic fields at levels below the exposure limits but higher than what is typically encountered and increased rates of childhood leukaemia. Based largely on this limited evidence the International Agency for Research on Cancer has classified ELF magnetic fields as possibly carcinogenic to humans.

There are problems with the methods in epidemiological studies that weaken the conclusion from these results. It is not known how magnetic fields could cause childhood leukaemia. Overall, other research including studies on cells and animals has not confirmed these results. On balance, the evidence related to childhood leukaemia is not strong; however people should be aware of the issue in order to make informed decisions.

There is no established evidence that the exposure to magnetic fields from powerlines, substations, transformers or other electrical sources, regardless of the proximity, causes any health effects. In view of the epidemiological studies, however, the possibility remains that prolonged exposure to higher than typical magnetic fields may increase the risk of leukaemia in children.

For homes near high voltage (HV) powerlines the magnetic field exposure will vary according to the amount of current carried by the powerline and the distance of the home from the powerline. Generally, homes that are more than 50 m from a high voltage powerline are not expected to have higher than typical magnetic fields. **For substations and transformers the magnetic fields at distances of 5-10m away are generally indistinguishable from typical background levels in the home.** The figure below shows a range of magnetic field levels measured by ARPANSA around

powerlines and in Australian homes. These are well below the exposure limit in the international guidelines of 200 μT (2000 mG).



The scientific evidence does not establish that exposure to ELF EMF found around the home, the office or near powerlines and other electrical sources is a hazard to human health.

ARPANSA maintains continual oversight of emerging research into the potential health effects of the EMF exposure from powerlines and other electrical sources in order to provide accurate and up-to-date advice.

Extremely low frequency (ELF) electric and magnetic fields (EMF) occupy the lower part of the electromagnetic spectrum in the frequency range 0-3000 Hz. ELF EMF result from electrically charged particles. Artificial sources are the dominant sources of ELF EMF and are usually associated with the generation, distribution and use of electricity at the frequency of 50 Hz in Australia or 60 Hz in some other countries. The electric field is produced by the voltage whereas the magnetic field is produced by the current. The properties of ELF electric and magnetic fields are described in detail in the

World Health Organization's Environmental Health Criteria 238 Extremely Low Frequency Fields.

Health effects related to ELF fields are described further in the ARPANSA fact sheet Electricity and Health.

The International Commission on Non-Ionizing Radiation Protection (ICNIRP) has issued Guidelines for Limiting Exposure to Time-Varying Electric and Magnetic Fields (1 Hz - 100 kHz) (PDF 641 kb) which are aimed at preventing the established health effects resulting from exposure to ELF EMF. The ICNIRP ELF guidelines are consistent with ARPANSA's understanding of the scientific basis for the protection of the general public (including the foetus) and workers from exposure to ELF EMF. Details about ICNIRP and a link to the ICNIRP ELF guidelines are available at International Best Practice.

2.8.3 Air Quality

Potential sources of odour from commercial premises and road traffic impacting on residences include:

- Hydrocarbons from increased vehicles travelling along Yagers Lane and within the carpark
    - fine particles, nitrogen oxides, volatile organic compounds such as benzene, toluene, ethylbenzene and xylene (BTEX)

Vehicle exhaust emissions can have a significant influence on local air quality in urban and suburban areas of Australia. Motor vehicles emit a variety of air pollutants that are known to be associated with adverse health impacts. Common air pollutants emitted by motor vehicles include fine particles, nitrogen oxides, volatile organic compounds such as benzene, toluene, ethylbenzene and xylene (BTEX). Exposure to these substances at particular concentrations is associated with a range of short and long term health effects, including on the heart and lungs (WHO 2000, WHO 2003, NEPC 2002, Environment Australia 2001).

Occupants of a dwelling, are likely to be sensitive to emissions from vehicles. Developments located next to busy roads have challenges in terms of how to provide an acceptable level of air quality for the occupants and users of the development.

Patterns of pollutant concentrations vary from site to site and also over time. A wide range of factors influence the level of pollution including: vehicle mix, condition and technology; fuel quality; dispersion of pollutants across a carriageway; weather conditions and traffic flow. The quantity of air pollutants emitted from roads is directly proportional to the traffic volume, speed, and the speed variability (acceleration or braking) of vehicles. Motor vehicles emit fewer pollutants at steady speeds or in freely flowing conditions. They emit greater quantities when accelerating or decelerating, stopping and starting, when in congested traffic or while idling (Quantification of Health Effects of Exposure to Air Pollution, WHO 2000).

Areas that are not confined tend to have greater winds and breezes which in turn disperse and carry away air pollutants. The degree to which winds and breezes carry away air pollutants is influenced by the orientation and continuity of open spaces, their dimension and shape, topography and the layout of buildings surrounding the subject area.

Based on the information supplied by ttm consulting (August 2022) it is understood that the development is expected to generate 53 vehicle trips per peak hour, which is estimated at 14 car movements and 2 truck movements with a speed of 60kph on the public road, and 20kph within the development.

Given the estimated small number of vehicle traffic to be generated and the nature of the potential tenancies the potential air quality risk to sensitive receivers is deemed to be negligible.

