

**DEVELOPMENT APPLICATION FOR MATERIAL CHANGE OF USE FOR WORKFORCE
ACCOMMODATION OVER LAND AT 429 FICHERA ROAD MAREEBA**

429 FICHERA ROAD
MAREEBA QLD 4880

JANUARY 2023

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1.0 Introduction

This Planning Report has been prepared on behalf of MLK Springs Pty Ltd ('The Applicant') in support of a Development Application to Mareeba Shire Council for a Material Change of Use for the purpose of Workforce Accommodation to be established on the site.

The development proposal seeks to establish Workforce Accommodation on the land comprising of twelve (12) accommodation buildings with each building accommodating twelve persons. The workers accommodation is supported by communal facilities comprising a kitchen, ablutions and laundry facilities. A Manager's Residence is also proposed being a component of the Workforce Accommodation land use.

The development application is for the establishment of Workforce Accommodation which will be an accredited accommodation facility under the Pacific Labour Scheme (PLS) & Seasonal Worker Programme (SWP) administered by Department of Agriculture & Fisheries (DAF) in conjunction Qld Health.

It is noted that the Planning Scheme includes the land use definition of Non-resident workforce accommodation; however with the recent amendments of the Planning Act 2016 to include the land use definition of Workforce Accommodation and remove Non-resident workforce accommodation, the Planning Act 2016 prevails to the extent of any inconsistencies. Application is therefore being made for Workforce Accommodation, being an impact assessable use in the Rural zone. It is also intended that the facility has the flexibility to provide for rural workers accommodation if and when the impacts of Covid-19 are lessened and the labour market returns as it was before the pandemic.

While the proposed development includes an Environmentally Relevant Activity being ERA 63 for an onsite waste water facility accommodating more than 21 Equivalent Persons, approval for such a facility is not being sought at this stage. The establishment of an ERA 63 on the site as proposed is not a Concurrence ERA and therefore referral to the State Assessment & Referral Agency (SARA) is not required. This is discussed in further detail within the body of the report.

The need for this application has arisen due to significant shortages in the labour hire supply chain required to harvest fruit and undertake other seasonal rural work within the Mareeba Shire and with the region more generally. Due to Covid 19, the labour market that was typically filled by overseas travellers is significantly depleted. This situation is not only affecting the Mareeba Shire but has broader implications all across Queensland and interstate. This situation is acknowledged by all tiers of Government and is well documented.

As an alternative source of labour hire, the Australian Government has introduced the Pacific Labour Scheme allowing primary producers to access labour through the seasonal worker program. The Applicant has and will continue to seek access to this labour market while the effects of Covid 19 and the impacts on the labour supply market remain.

The development proposed is 'assessable development' as defined under Section 44 of the *Planning Act 2016* and therefore requires assessment against local Planning Scheme provisions and relevant State legislation. This report provides an overview of the development proposed and addresses the various planning considerations relevant to Council's assessment of the proposal.

In summary, the report concludes that:

- The submitted information conforms to the requirements for making an 'impact assessable' development application under the *Planning Act 2016*; and

- That the development as proposed adequately addresses and responds to the assessment benchmarks of the Planning Scheme. The proposal has planning merit and approval of the application is commended to Council.

2.0 Site Information

2.1 Site Details

The application relates to land located at 429 Fichera Road Mareeba being formally described as Lot 414 on RP835556. The land has access to the Mareeba-Dimbulah Water Supply Scheme. At present, reticulated water from the scheme is available in the south western corner of the site adjacent Fichera Road. This source of water will be used as the potable water supply for the development.

The land has a total area of 102.6 hectares with a road frontage of approximately 1.13 kilometres to Fichera Road. The land is gently sloping from the south to the north east. The site is characterised by a vegetation band and gully extending in a south east to north west alignment. A portion of this vegetation band is identified as Remnant Vegetation – Category B under the Vegetation Management Act 1999.

The site is currently improved by a single dwelling and associated farm sheds in the southern portion of the allotment fronting Fichera Road. The site is located in relatively close proximity to the township of Mareeba with access onto the Kennedy Highway via Tinaroo Creek Road.

The surrounding land uses consist predominantly of large rural land holdings which are used for a range of primary production and cropping activities. It is understood the adjoining allotment to the north has been granted approval for a Tourist Park or something similar which provides for the accommodation of motor-homes and campervans on the site along with the ability to host events. This site is locally known as Ringers Rest.

An aerial image of the site is provided below.



Figure 1 - Locality Plan (source Qld Globe)

2.2 Planning Context

The planning context of the site is summaries as follows:

Regional Plan	Rural Landscape & Rural Production Area
Local Plan	None Applicable
Zone	Rural
Overlays	Agricultural Land (Class A & Class B) Bushfire Hazard –Potential impact buffer Airport Environs Transport Infrastructure – Minor Rural Road

3.0 Application Details

Applicant:	MLK Springs Pty Ltd
Registered Owners:	MLK Springs Pty Ltd

Contact:	Mr Neil Beck 32 Yarun Close WONGA BEACH 4873 Ph: 0477006782
Real Property Description:	Lot 414 on RP835556
Location:	429 Fichera Road Mareeba
Tenure:	Freehold
Total Area:	102.6 Hectares
Local Government Authority:	Mareeba Shire Council
Contaminated Land or Environmental Management Registers:	Nil
Easements and Encumbrances:	Nil
Proposal:	Material Change of Use for Workforce Accommodation

4.0 Proposal

The development proposal seeks to establish workers accommodation on the site. The workers accommodation will be used to accommodate predominately South Pacific Islanders who will not only work on the Applicant's rural properties but may also work on other rural properties within the region. As a consequence of the workers not being restricted to the rural properties owned and managed by the Applicant, the proposed land use does not constitute Rural Workers accommodation as defined in the Planning Scheme, but rather Workforce Accommodation as defined in Schedule 24 of the Planning Regulation 2017.

The proposed development comprises twelve (12) accommodation buildings with each building containing six bedrooms with two persons in each room. The workers accommodation is supported by communal facilities comprising a kitchen, ablutions and laundry facilities in additions to a Manager's Residence who will be responsible for the day to day management and oversight of the facility. Key aspects of the development include:-

- 12 accommodation buildings each containing 6 bedrooms with 2 persons per bedroom;
- 2 bedroom Managers Residence;
- Ablution facilities containing male and female toilets and showers;
- Landscaped setbacks adjacent Fichera Road and adjacent side boundary;

- 2 x central kitchen facilities and communal dining areas which also have the ability to be used as recreational spaces. All central facility buildings are connected to the accommodation buildings via a concrete footpath;
- 2 x volley ball courts;
- Onsite waste water treatment plant and irrigation area;
- Internal access driveway, manoeuvring areas and on-site car parking spaces (coaster buses and car parking spaces) to meet the operational requirements of the development.

A total of 146 persons will be accommodated at the facility including the Manager's Residence.

The development will be accessed via Fichera Road with an access driveway having a width of 4.5 metres. The proposed layout provides for an internal driveway and six car parking spaces and eight coaster bus parks to service the development. Base Plan has been engaged to investigate and detail parking and access including swept path diagrams in addition to other civil design considerations including stormwater management and the establishment of a lawful point of discharge.

Superior Steel Homes have been engaged to prepare building plans of the development inclusive of the accommodation buildings, amenities and central facilities buildings. Plans detailing the proposed buildings along with the civil design considerations form Attachment 2.

An onsite wastewater treatment facility will be established that will service the development. Mr Chris Taylor from Taylor Environmental has been engaged to undertake an assessment of the proposal and prepare a preliminary design and calculations for the treatment of wastewater. The size of the facility proposed constitutes an Environmentally Relevant Act being ERA 63. The report and supporting plans prepared by Taylor Environmental is located at Attachment 3.

With regard to traffic generation, vehicle entry and exit from the site and vehicle movements on Fichera Road, ARO Industries were engaged to investigate these matters and identify any external works triggered by the development. The investigation concludes that widening of the pavement is required in the vicinity of the entry to allow other vehicles to pass. Widening is required for a length of 40m in each direction from the access location onto Fichera Road. The report prepared by ARO Industries Pty Ltd is at Attachment 4.

5.0 Regulatory Framework

5.1 Overview

This section provides an assessment of the application against relevant statutory planning provisions.

5.2 State Planning Policy

The State Planning Policy is relevant to the assessment of this application where a state interest is not appropriately reflected in the Planning Scheme relevant to the site. It is submitted that all State Planning Policies which are relevant to this application are adequately reflected in the Planning Scheme.

5.3 Regional Plan

The Far North Queensland Regional Plan 2009-2031 identifies the site as being within the 'Rural Landscape & Rural Production Area'. The proposal is considered to be consistent with the intent of this designation through the establishment of land uses that are directly aligned with agricultural activities and supports the

economy of Mareeba Shire and the region more broadly which is underpinned by the agricultural industry and aligned goods and services.

5.4 State Development Assessment Provisions

5.4.1 Environmentally Relevant Activities

The development involves onsite wastewater treatment that will cater for over 21EP but not exceeding 100EP as detailed in the report prepared by Taylor Environmental.

While the development involves the establishment of an Environmentally Relevant Activity, i.e. ERA 63 for onsite sewerage treatment, the ERA is not a “Concurrence ERA” as detailed in Schedule 2 Part 13 of the Environmental Protection Regulation 2019 as the treated effluent will be discharged to an onsite irrigation area.

As a consequence, the application does not trigger referral to the State Assessment & Referral Agency (SARA) under Schedule 10 Part 5 of the Planning Regulation 2017.

It is noted however that the Applicant will be required to obtain an environmental authority for the relevant activity under the Environmental Protection Act 1994 prior to commencing the use.

A copy of the report prepared by Taylor Environmental forms Attachment 3.

5.4.2 Vegetation

A significant portion of the site has been historically cleared for agricultural purposes. However, it is noted that the site contains areas of mapped Category B Remnant Vegetation & Category R reef-regrowth watercourse vegetation under the Vegetation Management Act 1999.

Review of the remnant vegetation present on the site indicates that the Category B Remnant Vegetation is of least concern regional ecosystem, identified as being a mix of open forest and woodland plains ranging from mid-dense to sparse, and very sparse in nature. The area of Category R vegetation is also identified of least concern under the regional ecosystem mapping.

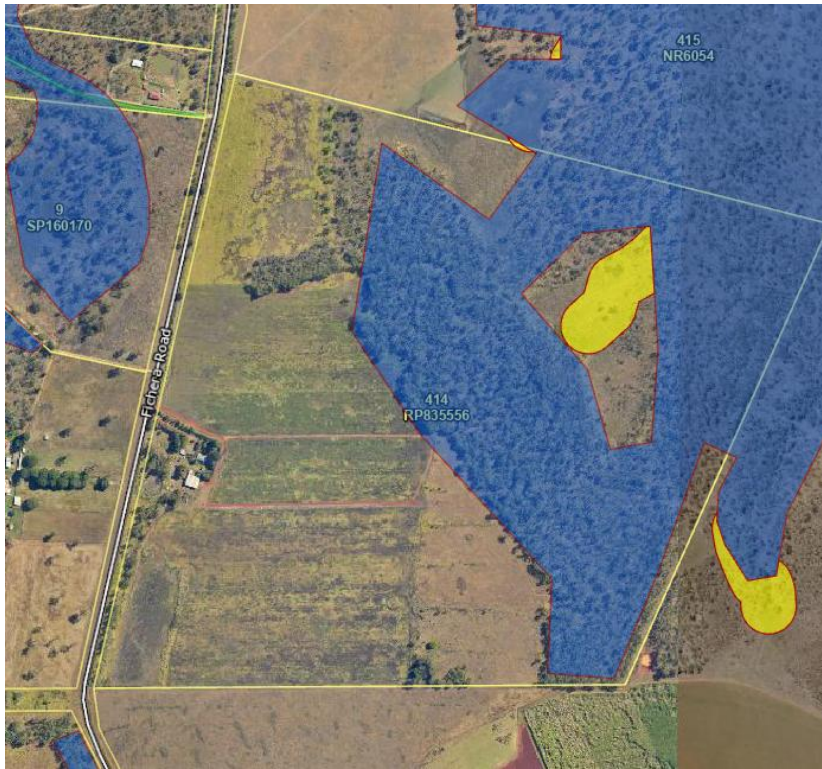


Figure 2 - Extent of Remnant Vegetation – Category B & Small area of Category R in the north-east portion of the site

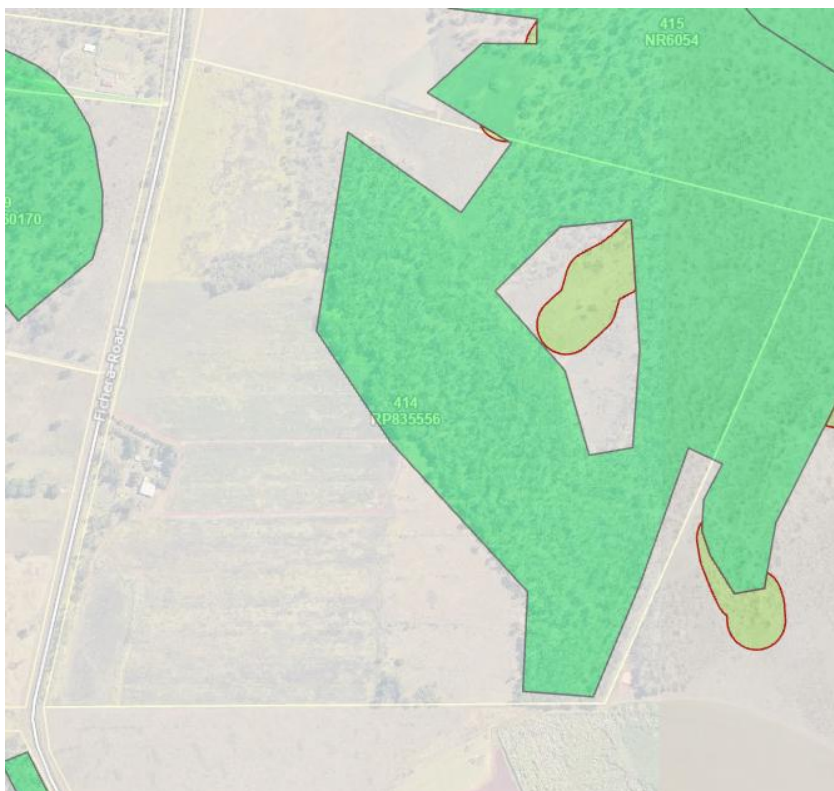


Figure 3 - Regional Ecosystem (Of Least Concern)

The mapped remnant vegetation has been included on the plans of development. As evidenced on the plans, the proposal does not include the clearing of native vegetation with the development being restricted to the open paddock area in the north western portion of the allotment. Small areas of existing vegetation outside of the mapped remnant vegetation are likely to be disturbed as a consequence of installing the onsite wastewater treatment facility. However, the Applicant seeks to keep vegetation disturbance to a minimum.

As a consequence, the development does not give rise to accepted operational works for vegetation clearing nor does the material change of use involves operational works that is assessable development under section 5 referenced in Schedule 10 Part 3 Division 4 Table 3 Column 2 Item (b)(ii).

5.4.3 State Transport Infrastructure & Thresholds

Preliminary discussions with Council officers identified that the proposed development may trigger referral to SARA under Schedule 10 Part 9 Division 4 as it relates to state transport infrastructure and related thresholds.

Schedule 20 of the Planning Regulation 2017 identifies that workforce accommodation exceeding 50 dwellings in areas identified as Local Government Area 2 triggers referral to SARA under Schedule 10 Part 9 of the Planning Regulation 2017. As the proposal does not exceed the nominated threshold limit, referral of the application is not required.

5.5 Planning Scheme Assessment

5.5.1 Impact Assessment

The proposed land use of Workforce Accommodation is listed under the Planning Act 2016 and has not been incorporated into the Planning Scheme. It is likely that the land use of Workforce Accommodation will be incorporated into the Planning Scheme when undertaking future amendments. As a consequence the proposed land use is identified as impact assessable necessitating an assessment against higher-order elements of the Planning Scheme, including the Strategic Framework.

The following section identifies those considerations to the extent relevant to the proposed development and the higher order planning outcomes sought by the Planning Scheme.

5.5.1.2 Settlement Pattern & Built Environment

The proposed development of providing Workforce Accommodation does not conflict with the Settlement Pattern & Built Environment Theme or any of the strategic outcomes being sort.

The following comments are made with respect to Element 3.3.11 – Rural areas of the Settlement Pattern & Built Environment Theme. The proposed development furthers the identified specific outcomes having regard to the following:-

- a) While taking place within the rural area and on land classified as Agricultural Land Class A, the development is very much aligned and compatible with the agricultural industry that the development will service.
- b) It has become increasingly evident that primary producers must have access to a reliable labour force to assist with harvesting and undertaking a range of labour intensive activities associated with primary production. With the lack of available housing within the area, primary producers increasingly have to provide this accommodation on farm.

Developments such as the one proposed will greatly assist with providing the primary producers of the Mareeba Shire with access to a reliable labour force and hence assist with the survival of rural industries into the future.

- c) Landscape buffers have been implemented to mitigate against land use conflicts and to ensure the development is appropriately screened from Fichera Road.

5.5.1.3 Natural Resources & Environment

This Theme has limited applicability to the proposed development as the development is taking place in an existing cleared area of a rural paddock and is not constrained by natural features such as watercourses or wetlands, vegetation or hillslopes.

Biosecurity measures for rural workers is of a high importance and particular protocols and workplace practices will be implemented for the accommodation facility at the operational phase of the development.

The onsite wastewater treatment facility will be operated in accordance with an environmental authority to be obtained by the Applicant at a future time. Obtaining further approvals under the Environmental Protection Act 1994 will be pursued by the Applicant once development approval has been obtained.

No concerns or conflicts with this Theme are identified.

5.5.1.4 Community Identity & Diversity

This particular Theme acknowledges the cultural diversity that is present in the Mareeba Shire and the importance of fostering local arts and culture and celebrating local history and identity.

With the change brought upon the region by Covid 19, and the presence of more non-residents to meet the needs of primary producers, the accommodation of these people within Mareeba Shire will contribute to the cultural diversity which already exists in the community.

Section 3.5.7 – Health acknowledges the importance of providing easily accessible health care services and facilities which meet the community needs. The site is located in relatively close proximity to the town centre of Mareeba providing access to a range of health care facilities and other commercial services. A number of the residents will be licensed to drive the coaster buses and therefore will have access to these facilities.

In terms of scenic amenity, the layout of the development incorporates landscape buffers to Fichera Road and the side boundary which will provide an attractive appearance when viewed from the road as well as provide effective screen overtime. The site is not located on a main scenic corridor – rather a minor rural road.

5.5.1.5 Transport & Infrastructure

The development is entirely consistent with the strategic outcomes with respect to Transport & Infrastructure Theme.

The site is accessible from Fichera Road being a minor rural road in the local traffic hierarchy. As previously identified, ARO Industries were engaged to undertake an assessment of Fichera Road in light of the proposed development. ARO Industries undertook an assessment of the characteristics of Fichera Road in terms of the road geometry, alignment and the traffic that will be generated by the proposed development.

The findings reveal that Fichera Road can accommodate the additional vehicle movements generated by the proposed development. Road widening and tapering is recommended at the entry to the development to facilitate entry and exit movements and to provide for passing opportunities on Fichera Road. Details of these findings are contained within the Traffic Report.

The land has access to the Mareeba- Dimbulah Water Supply Scheme. At present, reticulated water from the scheme is available in the south western corner of the site adjacent Fichera Road. This source of water will be used as the potable water supply for the development. Further treatment of this water will be required to make it fit for human consumption.

As previously identified, wastewater treatment and onsite disposal will be undertaken in accordance with an environmental authority for an ERA 63.

No concerns are raised with stormwater management as stormwater will be appropriately managed and directed to Fichera Road being the lawful point of discharge. Suitable refuse and storage areas will also be provided onsite and appropriately managed.

5.5.1.6 Economic Development

The proposed development furthers the achievement of the strategic outcomes with respect to this Theme to the extent that the strategic outcomes acknowledge the importance of the agricultural land to the community and maintaining viable agricultural industries. This aspect of the Strategic Framework emphasises the importance of primary industries and states that this industry forms the economic base of the region.

Without a labour force to assist with harvesting and other labour intensive activities, the viability of agricultural industries in Mareeba Shire and the region more broadly will be diminished overtime.

The proposal provides accommodation for a labour force and seasonal workers and in turn, will assist with maintaining viable rural industries in the Mareeba Shire and surrounding districts.

5.5.2 Applicable Codes

The following designations and overlays as contained within the Planning Scheme are applicable to the site:-

- Rural zone;
- Agricultural Land – Class A & Class B
- Bushfire Hazard – Potential impact buffer
- Airport Environs (3-6km from Airport)

Being a development application for Workforce Accommodation and having regard to the location of the site and the use proposed, the following codes are considered applicable to the proposed development:-

- Rural zone code;
- Agricultural land overlay code;
- Bushfire overlay code;
- Accommodation Activities code;
- Landscaping code;
- Parking & access code; and
- Works, services & infrastructure code

A review of the applicable codes has been undertaken and the following information and statements are provided to assist Council with the assessment.

- The establishment of Workforce Accommodation is an anticipated and compatible land use to take place in the Rural zone.

The zone code seeks to ensure land within the agricultural land precinct is not alienated and preserved for agricultural purposes. Consistent with this development outcome, the proposed development occupies a relatively small footprint of the site and has been designed to occupy the least area of the site as possible while meeting the needs of the Applicant.

The balance of the parcel of land is intended to be used for agricultural pursuits in the form of either cattle grazing or exploring other primary production pursuits. Either way, the balance of the land will be carefully managed as to not adversely impact on the proposed workers camp by way of dust, noise and application of pesticides and herbicides as examples. The ongoing agricultural use of the land is anticipated through low intensity and compatible rural uses.

All buildings and structures have been setback from boundaries to preserve the rural character and amenity of the locality. There are no immediate neighbours or dwellings that are going to be impacted by the proposed development.

- While not a land use that falls within the Accommodation Activities land use group, regard has been given to the content of the land use code. The proposed development is generally compliant with the purpose and outcomes sought by the code. An assessment against the land use code forms Attachment 5.
- For the purpose of the Agricultural Land Overlay Code, the development is proposed to locate on land contained within the Class A designation. It is noted in the Overlay Code that assessment benchmark AO1 provides an ability to locate buildings on Class A land provided such buildings are associated with cropping.

The development seeks to establish accommodation for a workforce to assist with the harvesting of fruit and primary products and therefore complies with the assessment benchmark. It is also noted that there is not an ability to locate the development on Class B land within the allotment due to the constraints around clearing remnant vegetation and without giving rise to other conflicts such as bushfire considerations.

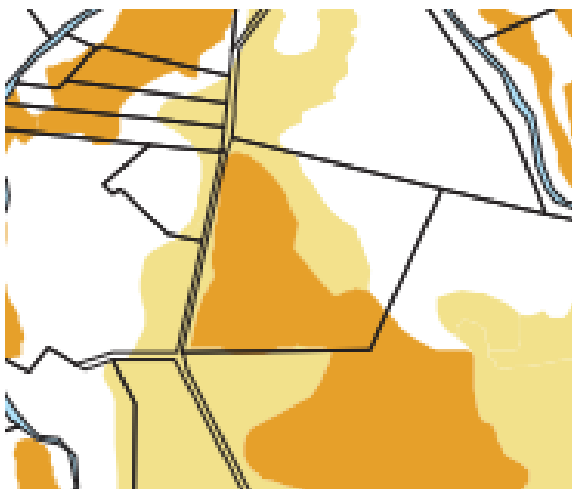


Figure 5 – Agricultural land overlay mapping

- The area of the site to accommodate the development is not constrained by natural features such as vegetation, area of high ecological value or slope. The site is gently sloping with the development being designed in a manner to accommodate the gentle grade. The accommodation facility will not be visually obtrusive or impact on the rural scenic amenity of the locality.

The site is identified as being affected by the Bushfire overlay with the band of Remnant Vegetation being contained within the medium bushfire intensity designation and the potential impact buffer being outside of this area as detailed below.

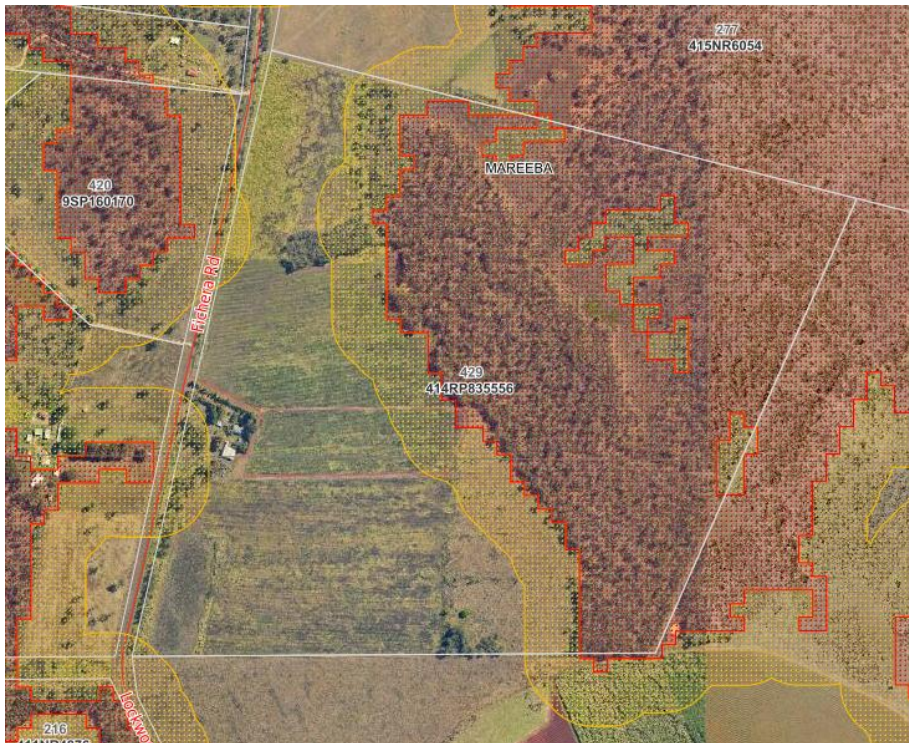


Figure 4 - Bushfire hazard Overlay mapping

The proposed accommodation facilities will not be impacted or subjected to any bushfire hazard event due to the siting of the facility in the north western portion of the allotment. As a consequence, an assessment of the development against the Bushfire overlay is not included in Attachment 5.

- The accompanying specialist's reports cover onsite wastewater disposal and traffic impacts associated with the proposed development. Both reports do not raise any issues with regard to servicing arrangements for the development.

The proposal plans detail stormwater management considerations in addition to access, onsite parking and vehicle manoeuvres.

- In terms of landscaping and the requirements of the Landscaping Code, landscape buffers are proposed adjacent the Fichera Road frontage and adjacent the side boundary. It is also indicatively shown that other vegetation and shade trees will be provided in and around the central facility buildings, amenities building and volleyball courts.
- While the site is affected by the Airport Environs Overlay, the nature and location of the proposed development has no impact on the ongoing operations of the Airport.

- The development will be serviced with sufficient on-site parking areas which accommodate a range of vehicle sizes suitable for the transportation of workers around to the various rural properties. Parking areas are located adjacent the Manager's Residence with parallel bus parking bays adjacent the internal driveway.

To promote and enable self sufficiency of the rural workers, there is an ability for workers to become competent in driving a vehicle and once qualified, will be issued with a valid driver's license. Amongst the workers, there will be a number of residents who will have a valid driver's license and will have access to the vehicles so they can take other workers to shops and undertake other activities as required. It is an important aspect of the proposal to note that the residents will have access to suitable transport to meet their needs.