Mechanical ventilation for cooking equipment will be provided in accordance with AS16668 Part 1 and 2. Given distance attenuation to sensitive receivers the risk of odours impacting on adjoining residents from the proposed development is deemed to be negligible.

2.8.4 Surface Water, Ground water and Soil and Sediment Runoff

Potential sources of contamination
Key environmental issues for the proposed development are:

- Stormwater pollution
- Soil and groundwater contamination

Site Contamination

Ecoteam has been engaged by Rosalie Stollery of Rosalie Stollery Architects PTY LTD to undertake a Preliminary Site Investigation (PSI) on behalf of their client. The PSI is required for a proposed development project at: Lot 7 DP 8385 (north) and Lot 8 DP 8385 (south), 103 Yagers Lane, Skinners Shoot NSW, 2481. The Area of Environmental Concern (AEC) is 45,000 m_2 (4.5 ha) within the 13.11 ha property area.

The objectives of this investigation are (i) to determine and document whether soil contamination is likely to have occurred from past land usage; (ii) assess the risk to human health; and (iii) determine the need for further investigations. A desktop assessment was undertaken to review and identify the previous zoning of land; the current and previous land use; the surrounding land use; and aerial photographs. Site assessment and soil sampling was conducted by Zachary Lyons and Jeffery Presbury on Tuesday the 26th of July 2022.

The site investigation was undertaken to describe the current conditions of the site and to identify contamination indicators. A systematic grid sampling plan was drafted for the 4.5 ha AEC. A total of 52 grid sub-samples were collected and analysed individually. A further 6 soil duplicates were collected, one for inter and one intra laboratory analysis, with one rinsate matrix sample collected for quality assurance (QA). All soil samples were analysed for metals and pesticides.

The results of the individual soil analyses from this investigation were compared with the Health Investigation Levels (HILs) and Ecological Investigation Levels (EILs) in the Schedule B (1) Guideline on the Investigation Levels for Soil and Groundwater using Column A – Residential (NEPC, 2013a). 52 soil samples, and 3 duplicates were analysed by NATA accredited SGS Laboratory, and 3 duplicates and the rinsate were analysed by NATA accredited Envirolab Laboratory. All samples were analysed for metals and pesticides.

One sample (11x) was analysed for soil characterisation for EIL calculations (Total Organic Carbon, Iron, pH, Clay content, Exchangeable Ca, K, Mg and Na, and Cation Exchange Capacity). All metals were below the HILs for ‘Standard’ Residential A Development, and EILs for Urban Residential and Public Open Space (URPOS). All

organochlorine and organophosphate results returned results of non-detectable concentrations.

Based on detecting hotspots with 95% accuracy, no contamination above HIL-A limits exist within the AEC. However, the PSI identified zinc and copper concentrations that exceed adopted EILs URPOS limits in 3 of 52 samples taken across the AEC.
Zinc was below the HIL-A guideline levels across the site, however, was above EIL guideline levels at 3 sampling points. The CSM of the source is considered to have occurred from past commercial agricultural use and leaching from infrastructure such as zinc coated roofing/cladding.
Copper was below the HIL-A guideline levels across the site, however, was above EIL guideline levels at 1 sampling point. The CSM of the source is considered to have occurred from past commercial agricultural use and leaching from infrastructure/materials.

The hotspots for EILs contamination are located where future driveways, footpaths, and grassed access tracks will be developed. There are no pathways for movement and no sensitive ecological receptors. Therefore, the EILs and the impact of zinc and copper on the proposed land use is negligible and are not applicable to this site.

Given the nature of the proposed development and the results of the soil laboratory analysis, the risk of soil contamination to human health is considered to be negligible. It is considered that the AEC is suitable for the proposed land use. It is recommended that no further soil investigation or remediation activities are required for metal and pesticide contamination within the AEC.

Onsite Wastewater Management
Greg Alderson and Associates (GAA September 2022) have been commissioned by M. Schrieber to provide an On-Site Sewage Management feasibility report for the proposed restaurant, artisan food and drink industry and road side stall. The OSSM report provides information for the site investigation and the proposed On-Site Sewage Management System (OSMS) that will treat wastewater generated from the proposed development.

It is proposed that two wastewater treatment systems be installed to service the two developments comprising:

1. Restaurant:
    a. 3 x 7kL septic tanks to act as a grease trap for the kitchen, to reduce BOD prior to treatment within the AWTS
    b. A balance tank and two commercial Taylex AWTS of treatment capacity of 5kL each
    c. Collection tank of minimum of 11400 L to be installed to collect treated wastewater and transfer to the irrigation tank
2. Artisan Food and Drink:
    a. 2 x 7kL septic tanks to act as a grease trap for the kitchen, to reduce BOD prior to treatment within the AWTS
    b. One commercial Taylex AWTS of treatment capacity of 5kL
    c. Irrigation tank of minimum of 19,000 L to be installed to collect treated wastewater from artisan food and drink and the restaurant and transfer to the SSI field

Design based on predicted loading from artisan food and drink industry and the restaurant

- 9550 L/day peak loading
- TN loading of 231 kg/year
- TP Loading of 38.5 kg/year
- Treatment in commercial Taylex AWTS achieving 53 % TN reduction
- Subsurface Irrigation field of 3843 m2 required, comprising of 1 m laterals
- S68 application required to be lodged prior to release of the construction certificate that details irrigation layout, pump duties

Stormwater Management

A Stormwater Management Plan (SMP) was prepared by Greg Alderson & Associates (October 2022). The SMP concluded that:

- Runoff from the existing developed areas on site will generally utilise existing drainage paths, ultimately flowing to the north via an existing open channel.
- A new underground pipe system will be provided for the proposed new development areas (new vehicular and landscaping areas) which will convey runoff to the existing open channel.
- Overland flow paths will be provided to direct runoff in excess of the underground system to the channel.
- On-Site Detention has been proposed by way of a 6.0m(W) x 13.2(L) x 0.9m(H) Ausdrain Enviromodule underground tank. Provision of this tank ensures site discharges do not exceed existing levels.
- Site runoff will be treated by a multi-faceted treatment train utilising, vegetated swales, buffer strips, and bioretention. MUSIC modelling of the proposed measures has calculated that the treatment train pollutant reduction exceeds Council's requirements.

Two external catchments contribute runoff to the site.

- A 13.1Ha catchment is directed to an existing 3 x 750mm + 1 x 450mm dia underground pipe system at the south of the site. The system has been estimated to have sufficient capacity to convey the 100 year ARI flow through the site.
- A 0.85Ha catchment enters the site from the west adjacent to the existing driveway entry.

It is proposed to construct a new underground pipe / open channel system to divert the runoff around the development area to the open channel discharge to the north.

2.8.5 Noise

It is understood that the primary noise sources at the site are expected to be vehicle movements and patron noise from the indoor and outdoor areas.

An environmental noise impact assessment was prepared by TFA of the proposed development. In undertaking the assessment, noise monitoring was conducted near the site and through modelling, predictions of road noise associated with traffic and potential offsite commercial noise impacting the noise sensitive components of the development.

Offsite and proposed onsite commercial activity noise impacts have the potential to impact upon existing sensitive receivers and has been assessed in accordance with the "Noise Policy for Industry".

Following an assessment of the background noise levels, attended noise measurements and noise modelling we have concluded that:

- A noise model has been constructed to predict the propagation of noise from the proposed development. The model includes shielding effects from existing structures, proposed structures, and topography. Topographic information included in the model was sourced from Geoscience Australia.
- Given the assumptions presented in the noise modelling, cumulative noise levels from expected activities at the proposed development are predicted to be within the Project Noise Trigger Level during all time periods at all sensitive receptors.

Following an assessment of the background noise levels, attended noise measurements and noise modelling it is our view that the proposed development can be adequately managed through:

- The implementation of a Noise Management Plan for venue operations to ensure adequate measures, roles and responsibilities are in place to achieve the project specific noise criteria. The Noise Management Plan should detail the methods that will be implemented for the whole project to minimise operational noise. Information should include:
  a) identification of nearby residences and other sensitive land uses;
  b) assessment of expected noise impacts;
  c) detailed examination of feasible and reasonable work practices that will be implemented to minimise noise impacts;
  d) clear and defined acceptable rules of behaviour for patrons;
  e) adherence to responsible service of alcohol regulations;
  f) strategies to promptly deal with and address noise complaints;
  g) details of performance evaluating procedures (for example, noise monitoring or checking work practices and equipment);
  h) procedures for notifying nearby residents of forthcoming works that are likely to produce noise impacts; and
  i) reference to relevant consent conditions.
- A detailed assessment of the mechanical plant is required. As final plant selection has not been completed, an assessment of plant should be conducted during the design phase.

Traffic Impacts

TTM Consulting Pty Ltd has been engaged by M. Schreiber to provide a traffic engineering assessment of a proposed mixed use development at 103 Yagers Lane, Skinners Shoot. The proposed land uses include:

- Food & Drink (Restaurant)
- Food & Drink (Café)
- Artisan Sales area (specialty plants & boutique goods)

The site proposes a restaurant with a total capacity of 60 people and two services, dinner and lunch. There is a small café and boutique retail/stall on site that will operate during the day, with some overlap with the main restaurant.

Based on the anticipated demands for the site, there is sufficient carparking to accommodate the demands. 71 carparking spaces are required and 71 carparking spaces are provided.

The development traffic is not anticipated to have a significant impact upon the local road network. A minimum of two passing bays and Road Edge Guide posts shall be provided along the length of Yagers Lane.

An investigation should be carried out for reducing the speed limit for the remaining sections of Yagers Land and Skinners Shoot Road to 50km/h posted speed, in line with the segments closer to Burns Street.

Crash data for the prior 5 years highlights there are potential safety concerns with Skinners Shoot Road that should be investigated further. These are not likely to be heightened by the development traffic based on the incident types, but TTM have recommended minor improvements that can be undertaken to improve the road environment.

The anticipated service vehicle is typically an SRV or a VAN. TTM have verified that both vehicle types can access and service the site with compliance to As2890.2. In the unusual event that an MRV may be required, there is sufficient space and complaint grades for it to stand on-site by the staff carparking. Refuse collection shall be generally in line with the existing arrangements with the bins stored in the same position as is current.

Based on the assessment contained within this report, TTM see no traffic engineering reason why the relevant approvals should not be granted.