- With respect to waste, the collection and disposal of waste will take place within a purposely designed facility that will be of a suitable dimension and size to accommodate bulk bins. The exact location of the facility is yet to be determined however it will be placed in an area that is accessible from the internal driveway and located in a position as to not cause a nuisance with regard to potential odour. The frequency of collection of waste will be a matter for the owner and the waste collection contractors to monitor and manage. The facility will be roofed and bunded, connected to the onsite wastewater facility and be provided with water supply.

It is requested that Council place a condition on the approval regarding the requirement to provide such a facility.

In addition to the above information, a detailed assessment against the applicable codes forms Attachment 5.

6.0 Conclusion

This Planning Report has been prepared on behalf of MLK Springs Pty Ltd ('the Applicant') for a Material Change of Use for Workforce Accommodation at 429 Fichera Road Mareeba.

The development proposed is 'assessable development' as defined under Section 44 of the *Planning Act 2016* and therefore requires assessment against local Planning Scheme provisions and relevant State legislation. This report provides an overview of the development proposed and addresses the various planning considerations relevant to Council in addition to the various state interests to the extent relevant.

In summary, the report concludes that:

- The submitted information conforms to the requirements for making an 'impact assessable' development application under the *Planning Act 2016* to the extent applicable to the development proposed; and
- That the development as proposed does not conflict with the overall outcomes sought by the performance outcomes and assessment benchmarks of applicable codes. The proposal has planning merit and approval of the application is commended to Council.

In light of the above, the application is presented for Council's favourable consideration.

I trust the information provided is sufficient for Council's purposes. However should you require any further information, please do not hesitate to contact the undersigned.

Yours faithfully



Neil Beck
Town Planner
0477006782

- Attachment 1** – DA Form 1 & Owner's Consent
- Attachment 2** – Proposal Plans
- Attachment 3** – Taylor Environmental – Onsite Wastewater Assessment
- Attachment 4** – ARO Industries – Traffic Report
- Attachment 5** – Statements of Planning Scheme Code Compliance
- Attachment 6** – Title Search

Attachment 1 - DA Form 1 & Owners Consent

DA Form 1 – Development application details

Approved form (version 1.3 effective 28 September 2020) made under section 282 of the Planning Act 2016.

This form **must** be used to make a development application **involving code assessment or impact assessment**, except when applying for development involving only building work.

For a development application involving **building work only**, use *DA Form 2 – Building work details*.

For a development application involving **building work associated with any other type of assessable development (i.e. material change of use, operational work or reconfiguring a lot)**, use this form (*DA Form 1*) and parts 4 to 6 of *DA Form 2 – Building work details*.

Unless stated otherwise, all parts of this form **must** be completed in full and all required supporting information **must** accompany the development application.

One or more additional pages may be attached as a schedule to this development application if there is insufficient space on the form to include all the necessary information.

Note: All terms used in this form have the meaning given under the Planning Act 2016, the Planning Regulation 2017, or the Development Assessment Rules (DA Rules).

PART 1 – APPLICANT DETAILS

1) Applicant details	
Applicant name(s) <i>(individual or company full name)</i>	MLK SPRINGS PTY LTD
Contact name <i>(only applicable for companies)</i>	C/- NEIL BECK
Postal address <i>(P.O. Box or street address)</i>	32 YARUN CLOSE
Suburb	WONGA BEACH
State	QUEENSLAND
Postcode	4873
Country	AUSTRALIA
Contact number	0477006782
Email address <i>(non-mandatory)</i>	NEILRB11@OUTLOOK.COM
Mobile number <i>(non-mandatory)</i>	0477006782
Fax number <i>(non-mandatory)</i>	-
Applicant's reference number(s) <i>(if applicable)</i>	-

2) Owner's consent

2.1) Is written consent of the owner required for this development application?

- Yes – the written consent of the owner(s) is attached to this development application
 No – proceed to 3)

PART 2 – LOCATION DETAILS

3) Location of the premises (complete 3.1) or 3.2), and 3.3) as applicable)

Note: Provide details below and attach a site plan for any or all premises part of the development application. For further information, see DA Forms Guide: Relevant plans.

3.1) Street address and lot on plan

- Street address **AND** lot on plan (all lots must be listed), **or**
 Street address **AND** lot on plan for an adjoining or adjacent property of the premises (appropriate for development in water but adjoining or adjacent to land e.g. jetty, pontoon. All lots must be listed).

a)	Unit No.	Street No.	Street Name and Type	Suburb
		429	FICHERA ROAD	MAREEBA
	Postcode	Lot No.	Plan Type and Number (e.g. RP, SP)	Local Government Area(s)
		414	RP835556	MAREEBA SHIRE COUNCIL
b)	Unit No.	Street No.	Street Name and Type	Suburb
	Postcode	Lot No.	Plan Type and Number (e.g. RP, SP)	Local Government Area(s)

3.2) Coordinates of premises (appropriate for development in remote areas, over part of a lot or in water not adjoining or adjacent to land e.g. channel dredging in Moreton Bay)

Note: Place each set of coordinates in a separate row.

- Coordinates of premises by longitude and latitude

Longitude(s)	Latitude(s)	Datum	Local Government Area(s) (if applicable)
		<input type="checkbox"/> WGS84 <input type="checkbox"/> GDA94 <input type="checkbox"/> Other: <input type="text"/>	

- Coordinates of premises by easting and northing

Easting(s)	Northing(s)	Zone Ref.	Datum	Local Government Area(s) (if applicable)
		<input type="checkbox"/> 54 <input type="checkbox"/> 55 <input type="checkbox"/> 56	<input type="checkbox"/> WGS84 <input type="checkbox"/> GDA94 <input type="checkbox"/> Other: <input type="text"/>	

3.3) Additional premises

- Additional premises are relevant to this development application and the details of these premises have been attached in a schedule to this development application
 Not required

4) Identify any of the following that apply to the premises and provide any relevant details

- In or adjacent to a water body or watercourse or in or above an aquifer

Name of water body, watercourse or aquifer:

- On strategic port land under the *Transport Infrastructure Act 1994*

Lot on plan description of strategic port land:

Name of port authority for the lot:

- In a tidal area

Name of local government for the tidal area (if applicable):

Name of port authority for tidal area (if applicable):

- On airport land under the *Airport Assets (Restructuring and Disposal) Act 2008*

Name of airport:	
<input type="checkbox"/> Listed on the Environmental Management Register (EMR) under the <i>Environmental Protection Act 1994</i>	
EMR site identification:	
<input type="checkbox"/> Listed on the Contaminated Land Register (CLR) under the <i>Environmental Protection Act 1994</i>	
CLR site identification:	

5) Are there any existing easements over the premises?

Note: Easement uses vary throughout Queensland and are to be identified correctly and accurately. For further information on easements and how they may affect the proposed development, see [DA Forms Guide](#).

- Yes – All easement locations, types and dimensions are included in plans submitted with this development application
- No

PART 3 – DEVELOPMENT DETAILS

Section 1 – Aspects of development

6.1) Provide details about the first development aspect

a) What is the type of development? *(tick only one box)*

- Material change of use Reconfiguring a lot Operational work Building work

b) What is the approval type? *(tick only one box)*

- Development permit Preliminary approval Preliminary approval that includes a variation approval

c) What is the level of assessment?

- Code assessment Impact assessment *(requires public notification)*

d) Provide a brief description of the proposal *(e.g. 6 unit apartment building defined as multi-unit dwelling, reconfiguration of 1 lot into 3 lots):*

WORKFORCE ACCOMMODATION

e) Relevant plans

Note: Relevant plans are required to be submitted for all aspects of this development application. For further information, see [DA Forms guide: Relevant plans](#).

- Relevant plans of the proposed development are attached to the development application

6.2) Provide details about the second development aspect

a) What is the type of development? *(tick only one box)*

- Material change of use Reconfiguring a lot Operational work Building work

b) What is the approval type? *(tick only one box)*

- Development permit Preliminary approval Preliminary approval that includes a variation approval

c) What is the level of assessment?

- Code assessment Impact assessment *(requires public notification)*

d) Provide a brief description of the proposal *(e.g. 6 unit apartment building defined as multi-unit dwelling, reconfiguration of 1 lot into 3 lots):*

e) Relevant plans

Note: Relevant plans are required to be submitted for all aspects of this development application. For further information, see [DA Forms Guide: Relevant plans](#).

- Relevant plans of the proposed development are attached to the development application

6.3) Additional aspects of development

- Additional aspects of development are relevant to this development application and the details for these aspects that would be required under Part 3 Section 1 of this form have been attached to this development application

Not required

Section 2 – Further development details

7) Does the proposed development application involve any of the following?

Material change of use	<input checked="" type="checkbox"/> Yes – complete division 1 if assessable against a local planning instrument
Reconfiguring a lot	<input type="checkbox"/> Yes – complete division 2
Operational work	<input type="checkbox"/> Yes – complete division 3
Building work	<input type="checkbox"/> Yes – complete <i>DA Form 2 – Building work details</i>

Division 1 – Material change of use

Note: This division is only required to be completed if any part of the development application involves a material change of use assessable against a local planning instrument.

8.1) Describe the proposed material change of use

Provide a general description of the proposed use	Provide the planning scheme definition <i>(include each definition in a new row)</i>	Number of dwelling units <i>(if applicable)</i>	Gross floor area (m ²) <i>(if applicable)</i>
WORKFORCE ACCOMMODATION	NOT DEFINED IN THE PLANNING SCHEME	REFER TO ATTACHED PLANNING REPORT	SEE ATTACHED

8.2) Does the proposed use involve the use of existing buildings on the premises?

Yes

No

Division 2 – Reconfiguring a lot

Note: This division is only required to be completed if any part of the development application involves reconfiguring a lot.

9.1) What is the total number of existing lots making up the premises?

9.2) What is the nature of the lot reconfiguration? *(tick all applicable boxes)*

Subdivision *(complete 10)*

Dividing land into parts by agreement *(complete 11)*

Boundary realignment *(complete 12)*

Creating or changing an easement giving access to a lot from a constructed road *(complete 13)*

10) Subdivision

10.1) For this development, how many lots are being created and what is the intended use of those lots:

Intended use of lots created	Residential	Commercial	Industrial	Other, please specify:
Number of lots created				

10.2) Will the subdivision be staged?

Yes – provide additional details below

No

How many stages will the works include?

What stage(s) will this development application apply to?

11) Dividing land into parts by agreement – how many parts are being created and what is the intended use of the parts?

Intended use of parts created	Residential	Commercial	Industrial	Other, please specify:
Number of parts created				

12) Boundary realignment

12.1) What are the current and proposed areas for each lot comprising the premises?

Current lot		Proposed lot	
Lot on plan description	Area (m ²)	Lot on plan description	Area (m ²)

12.2) What is the reason for the boundary realignment?

--

13) What are the dimensions and nature of any existing easements being changed and/or any proposed easement? (attach schedule if there are more than two easements)

Existing or proposed?	Width (m)	Length (m)	Purpose of the easement? (e.g. pedestrian access)	Identify the land/lot(s) benefitted by the easement

Division 3 – Operational work

Note: This division is only required to be completed if any part of the development application involves operational work.

14.1) What is the nature of the operational work?

<input type="checkbox"/> Road work	<input type="checkbox"/> Stormwater	<input type="checkbox"/> Water infrastructure
<input type="checkbox"/> Drainage work	<input type="checkbox"/> Earthworks	<input type="checkbox"/> Sewage infrastructure
<input type="checkbox"/> Landscaping	<input type="checkbox"/> Signage	<input type="checkbox"/> Clearing vegetation
<input type="checkbox"/> Other – please specify:		

14.2) Is the operational work necessary to facilitate the creation of new lots? (e.g. subdivision)

<input type="checkbox"/> Yes – specify number of new lots:	
<input type="checkbox"/> No	

14.3) What is the monetary value of the proposed operational work? (include GST, materials and labour)

--

PART 4 – ASSESSMENT MANAGER DETAILS

15) Identify the assessment manager(s) who will be assessing this development application

MAREEBA SHIRE COUNCIL

16) Has the local government agreed to apply a superseded planning scheme for this development application?

<input type="checkbox"/> Yes – a copy of the decision notice is attached to this development application
<input type="checkbox"/> The local government is taken to have agreed to the superseded planning scheme request – relevant documents attached
<input checked="" type="checkbox"/> No

PART 5 – REFERRAL DETAILS

17) Does this development application include any aspects that have any referral requirements?

Note: A development application will require referral if prescribed by the Planning Regulation 2017.

No, there are no referral requirements relevant to any development aspects identified in this development application – proceed to Part 6

Matters requiring referral to the **Chief Executive of the Planning Act 2016:**

- Clearing native vegetation
- Contaminated land (*unexploded ordnance*)
- Environmentally relevant activities (ERA) (*only if the ERA has not been devolved to a local government*)
- Fisheries – aquaculture
- Fisheries – declared fish habitat area
- Fisheries – marine plants
- Fisheries – waterway barrier works
- Hazardous chemical facilities
- Heritage places – Queensland heritage place (*on or near a Queensland heritage place*)
- Infrastructure-related referrals – designated premises
- Infrastructure-related referrals – state transport infrastructure
- Infrastructure-related referrals – State transport corridor and future State transport corridor
- Infrastructure-related referrals – State-controlled transport tunnels and future state-controlled transport tunnels
- Infrastructure-related referrals – near a state-controlled road intersection
- Koala habitat in SEQ region – interfering with koala habitat in koala habitat areas outside koala priority areas
- Koala habitat in SEQ region – key resource areas
- Ports – Brisbane core port land – near a State transport corridor or future State transport corridor
- Ports – Brisbane core port land – environmentally relevant activity (ERA)
- Ports – Brisbane core port land – tidal works or work in a coastal management district
- Ports – Brisbane core port land – hazardous chemical facility
- Ports – Brisbane core port land – taking or interfering with water
- Ports – Brisbane core port land – referable dams
- Ports – Brisbane core port land – fisheries
- Ports – Land within Port of Brisbane’s port limits (*below high-water mark*)
- SEQ development area
- SEQ regional landscape and rural production area or SEQ rural living area – tourist activity or sport and recreation activity
- SEQ regional landscape and rural production area or SEQ rural living area – community activity
- SEQ regional landscape and rural production area or SEQ rural living area – indoor recreation
- SEQ regional landscape and rural production area or SEQ rural living area – urban activity
- SEQ regional landscape and rural production area or SEQ rural living area – combined use
- Tidal works or works in a coastal management district
- Reconfiguring a lot in a coastal management district or for a canal
- Erosion prone area in a coastal management district
- Urban design
- Water-related development – taking or interfering with water
- Water-related development – removing quarry material (*from a watercourse or lake*)
- Water-related development – referable dams
- Water-related development – levees (*category 3 levees only*)
- Wetland protection area

Matters requiring referral to the **local government:**

- Airport land
- Environmentally relevant activities (ERA) (*only if the ERA has been devolved to local government*)

<input type="checkbox"/> Heritage places – Local heritage places
Matters requiring referral to the Chief Executive of the distribution entity or transmission entity: <input type="checkbox"/> Infrastructure-related referrals – Electricity infrastructure
Matters requiring referral to: <ul style="list-style-type: none"> • The Chief Executive of the holder of the licence, if not an individual • The holder of the licence, if the holder of the licence is an individual <input type="checkbox"/> Infrastructure-related referrals – Oil and gas infrastructure
Matters requiring referral to the Brisbane City Council: <input type="checkbox"/> Ports – Brisbane core port land
Matters requiring referral to the Minister responsible for administering the Transport Infrastructure Act 1994: <input type="checkbox"/> Ports – Brisbane core port land <i>(where inconsistent with the Brisbane port LUP for transport reasons)</i> <input type="checkbox"/> Ports – Strategic port land
Matters requiring referral to the relevant port operator , if applicant is not port operator: <input type="checkbox"/> Ports – Land within Port of Brisbane's port limits <i>(below high-water mark)</i>
Matters requiring referral to the Chief Executive of the relevant port authority: <input type="checkbox"/> Ports – Land within limits of another port <i>(below high-water mark)</i>
Matters requiring referral to the Gold Coast Waterways Authority: <input type="checkbox"/> Tidal works or work in a coastal management district <i>(in Gold Coast waters)</i>
Matters requiring referral to the Queensland Fire and Emergency Service: <input type="checkbox"/> Tidal works or work in a coastal management district <i>(involving a marina (more than six vessel berths))</i>

18) Has any referral agency provided a referral response for this development application?		
<input type="checkbox"/> Yes – referral response(s) received and listed below are attached to this development application		
<input type="checkbox"/> No		
Referral requirement	Referral agency	Date of referral response
Identify and describe any changes made to the proposed development application that was the subject of the referral response and this development application, or include details in a schedule to this development application <i>(if applicable)</i> .		

PART 6 – INFORMATION REQUEST

19) Information request under Part 3 of the DA Rules
<input checked="" type="checkbox"/> I agree to receive an information request if determined necessary for this development application
<input type="checkbox"/> I do not agree to accept an information request for this development application
Note: <i>By not agreeing to accept an information request I, the applicant, acknowledge:</i>
<ul style="list-style-type: none"> • <i>that this development application will be assessed and decided based on the information provided when making this development application and the assessment manager and any referral agencies relevant to the development application are not obligated under the DA Rules to accept any additional information provided by the applicant for the development application unless agreed to by the relevant parties</i> • <i>Part 3 of the DA Rules will still apply if the application is an application listed under section 11.3 of the DA Rules.</i>
<i>Further advice about information requests is contained in the DA Forms Guide.</i>

PART 7 – FURTHER DETAILS

20) Are there any associated development applications or current approvals? (e.g. a preliminary approval)			
<input type="checkbox"/> Yes – provide details below or include details in a schedule to this development application <input checked="" type="checkbox"/> No			
List of approval/development application references	Reference number	Date	Assessment manager
<input type="checkbox"/> Approval <input type="checkbox"/> Development application			
<input type="checkbox"/> Approval <input type="checkbox"/> Development application			

21) Has the portable long service leave levy been paid? (only applicable to development applications involving building work or operational work)		
<input type="checkbox"/> Yes – a copy of the receipted QLeave form is attached to this development application <input type="checkbox"/> No – I, the applicant will provide evidence that the portable long service leave levy has been paid before the assessment manager decides the development application. I acknowledge that the assessment manager may give a development approval only if I provide evidence that the portable long service leave levy has been paid <input checked="" type="checkbox"/> Not applicable (e.g. building and construction work is less than \$150,000 excluding GST)		
Amount paid	Date paid (dd/mm/yy)	QLeave levy number (A, B or E)
\$		

22) Is this development application in response to a show cause notice or required as a result of an enforcement notice?
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

23) Further legislative requirements			
Environmentally relevant activities			
23.1) Is this development application also taken to be an application for an environmental authority for an Environmentally Relevant Activity (ERA) under section 115 of the <i>Environmental Protection Act 1994</i> ?			
<input type="checkbox"/> Yes – the required attachment (form ESR/2015/1791) for an application for an environmental authority accompanies this development application, and details are provided in the table below <input checked="" type="checkbox"/> No <i>Note: Application for an environmental authority can be found by searching "ESR/2015/1791" as a search term at www.qld.gov.au. An ERA requires an environmental authority to operate. See www.business.qld.gov.au for further information.</i>			
Proposed ERA number:		Proposed ERA threshold:	
Proposed ERA name:			
<input type="checkbox"/> Multiple ERAs are applicable to this development application and the details have been attached in a schedule to this development application.			
Hazardous chemical facilities			
23.2) Is this development application for a hazardous chemical facility ?			
<input type="checkbox"/> Yes – Form 69: Notification of a facility exceeding 10% of schedule 15 threshold is attached to this development application <input checked="" type="checkbox"/> No <i>Note: See www.business.qld.gov.au for further information about hazardous chemical notifications.</i>			

Clearing native vegetation

23.3) Does this development application involve **clearing native vegetation** that requires written confirmation that the chief executive of the *Vegetation Management Act 1999* is satisfied the clearing is for a relevant purpose under section 22A of the *Vegetation Management Act 1999*?

- Yes – this development application includes written confirmation from the chief executive of the *Vegetation Management Act 1999* (s22A determination)
- No

Note: 1. Where a development application for operational work or material change of use requires a s22A determination and this is not included, the development application is prohibited development.
2. See <https://www.qld.gov.au/environment/land/vegetation/applying> for further information on how to obtain a s22A determination.

Environmental offsets

23.4) Is this development application taken to be a prescribed activity that may have a significant residual impact on a **prescribed environmental matter** under the *Environmental Offsets Act 2014*?

- Yes – I acknowledge that an environmental offset must be provided for any prescribed activity assessed as having a significant residual impact on a prescribed environmental matter
- No

Note: The environmental offset section of the Queensland Government's website can be accessed at www.qld.gov.au for further information on environmental offsets.

Koala habitat in SEQ Region

23.5) Does this development application involve a material change of use, reconfiguring a lot or operational work which is assessable development under Schedule 10, Part 10 of the Planning Regulation 2017?

- Yes – the development application involves premises in the koala habitat area in the koala priority area
- Yes – the development application involves premises in the koala habitat area outside the koala priority area
- No

Note: If a koala habitat area determination has been obtained for this premises and is current over the land, it should be provided as part of this development application. See koala habitat area guidance materials at www.des.qld.gov.au for further information.

Water resources

23.6) Does this development application involve **taking or interfering with underground water through an artesian or subartesian bore, taking or interfering with water in a watercourse, lake or spring, or taking overland flow water under the Water Act 2000?**

- Yes – the relevant template is completed and attached to this development application and I acknowledge that a relevant authorisation or licence under the *Water Act 2000* may be required prior to commencing development
- No

Note: Contact the Department of Natural Resources, Mines and Energy at www.dnrme.qld.gov.au for further information.

DA templates are available from <https://planning.dsdmip.qld.gov.au/>. If the development application involves:

- Taking or interfering with underground water through an artesian or subartesian bore: complete DA Form 1 Template 1
- Taking or interfering with water in a watercourse, lake or spring: complete DA Form 1 Template 2
- Taking overland flow water: complete DA Form 1 Template 3.

Waterway barrier works

23.7) Does this application involve **waterway barrier works?**

- Yes – the relevant template is completed and attached to this development application
- No

DA templates are available from <https://planning.dsdmip.qld.gov.au/>. For a development application involving waterway barrier works, complete DA Form 1 Template 4.

Marine activities

23.8) Does this development application involve **aquaculture, works within a declared fish habitat area or removal, disturbance or destruction of marine plants?**

- Yes – an associated resource allocation authority is attached to this development application, if required under the *Fisheries Act 1994*
- No

Note: See guidance materials at www.daf.qld.gov.au for further information.

Quarry materials from a watercourse or lake

23.9) Does this development application involve the **removal of quarry materials from a watercourse or lake** under the *Water Act 2000*?

- Yes – I acknowledge that a quarry material allocation notice must be obtained prior to commencing development
 No

Note: Contact the Department of Natural Resources, Mines and Energy at www.dnrme.qld.gov.au and www.business.qld.gov.au for further information.

Quarry materials from land under tidal waters

23.10) Does this development application involve the **removal of quarry materials from land under tidal water** under the *Coastal Protection and Management Act 1995*?

- Yes – I acknowledge that a quarry material allocation notice must be obtained prior to commencing development
 No

Note: Contact the Department of Environment and Science at www.des.qld.gov.au for further information.

Referable dams

23.11) Does this development application involve a **referable dam** required to be failure impact assessed under section 343 of the *Water Supply (Safety and Reliability) Act 2008* (the *Water Supply Act*)?

- Yes – the 'Notice Accepting a Failure Impact Assessment' from the chief executive administering the *Water Supply Act* is attached to this development application
 No

Note: See guidance materials at www.dnrme.qld.gov.au for further information.

Tidal work or development within a coastal management district

23.12) Does this development application involve **tidal work or development in a coastal management district**?

- Yes – the following is included with this development application:
- Evidence the proposal meets the code for assessable development that is prescribed tidal work (*only required if application involves prescribed tidal work*)
 - A certificate of title
- No

Note: See guidance materials at www.des.qld.gov.au for further information.

Queensland and local heritage places

23.13) Does this development application propose development on or adjoining a place entered in the **Queensland heritage register** or on a place entered in a local government's **Local Heritage Register**?

- Yes – details of the heritage place are provided in the table below
 No

Note: See guidance materials at www.des.qld.gov.au for information requirements regarding development of Queensland heritage places.

Name of the heritage place:		Place ID:	
-----------------------------	--	-----------	--

Brothels

23.14) Does this development application involve a **material change of use for a brothel**?

- Yes – this development application demonstrates how the proposal meets the code for a development application for a brothel under Schedule 3 of the *Prostitution Regulation 2014*
 No

Decision under section 62 of the Transport Infrastructure Act 1994

23.15) Does this development application involve new or changed access to a state-controlled road?

- Yes – this application will be taken to be an application for a decision under section 62 of the *Transport Infrastructure Act 1994* (subject to the conditions in section 75 of the *Transport Infrastructure Act 1994* being satisfied)
 No

Walkable neighbourhoods assessment benchmarks under Schedule 12A of the Planning Regulation

23.16) Does this development application involve reconfiguring a lot into 2 or more lots in certain residential zones (except rural residential zones), where at least one road is created or extended?

- Yes – Schedule 12A is applicable to the development application and the assessment benchmarks contained in schedule 12A have been considered
- No

Note: See guidance materials at www.planning.dsdmip.qld.gov.au for further information.

PART 8 – CHECKLIST AND APPLICANT DECLARATION

24) Development application checklist

I have identified the assessment manager in question 15 and all relevant referral requirement(s) in question 17

Yes

Note: See the *Planning Regulation 2017* for referral requirements

If building work is associated with the proposed development, Parts 4 to 6 of [DA Form 2 – Building work details](#) have been completed and attached to this development application

Yes

Not applicable

Supporting information addressing any applicable assessment benchmarks is with the development application

Note: This is a mandatory requirement and includes any relevant templates under question 23, a planning report and any technical reports required by the relevant categorising instruments (e.g. local government planning schemes, State Planning Policy, State Development Assessment Provisions). For further information, see [DA Forms Guide: Planning Report Template](#).

Yes

Relevant plans of the development are attached to this development application

Note: Relevant plans are required to be submitted for all aspects of this development application. For further information, see [DA Forms Guide: Relevant plans](#).

Yes

The portable long service leave levy for QLeave has been paid, or will be paid before a development permit is issued (see 21)

Yes

Not applicable

25) Applicant declaration

By making this development application, I declare that all information in this development application is true and correct

Where an email address is provided in Part 1 of this form, I consent to receive future electronic communications from the assessment manager and any referral agency for the development application where written information is required or permitted pursuant to sections 11 and 12 of the *Electronic Transactions Act 2001*

Note: It is unlawful to intentionally provide false or misleading information.

Privacy – Personal information collected in this form will be used by the assessment manager and/or chosen assessment manager, any relevant referral agency and/or building certifier (including any professional advisers which may be engaged by those entities) while processing, assessing and deciding the development application. All information relating to this development application may be available for inspection and purchase, and/or published on the assessment manager's and/or referral agency's website.

Personal information will not be disclosed for a purpose unrelated to the *Planning Act 2016*, *Planning Regulation 2017* and the DA Rules except where:

- such disclosure is in accordance with the provisions about public access to documents contained in the *Planning Act 2016* and the *Planning Regulation 2017*, and the access rules made under the *Planning Act 2016* and *Planning Regulation 2017*; or
- required by other legislation (including the *Right to Information Act 2009*); or
- otherwise required by law.

This information may be stored in relevant databases. The information collected will be retained as required by the *Public Records Act 2002*.

PART 9 – FOR COMPLETION OF THE ASSESSMENT MANAGER – FOR OFFICE USE ONLY

Date received: Reference number(s):

Notification of engagement of alternative assessment manager	
Prescribed assessment manager	
Name of chosen assessment manager	
Date chosen assessment manager engaged	
Contact number of chosen assessment manager	
Relevant licence number(s) of chosen assessment manager	

QLeave notification and payment			
<i>Note: For completion by assessment manager if applicable</i>			
Description of the work			
QLeave project number			
Amount paid (\$)		Date paid (dd/mm/yy)	
Date receipted form sighted by assessment manager			
Name of officer who sighted the form			

**Owner's consent for making a development application under the
*Planning Act 2016***

MLK Springs Pty Ltd - A C N 619 216 376 as Trustee Under Instrument 718838878

as owners of the premises identified as follows:


Lot 414 on RP835556 being 429 Fichera Road Mareeba


consent to the making of a development application under the *Planning Act 2016* by:

Neil Beck

on the premises described above for:

Material Change of Use for Workforce Accommodation


Mathew Kleyn
(Director)


Louise Kleyn
(Director)

Dated 16 / 12 / 2022

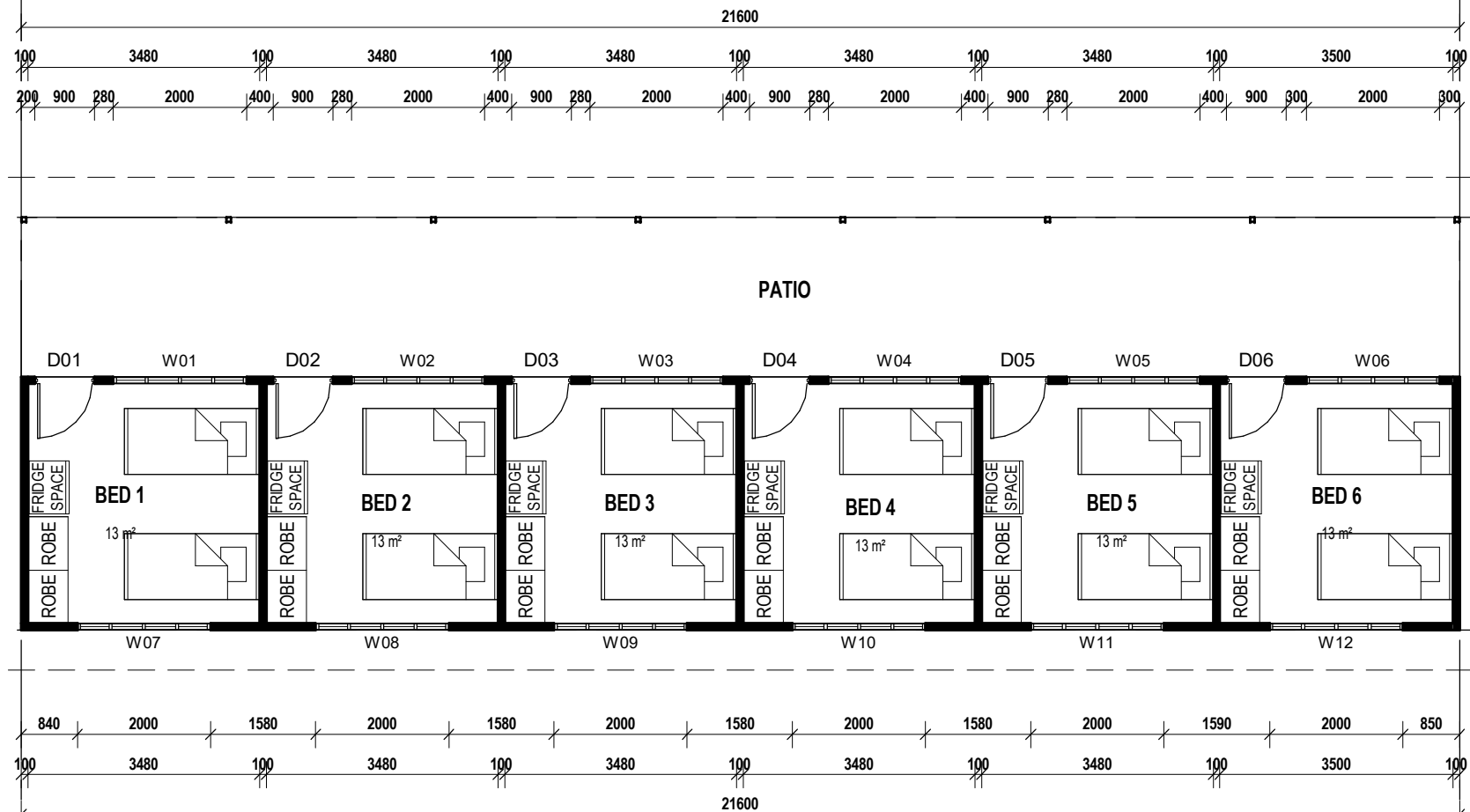
Attachment 2 – Proposal Plans



ELEVATION KEY

FLOOR AREAS LEGEND	
BREEZEWAY	96.36 m ²
UNITS 1, 2, 3	60.72 m ²
UNITS 4, 5, 6	60.72 m ²
KITCHEN	25.55 m ²
	243.35 m ²

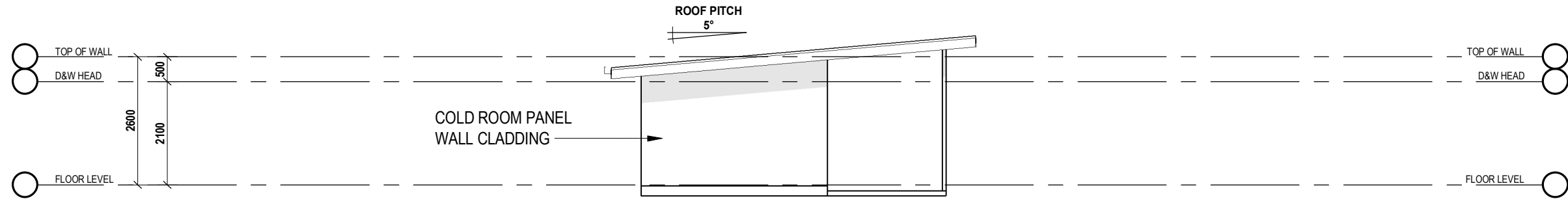
Door Schedule						
Mark	Room	Height	Width	Comments	Description	
D01	BED 1	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR	
D02	BED 2	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR	
D03	BED 3	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR	
D04	BED 4	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR	
D05	BED 5	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR	
D06	BED 6	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR	



Window Schedule						
Mark	Room	Height	Width	Head Height	Description	
W01	BED 1	1200 mm	2000 mm	2100 mm	OXXO SLIDING GLASS WINDOW	
W02	BED 2	1200 mm	2000 mm	2100 mm	OXXO SLIDING GLASS WINDOW	
W03	BED 3	1200 mm	2000 mm	2100 mm	OXXO SLIDING GLASS WINDOW	
W04	BED 4	1200 mm	2000 mm	2100 mm	OXXO SLIDING GLASS WINDOW	
W05	BED 5	1200 mm	2000 mm	2100 mm	OXXO SLIDING GLASS WINDOW	
W06	BED 6	1200 mm	2000 mm	2100 mm	OXXO SLIDING GLASS WINDOW	
W07	BED 1	1200 mm	2000 mm	2100 mm	OXXO SLIDING GLASS WINDOW	
W08	BED 2	1200 mm	2000 mm	2100 mm	OXXO SLIDING GLASS WINDOW	
W09	BED 3	1200 mm	2000 mm	2100 mm	OXXO SLIDING GLASS WINDOW	
W10	BED 4	1200 mm	2000 mm	2100 mm	OXXO SLIDING GLASS WINDOW	
W11	BED 5	1200 mm	2000 mm	2100 mm	OXXO SLIDING GLASS WINDOW	
W12	BED 6	1200 mm	2000 mm	2100 mm	OXXO SLIDING GLASS WINDOW	

DESIGN WIND SPEED -	C-	SOIL CLASSIFICATION -	TBA
A			
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VARIATIONS INCLUDED IN THIS DRAWING			
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PRELIMINARY ISSUE			
SSHJQ JOB No.	-	DRAWING No.	22071101
PROJECT			
PROPOSED WORKERS ACCOMMODATION			
Lot 414 on RP835556			
429 FICHERA ROAD			
MAREEBA			
CLIENT			
LAKESHORE AVOCADOS			
PO BOX 876		QBCC. 1097802	
ATHERTON QLD 4883			
33-35 ALBRECHT ST			
TOLGA INDUSTRIAL ESTATE, QLD, 4882			
PH: 07 4095 4008			
EMAIL: info@sshjq.com.au			
WEB: www.superiorsteelhomesq.com.au			
THIS DRAWING IS COPYRIGHT ©			

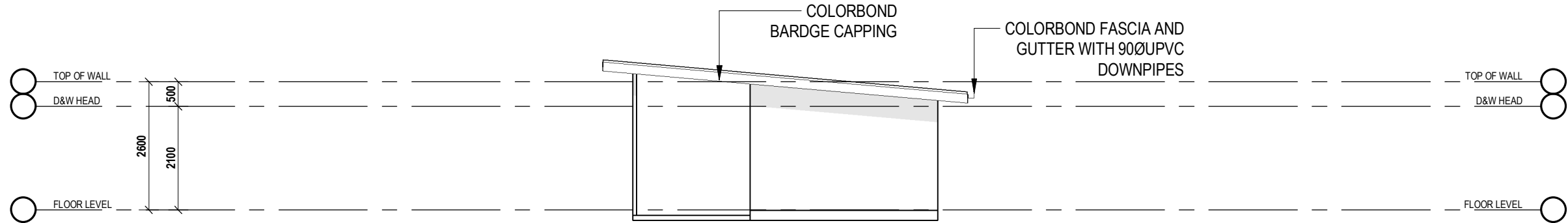
NOTE: (1). VERIFY ALL DIMENSIONS AND LEVELS BEFORE COMMENCING ANY WORK. (2). VERIFY ALL ON SITE DIMENSIONS BEFORE COMMENCING ANY FABRICATION. (3). FIGURED DIMENSIONS TO TAKE PRECEDENCE OVER SCALED MEASUREMENTS. (4). ALL WORK TO COMPLY WITH LOCAL AUTHORITY REQUIREMENTS, THE STANDARD BUILDING BY-LAWS, THE BUILDING CODE OF AUSTRALIA AND RELEVANT AUSTRALIAN STANDARDS. (5). SUBSTITUTION OF ANY STRUCTURAL MEMBERS, & OR VARIATIONS TO ANY PART OF THE DESIGN, **WILL VOID** ANY RESPONSIBILITIES OF THE BUILDING DESIGNER FOR THE STRUCTURAL INTEGRITY & PERFORMANCE OF THE BUILDING



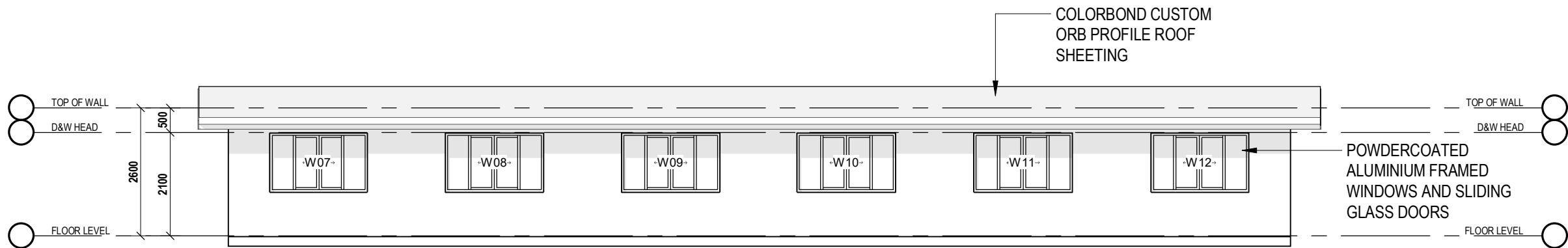
ELEVATION 1



ELEVATION 2



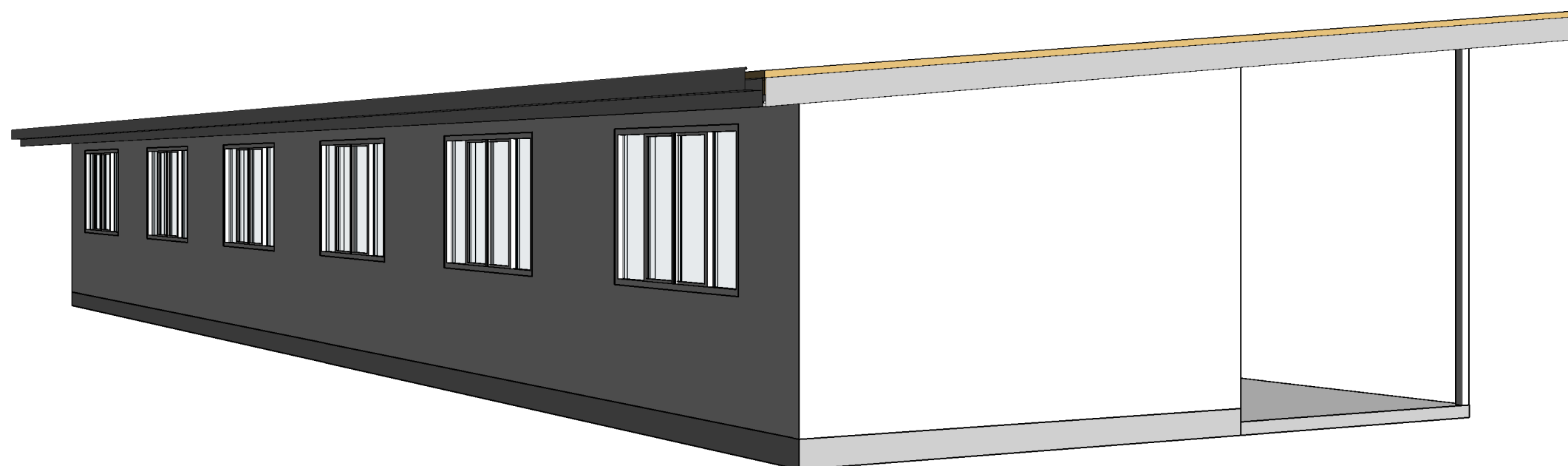
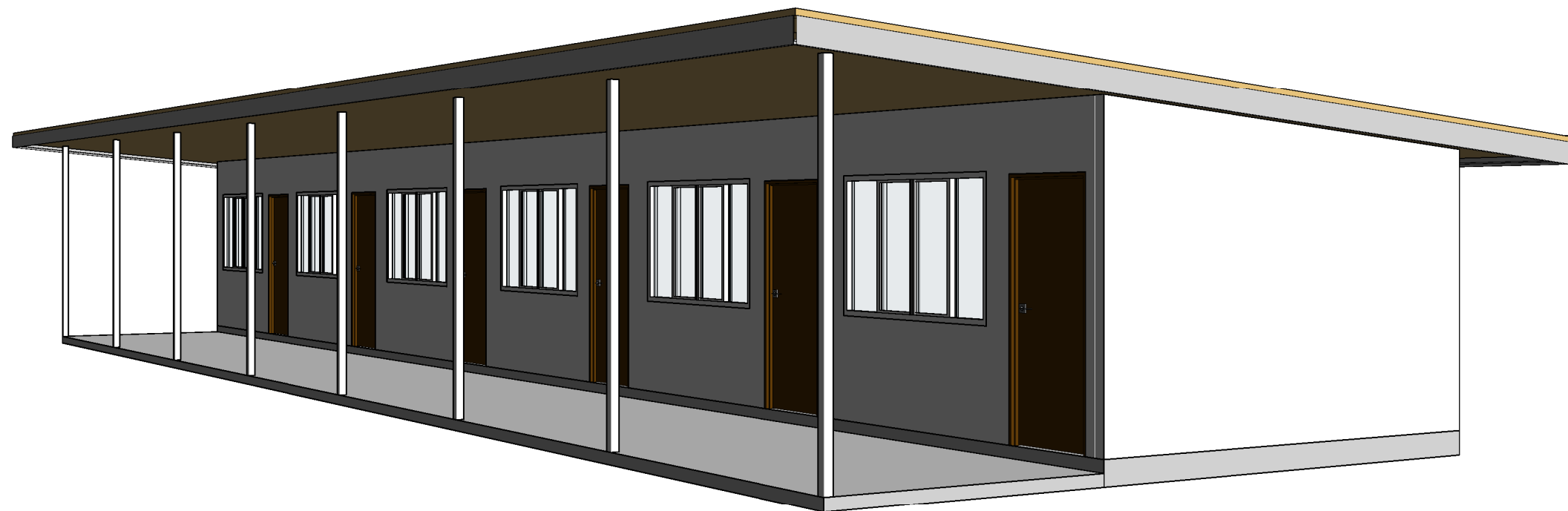
ELEVATION 3



ELEVATION 4

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ELEVATIONS			
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PRELIMINARY ISSUE			
SSHQ JOB No.	-	DRAWING No.	22071101
PROJECT			
PROPOSED WORKERS ACCOMMODATION			
Lot 414 on RP835556			
429 FICHERA ROAD			
MAREEBA			
CLIENT			
LAKESHORE AVOCADOS			
PO BOX 876		QBCC. 1097802	
ATHERTON QLD 4883			
33-35 ALBRECHT ST			
TOLGA INDUSTRIAL ESTATE, QLD, 4882			
PH: 07 4095 4008			
EMAIL: info@sshq.com.au			
WEB: www.superiorsteelhomesnq.com.au			
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DESIGN WIND SPEED - C- SOIL CLASSIFICATION - TBA

A

No.	DATE	DESCRIPTION
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VARIATIONS INCLUDED IN THIS DRAWING

DRAWING TITLE
3D VIEWS

SHEET NO. 05 PRINT TIME: 20/07/2022 8:49:29 AM

PRELIMINARY: 11/07/22 CONSTRUCTION: -

A3 SCALE: NTS AT A3 ISSUE: A DRAWN BY: WE

PRELIMINARY ISSUE

SSHQ JOB No. - DRAWING No. 22071101

PROJECT
 PROPOSED WORKERS ACCOMMODATION
 Lot 414 on RP835556
 429 FICHERA ROAD
 MAREEBA

CLIENT
 LAKESHORE AVOCADOS



PO BOX 876 QBCC. 1097802
 ATHERTON QLD 4883
 33-35 ALBRECHT ST
 TOLGA INDUSTRIAL ESTATE, QLD, 4882
 PH: 07 4095 4008
 EMAIL: info@sshq.com.au
 WEB: www.superiorsteelhomesnq.com.au

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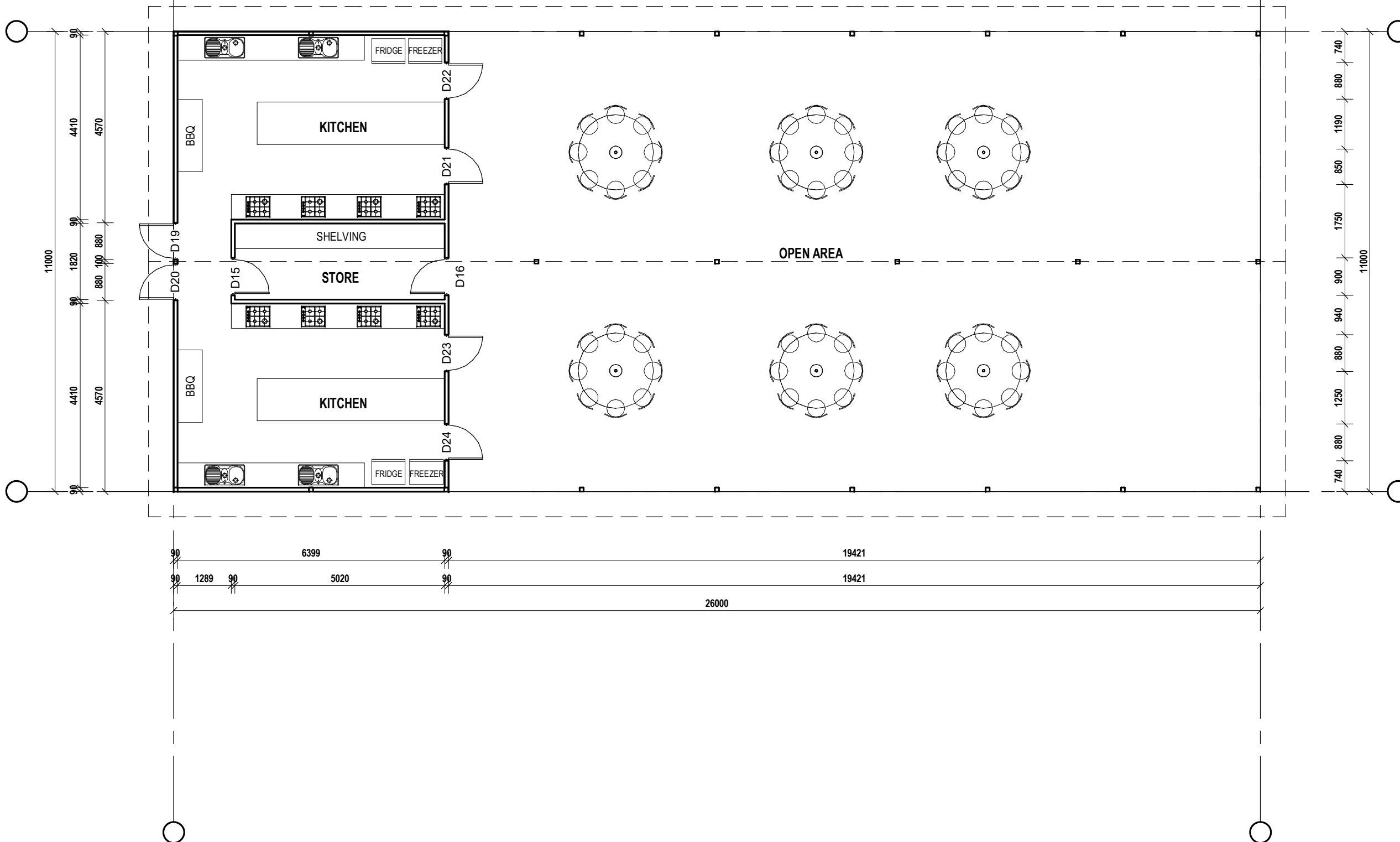
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ELEVATION KEY

FLOOR AREAS LEGEND	
KITCHEN	72.36 m ²
OPEN AREA	213.64 m ²
	286.00 m ²

Mark	Room	Height	Width	Comments	Description
D15	STORE	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR
D16	STORE	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR
D19	KITCHEN	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR
D20	KITCHEN	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR
D21	KITCHEN	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR
D22	KITCHEN	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR
D23	KITCHEN	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR
D24	KITCHEN	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR



DESIGN WIND SPEED -	C-	SOIL CLASSIFICATION -	TBA
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	1:100 AT A3	DRAWN BY:	WE
PRELIMINARY ISSUE			
SSHNO JOB No.	-	DRAWING No.	21080401

PROJECT
PROPOSED WORKERS ACCOMMODATION
 Lot 414 on RP835556
 429 FICHERA ROAD
 MAREEBA

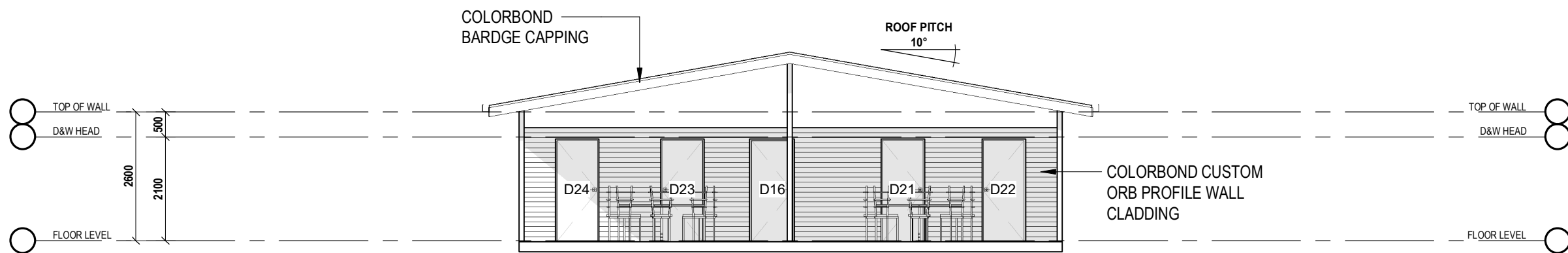
CLIENT
 LAKESHORE AVOCADOS



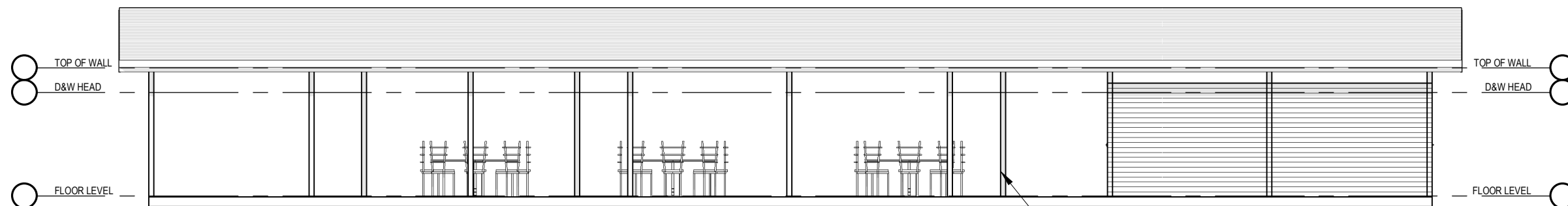
PO BOX 876
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 TOLGA INDUSTRIAL ESTATE, QLD, 4882
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 EMAIL: info@sshno.com.au
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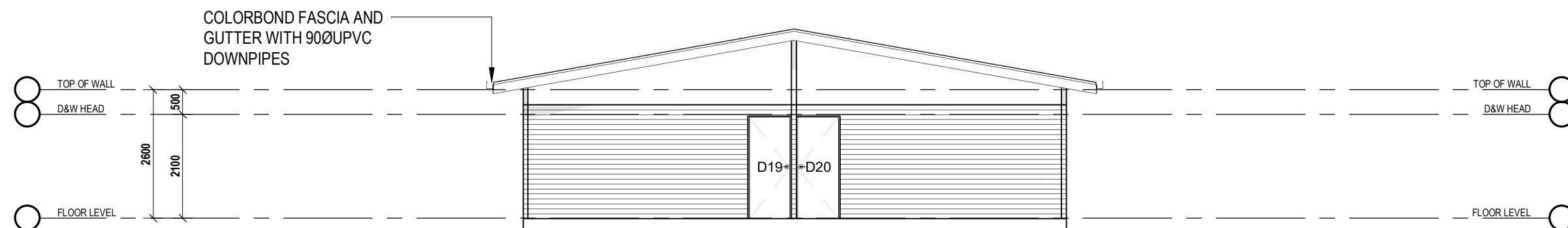
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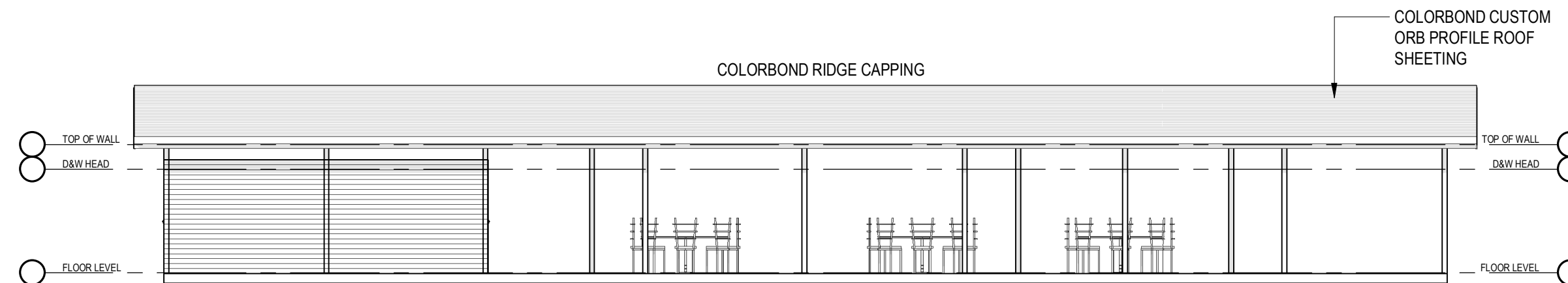
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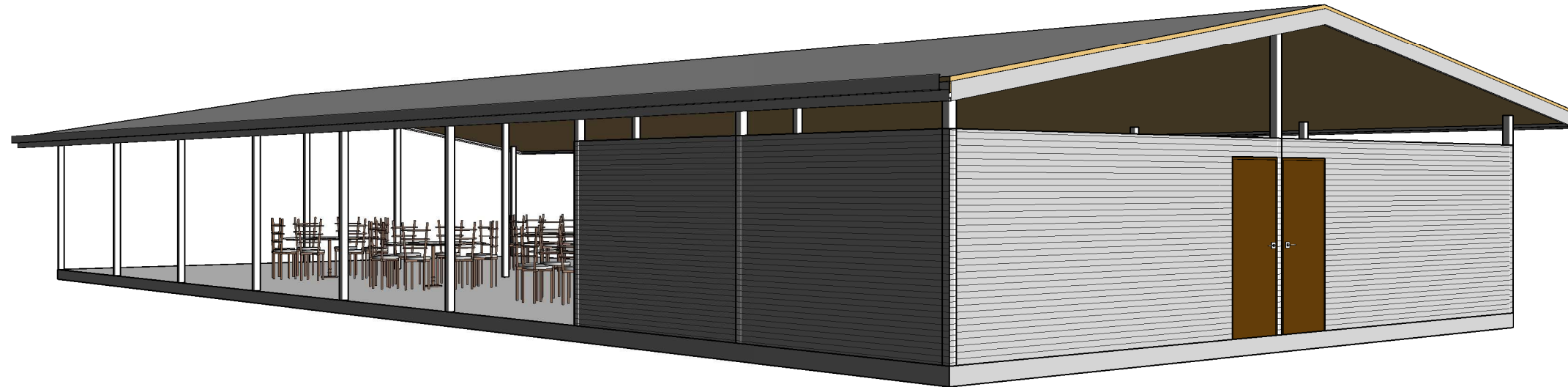
ELEVATION 3