Residential Dwellings Tourist Accommodation (Glamping Tents)

Given distance attenuation and the lack of a direct line of sight between the existing residential dwellings and tourist accommodation (5 Glamping tents in the locale) to the proposed development potential incompatibility with respect to noise, traffic and air quality impacts are expected to be minor subject to the implementation of the recommendations in the environmental assessments.

Ecological Impacts
An Ecological Impact Assessment (Annika Hallinan, November 2022) concluded that

1. The proposed development would impose some negative ecological effects associated with intensified human occupation of the land and removal of 2,316m$_2$ of native vegetation.
2. Proposed site disturbances would include potential microbat habitat, i.e., two drains which are considered to not be critical to the survival or recovery of local microbat populations.
3. No signs were detected of microbat use or occupation of the study area despite targeted searches with the aid of high-powered torchlight and including a limited search of two drains. Acoustic microbat survey and fly-out

/ fly-in dusk/dawn survey of concrete drains on site are proposed prior to disturbance of the drains to inform any microbat impacts and protection measures (e.g., timing of the proposed works) in the case that microbat species are detected occupying the drains.

4. With effective implementation of proposed impact avoidance and minimisation measures, the proposal is considered unlikely to significantly contribute to key threatening processes or significantly reduce habitat values for forest species, including foraging, roosting, nesting, reproduction or sheltering values in the locality and beyond.

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.

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The procedure of environmental/public health & amenity hazard identification and risk control is performed in three stages.

1. Environmental/public health & 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.

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 Risk 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 plants • 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

Level	Descriptor	Description	Examples/Implications
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

This report utilises an enhanced measure of likelihood of risk approach1 which provides for 5 levels of probability (A-E). The 5 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' (i.e. a letter A to E) and 'consequence' (i.e. 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 (e.g. 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

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 e.g. 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 Assessment

Site Feature	Condition/Comments	Potential Conflict
Air Quality		
Hydrocarbons from vehicles travelling in proposed carpark and along Yagers Lane	Vehicle exhaust emissions can have a significant influence on local air quality in urban and suburban areas of Australia. Motor vehicles emit a variety of air pollutants that are known to be associated with adverse health impacts. Common air pollutants emitted by motor vehicles include fine particles, nitrogen oxides, volatile organic compounds such as benzene, toluene, ethylbenzene and xylene (BTEX). Exposure to these substances at particular concentrations is associated with a range of short and long term health effects, including on the heart and lungs. Air pollution concentrations tend to be highest adjacent to the road and decrease with distance from it. Areas that are not confined tend to have greater winds and breezes which in turn disperse and carry away air pollutants. Based on the information supplied by ttm consulting (August 2022) it is understood that the development is expected to generate 53 vehicle trips per peak	D4 = 5 Acceptable Risk.

	hour, which is estimated at 14 car movements and 2 truck movements with a speed of 60kph on the public road, and 20kph within the development. Given the estimated small number of vehicle traffic to be generated and the nature of the potential tenancies the potential air quality risk to sensitive receivers is deemed to be negligible. Mechanical ventilation for cooking equipment will be provided in accordance with AS16668 Part 1 and 2. Given distance attenuation to sensitive receivers the risk of odours impacting on adjoining residents from the proposed development is deemed to be negligible.	
Noise		
Onsite and Offsite	• A noise model has been constructed to predict the propagation of noise from the proposed development. The model includes shielding effects from existing structures, proposed structures, and topography. Topographic information included in the model was sourced from Geoscience Australia. • Given the assumptions presented in the noise modelling, cumulative noise levels from expected activities at the proposed development are predicted to be within the Project Noise Trigger Level during all time periods at all sensitive receptors. Following an assessment of the background noise levels, attended noise measurements and noise modelling it is our view that the proposed development can be adequately managed through: ○ The implementation of a Noise Management Plan for venue operations to ensure adequate measures, roles and responsibilities are in place to achieve the project specific noise criteria. The Noise Management Plan should detail the methods that will be implemented for the whole project to minimise operational noise. Information should include: a) identification of nearby residences and other sensitive land uses; b) assessment of expected noise impacts; c) detailed examination of feasible and reasonable work practices that will be implemented to minimise noise impacts; d) clear and defined acceptable rules of behaviour for patrons;	D4 = 5 Acceptable Risk.

	e) adherence to responsible service of alcohol regulations; f) strategies to promptly deal with and address noise complaints; g) details of performance evaluating procedures (for example, noise monitoring or checking work practices and equipment); h) procedures for notifying nearby residents of forthcoming works that are likely to produce noise impacts; and i) reference to relevant consent conditions. ○ A detailed assessment of the mechanical plant is required. As final plant selection has not been completed, an assessment of plant should be conducted during the design phase.	
Surface Water, Soil and Sediment Runoff		
On site Wastewater	Greg Alderson and Associates (GAA September 2022) have been commissioned by M. Schrieber to provide an On-Site Sewage Management feasibility report for the proposed restaurant, artisan food and drink industry and road side stall. The OSSM report provides information for the site investigation and the proposed On-Site Sewage Management System (OSMS) that will treat wastewater generated from the proposed development. It is proposed that two wastewater treatment systems be installed to service the two developments comprising: 1. Restaurant: a. 3 x 7kL septic tanks to act as a grease trap for the kitchen, to reduce BOD prior to treatment within the AWTS b. A balance tank and two commercial Taylex AWTS of treatment capacity of 5kL each c. Collection tank of minimum of 11400 L to be installed to collect treated wastewater and transfer to the irrigation tank 2. Artisan Food and Drink: a. 2 x 7kL septic tanks to act as a grease trap for the kitchen, to reduce BOD prior to treatment within the AWTS b. One commercial Taylex AWTS of treatment capacity of 5kL c. Irrigation tank of minimum of 19,000 L to be installed to collect treated wastewater from artisan food and	D4 = 5 Acceptable Risk.