ELEVATION 4

DESIGN WIND SPEED -	C-	SOIL CLASSIFICATION -	TBA
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PRELIMINARY ISSUE			
SSHQ JOB No.	-	DRAWING No.	21080401
PROJECT			
PROPOSED WORKERS ACCOMMODATION			
Lot 414 on RP835556			
429 FICHERA ROAD			
MAREEBA			
CLIENT			
LAKESHORE AVOCADOS			
			
PO BOX 876		QBCC. 1097802	
ATHERTON QLD 4883			
33-35 ALBRECHT ST			
TOLGA INDUSTRIAL ESTATE, QLD, 4882			
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SSHQ JOB No.	-	DRAWING No.	21080401
PROJECT			
PROPOSED WORKERS ACCOMMODATION			
Lot 414 on RP835556			
429 FICHERA ROAD			
MAREEBA			
CLIENT			
LAKESHORE AVOCADOS			
			
PO BOX 876		QBCC. 1097802	
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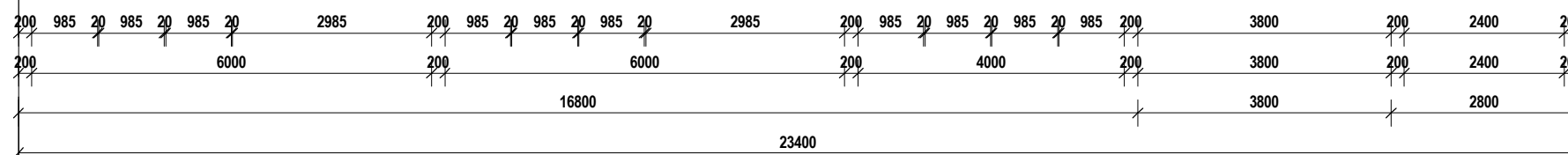
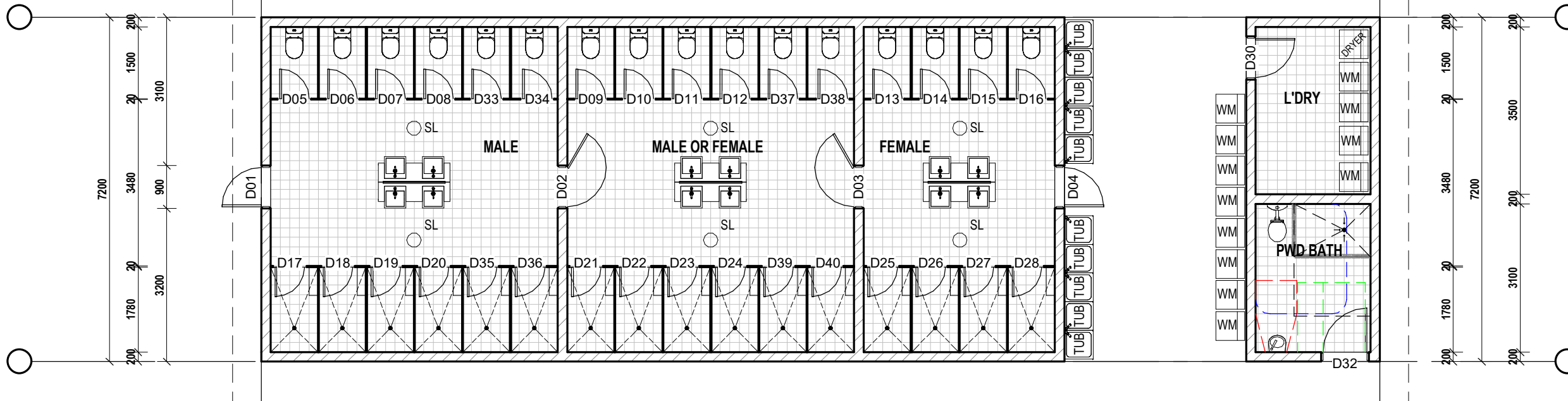
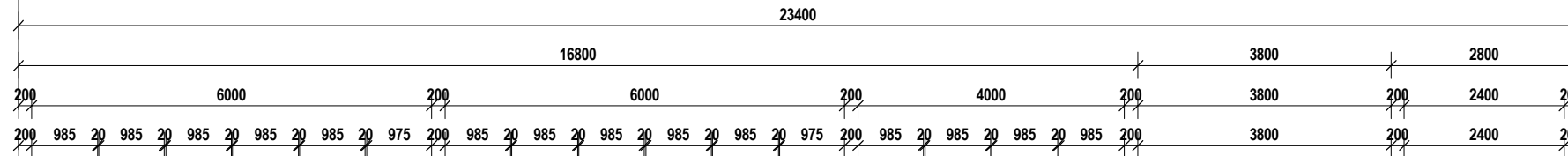


ELEVATION KEY

FLOOR AREAS LEGEND	
TOILET BLOCK	120.79 m ²
BREZZEWAY	27.36 m ²
L'DRY	20.17 m ²
	168.32 m ²

Door Schedule					
Mark	Room	Height	Width	Comments	Description
D01	MALE	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR
D02	MALE	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR
D03	FEMALE	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR
D04	FEMALE	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR
D05	MALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D06	MALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D07	MALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D08	MALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR

Door Schedule					
Mark	Room	Height	Width	Comments	Description
D09	MALE OR FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D10	MALE OR FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D11	MALE OR FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR



Door Schedule					
Mark	Room	Height	Width	Comments	Description
D12	MALE OR FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D13	FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D14	FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D15	FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D16	FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D17	MALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D18	MALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D19	MALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D20	MALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D21	MALE OR FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR

Door Schedule					
Mark	Room	Height	Width	Comments	Description
D22	MALE OR FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D23	MALE OR FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D24	MALE OR FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D25	FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D26	FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D27	FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D28	FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D30	L'DRY	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR
D32	PWD BATH	2040 mm	920 mm	DOOR LEAF SIZE	920 SINGLE SWING DOOR

Door Schedule					
Mark	Room	Height	Width	Comments	Description
D33	MALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D34	MALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D35	MALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D36	MALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D37	MALE OR FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D38	MALE OR FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D39	MALE OR FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D40	MALE OR FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR

DESIGN WIND SPEED -	C-	SOIL CLASSIFICATION -	TBA
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PRELIMINARY ISSUE			
SSHQ JOB No.	-	DRAWING No.	21040101

PROJECT
PROPOSED TOILET BLOCK
 Lot 414 on RP835556
 429 FICHERA ROAD,
 MAREEBA

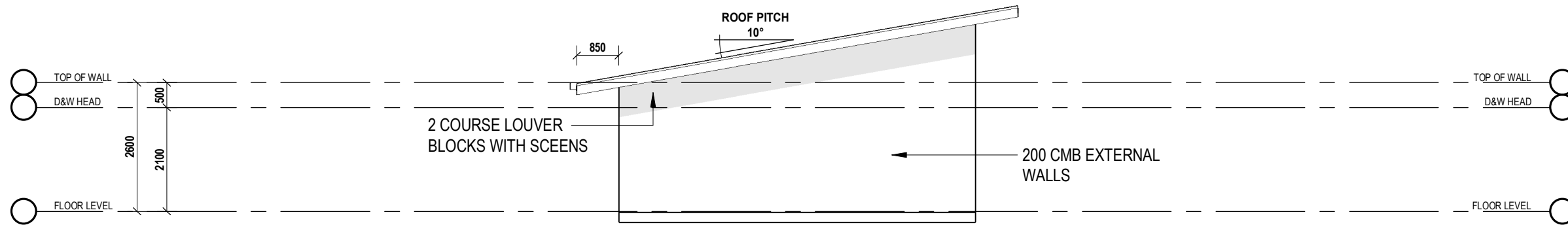
CLIENT
LAKESHORE AVOCADOS



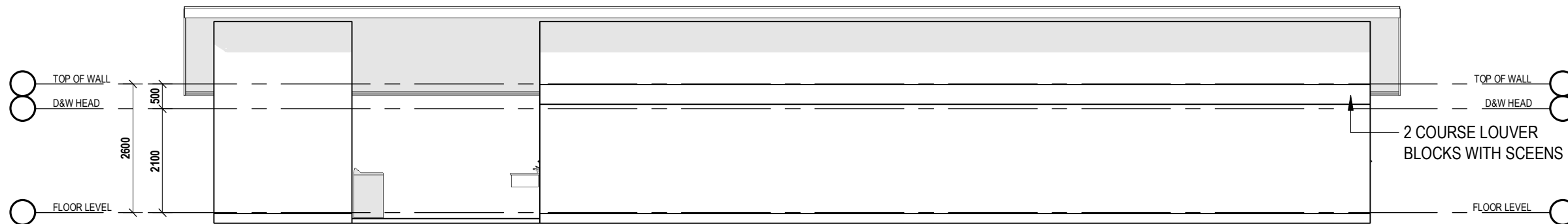
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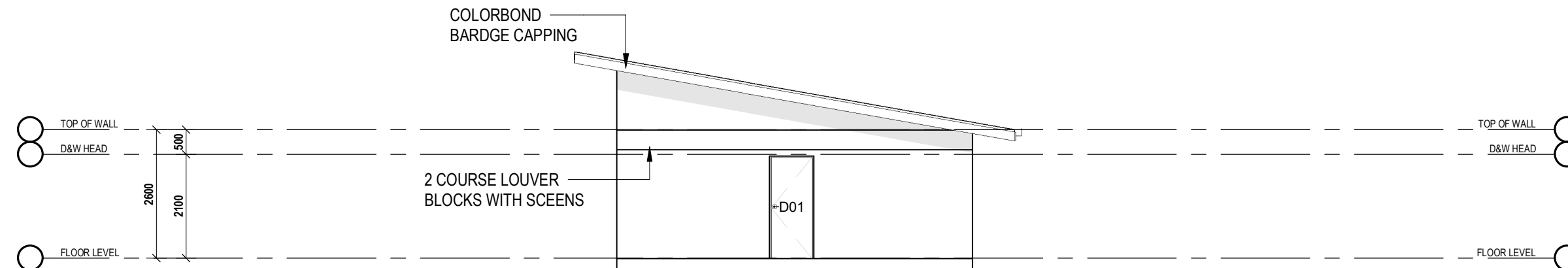
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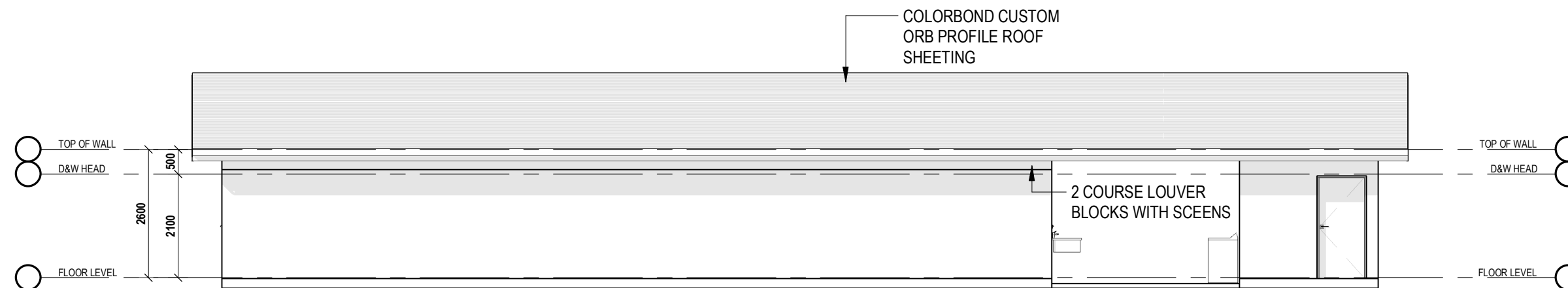
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ELEVATION 2



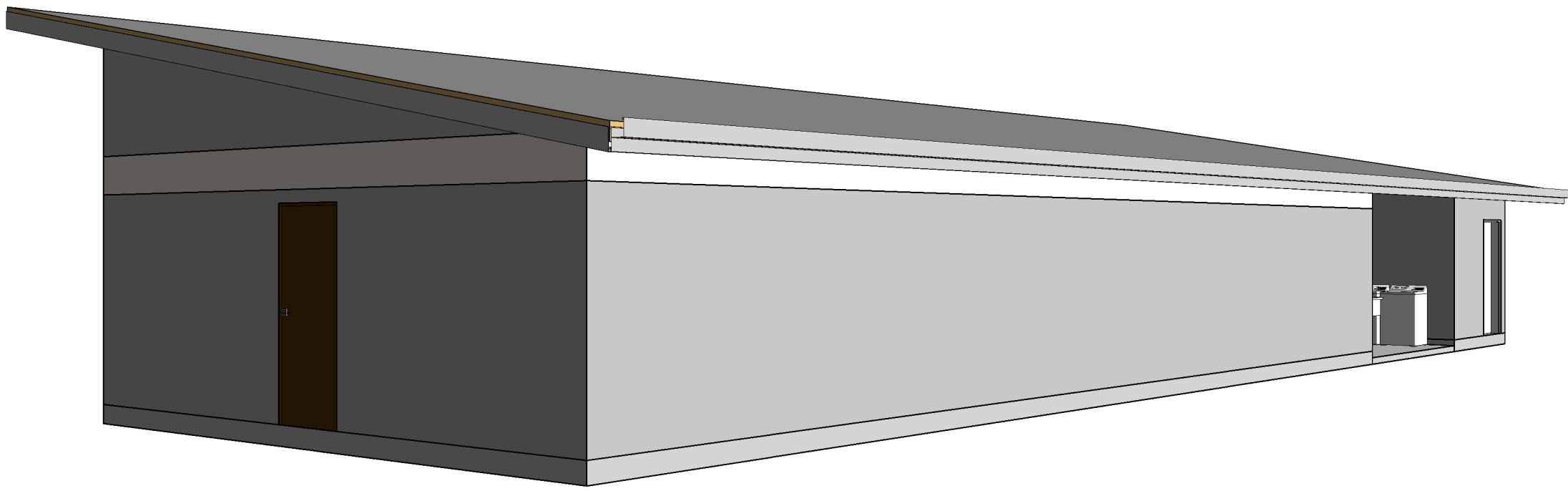
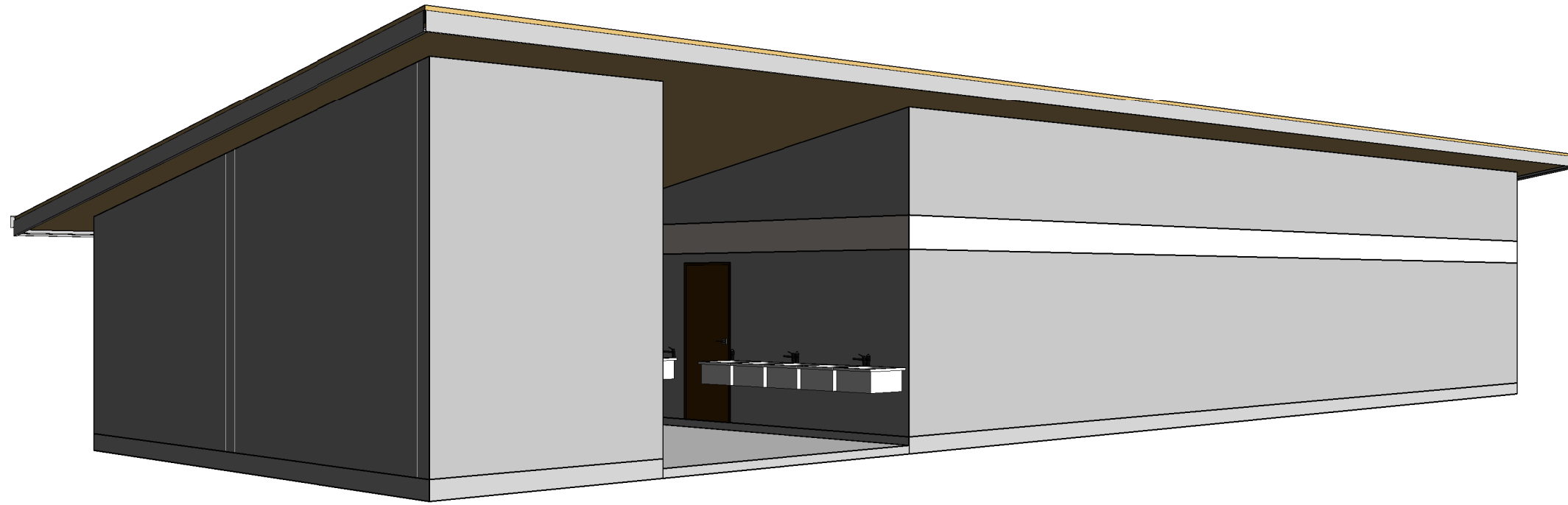
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ELEVATION 4

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SSHQ JOB No.	DRAWING No.		21040101
PROJECT			
PROPOSED TOILET BLOCK			
Lot 414 on RP835556			
429 FICHERA ROAD,			
MAREEBA			
CLIENT			
LAKESHORE AVOCADOS			
			
PO BOX 876		QBCC. 1097802	
ATHERTON QLD 4883			
33-35 ALBRECHT ST			
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LAKESHORE AVOCADOS			
			
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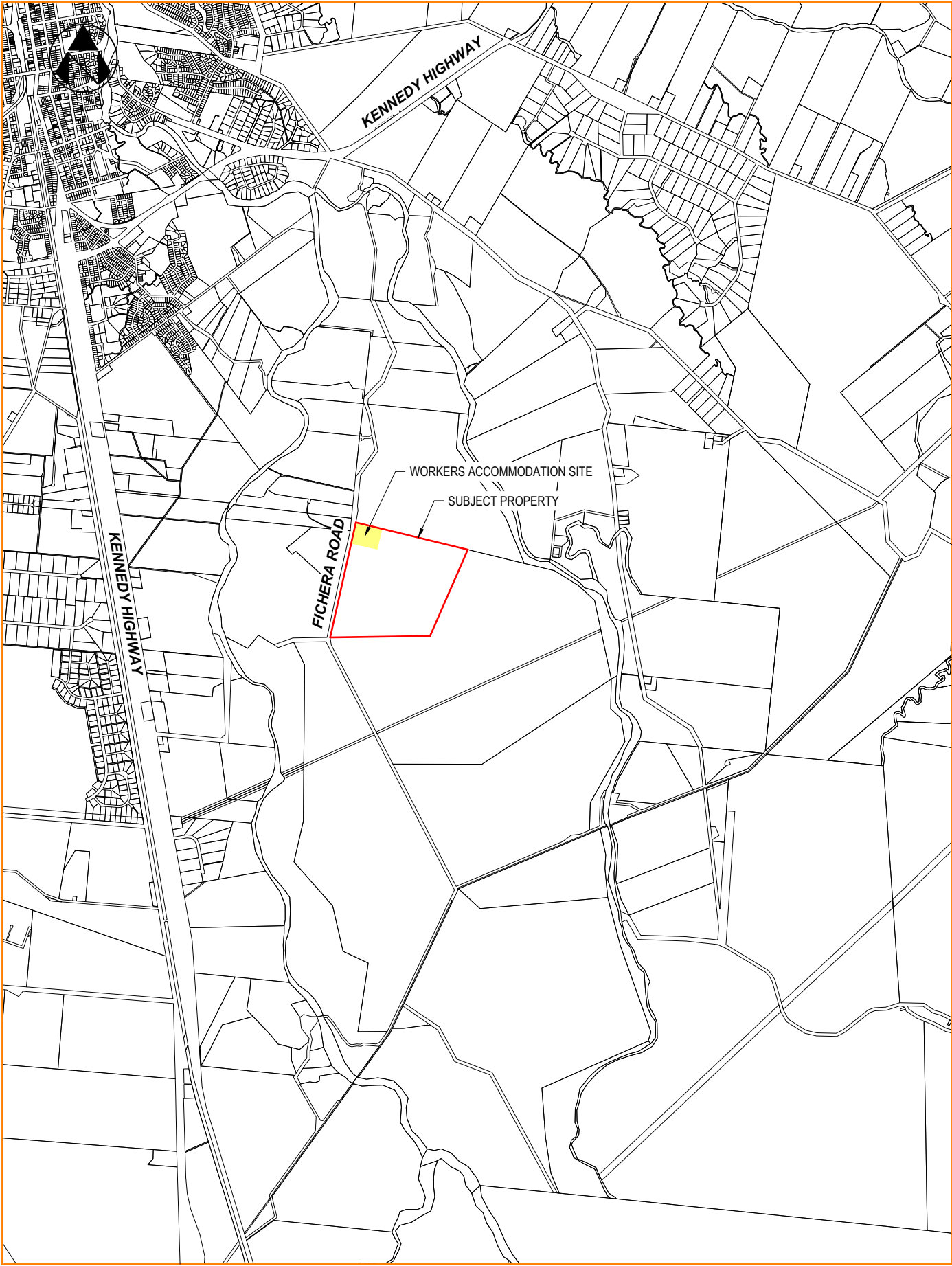
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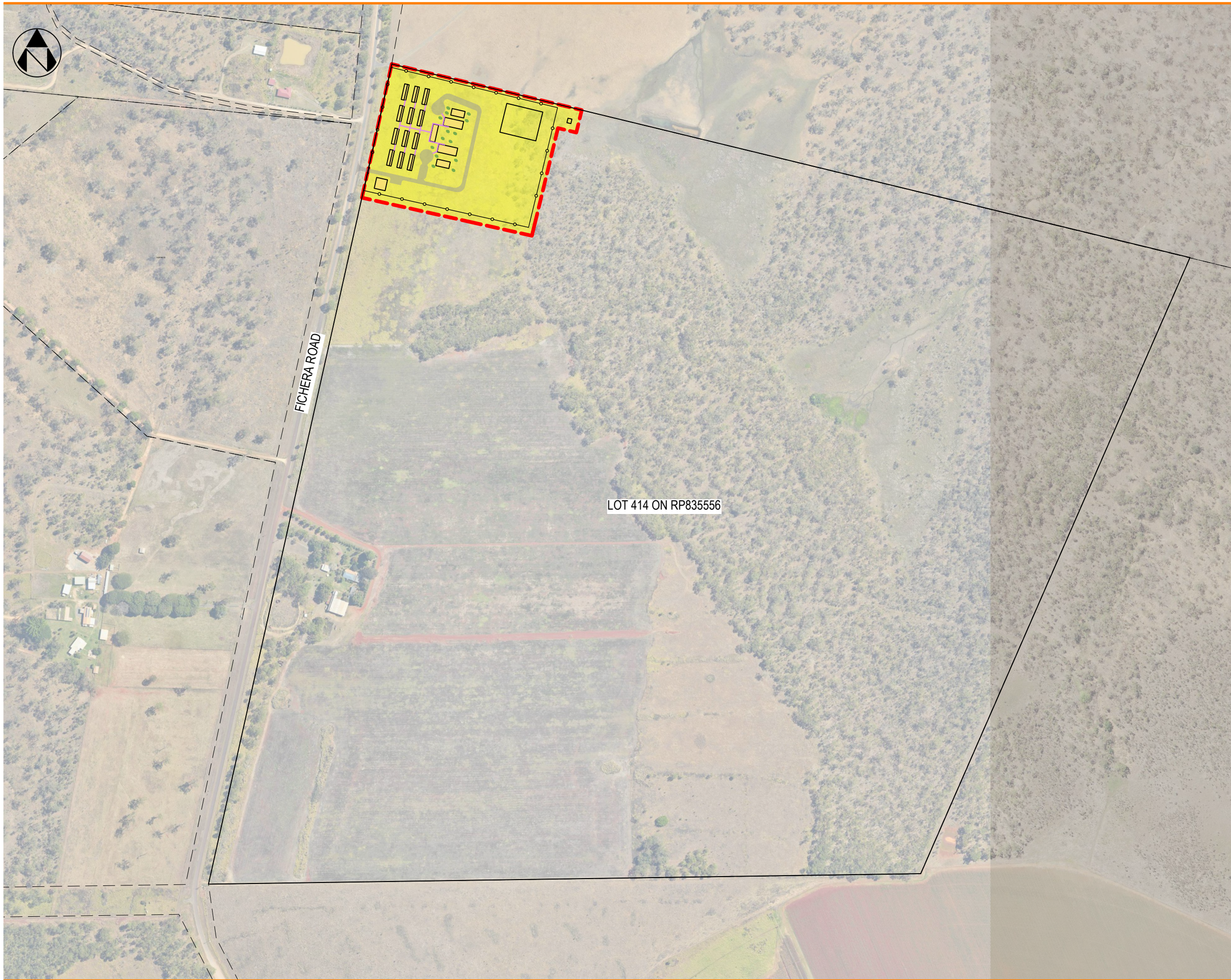
WORKERS ACCOMMODATION 429 FICHERA ROAD, MAREEBA CIVIL MASTERPLANS

DRAWING INDEX


DRAWING No.	DRAWING TITLE
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033-2201-00-SK-0002	OVERALL SITE PLAN
033-2201-00-SK-0003	ACCOMMODATION AREA SITE PLAN
033-2201-00-SK-0004	INTERSECTION PLAN
033-2201-00-SK-0005	MANAGERS PARKING PLAN
033-2201-00-SK-0006	COMMUTER BUS TURNAROUND AND PARKING PLAN - SHEET 1 OF 2
033-2201-00-SK-0007	COMMUTER BUS TURNAROUND AND PARKING PLAN - SHEET 2 OF 2
033-2201-00-SK-0008	PRE DEVELOPMENT CATCHMENT PLAN
033-2201-00-SK-0009	POST DEVELOPMENT CATCHMENT PLAN
033-2201-00-SK-0010	ACCESS SIGHT DISTANCE CHECK
033-2201-00-SK-0011	VEGETATION MAPPING

LOCALITY PLAN





LEGEND

 ACCOMMODATION SITE AREA

LOT 414 ON RP835556

FICHERA ROAD

Rev	Date	Revision Notes
C	20.10.22	FENCE UPDATED
B	12.10.22	MINOR AMENDMENTS
A	05.10.22	INITIAL ISSUE



MATTY KLEYN

Drawn	Design	Check'd	Appr'd
PAM	PAM	CJC	CJC

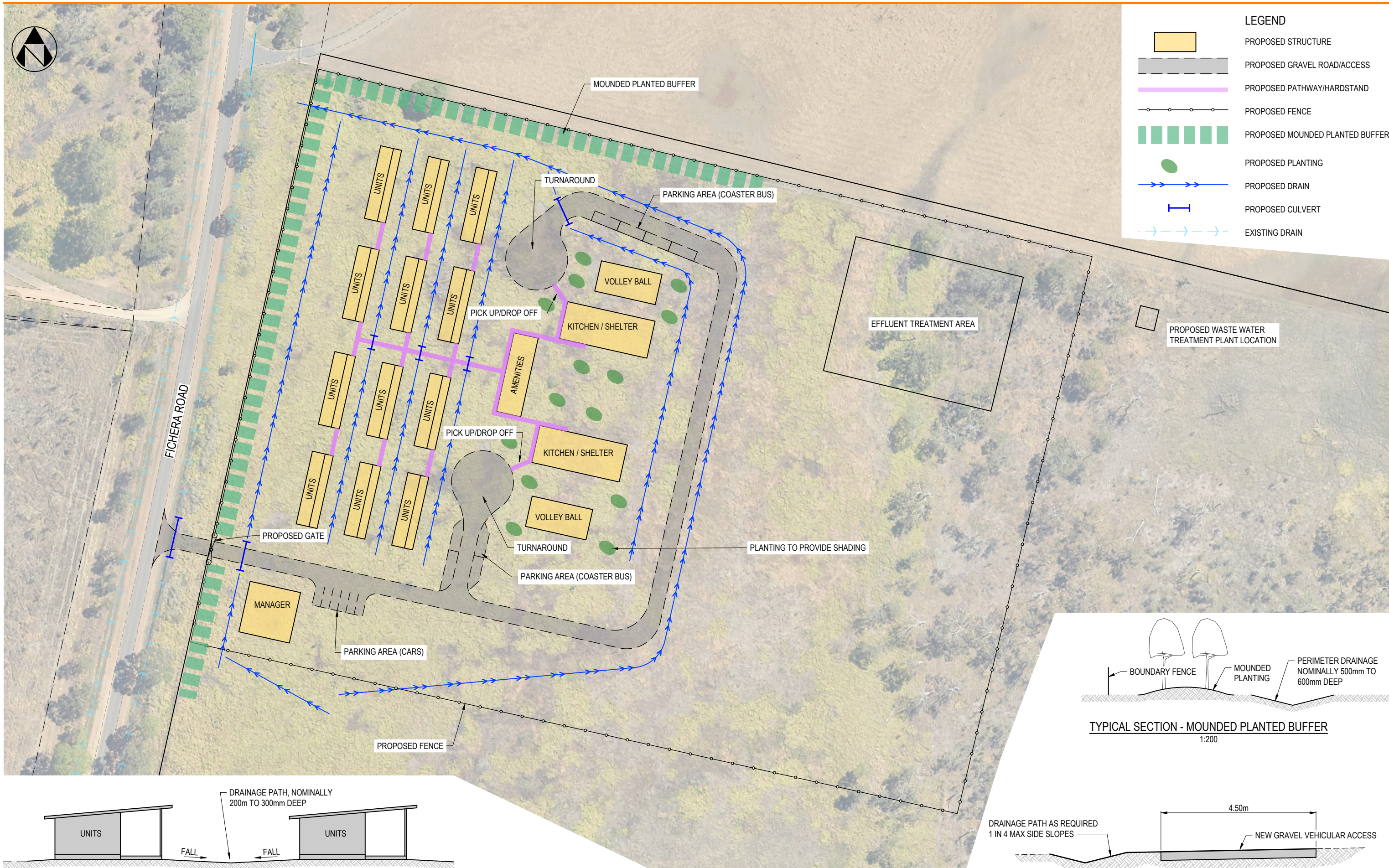
WORKERS ACCOMMODATION - FICHERA ROAD, MAREEBA

MASTERPLANS
OVERALL SITE PLAN

A3 Full Size (Scale as shown)

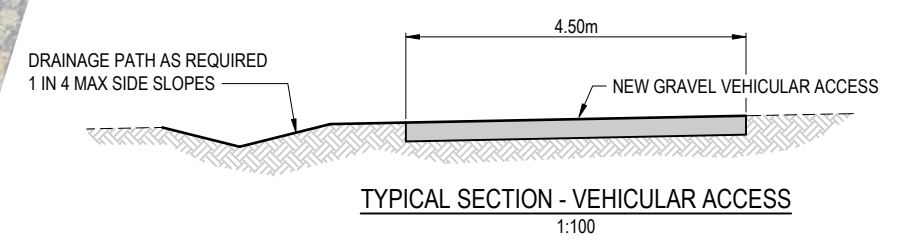
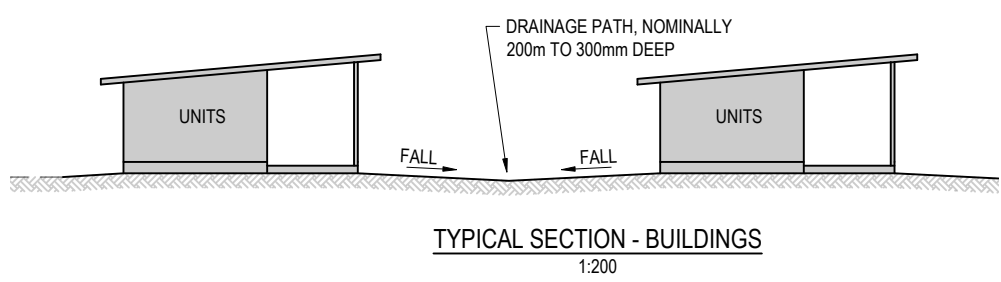
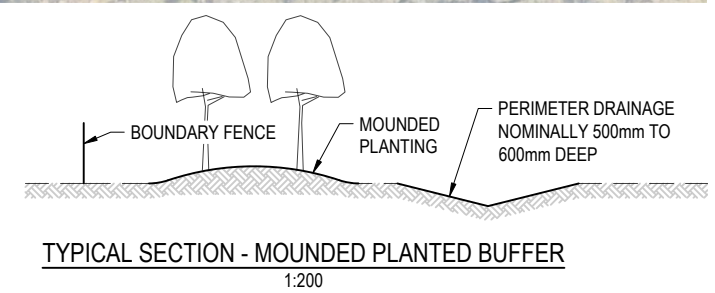
033-2201-00-SK-0002

C



LEGEND

- PROPOSED STRUCTURE
- PROPOSED GRAVEL ROAD/ACCESS
- PROPOSED PATHWAY/HARDSTAND
- PROPOSED FENCE
- PROPOSED MOUNDED PLANTED BUFFER
- PROPOSED PLANTING
- PROPOSED DRAIN
- PROPOSED CULVERT
- EXISTING DRAIN



Rev	Date	Revision Notes
C	20.10.22	FENCE UPDATED
B	12.10.22	SECTIONS ADDED
A	05.10.22	INITIAL ISSUE

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MATTY KLEYN

WORKERS ACCOMMODATION - FICHERA ROAD, MAREEBA

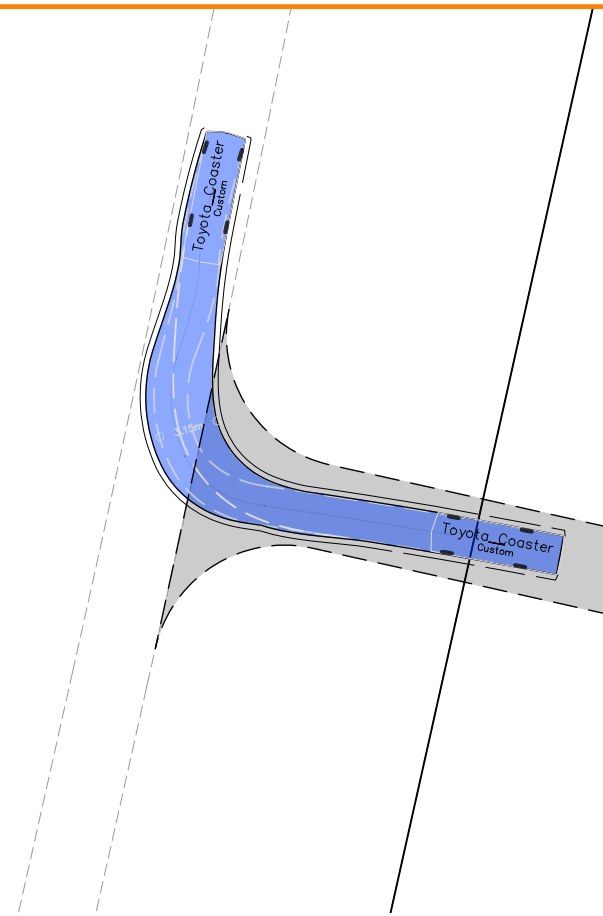
MASTERPLANS
ACCOMMODATION AREA SITE PLAN

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PAM	PAM	CJC	CJC

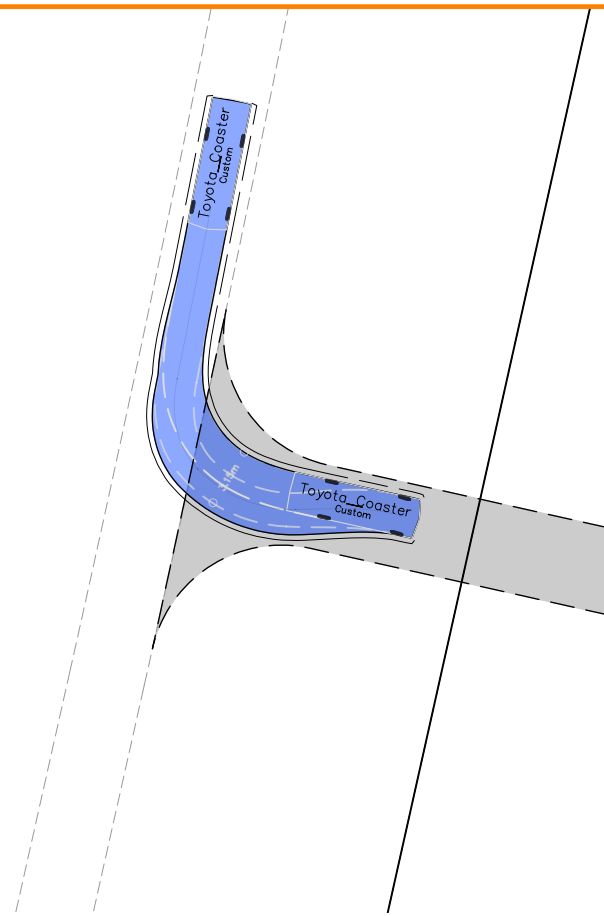
A3 Full Size (Scale as shown)

033-2201-00-SK-0003

C



COASTER BUS - EGRESS NORTH



COASTER BUS - INGRESS NORTH



A 05.10.22 INITIAL ISSUE

Rev Date Revision Notes

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MATTY KLEYN

Drawn PAM Design PAM Check'd CJC Appr'd CJC

WORKERS ACCOMMODATION - FICHERA ROAD, MAREEBA

MASTERPLANS INTERSECTION PLAN

A3 Full Size (Scale as shown)

033-2201-00-SK-0004

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MATTY KLEYN

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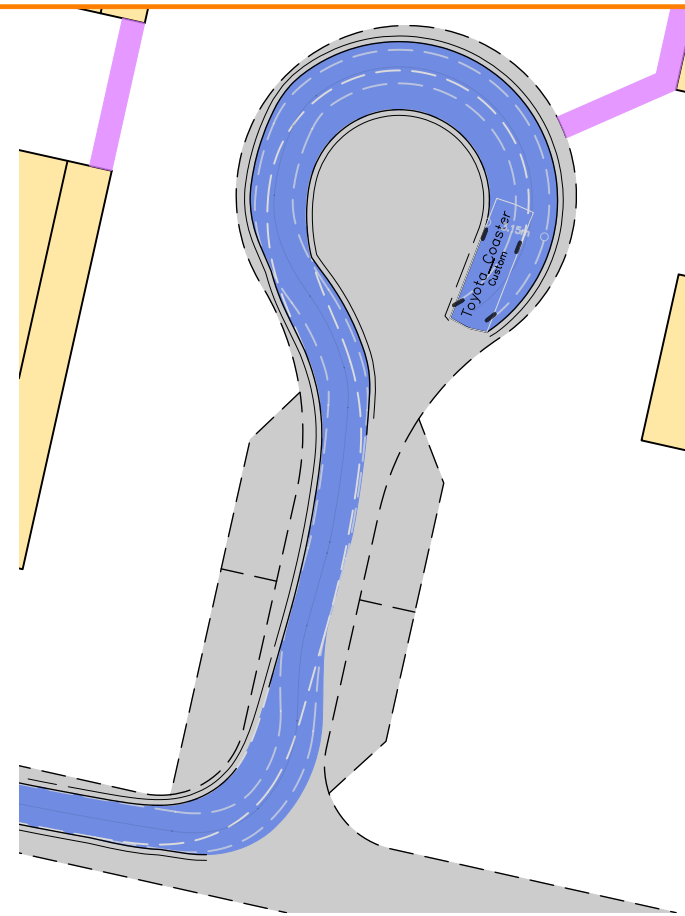
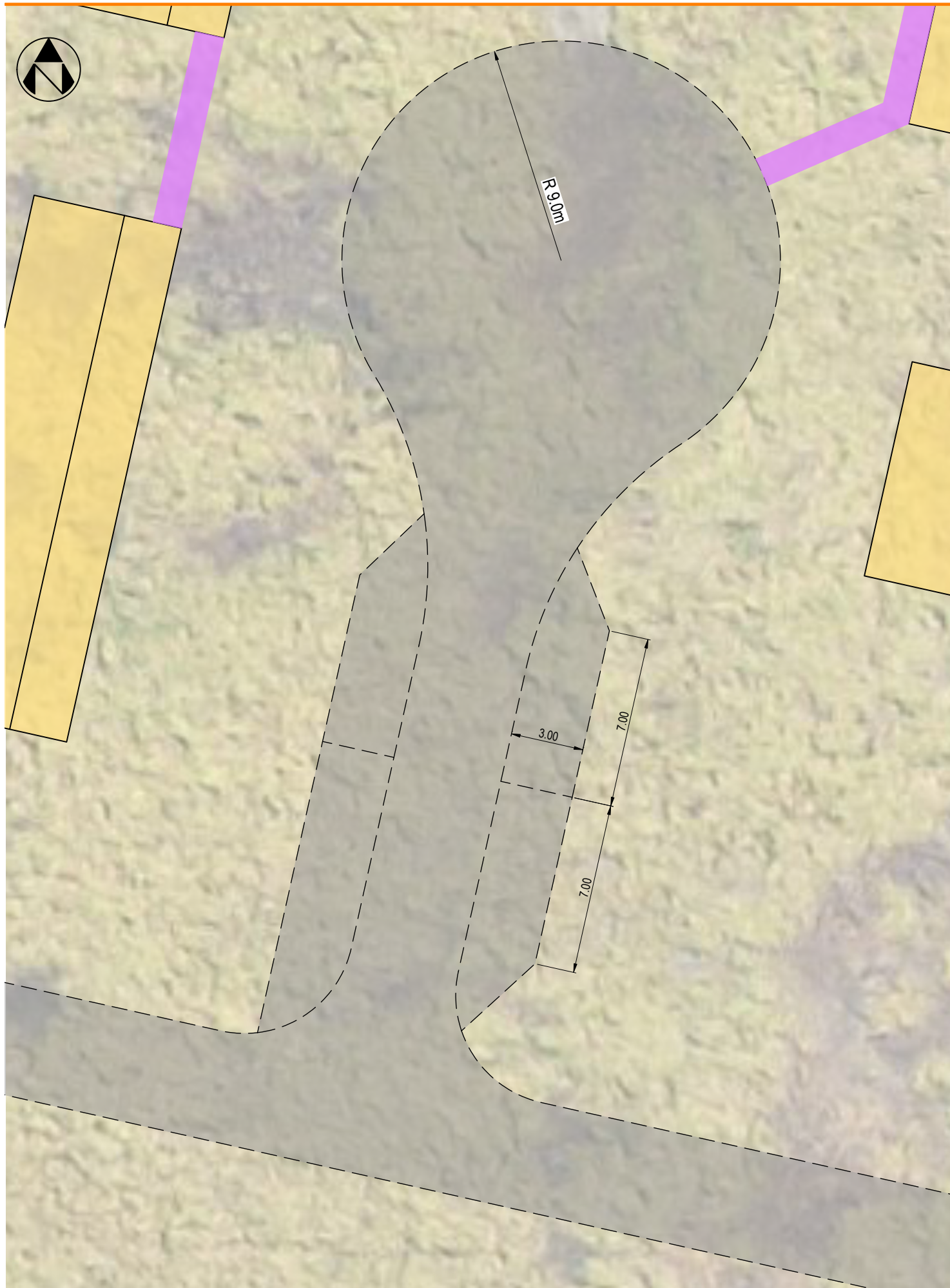
WORKERS ACCOMMODATION - FICHERA ROAD, MAREEBA

MASTERPLANS
MANAGERS PARKING PLAN

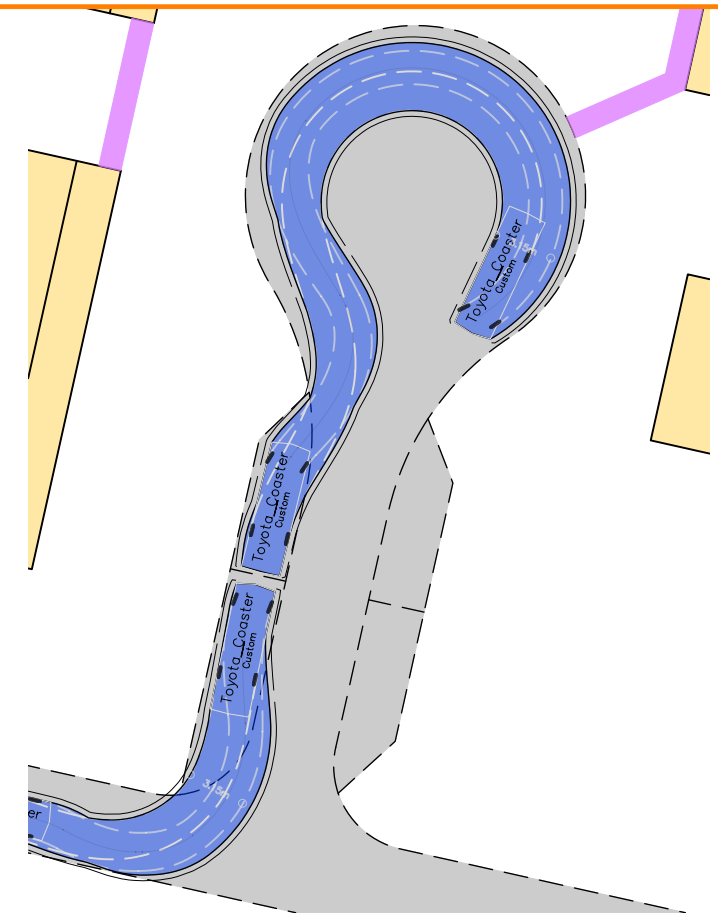
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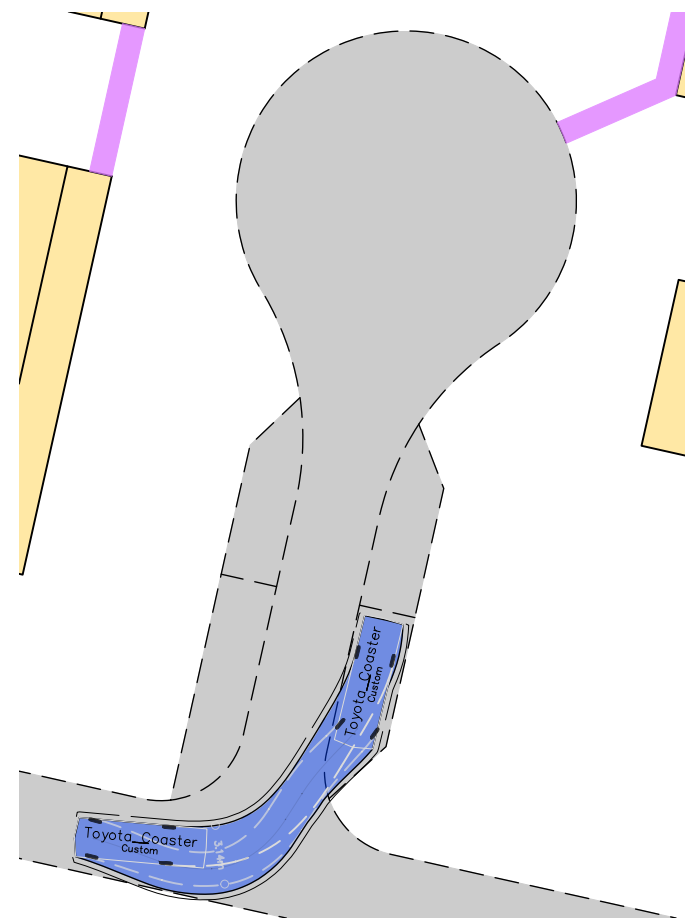
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COASTER BUS - CUL-DE-SAC MANOUVRE

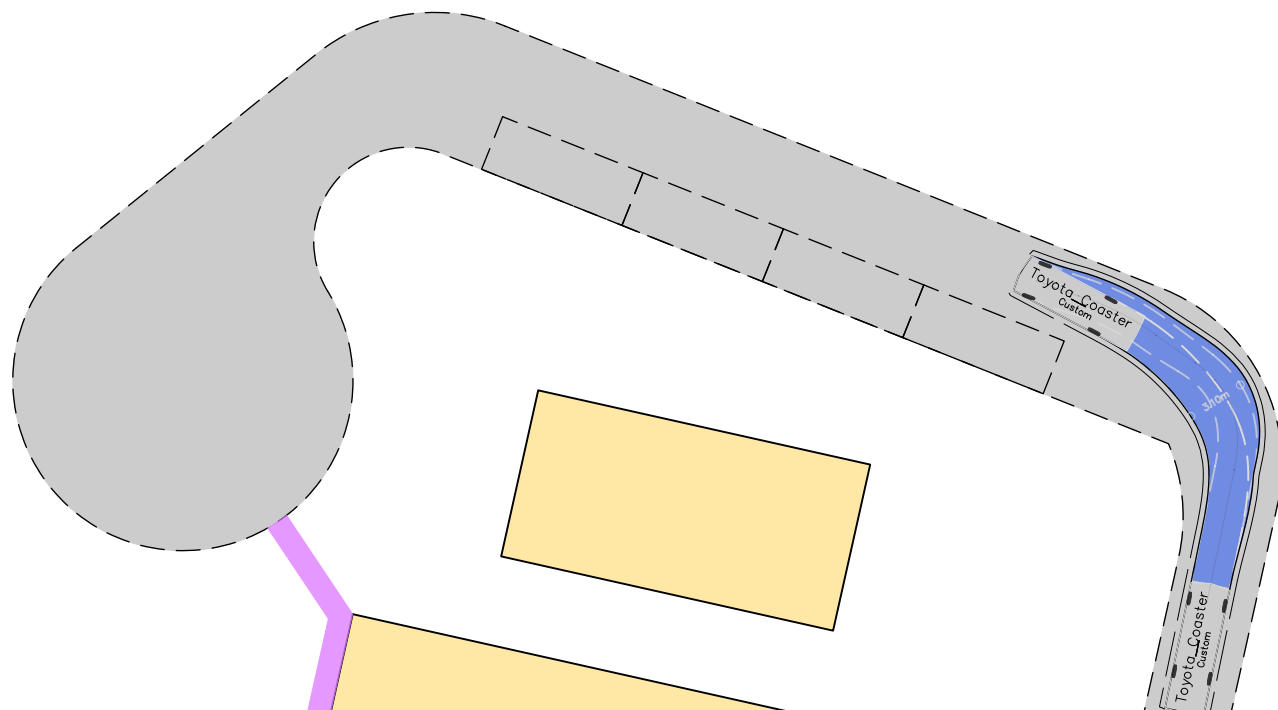


COASTER BUS - PARKING

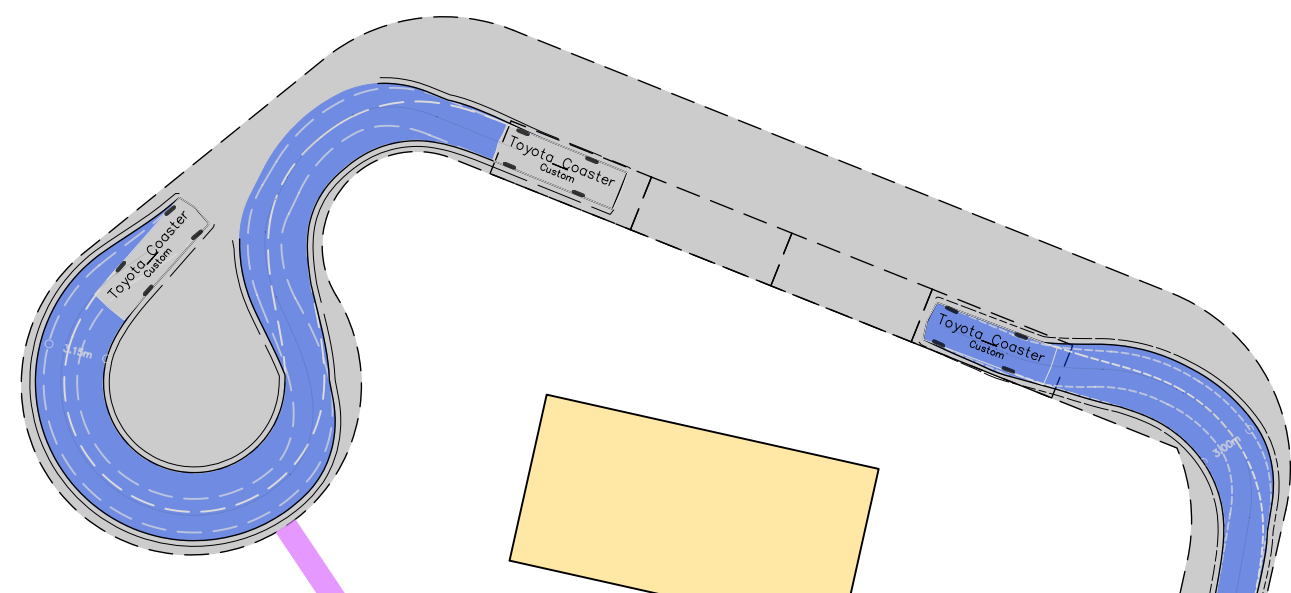


COASTER BUS - EXIT PARKING OR CUL-DE-SAC



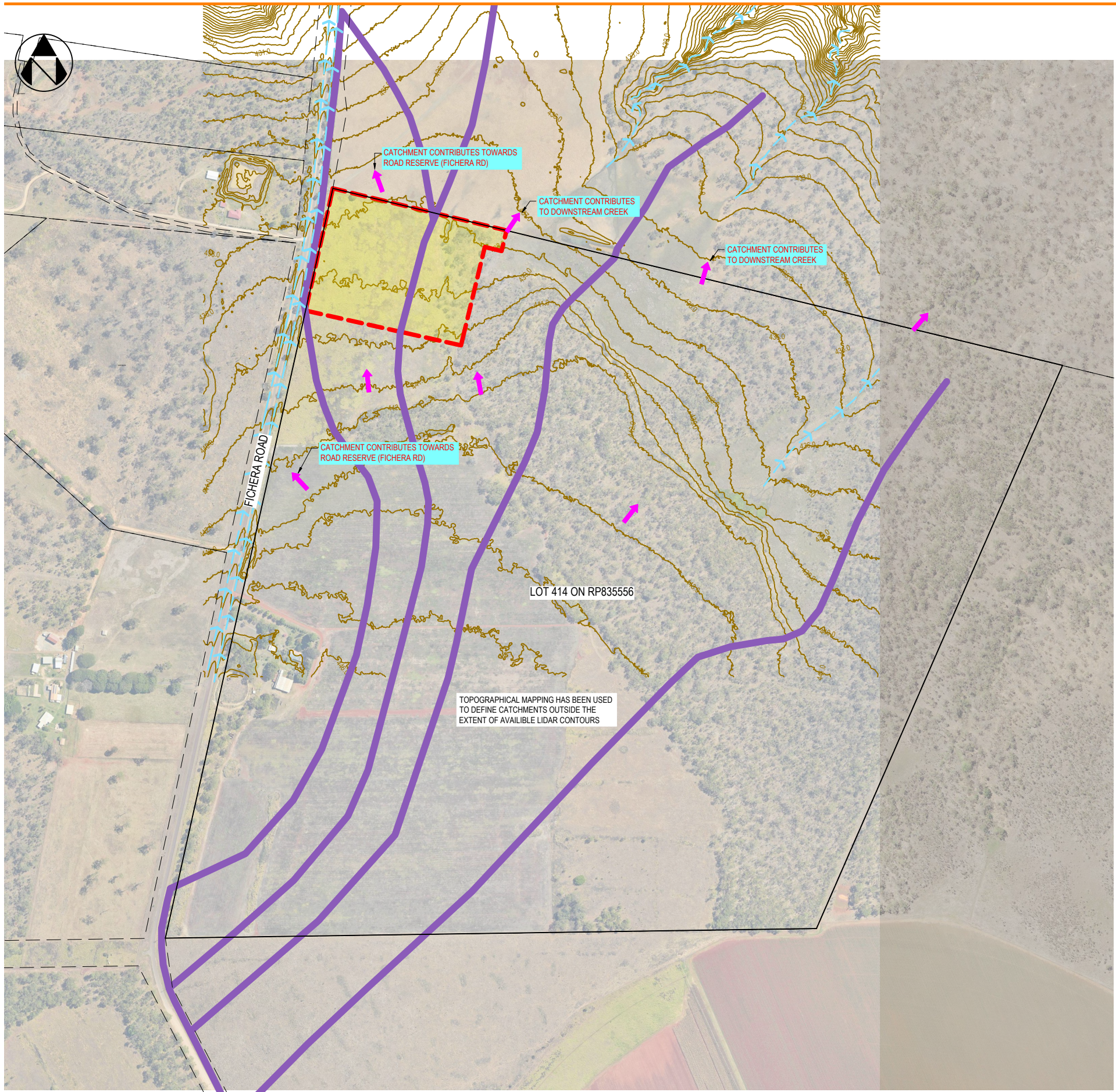


COASTER BUS - TURN THROUGH CURVE



COASTER BUS - ENTER AND EXIT PARKING ZONE





LEGEND

- STORMWATER CATCHMENT
- OVERLAND FLOW DIRECTION
- ← EXISTING DRAINAGE PATH
- - - EXISTING SURFACE CONTOURS (1m INTERVAL)