	drink and the restaurant and transfer to the SSI field	
Stormwater	A Stormwater Management Plan (SMP) was prepared by Greg Alderson & Associates (October 2022). The SMP concluded that: • Runoff from the existing developed areas on site will generally utilise existing drainage paths, ultimately flowing to the north via an existing open channel. • A new underground pipe system will be provided for the proposed new development areas (new vehicular and landscaping areas) which will convey runoff to the existing open channel. • Overland flow paths will be provided to direct runoff in excess of the underground system to the channel. • On-Site Detention has been proposed by way of a 6.0m(W) x 13.2(L) x 0.9m(H) Ausdrain Enviromodule underground tank. Provision of this tank ensures site discharges do not exceed existing levels. • Site runoff will be treated by a multi-faceted treatment train utilising, vegetated swales, buffer strips, and bioretention. MUSIC modelling of the proposed measures has calculated that the treatment train pollutant reduction exceeds Council's requirements. Two external catchments contribute runoff to the site. • A 13.1Ha catchment is directed to an existing 3 x 750mm + 1 x 450mm dia underground pipe system at the south of the site. The system has been estimated to have sufficient capacity to convey the 100 year ARI flow through the site. • A 0.85Ha catchment enters the site from the west adjacent to the existing driveway entry. It is proposed to construct a new underground pipe / open channel system to divert the runoff around the development area to the open channel discharge to the north.	D4 = 5 Acceptable Risk.
Biodiversity	A Biodiversity Assessment (Reconeco, August 2023) concluded that The site comprises disturbed vegetation of cleared grassland, native and exotic plantings and landscaped areas, with a high frequency of exotic species across the site. These areas are not consistent with any Plant Community Type or Threatened Ecological Communities. • Three threatened flora species were recorded beneath a mature Moreton Bay Fig	D4 = 5 Acceptable Risk.

	and will be retained – Stinking Cryptocarya (Cryptocarya foetida), Scrub Turpentine (Rhodamnia rubescens) and Green-leaved Rose Walnut (Endiandra muelleri subsp. bracteata). • The site provides low quality habitat due to a low diversity of native flora. • Fruiting native rainforest trees and exotic trees planted at the site may provide marginal foraging habitat for frugivore bird species (ie. Rose-crowned Fruit Dove) and Grey-headed Flying Fox; unused agricultural buildings may provide potential opportunistic roosting habitat for microbat species. • No Koala feed trees or mapped areas of potential Koala habitat occur within the works footprint; • requirements of the Byron Coast Comprehensive Koala Plan of Management do not apply. • No hollow-bearing trees occur within the works footprint. • The works may require the removal of two planted native trees to enable construction works to repurpose existing buildings. • A range of mitigation measures to minimise biodiversity impacts have been prescribed. • The proposal complies with relevant matters in Chapter B1 of the Byron Development Control Plan.	
Buffer Distance to Essential Energy Substation	The closest distance from the proposed development to the: • Essential Energy Electrical Substation (located about 220m south east); Neither Table 8 of the Living and Working in Rural Areas Handbook (2007) or Table 2.1 Chapter 2 Ballina Development Control Plan 2012 nominate a default buffer an between an Electrical Substation and commercial development. ARPANSA states that for substations and transformers the magnetic fields at distances of 5-10m away are generally indistinguishable from typical background levels in the home.	E4=3 Acceptable Risk
Site Contamination	Ecoteam has been engaged by Rosalie Stollery of Rosalie Stollery Architects PTY LTD to undertake a Preliminary Site Investigation (PSI) on behalf of their client.. The Area of Environmental Concern (AEC) is 45,000 m2 (4.5 ha) within the 13.1 ha property area. Based on detecting hotspots with 95% accuracy, no contamination above HIL-A limits exist within the AEC. However, the PSI identified zinc and copper concentrations that exceed adopted EILs URPOS limits in 3 of 52 samples taken across the AEC.	D4 = 5 Acceptable Risk.

	Zinc was below the HIL-A guideline levels across the site, however, was above EIL guideline levels at 3 sampling points. The CSM of the source is considered to have occurred from past commercial agricultural use and leaching from infrastructure such as zinc coated roofing/cladding. Copper was below the HIL-A guideline levels across the site, however, was above EIL guideline levels at 1 sampling point. The CSM of the source is considered to have occurred from past commercial agricultural use and leaching from infrastructure/materials. The hotspots for EILs contamination are located where future driveways, footpaths, and grassed access tracks will be developed. There are no pathways for movement and no sensitive ecological receptors. Therefore, the EILs and the impact of zinc and copper on the proposed land use is negligible and are not applicable to this site. Given the nature of the proposed development and the results of the soil laboratory analysis, the risk of soil contamination to human health is considered to be negligible. It is considered that the AEC is suitable for the proposed land use. It is recommended that no further soil investigation or remediation activities are required for metal and pesticide contamination within the AEC.	
Free Range Poultry and Cattle Grazing	Free Range poultry and cattle beef production occurs on Lot 1 DP 1135605 (adjacent to the proposed development site). Lot 1 DP 1135605 comprises 31.55 ha Mr Trevor Jones currently runs 45-50 head of cattle and free range hens located in 4 mobile caravans. Each caravan can accommodate up to 2,000 hens. Currently each caravan houses 500 hens. The caravans are regularly moved around the farm to distribute nutrients, minimize erosion and dust, reduce compaction, reduce impacts on surface water quality. Odour from hen production is minimal as chickens are moved around to fertilizer the ground, same applies to cattle. Some early morning and night work is required when hens are relocated. There are a small number of deaths due to hens being sold before that are too old. Hens are placed in a burial pit and composted with woodchips and carbon. The burial pit is located offset: • Adjacent to the Essential Energy Substation about 220m south east of the proposed development site at 103 Yagers Lane A Tractor is used from time to time for slashing and grass seeding.	D4 = 5 Acceptable Risk.

	Currently there is no use of chemicals on the subject site. Mr Trevor Jones advised that consideration is being given to the potential future establishment of an orchard, however no definitive plans or types of crops have been confirmed. A review of the Egg Industry Environmental Guidelines (Australian Eggs Limited Edition II 2018) confirms that the free range poultry farm at Lot 1 DP 1135605 is a small scale enterprise. Stocking rate of range areas is an important consideration as it relates to the capacity of the range area to assimilate and utilise nutrients. With a land area of 31.55 ha, at a maximum of 8,000 birds which is equivalent 39 birds per ha the stocking rate is very low (Australian Eggs Limited Edition II 2018). The maximum stocking rate for cattle is 1.6 per ha which again is very low. Given the small scale and nature of the poultry and beef cattle production relative to the size of the property (31ha) and the location of the proposed development on the subject site the risk of incompatibility is deemed to be minor	
Traffic	Based on the anticipated demands for the site, there is sufficient carparking to accommodate the demands. 71 carparking spaces are required and 71 carparking spaces are provided. The development traffic is not anticipated to have a significant impact upon the local road network. A minimum of two passing bays and Road Edge Guide posts shall be provided along the length of Yagers Lane. An investigation should be carried out for reducing the speed limit for the remaining sections of Yagers Land and Skinners Shoot Road to 50km/h posted speed, in line with the segments closer to Burns Street. Crash data for the prior 5 years highlights there are potential safety concerns with Skinners Shoot Road that should be investigated further. These are not likely to be heightened by the development traffic based on the incident types, but TTM have recommended minor improvements that can be undertaken to improve the road environment. The anticipated service vehicle is typically an SRV or a VAN. TTM have verified that both vehicle types can access and service the site with compliance to As2890.2. In the unusual event that an MRV may be required, there is sufficient space and complaint grades for it to stand on-site by the staff carparking.	D4 = 5 Acceptable Risk. Subject to ttm recommendations

	Refuse collection shall be generally in line with the existing arrangements with the bins stored in the same position as is current. Based on the assessment contained within this report, TTM see no traffic engineering reason why the relevant approvals should not be granted.	

4. Conclusions

This assessment has been undertaken to determine the potential land use conflicts between the future occupiers of the proposed restaurant, café and roadside and neighbouring residential dwellings, farmers, electrical substation operations and tourist operations. The proponents are seeking to develop the site for the purpose of a Restaurant and construct new buildings to be utilised as both an Artisan Food and Drink Industry and Artisan Sales Area. The application is inclusive of internal and external building works, carparking, earthworks, landscaping, waste water disposal and vegetation management works.

It is proposed that part of the piggery structures will be modified to allow for the proposed restaurant. New driveway access and parking is proposed to service the restaurant. It is proposed that the artisan food and drink industry and road side stall will be constructed within the new parking area. The proposed development is located in the northern portion of Lot 8.

Potential Land use conflicts for the proposed development include:

- Free range chicken and cattle grazing to the east;
- Cattle Grazing to the north;
- Essential Energy substation to the south east;
- Dwellings located to the south east, west, north west and north; and
- Tourist Accommodation to the north west.

A site inspection, coupled with a review of existing guidelines and environment assessments for the subject development indicates that potential land use conflicts risk are acceptable subject to the implementation of the following measures:

1. Noise
    a. The implementation of a Noise Management Plan for venue operations to ensure adequate measures, roles and responsibilities are in place to achieve the project specific noise criteria. The Noise Management Plan should detail the methods that will be implemented for the whole project to minimise operational noise. Information should include:
        i. identification of nearby residences and other sensitive land uses;
        ii. assessment of expected noise impacts;
        iii. detailed examination of feasible and reasonable work practices that will be implemented to minimise noise impacts;
        iv. clear and defined acceptable rules of behaviour for patrons;
        v. adherence to responsible service of alcohol regulations;
        vi. strategies to promptly deal with and address noise complaints;
        vii. details of performance evaluating procedures (for example, noise monitoring or checking work practices and equipment);
        viii. procedures for notifying nearby residents of forthcoming works that are likely to produce noise impacts; and
        ix. reference to relevant consent conditions.

b. A detailed assessment of the mechanical plant is required. As final plant selection has not been completed, an assessment of plant should be conducted during the design phase.