MATTY KLEYN

Drawn	Design	Checked	Appr'd
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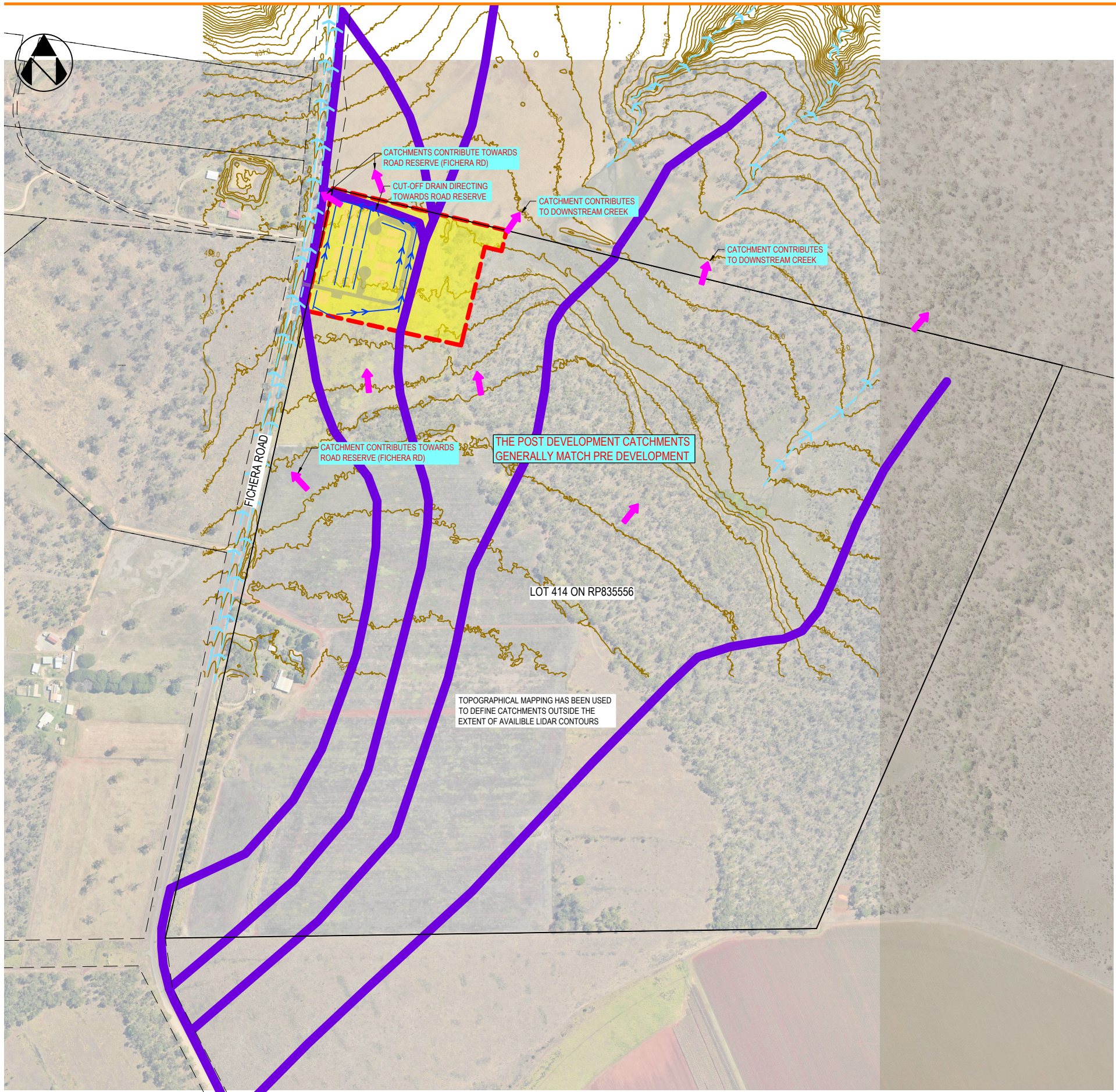
WORKERS ACCOMMODATION - FICHERA ROAD, MAREEBA

MASTERPLANS
PRE DEVELOPMENT CATCHMENT PLAN

A3 Full Size (Scale as shown)

033-2201-00-SK-0008

A

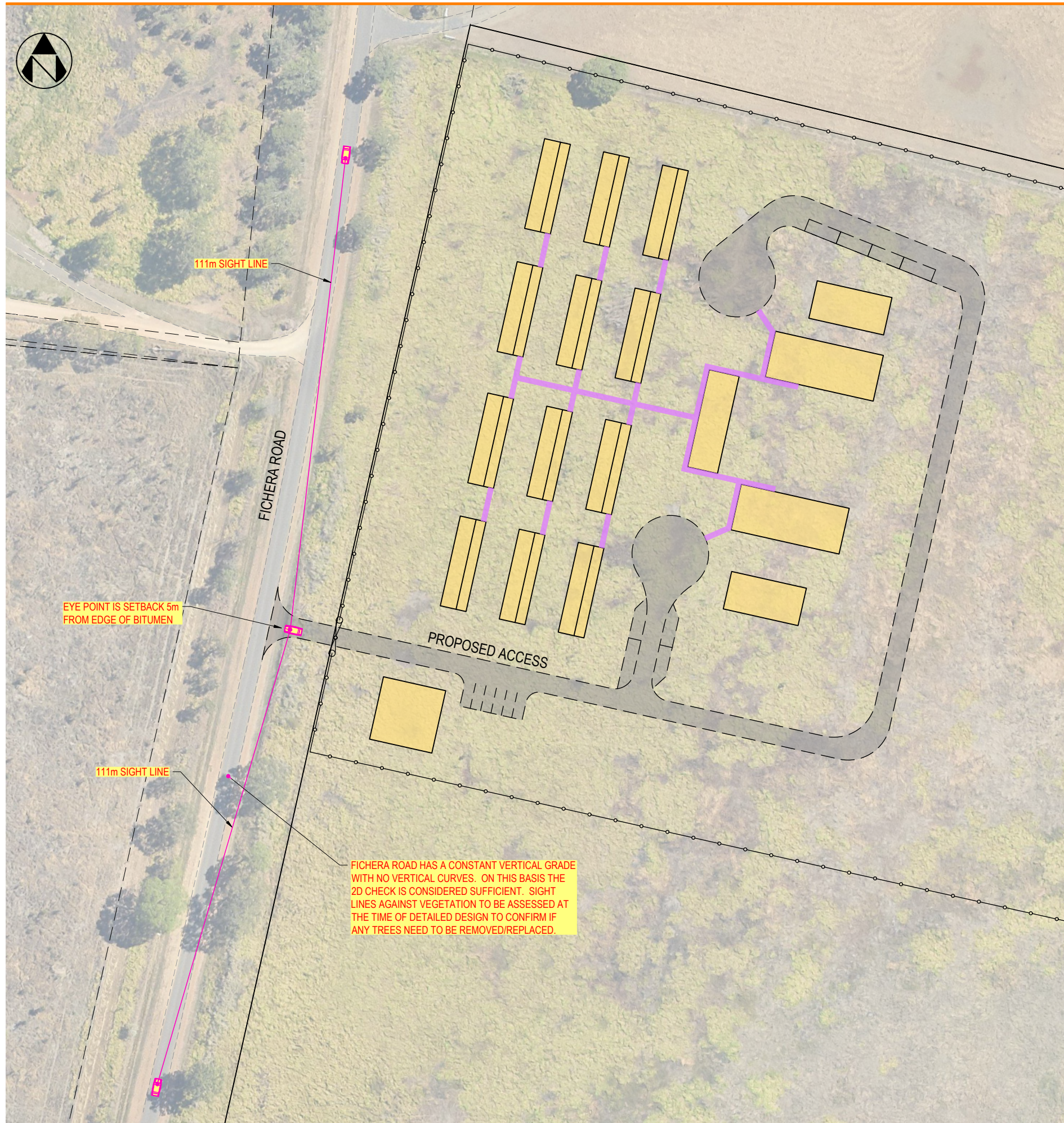


- LEGEND**
- █ STORMWATER CATCHMENT
 - ➔ OVERLAND FLOW DIRECTION
 - ➔ EXISTING DRAINAGE PATH
 - ➔ PROPOSED DRAINAGE PATH
 - EXISTING SURFACE CONTOURS (1m INTERVAL)



MATTY KLEYN

Drawn	Design	Check'd	Appr'd
PAM	PAM	CJC	CJC



NOTES

- SIGHT DISTANCE REQUIREMENTS AT ACCESS DRIVEWAYS OBTAINED FROM AS/NZS 2890.1 SECTION 3.2.4.
- ROAD FRONT SPEED = 80km/h
- SIGHT DISTANCE REQUIRED = 111m (DESIRABLE)

FURTHER NOTES

- POSTED SPEED IS 80km/h
- VERTICAL GEOMETRY IS UNOBSTRUCTED BASED ON LIDAR CONTOUR INFORMATION

EYE POINT IS SETBACK 5m FROM EDGE OF BITUMEN

FICHERA ROAD HAS A CONSTANT VERTICAL GRADE WITH NO VERTICAL CURVES. ON THIS BASIS THE 2D CHECK IS CONSIDERED SUFFICIENT. SIGHT LINES AGAINST VEGETATION TO BE ASSESSED AT THE TIME OF DETAILED DESIGN TO CONFIRM IF ANY TREES NEED TO BE REMOVED/REPLACED.



Rev	Date	Revision Notes
C	20.10.22	FENCE UPDATED
B	12.10.22	MINOR AMENDMENTS
A	05.10.22	INITIAL ISSUE



MATTY KLEYN

Drawn	Design	Check'd	Appr'd
PAM	PAM	CJC	CJC

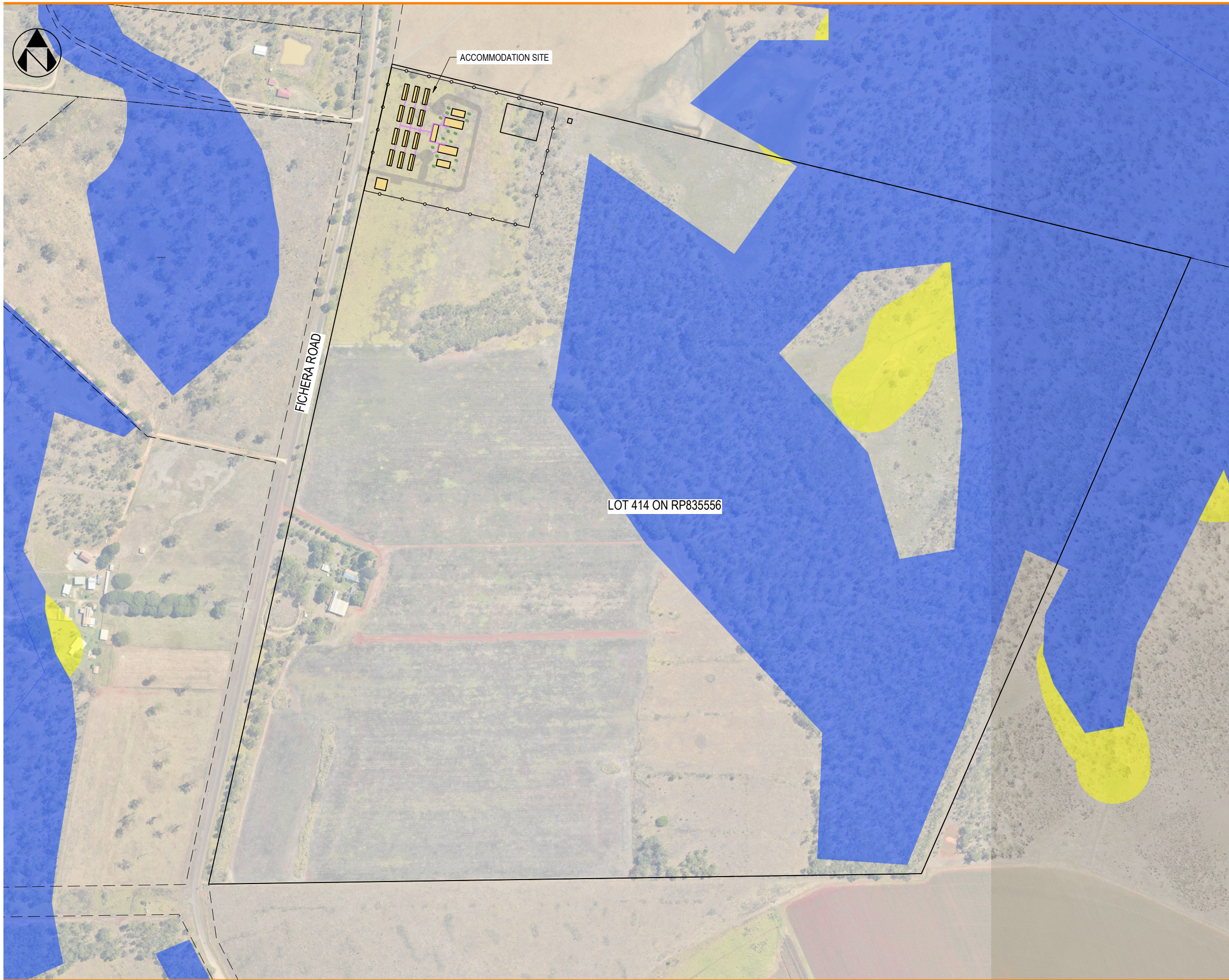
WORKERS ACCOMMODATION - FICHERA ROAD, MAREEBA

MASTERPLANS
ACCESS SIGHT DISTANCE CHECK

A3 Full Size (Scale as shown)

033-2201-00-SK-0010

C



LEGEND

- REMNANT VEGETATION CATEGORY B
- REMNANT VEGETATION CATEGORY R

B 20.10.22 FENCE UPDATED
 A 12.10.22 INITIAL ISSUE

Rev Date Revision Notes

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MATTY KLEYN

Drawn	Design	Check'd	Appr'd
PAM	PAM	CJC	CJC

WORKERS ACCOMMODATION - FICHERA ROAD, MAREEBA

MASTERPLANS
 VEGETATION MAPPING

A3 Full Size (Scale as shown)

033-2201-00-SK-0011

B

Attachment 3 – Taylor Environmental – Onsite Wastewater Assessment



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ERA63(a)(i) Standard Conditions On-Site Wastewater and Effluent Disposal System Design

**Workers Accommodation,
429 Fichera Road,
Mareeba QLD 4880**

Report #	TE222113
Date	23 November 2022

Document Control Table



		Taylor Environmental Project Number: TE222113 Effluent Disposal Report ERA63(a)(i) Standard Conditions Workers Accommodation, 429 Fichera Road, Mareeba QLD 4880		
		Revision	Date	Revision Details
A	16 August 2022	Issue A	M. Mahony	C. Taylor
B	30 August 2022	Issue B Pop up sprinklers	M. Mahony	C. Taylor
C	23 November 2022	Issue C Final Layout	M. Mahony	 C. Taylor 0400 301 364

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1 Introduction

1.1 Background

Taylor Environmental (Australia) Pty Ltd was engaged to design an on-site wastewater treatment and effluent disposal system for the Lakeland Avocados workers accommodation at 429 Fichera Road, Mareeba QLD 4880.

A camp is to house seasonal and long-term staff for nearby avocado crops, with 12 lodging blocks, one communal amenities block and two kitchens/mess halls. A small managers quarters will also be built, with 2 live-in managers.

All wastewater is to be treated and disposed of onsite.

1.2 Proposal

It is proposed to:

- Install primary septic tanks at the amenities, kitchens and managers residence
- Install a Sewage Treatment Plant
- Install a treated effluent storage tank with 5 days holding capacity
- Install a 1ha surface spray irrigation area

1.3 Objectives

The scope of works for this report are outlined below:

- Undertake a desktop study of the property, including a review of the development, sensitive environments, geology and slope
- Carry out a site inspection
- Determine a suitable location and method of effluent disposal
- Prepare plans for the wastewater management system for DES consideration
- Apply for a Standard Conditions permit for an ERA63

1.4 Legislation and Standards

This report has been completed in accordance with the relevant legislative requirements:

- Plumbing and Drainage Act
- Plumbing and Drainage Regulation
- Queensland Plumbing and Wastewater Code
- AS/NZS 1547:2012 On-site domestic wastewater management
- Plumbing Code of Australia (PCA)
- Environmental Protection Act 1994
- Environmental Protection Regulations 2019

2 Environmental Assessment

2.1 Land

2.1.1 Property details

The property description details of this site are presented in Table 1.

Table 1: Property Description

Feature	Detail
Address	429 Fichera Road, Mareeba QLD 4880
Lot and Plan Number	Lot 414 on RP835556
Local Authority	Mareeba Shire Council
Property Size	102.6 ha
Tenure	Freehold
Pre-development Land Use	Grazing – native vegetation
Post-development Land Use	No future land use identified

The property is shown in Figure 1.

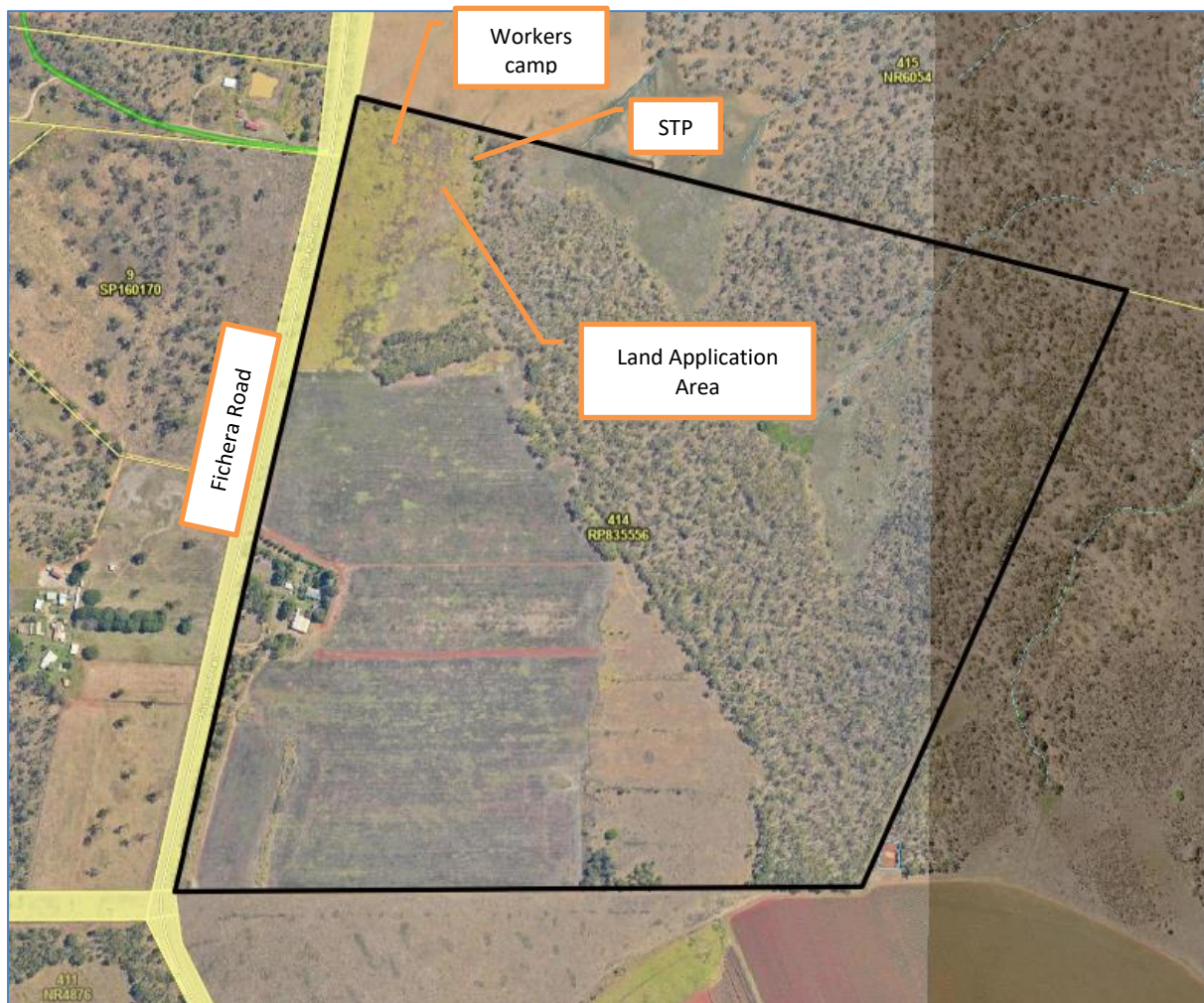


Figure 1: Property Boundary

2.1.2 Site Use

The proposed works camp will provide short-term and long-term accommodation to staff at surrounding farms. The work is seasonal, meaning the site will not be at full capacity year-round. Most residents will not be at the site during the day.

There will be a communal amenities block with laundry facilities, and two kitchen/mess halls. The lodging blocks do not have any plumbing in them.

2.1.3 Land application area details

A summary of the characteristics of the proposed land application area are presented in Table 2.

Table 2: Disposal Area Details

Feature	Detail
Coordinates	-17.03774,145.45399 approx
Elevation	447 - 4488m AHD
Slope	Less than 2% - virtually flat
Aspect	North
Exposure	Good
Vegetation	Grass

2.1.4 Climate

The closest Bureau of Meteorology (BOM) weather station is at Mareeba Airport (Station #031210). Table 3 presents the mean rainfall and mean maximum and minimum temperatures recorded at the weather station, with a visual representation in Figure 2.

Table 3: Climate Characteristics

Monthly	J	F	M	A	M	J	J	A	S	O	N	D
Rainfall (mm)	221.3	217.3	150.6	46.6	15.2	10.5	9.2	7	5	15.2	39.9	95.8
Mean max Temp (°C)	31.2	30.8	29.9	28.6	26.9	25.4	25.1	26.4	28.7	30.7	31.7	33.2
Mean min Temp (°C)	24.1	21.4	20.7	19.1	16.9	15.4	14	13.9	15.4	17.4	19.3	20.8

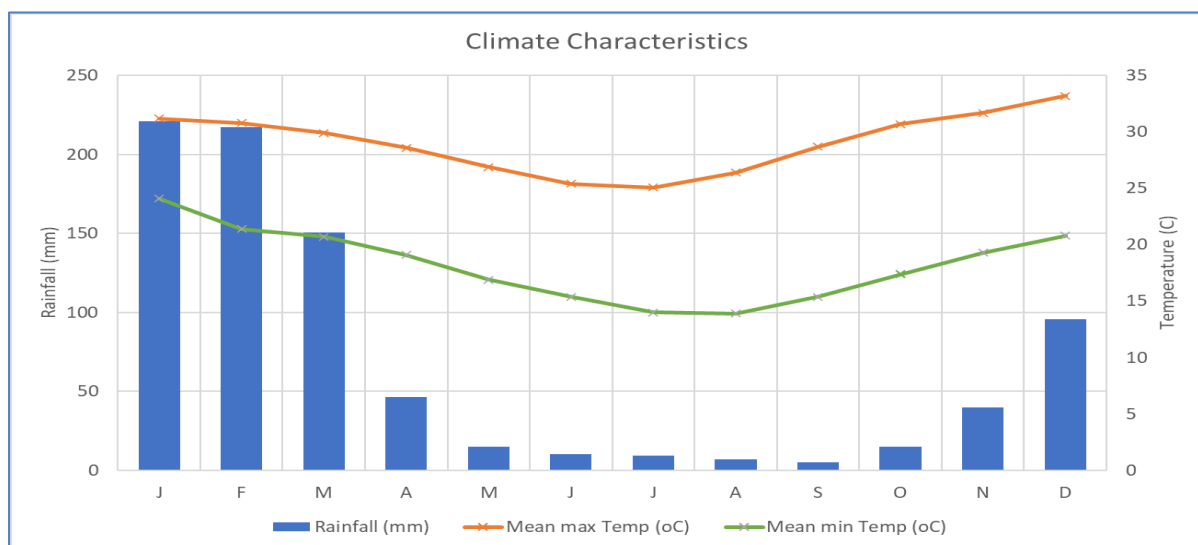


Figure 2: Climate Characteristics

The graph shows a defined wet season in the summer months, with hot days and nights year-round.

A dissection of the average number of wet days per calendar year found that:

Mean annual rainfall:	830 mm
Mean number of wet days per year:	104
Mean number of wet days per year > 10 mm:	25

It is recommended to cease irrigation when >10mm of rain has fallen per 24-hour period, which occurs 25 times over the year. A treated effluent storage tank of 5 days capacity is suitable for this property.