2. Onsite Wastewater Management
    a. It is proposed that two wastewater treatment systems be installed to service the two developments comprising:
        i. Restaurant:
            1. 3 x 7kL septic tanks to act as a grease trap for the kitchen, to reduce BOD prior to treatment within the AWTS
            2. A balance tank and two commercial Taylex AWTS of treatment capacity of 5kL each
            3. Collection tank of minimum of 11400 L to be installed to collect treated wastewater and transfer to the irrigation tank
        ii. Artisan Food and Drink:
            1. 2 x 7kL septic tanks to act as a grease trap for the kitchen, to reduce BOD prior to treatment within the AWTS
            2. One commercial Taylex AWTS of treatment capacity of 5kL
            3. Irrigation tank of minimum of 19,000 L to be installed to collect treated wastewater from artisan food and drink and the restaurant and transfer to the SSI field
3. Traffic Impacts
    a. Based on the anticipated demands for the site, there is sufficient carparking to accommodate the demands. 71 carparking spaces are required and 71 carparking spaces are provided.
    b. The development traffic is not anticipated to have a significant impact upon the local road network. A minimum of two passing bays and Road Edge Guide posts shall be provided along the length of Yagers Lane.
    c. An investigation should be carried out for reducing the speed limit for the remaining sections of Yagers Land and Skinners Shoot Road to 50km/h posted speed, in line with the segments closer to Burns Street.
    d. Crash data for the prior 5 years highlights there are potential safety concerns with Skinners Shoot Road that should be investigated further. These are not likely to be heightened by the development traffic based on the incident types, but TTM have recommended minor improvements that can be undertaken to improve the road environment.
    e. The anticipated service vehicle is typically an SRV or a VAN. TTM have verified that both vehicle types can access and service the site with compliance to As2890.2. In the unusual event that an MRV may be required, there is sufficient space and complaint grades for it to stand on-site by the staff carparking. Refuse collection shall be generally in line with the existing arrangements with the bins stored in the same position as is current.
    f. Based on the assessment contained within the Traffic Impact Assessment report, TTM see no traffic engineering reason why the relevant approvals should not be granted.

4. Stormwater

A Stormwater Management Plan (SMP) was prepared by Greg Alderson & Associates (October 2022). The SMP concluded that:

- Runoff from the existing developed areas on site will generally utilise existing drainage paths, ultimately flowing to the north via an existing open channel.
- A new underground pipe system will be provided for the proposed new development areas (new vehicular and landscaping areas) which will convey runoff to the existing open channel.
- Overland flow paths will be provided to direct runoff in excess of the underground system to the channel.
- On-Site Detention has been proposed by way of a 6.0m(W) x 13.2(L) x 0.9m(H) Ausdrain Enviromodule underground tank. Provision of this tank ensures site discharges do not exceed existing levels.
- Site runoff will be treated by a multi-faceted treatment train utilising, vegetated swales, buffer strips, and bioretention. MUSIC modelling of the proposed measures has calculated that the treatment train pollutant reduction exceeds Council's requirements.

Two external catchments contribute runoff to the site.

- A 13.1Ha catchment is directed to an existing 3 x 750mm + 1 x 450mm dia underground pipe system at the south of the site. The system has been estimated to have sufficient capacity to convey the 100 year ARI flow through the site.
- A 0.85Ha catchment enters the site from the west adjacent to the existing driveway entry.

It is proposed to construct a new underground pipe / open channel system to divert the runoff around the development area to the open channel discharge to the north.

5. Biodiveristy

A Biodiversity Assessment (Reconeco, August 2023) concluded that:

The site comprises disturbed vegetation of cleared grassland, native and exotic plantings and landscaped areas, with a high frequency of exotic species across the site. These areas are not consistent with any Plant Community Type or Threatened Ecological Communities.

- Three threatened flora species were recorded beneath a mature Moreton Bay Fig and will be retained – Stinking Cryptocarya (Cryptocarya foetida), Scrub Turpentine (Rhodamnia rubescens) and Green-leaved Rose Walnut (Endiandra muelleri subsp. bracteata).
- The site provides low quality habitat due to a low diversity of native flora.
- Fruiting native rainforest trees and exotic trees planted at the site may provide marginal foraging habitat for frugivore bird species (ie. Rose-crowned Fruit Dove) and Grey-headed Flying Fox; unused agricultural buildings may provide potential opportunistic roosting habitat for microbat species.
- No Koala feed trees or mapped areas of potential Koala habitat occur within the works footprint;
- requirements of the Byron Coast Comprehensive Koala Plan of Management do not apply.
- No hollow-bearing trees occur within the works footprint.

- The works may require the removal of two planted native trees to enable construction works to repurpose existing buildings.
- A range of mitigation measures to minimise biodiversity impacts have been prescribed.
- The proposal complies with relevant matters in Chapter B1 of the Byron Development Control Plan.

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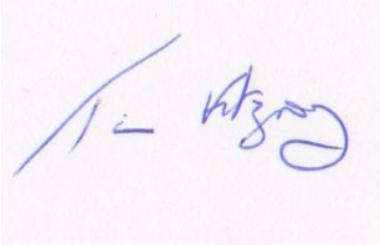
This report has been prepared by Tim Fitzroy of *Tim Fitzroy & Associates.*



Tim Fitzroy
Environmental Health Scientist
Environmental Auditor

References

Department of Primary Industries et al 2007 Living and Working in Rural Areas-a handbook for managing land use conflicts on the NSW North Coast, NSW

Planning Guidelines Separating Agricultural and Residential Uses, Queensland Department of Natural Resources 1997.

Noise Policy for Industry (NSW EPA 2017);

Byron Shire Council (2004). Design Guidelines for On-site Sewage Management for Single Households. Protecting the Environment and Health of Byron Shire. Technical Guidelines for System Designers

Stormwater Management Plan Restaurant and construct new buildings to be utilised as both an Artisan Food and Drink Industry and Land Use Conflict Risk Assessment Restaurant, Café & Artisan Sales Area 103 Yagers Lane Skinners Shoot (Greg Alderson & Associates January 2024)

National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013

Byron Development Control Plan 2014

Egg Industry Environmental Guidelines (Australian Eggs Limited Edition II 2018) and

Exposure to extremely low frequency fields, World Health Organisation 2007.

Proposed Design Plans (Stollery Architects, 2022);

Onsite Sewage Management Feasibility Assessment (Greg Alderson & Associates Report No 21421_WW_REVA1_September 2022;

Traffic Impact Assessment (ttm consulting, 22 August 2022);

Biodiversity Assessment (Reconeco, August 2023);

Noise Impact Assessment (TFA, November, 2023).

Copyright and Usage

A Development Plans

BOUNDARY

EXISTING DAM

EXISTING DAM

EXISTING DAM

EXISTING UN-USED PIGGERY SHEDS

98M BOUNDARY SETBACK

D

E

F

24 800

21 000

11 000

6100

16 200

3400

42 000

EXISTING PLANTINGS TO REMAIN

EXISTING GRASSED AREA

PRIVATE DINING

exist. tank

LANDSCAPED COURTYARD

exist. tank

existing slab to remain

A

EXISTING UN-USED PIGGERY SHEDS TO REMAIN

B

C

RESTAURANT LOUNGE

outdoor Dining

PROPOSED RESTAURANT

existing bamboo planting

ENTRY

RESTAURANT DINING

J

court

Back of House

deliv

plant

deliveries & staff parking

18s

water storage tanks below driveway

open Landscaped Courtyard

12.0

5.0

drop off zone

feature Tree

PROPOSED RESTAURANT SET DOWN

SUITABLE FOR FIRE TRUCK ACCESS

formal vegie growing beds

relocate exist septic tanks

existing retaining wall to remain

existing driveway & 18 relocated parking spaces

EXISTING SHEDS TO REMAIN

G

existing driveway to remain

PROPOSED FOOD & DRINK INDUSTRY

EXISTING AVENUE OF TREES TO REMAIN

PEDESTRIAN ACCESS TO F & D INDUSTRY

ramp

ramp

existing driveway to remain

I

80M BOUNDARY SETBACK

remain

to

access

internal

STAFF PARKING & RESTAURANT DELIVERY ACCESS

18 STAFF SPACES

existing Parking bays for 18 Staff parking

52 VISITOR SPACES

VISITOR CARPARK

layout to follow land contours

PROPOSED FARM SHED

DELIVERIES

EXISTING FIG TREE TO REMAIN

1.0m HIGH ENTRY WALL WITH ENGRAVED "GARDENHOUSE" SIGN

IN/OUT

VISITOR CARPARK ACCESS

existing

BOUNDARY

YAGERS LANE END

SITE PLAN

0 5 10 15 20

LEGEND

A-J EXISTING SHED BUILDINGS TO REMAIN

EXISTING SHED TO BE REPURPOSED

NEW BUILDING

A2A-DEC 2023 -
ADD DIMENSIONS & PARKING NOs

PROPOSED REPURPOSING OF EXISTING AGRICULTURAL SHEDS
TO PROVIDE A
RESTAURANT
&
ARTISAN FOOD & DRINK INDUSTRY

for
M SCHREIBER

at
103 YAGERS LANE
SKINNERS SHOOT

architect:

rosalie stollery architects pty. ltd.
ph: 6021 06 6798882 p.o. box 882,
fx: 6021 06 6798882 byron bay. 2481
e. rosaliestollery@bigpond.com

drawn: r.s
date: Sept '22
scale: as shown

SITE PLAN

job no: 2208
drwg no: A2A

B Photographs

Photo A Example of existing building to be utilised in development

Photo B Free Range Chickens on adjoining Lot to the east

Photo C **Essential Energy Substation located to the south east**

Photo D **Glamping Tents located to the north west along Yagers Lane**