2.2 Soil

The soil type changes across the property, as shown in Figure 3 below.

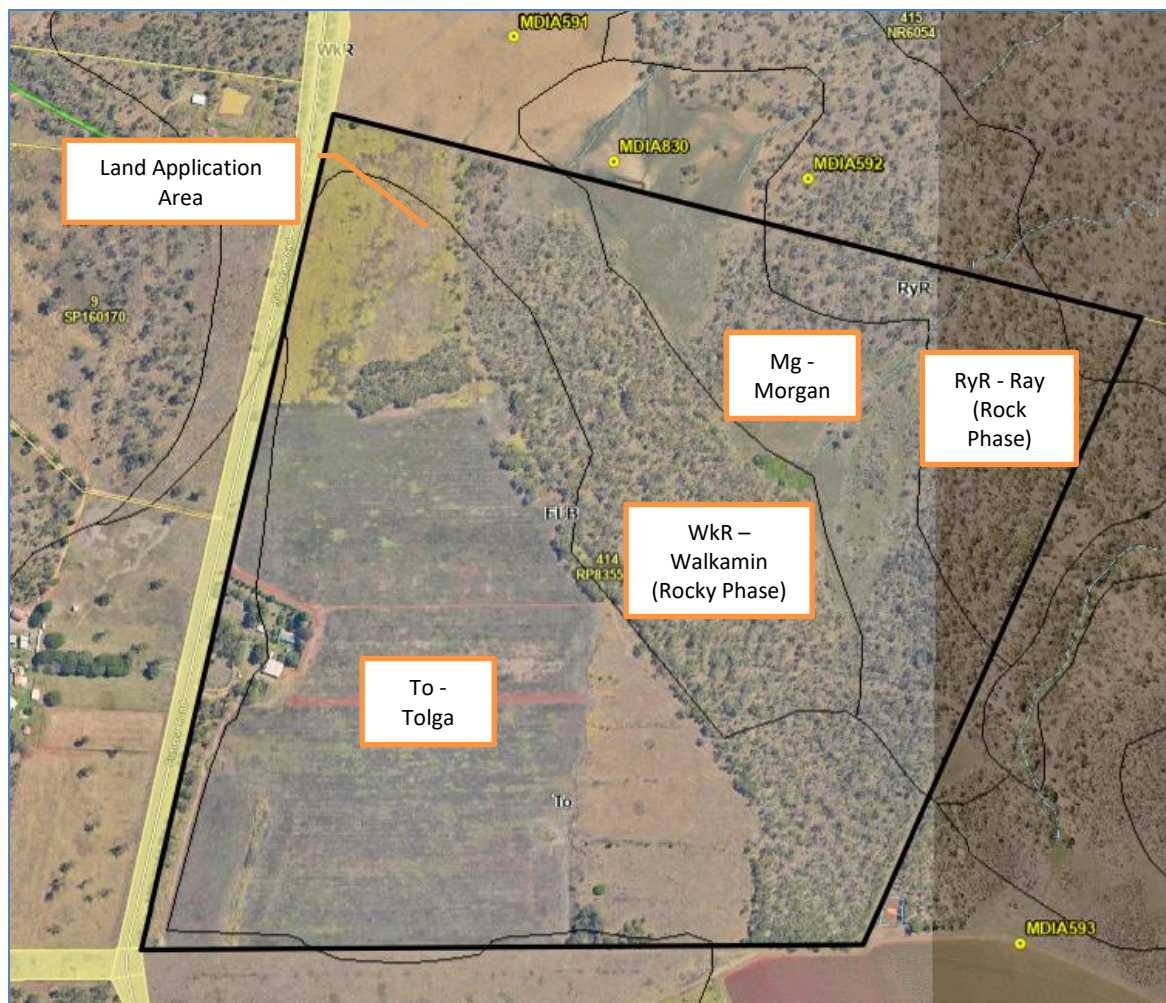


Figure 3: Soil Mapping

The characteristics of the receiving soil are shown in Table 4.

Table 4: Soils

	Detail
Surface Geology	Dominant Rock Basalt Rock Unit Name Tertiary-Quaternary basalts, N Queensland Rock Type Stratified unit Age Late Tertiary – Quaternary
Soil Type	Brown Ferrosol (Walkamin)
Drainage (soils level 5)	Imperfectly drained
Limiting layers	Not encountered
Acid Sulfate Soils	n/a
Groundwater	Not encountered
AS1547:2012 Classification	Light Clay
AS1547:2012 Permeability	0.06 – 0.12 m/day
AS1547:2012 Design Irrigation Rate	3 mm/day

2.3 Environment and Waters

Figure 4 shows the sensitive environment, surface waters and bores within 2km the subject property.

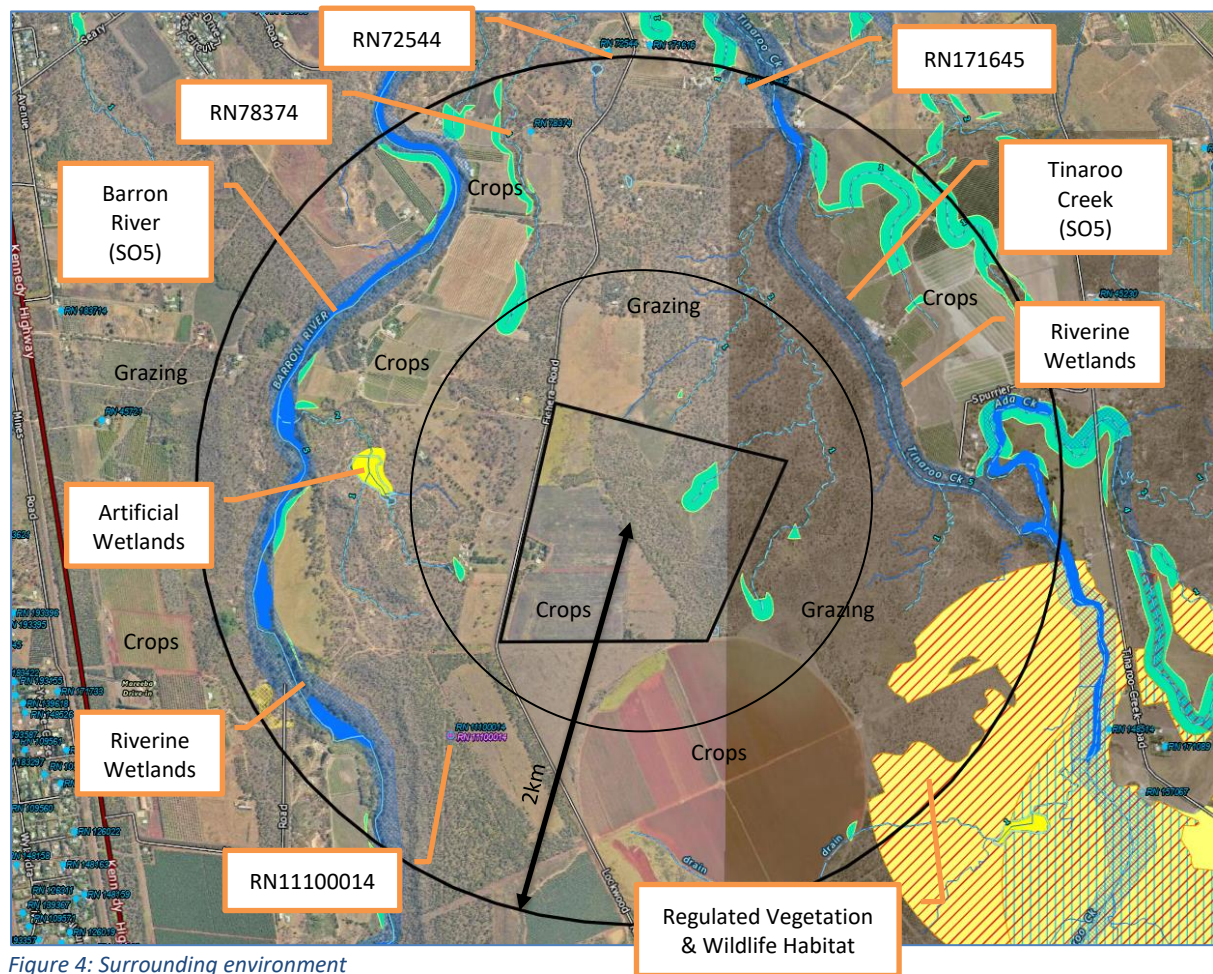


Figure 4: Surrounding environment

Details of the surrounding waters and sensitive environment is shown in Table 5.

Table 5: Waters and Environment

Type	Details																														
Permeant watercourses	<ul style="list-style-type: none"> No permanent watercourses on the property Closest permanent watercourse are: <ul style="list-style-type: none"> Tinaroo Creek, 1.5km east (stream order 5, minor) Barron River, 1.5km west (stream order 5, major) 																														
Intermittent watercourses	<ul style="list-style-type: none"> One intermittent watercourse is on the property, 100m east of land application area Several others on neighbouring property Tributary gullies of Tinaroo Creek 																														
Dams	<ul style="list-style-type: none"> No dams on the property Small farm dam near Northern boundary, 150m east of land application area Dam 1.2km west 																														
Springs	<ul style="list-style-type: none"> No springs on or nearby property 																														
Wetlands	<ul style="list-style-type: none"> No wetlands on the property Riverine wetlands surrounding Tinaroo and Barron River Artificial wetlands on dam to west 																														
Flooding	<ul style="list-style-type: none"> Property is not at risk of flooding and is not in a Mareeba Shire Council flood inundation area 																														
Overland flow paths	<ul style="list-style-type: none"> Property and surrounds are virtually flat No overland flow with traverse the site or runoff from the site 																														
Groundwater Dependent Ecosystems	<ul style="list-style-type: none"> No GDE on or surrounding the property 																														
Bores (bore reports in appendix B)	<ul style="list-style-type: none"> 2 registered bores within 2km of the subject property <table border="1"> <thead> <tr> <th></th> <th>RN11100014</th> <th>RN78374</th> <th>RN171645</th> <th>RN72522</th> </tr> </thead> <tbody> <tr> <td>Date Drilled</td> <td>24/1/1994</td> <td>20/3/1987</td> <td>17/2/2017</td> <td>25/5/1991</td> </tr> <tr> <td>Role</td> <td>Previous monitoring bore Abandoned</td> <td>Farm use</td> <td>Water Supply</td> <td>Farm use</td> </tr> <tr> <td>Bore Depth</td> <td>60.5m</td> <td>n/a</td> <td>55m</td> <td>38.1m</td> </tr> <tr> <td>Aquifer</td> <td>n/a</td> <td>n/a</td> <td>21 – 53m Hodgkinson Formation</td> <td>n/a</td> </tr> <tr> <td>Standing Water Level</td> <td>n/a</td> <td>32m</td> <td>13.7m</td> <td>56ft = 17m</td> </tr> </tbody> </table>		RN11100014	RN78374	RN171645	RN72522	Date Drilled	24/1/1994	20/3/1987	17/2/2017	25/5/1991	Role	Previous monitoring bore Abandoned	Farm use	Water Supply	Farm use	Bore Depth	60.5m	n/a	55m	38.1m	Aquifer	n/a	n/a	21 – 53m Hodgkinson Formation	n/a	Standing Water Level	n/a	32m	13.7m	56ft = 17m
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Aquifer	n/a	n/a	21 – 53m Hodgkinson Formation	n/a																											
Standing Water Level	n/a	32m	13.7m	56ft = 17m																											
Aquifers	<ul style="list-style-type: none"> By inspection of the bore reports, there appears to be a permanent, moderate to deep aquifer of the Hodgkinson Formation No shallow or seasonal aquifer is identified 																														
Groundwater on site	<ul style="list-style-type: none"> No indication of a shallow groundwater table is observed onsite A bore is to be constructed in the future for the accommodation water supply 																														
Environmental Values	<ul style="list-style-type: none"> EPP Area: Barron River Basin, Tinaroo Creek, Upland fresh waters EV's: aquatic ecosystems, irrigation, farm supply stock watering, human consumer, primary recreation, secondary recreation, visual appreciation, industrial use, cultural values Water quality objectives: <ul style="list-style-type: none"> Turbidity <15 NTU SS <8 mg/L Chlorophyll <1.5 ug/L Total Nitrogen <340 ug/L Oxidised N <50 ug/L Ammonia N <10 ug/L Total Phosphorus <25 ug/L 																														

Type	Details
	<ul style="list-style-type: none"> ○ Filterable reactive phosphorus <8 ug/L ○ DO 85-120% saturation ○ pH 6.0 – 8.0
Surrounding land use	<ul style="list-style-type: none"> ● Surrounding land use is mostly agricultural: <ul style="list-style-type: none"> ○ irrigated cropping ○ irrigated sugar ○ irrigated fruit trees ○ irrigated hay and silage ○ grazing native vegetation
Matters of State Environmental Significance	<ul style="list-style-type: none"> ● Remnant vegetation mapped on some parts of the property (not near the effluent land application area)
Local Areas of Significance	<ul style="list-style-type: none"> ● No specific Mareeba Shire Council local areas of significance are on or surrounding the property

2.4 Air and Noise Sensitive receptors

Table 6 outlines the nearby sensitive receptors for air and noise. The land application area is subsurface, and there is a vegetation buffer surrounding the STP and the land application area.

Table 6: Sensitive Receptors

Type	Details
Residential	<ul style="list-style-type: none"> ● Workers accommodation is 308m west of the land application area
Commercial / industrial	<ul style="list-style-type: none"> ● None in close proximity to property
Agriculture	<ul style="list-style-type: none"> ● Remainder of property is used as farmland
Recreation	<ul style="list-style-type: none"> ● None in close proximity to property

3 Design Volume

3.1 Water Supply

It is understood that a bore will be constructed for water supply.

3.2 Volume Allowance

The accommodation offered at Lakeland Avocados is similar to a residential dwelling, with bathrooms, laundry and kitchens. As such, AS1547:2012 Table H1 has been used to determine the design volume based on domestic wastewater flow allowances. A volume allowance of 150 L/p/day has been adopted for the workers and the live-in site manager.

3.3 Number of Residents and Seasonal Variation

Due to the nature of the work, there will be significant seasonal variation of the number of workers residing at the camp. Higher occupancy will be during the harvest season between February and June¹, with lower occupancy during the off season. Additionally, workers may be coming and going frequently under Fly In Fly Out, backpackers or short term contracts and it is unlikely that there will be 100% occupancy on site at any given time. Therefore, a 90% occupancy rate has been adopted. The works accommodation consists of 12 blocks of 6 rooms, for a total of 144 beds. With a 90% occupancy rate, this equates to 130 people.

The managers residence can accommodate two people.

3.4 Adopted Design Volume

The adopted design volume is:

Workers accommodation	130 people	x 150 L/p/day	= 19,500 L/day
Managers	2 people	x 150 L/p/day	= 300 L/day
TOTAL	132 people	x 150 L/p/day	= 19,800 L/day

3.5 Sewerage Composition

Table7 presents the typical domestic composition as identified in the *Planning Guidelines for Water and Sewerage April 2010* and is the expected composition for this property.

Wastewater at this property will be generated from:

- Communal amenities blocks
- Laundry (self-serve domestic machines, not commercial)
- Communal kitchen

The lodging rooms themselves do not have plumbing.

Table 7: Typical Influent Composition

Analyte	Typical Domestic Influent Composition	Analyte	Typical Domestic Influent Composition
pH	6.5 – 8.0	BOD5	140 – 480 mg / L
Electrical Conductivity	700 - 900 µS/cm	Total Organic Carbon	160 – 250 mg / L
Total Dissolved Salts	500 – 650 mg / L	Total Nitrogen	30 – 85 mg / L
Total Suspended Solids	140 – 410 mg / L	Total Phosphorus	12 mg / L

¹ QLD Government Pick Queensland; <https://www.qld.gov.au/about/pickqld/crops-by-season-and-location>

4 Sewage Treatment System

The proposed wastewater system is shown schematically below, and is designed for 19,800L/day.

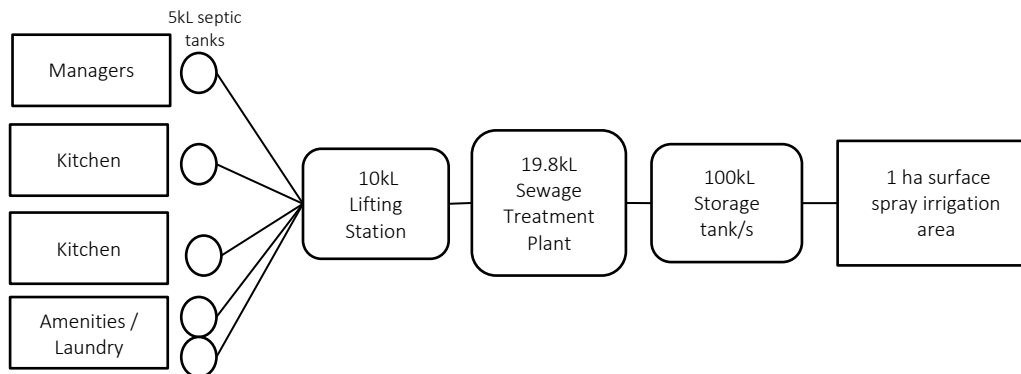


Table 8: Sewage Treatment System

Component	Details														
Pre-treatment and collection	<ul style="list-style-type: none"> • 5kL all-waste septic tanks to be installed at each kitchen • 2x 5kL all-waste septic tanks to be installed at amenities/laundry block • 5kL all-waste septic tank to be installed at managers quarters • Septic tanks provide initial primary treatment and catch foreign items prior to the STP • Gravity drain to lifting station 														
Lifting Station	<ul style="list-style-type: none"> • 10kL lifting station down slope of all septic tanks to pump to elevated STP inlet <ul style="list-style-type: none"> ○ Duel alternating macerator pumps ○ Visual and audible pump failure and 75% high liquid level alarms to be monitored by site maintenance operator ○ Non-return valve on outlet ○ Fit with camlock connection for pumpout truck • Lifting station can act as emergency storage in case of STP maintenance 														
Sewage Treatment Plant	<ul style="list-style-type: none"> • Pre-packaged 19.8kL STP for tertiary treatment • Must include alarm system • Service in accordance with manufacturers specifications • Pump treated effluent to storage tank • Minimum effluent quality as per ERA63 Standard Conditions release limits: <table border="1" data-bbox="472 1496 1161 1753"> <thead> <tr> <th>Analyte</th> <th>Limit/Range</th> </tr> </thead> <tbody> <tr> <td>pH</td> <td>5 – 8.5</td> </tr> <tr> <td>Electrical Conductivity</td> <td>1600 uS/cm</td> </tr> <tr> <td>Total Nitrogen</td> <td>60 mg/L</td> </tr> <tr> <td>Total Phosphorus</td> <td>20 mg/L</td> </tr> <tr> <td>E. Coli</td> <td><1000 CFU/100 mL</td> </tr> <tr> <td>Total residual chlorine</td> <td>1 mg/L</td> </tr> </tbody> </table> 	Analyte	Limit/Range	pH	5 – 8.5	Electrical Conductivity	1600 uS/cm	Total Nitrogen	60 mg/L	Total Phosphorus	20 mg/L	E. Coli	<1000 CFU/100 mL	Total residual chlorine	1 mg/L
Analyte	Limit/Range														
pH	5 – 8.5														
Electrical Conductivity	1600 uS/cm														
Total Nitrogen	60 mg/L														
Total Phosphorus	20 mg/L														
E. Coli	<1000 CFU/100 mL														
Total residual chlorine	1 mg/L														
Treated Effluent Storage Tank/s	<ul style="list-style-type: none"> • 100kL capacity (5 days peak volume storage) <ul style="list-style-type: none"> ○ Duel alternating pumps with pump controller ○ Solenoid valves (or similar) to rotate effluent between 5 irrigation zones ○ Inline filters on outlet ○ Auto logging electromagnetic flow meter on outlet to monitor daily transfer volumes ○ Flow controller limited to 19.8kL/day maximum onsite irrigation. Any excess wastewater is to remain in the tank 														

Component	Details
	<ul style="list-style-type: none"> ○ Rain sensor to be installed on controller. If more than 10mm of rain falls within a 24hour period, irrigation is to cease. Sensor resets at 12pm midnight ○ Visual and audible pump failure and 75% high liquid level alarms to be monitored by site maintenance operator ○ Pump out within 48 hours of alarm trigger ○ Camlock fitting for pumpout truck suction hose connection ○ Treated effluent sampling point at outlet (for quarterly grab samples)
Additional Requirements	<ul style="list-style-type: none"> ● Pumps must be configured to enable the use of a portable generator for temporary power supply during extended power failure ● The wastewater treatment and effluent disposal system is to not cause a noise or odour issue to the development or site users ● A reliable installer must be engaged and provide evidence of similar installations ● The installer is to provide details of costs of servicing, maintenance and warranty on system and parts ● The supplier must provide a suitable operation and maintenance manual, including warranty certificates ● The wastewater and effluent can be removed for off-site disposal in case of a tank high liquid level or pump failure alarm. A licensed regulated waste contractor is to be contacted immediately if an alarm is triggered to ensure pump-out occurs within 48 hours and a service agent is to also be contacted immediately for rectification of fault within 48 hours ● Lockable valves or removable handles to be fitted in areas that are accessible by unauthorized persons

5 Land Application Area

Details of the Land Application Area are shown in Table 9 below.

Table 9: Land Application

	Details										
Area Required	<ul style="list-style-type: none"> Land application area sizing based on the methodology of <i>AS1547:2012 On-Site Domestic Wastewater Management</i> Irrigation Rate as per ERA63 standard conditions requirements: 2 mm/day for areas with rainfall 600 – 1000 mm/year Area Required: $A = \frac{Q}{IR} = \frac{19,800 \text{ L/day}}{2 \text{ mm/day}} = 0.98ha \approx 1ha$ 										
Area Proposed	<ul style="list-style-type: none"> 122m x 82m = 1ha 										
Irrigation	<ul style="list-style-type: none"> Popup sprinklers Rainbird maxi-paw with #10 low-angle nozzle [or similar] 10m spray radius 4 rows of 6 sprinklers = 24 total 4 laterals <ul style="list-style-type: none"> one lateral operating at a time pump controller and solenoid valves to alternate between laterals 										
Vegetation	<ul style="list-style-type: none"> Establish turf/grass in irrigation area (kikuyu or similar species suitable for climate) Grass to be mown as required with clippings to avoid nutrient build up 										
Additional Requirements	<ul style="list-style-type: none"> Hang warning signs around land application area warning of effluent disposal No water supply bore within 250m of land application area 										
Setback Distances	<table border="1"> <thead> <tr> <th>Feature</th> <th>Distance</th> </tr> </thead> <tbody> <tr> <td>Property boundary</td> <td>15 m</td> </tr> <tr> <td>Worker's camp</td> <td>30m</td> </tr> <tr> <td>Intermittent waterway</td> <td>100m</td> </tr> <tr> <td>Crop land</td> <td>>250m</td> </tr> </tbody> </table>	Feature	Distance	Property boundary	15 m	Worker's camp	30m	Intermittent waterway	100m	Crop land	>250m
Feature	Distance										
Property boundary	15 m										
Worker's camp	30m										
Intermittent waterway	100m										
Crop land	>250m										

6 Servicing and Monitoring

The service, monitoring and reporting conditions of the EA permit are to be complied with. Table 10 outlines the key requirements. Refer to Appendix B for the standard conditions requirements.

Table 10: Servicing and reporting

	Details
Servicing and Maintenance	<ul style="list-style-type: none"> • Establish a 12-monthly contract prior to commissioning the system in accordance with the system manufacturer • Septic tanks require annual checking of solids build up and pumped out when 1/3 full of solids or once every 5 years, whichever is sooner • Alarm systems shall be monitored regularly by the site operator • The land application area is to be mown as required and kept free of weeds and scrub
Monitoring	<ul style="list-style-type: none"> • Treated effluent quality is to be monitored quarterly • A grab sample is to be taken from the storage tank and tested at an NATA approved laboratory for: <ul style="list-style-type: none"> ○ pH ○ Electrical Conductivity ○ Total Nitrogen ○ Total Phosphorus ○ Total Residual Chlorine ○ E coli • Any sample that exceeds the maximum limit identified in the EA permit is to be reported to the Department of Environment and Science within 7 days • Ongoing non-compliance with the release limits may require intervention from a suitably qualified person • Any complaints about the system or nuisance cause by the system shall be documented and with reports kept for at least 5 years
Operation	<ul style="list-style-type: none"> • No effluent is to be irrigated during days with >10mm of rainfall • No effluent is to be irrigated to a depth greater than 2 mm/day • No effluent is to be irrigated in excess of the maximum design volume • A Land Management Plan (LMP) is to be prepared that meets the requirements of Condition G2 of the ERA63 Standard Conditions: <ul style="list-style-type: none"> ○ identify potential risks to the environment from the activity during routine operations and emergencies ○ establish control measures that minimise the potential for environmental harm ○ ensure plant and equipment is maintained and operated in proper and effective condition ○ ensure that staff are trained and aware of their obligations under the <i>Environmental Protection Act 1994</i> ○ ensure that reviews of environmental performance are undertaken at least annually.

7 ERA Application

7.1 Equivalent Persons

The number of Equivalent Persons in accordance with *Environmental Protection Regulation 2008, Schedule 2*, have been calculated below:

$$\begin{aligned}\text{STP Treatment Capacity EP} &= \text{Total Capacity} / 200 \\ &= (19,800) / 200 \\ &= \mathbf{99 \text{ EP}}\end{aligned}$$

$$\begin{aligned}\text{Phosphorus EP} &= (\text{P loading rate} \times \text{volume}) / 2.5 \\ &= [12 \text{ mg/L} \times 19,800\text{L}] / 2.5 \\ &= \mathbf{95.04 \text{ EP}}\end{aligned}$$

7.2 Standard Conditions

The Eligibility criteria used for ERA63 Standard Condition is shown in Table 11 below.

Table 11: Eligibility Criteria

Criteria	Detail	Complies?
Activity	The activity is sewage treatment works with a total daily peak design capacity of 21 to 100 equivalent persons (EP)	✓
	The activity does not discharge effluent to an infiltration trench	✓
Location	The effluent disposal area is not within 250 m of any bore used for domestic water supply however an onsite bore is proposed for potable use.	✓
	The effluent disposal area is not within 1,000 m of any bore used for town water supply.	✓
	The activity is not carried out in a designated precinct in a strategic environmental area as defined in the Regional planning Interests Regulation 2014 or regional plan.	✓
	The facility is not within 100 m of any watercourse, wetland, or spring	✓
Water	There is no release of aqueous waste from the activity to waters	✓

7.1 Application Type

Based on the assessment of Equivalent Persons and Eligibility Criteria, this application is a:

Standard Conditions Application for an ERA 63 (1)(a)(i) - operating a sewage treatment works with a total daily peak design capacity of 21 - 100 equivalent persons if treated effluent is discharged to an infiltration trench or through an irrigation scheme, with:

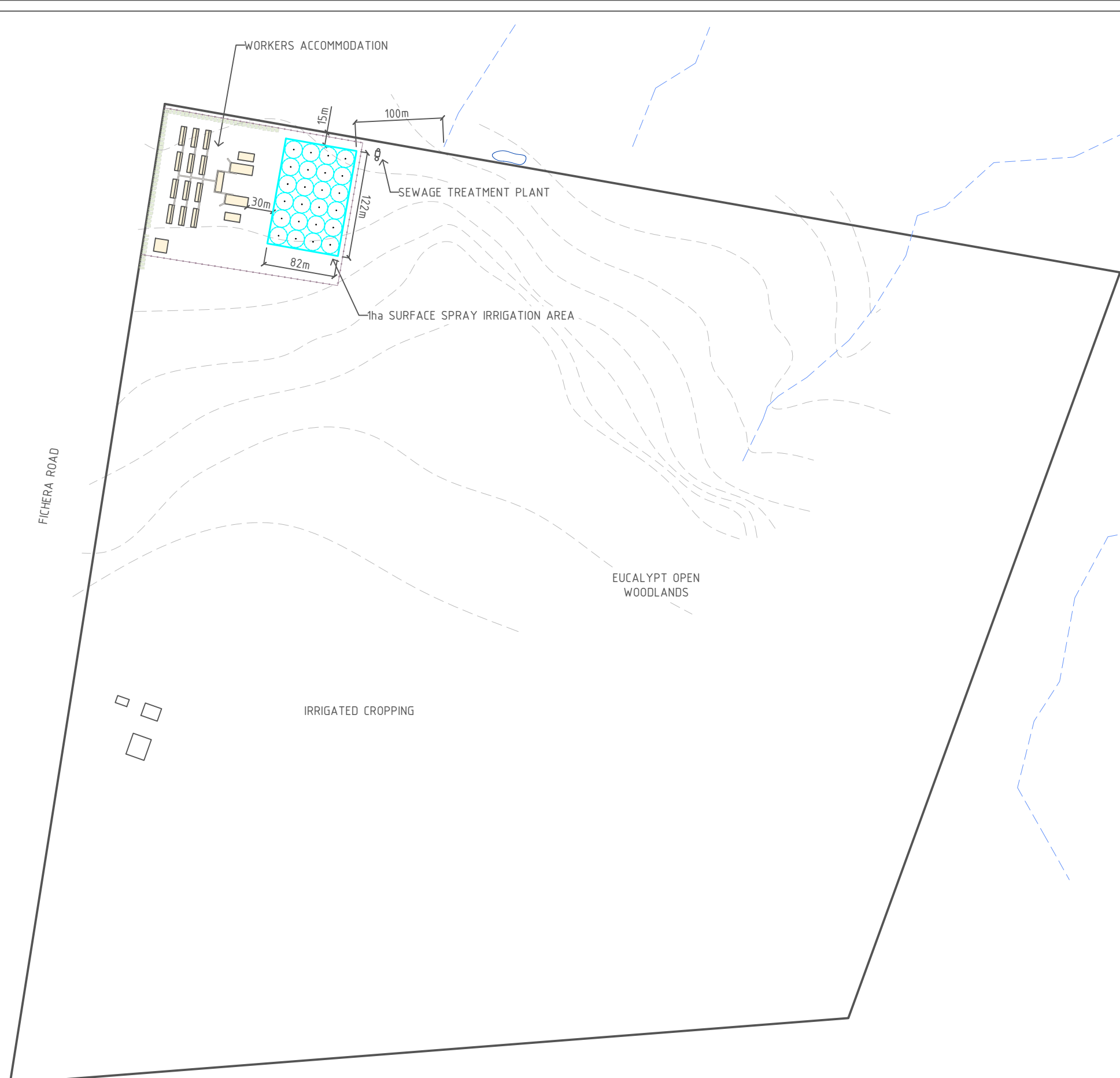
$$\begin{aligned}\text{Equivalent Persons} &= \mathbf{99 \text{ EP}} \\ \text{Design volume} &= \mathbf{19.8 \text{ kL/day}} \\ \text{Application Rate} &= \mathbf{2 \text{ mm/day}} \\ \text{Application Area} &= \mathbf{1 \text{ ha}}\end{aligned}$$

The design was completed by Chris Taylor (Director, Taylor Environmental (Australia) Pty Ltd, QBCC Licence Number 150 556 72).

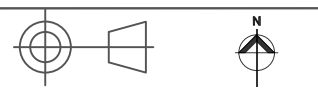


Chris Taylor MEnvMan, BAppSc(Chem), ADCivEng Cert IV DWM003
Director | Taylor Environmental (Australia) Pty Ltd
23 November 2022

Appendix A Design Drawings



SITE AND SOIL CHARACTERISTICS	
TEXTURE	LIGHT CLAY
SLOPE	<2% - VIRTUALLY FLAT
VEGETATION	LIGHT WOODLAND
RAINFALL	830 mm/YEAR
MAXIMUM IRRIGATION RATE	2 mm/DAY
DESIGN VOLUME	
WATER SUPPLY	BORE WATER
VOLUME ALLOWANCE	150 L/PERSON/DAY
AVERAGE NUMBER OF RESIDENTS (90% CAPACITY)	130 PEOPLE
MANAGERS	2 PEOPLE
DESIGN VOLUME	19800 L/DAY
EQUIVALENT PERSONS	99 EP
LAND APPLICATION AREA	
TYPE	SURFACE SPRAY IRRIGATION
AREA PROPOSED	1 HA
CONFIGURATION	4 ROWS OF 6 SPRINKLERS
VEGETATION	KIKUYU GRASS OR SIMILAR
SPRINKLER TYPE	RAINBIRD MAXI-PAW POP UP SPRINKLERS WITH #10 LOW-ANGLE NOZZLE [OR SIMILAR]
SPRINKLER SPECS	SPRAY RADIUS = 10 m FLOW RATE = 19.8 L/MIN/SPRINKLER
IRRIGATION PUMP DUTY	
HEAD LOSS: TANK	3 m
HEAD LOSS: ELEVATION	1 m
FRICTION LOSS: VALVES	7 m
FRICTION LOSS: RISING MAIN	9 m
TOTAL LOSS	20 m
PUMP DUTY	20m HEAD @ 120 L/MIN/LATERAL
TRANSFER TIME [1,000L]	8 MIN



REVISIONS

#	DATE	SUBJECT	AUTHORISED
A	16/08/2022	ERA PLANS	C. TAYLOR
B	30/08/2022	ERA PLANS	C. TAYLOR
C	23/11/2022	ERA PLANS	C. TAYLOR

TAYLOR ENVIRONMENTAL



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 Web: www.taylorenviro.com.au

WASTE WATER TREATMENT & EFFLUENT DISPOSAL SYSTEM

AUTHORISED FOR ISSUE DATE
M.C. Taylor 23/11/2022

STREET ADDRESS
 429 FICHERA RD, MAREEBA

LOT & PLAN
 414 RP835556

COUNCIL
 MAREEBA SHIRE

NAME OF CLIENT
 LAKESHORE AVOCADOS

DESIGNER
 C. TAYLOR

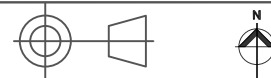
DRAWN
 M. MAHONY

DRAWING DETAILS
 Site Layout

JOB NUMBER
 TE222113

SCALE	REVISION	DWG #
1:5000	C	SL1

FULL SITE PLAN
 1:5000 @ A3



REVISIONS

#	DATE	SUBJECT	AUTHORISED
A	16/08/2022	ERA PLANS	C. TAYLOR
B	30/08/2022	ERA PLANS	C. TAYLOR
C	23/11/2022	ERA PLANS	C. TAYLOR

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WASTE WATER TREATMENT & EFFLUENT DISPOSAL SYSTEM

AUTHORISED FOR ISSUE DATE
M.C. Taylor 23/11/2022

STREET ADDRESS
429 FICHERA RD, MAREEBA

LOT & PLAN
414 RP835556

COUNCIL
MAREEBA SHIRE

NAME OF CLIENT
LAKESHORE AVOCADOS

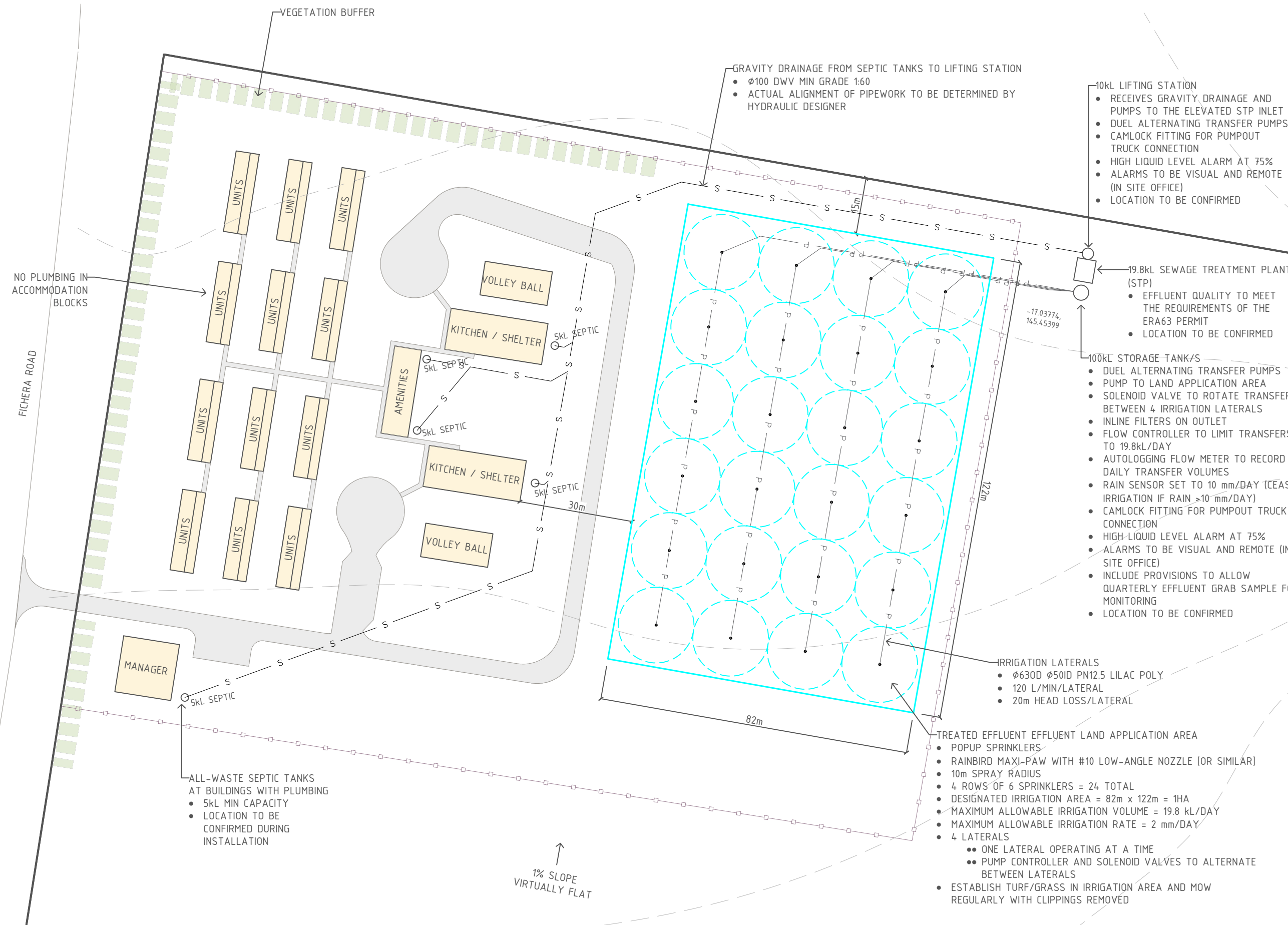
DESIGNER
C. TAYLOR

DRAWN
M. MAHONY

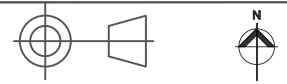
DRAWING DETAILS
DEVELOPMENT AREA

JOB NUMBER
TE222113

SCALE	REVISION	DWG #
1:1000	C	SL2



DEVELOPMENT AREA
1:1000 @ A3



REVISIONS

#	DATE	SUBJECT	AUTHORISED
A	16/08/2022	ERA PLANS	C. TAYLOR
B	30/08/2022	ERA PLANS	C. TAYLOR
C	23/11/2022	ERA PLANS	C. TAYLOR

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WASTE WATER TREATMENT & EFFLUENT DISPOSAL SYSTEM

AUTHORISED FOR ISSUE DATE
M.C. Taylor 23/11/2022

STREET ADDRESS
429 FICHERA RD, MAREEBA

LOT & PLAN
414 RP835556

COUNCIL
MAREEBA SHIRE

NAME OF CLIENT
LAKESHORE AVOCADOS

DESIGNER
C. TAYLOR

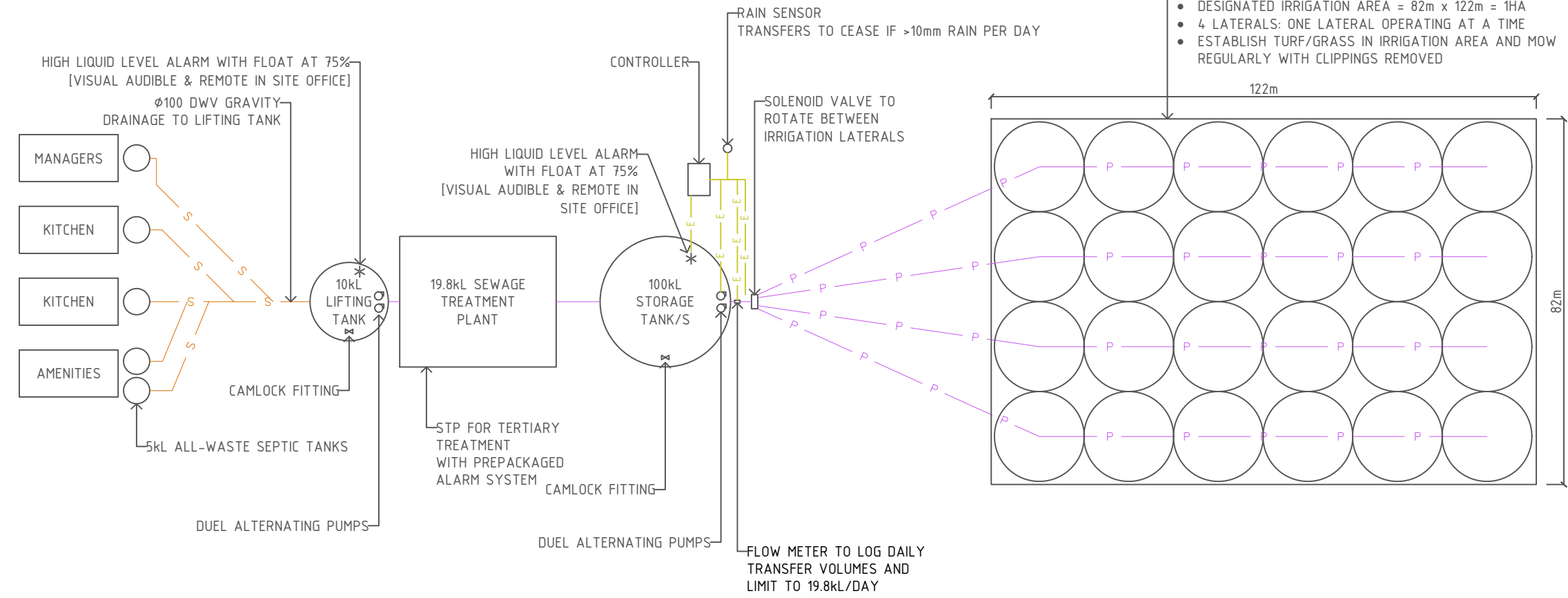
DRAWN
M. MAHONY

DRAWING DETAILS
TYPICAL ARRANGEMENT

JOB NUMBER
TE222113

SCALE	REVISION	DWG #
N/A	C	SL3

- SURFACE SPRINKLER LAND APPLICATION AREA
- POPUP SPRINKLERS
 - RAINBIRD MAXI-PAW WITH #10 LOW-ANGLE NOZZLE [OR SIMILAR]
 - 10m SPRAY RADIUS
 - 4 ROWS OF 6 SPRINKLERS
 - DESIGNATED IRRIGATION AREA = 82m x 122m = 1HA
 - 4 LATERALS: ONE LATERAL OPERATING AT A TIME
 - ESTABLISH TURF/GRASS IN IRRIGATION AREA AND MOW REGULARLY WITH CLIPPINGS REMOVED



TYPICAL ARRANGEMENT

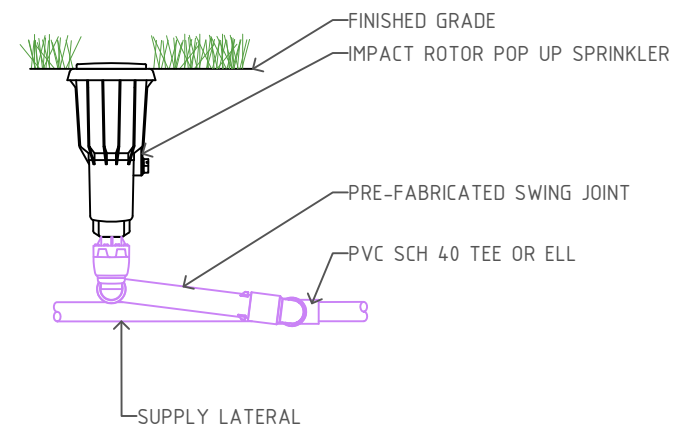
ERA63
- THIS WASTEWATER SYSTEM IS AN ERA63(1)(a)(i) WITH STANDARD CONDITIONS
- ALL CONDITIONS OF THE EA PERMIT ARE TO BE COMPLIED WITH

INSTALLATION
- IT IS THE INSTALLERS RESPONSIBILITY TO ENSURE THAT ALL COMPONENTS COMPLY WITH THESE GUIDES UPON COMMISSIONING OF THIS SYSTEM
- THE INSTALLER SHALL ENSURE ALL IRRIGATION PIPEWORK AND FITTINGS COMPLIES WITH AS1477
- ALL BURIED PIPEWORK IS TO BE IDENTIFIED WITH UNDERGROUND MARKING TAPE PLACED ABOVE THE PIPEWORK AND ALL PIPE IS TO BE LILAC COATED
- ALONG THE BOUNDARY OF THE IRRIGATION AREAS THERE SHALL BE AT LEAST 2 WARNING SIGNS CLEARLY VISIBLE TO ADVISE THAT RECYCLED WATER IS USED FOR IRRIGATION (EACH SIGN SHALL COMPLY WITH AS1319 AND HAVE THE WORDING RECYCLED WATER - AVOID CONTACT DO NOT DRINK)

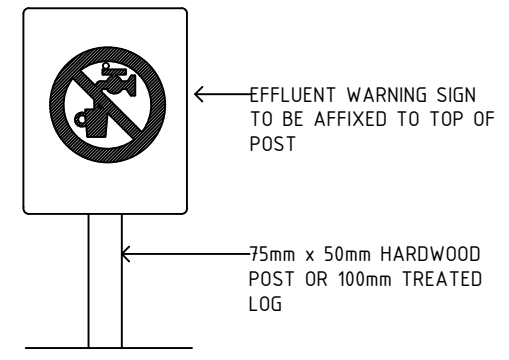
MAINTENANCE AND SERVICING
- SEPTIC TANKS TO BE CHECKED ANNUALLY AND PUMPED OUT WHEN 1/3 FULL OF SOLIDS OR EVERY 5 YEARS
- STP TO BE SERVICED IN ACCORDANCE WITH MANUFACTURES GUIDELINES
- REGULAR ROUTINE MAINTENANCE CHECKS OF THE IRRIGATION SYSTEM SHALL BE CARRIED OUT BY A LICENSED SERVICE AGENT
- FITTINGS SHALL BE MAINTAINED IN CORRECT WORKING ORDER TO ENSURE PROPER PERFORMANCE BY THE LICENSED SERVICE AGENT

MONITORING & REPORTING
- EFFLUENT AND SOIL MONITORING TO BE UNDERTAKEN IN ACCORDANCE WITH ERA63 ENVIRONMENTAL AUTHORITY
- THE REPORTING REQUIREMENTS OUTLINED IN THE EA PERMIT ARE TO BE UNDERTAKEN

GENERAL NOTES - HSTP
1. THE SYSTEM INSTALLER IS RESPONSIBLE TO ESTABLISH THE LOCATION, LEVELS AND DEPTHS OF ALL EXISTING SERVICES ON-SITE PRIOR TO COMMENCING ANY WORKS
2. LOCATIONS AND SETOUT DIMENSIONS SHOWN ARE APPROXIMATE ONLY AND ARE TO BE CONFIRMED ON SITE.
3. ACCESS AND LAY DOWN AREAS ARE TO BE CONFIRMED BY THE SYSTEM INSTALLER
4. EXISTING BUILDINGS AND EXTERNAL STRUCTURES SHOWN ON THESE DRAWINGS ARE OBTAINED FROM THE AVAILABLE INFORMATION AND MAY NOT BE COMPLETE AND ACCURATE
5. PLUMBING AND DRAINAGE TO AS / NZS 3500
6. ALL PIPE WORK TO AS / NZS 4020
7. ALL TANKS TO BE INSTALLED AND ANCHORED IN COMPLIANCE WITH THE MANUFACTURERS SPECIFICATIONS
8. FLEXIBLE JOINTS ON ALL INSTALLED TANKS (AS / NZS 3500)
9. THERE SHALL BE NO CROSS CONNECTION BETWEEN ANY WASTEWATER / EFFLUENT PIPEWORK AND ANY POTABLE WATER SUPPLY PIPEWORK
10. MINIMUM DISTANCE BETWEEN TANKS AND BUILDINGS TO BE MAINTAINED (AS/NZS 3500)
11. GRADE ALL BATTERS EVENLY AT 1 IN 5, UNLESS NOTED OTHERWISE
12. ANY SOILS ENCOUNTERED WHICH SHOW EVIDENCE OF CONTAMINATION ARE TO BE STOCKPILED SEPARATELY. CONTAMINATED SOIL SHALL BE HANDLED IN ACCORDANCE WITH ALL WORKPLACE HEALTH & SAFETY AND ENVIRONMENTAL REGULATIONS
13. IT IS THE INSTALLERS RESPONSIBILITY TO PROVIDE 3 COPIES OF ACCURATE 'AS CONSTRUCTED' DRAWINGS TO THE RELEVANT LOCAL AUTHORITY AND INCUR ALL ASSOCIATED COSTS
14. ALL DISTURBED AREAS TO BE TURFED AND RECTIFIED
15. EXISTING TOPSOIL IS TO BE RETAINED AND SET ASIDE (WINDROWED) TO PREVENT DAMAGE FROM MACHINERY AND REDISTRIBUTED ONCE INSTALLATION IS COMPLETE
16. AT LEAST A 5 TONNE MACHINE FOR EARTHWORKS TO UTILISED
17. IT IS THE RESPONSIBILITY OF THE INSTALLER TO ENGAGE TAYLOR ENVIRONMENTAL (AUSTRALIA) PTY LTD TO UNDERTAKE INSPECTIONS DURING INSTALLATION. FAILURE TO DO SO WILL RESULT IN THE FORM 8 / COMMISSIONING CERTIFICATE NOT BEING ABLE TO BE COMPLETED



RAINBIRD MAXI PAW POP UP SPRINKLER



TYPICAL WARNING SIGN

Appendix B Standard Conditions Requirements

Eligibility criteria and standard conditions for sewage treatment works (ERA 63) – Version 2

This document provides eligibility criteria and standard conditions for Environmentally Relevant Activity (ERA) 63 - Sewage treatment at threshold 1(a)(i) - sewage treatment works with total daily peak design capacity of 21 to 100 equivalent persons if treated effluent is discharged through an irrigation scheme.

Eligibility criteria

Eligibility criteria are constraints set to ensure environmental risks associated with the operation of the ERA are able to be managed by the standard conditions. Eligibility criteria set out the circumstances in which a standard or variation application for an environmental authority can be made.

Standard conditions

Standard conditions are the minimum operating requirements an environmental authority holder must comply with.

Standard applications

If an applicant can meet all of the eligibility criteria and standard conditions, then they can make a standard application. Applicants are required to complete a 'Standard application form'. The form can be downloaded from the Queensland Government's Business and Industry Portal at www.business.qld.gov.au/ea

Variation applications

If an applicant can meet all of the eligibility criteria but needs to vary one or more of the standard conditions to suit their operational needs, then they can make a variation application. Applicants are required to complete a 'Variation application form'. The form can be downloaded from the Queensland Government's Business and Industry Portal at www.business.qld.gov.au/ea

Site specific applications

Applicants who cannot meet the eligibility criteria must make a site specific application. Applicants are required to complete a 'Site specific application form'. The form can be downloaded from the Queensland Government's Business and Industry Portal at www.business.qld.gov.au/ea

Amendment applications

If the holder of an environmental authority needs to amend a standard condition in the issued environmental authority, then the holder must submit an 'Amendment application form'. The form can be downloaded from the Queensland Government's Business and Industry Portal at www.business.qld.gov.au/ea

Definitions

Some terms used in this document are defined in Appendix 1.

Version history

Version	Date	Description of changes
1	6 December 2013	Eligibility criteria and standard conditions take effect
2	30 September 2015	Updated for repeal of wild river provisions (as allowed in section 715C of the <i>Environmental Protection Act 1994</i>) and version history added
2	15 August 2016	Added publication number ESR/2015/1710

Eligibility criteria and standard conditions
Sewage treatment works (ERA 63)

Eligibility criteria

Eligibility criteria category	Eligibility criteria
Activity description	The activity is sewage treatment works with a total daily peak design capacity of 21 to 100 equivalent persons, if treated effluent is discharged through an irrigation scheme.
	The activity does not discharge effluent to an infiltration trench.
Activity location	The effluent disposal area is not within 250 metres of any bore used for domestic water supply.
	The effluent disposal area is not within 1000 metres of any bore used for town water supply.
	The activity is not carried out in a designated precinct in a strategic environmental area as defined in the Regional Planning Interests Regulation 2014 or regional plan.
	The facility is not within 100 metres of any watercourse, wetland or spring.
Water	There is no release of aqueous waste from the activity to waters.

Standard conditions

Conditions
General
G1: All reasonable steps must be taken to ensure the activity complies with the eligibility criteria.
G2: The activity must be undertaken in accordance with written procedures that: <ul style="list-style-type: none"> identify potential risks to the environment from the activity during routine operations and emergencies establish control measures that minimise the potential for environmental harm ensure plant and equipment is maintained and operated in proper and effective condition ensure that staff are trained and aware of their obligations under the <i>Environmental Protection Act 1994</i> ensure that reviews of environmental performance are undertaken at least annually.
G3: The activity must not cause environmental nuisance at a nuisance sensitive place.
G4: All documents and records of monitoring required by conditions of this authority must be kept for at least five years.
G5: Storage of chemicals and fuels in bulk or in containers of greater than 15 litres must be within a secondary containment system and releases controlled in a manner that prevents environmental harm.
Land
L1: Contaminants from the activity must not be released to land except as authorised by under conditions (D1), (D3) and (D4).
Water
W1: Stormwater contaminated by the activity must be managed to minimise or prevent any adverse effect on the environmental values of the receiving environment.
W2: Ponds used for the storage or treatment of effluent or wastes must be constructed, installed and maintained to: <ul style="list-style-type: none"> prevent any release of effluent or wastes from the ponds ensure the stability of the pond structure.
Disposal of effluent to land
D1: Treated effluent is permitted to be released to land provided that it is done in accordance with a written procedure that ensures: <ul style="list-style-type: none"> infiltration to groundwater and subsurface flows of contaminants to surface waters are prevented surface pondage and run-off of effluent is prevented degradation of soil structure is minimised soil sodicity and the build-up of nutrients and heavy metals in the soil and subsoil are minimised spray drift or overspray do not carry beyond effluent disposal areas effluent disposal areas are maintained with an appropriate crop in a viable state for transpiration and nutrient uptake the crop on the disposal area is harvested and removed from the disposal area.
D2: When weather conditions or soil conditions preclude the release of effluent to land, effluent must be directed to wet weather storage or be lawfully removed from the site.

Eligibility criteria and standard conditions
Sewage treatment works (ERA 63)

D3: In addition to the requirements of D1, the treated effluent must be evenly distributed over an area stated in Table 1 or a greater area.

Table 1 – Irrigation area requirements

Rainfall	Maximum irrigation rate	Minimum land required (m ²)
<600 millimetres per year (mm/year)	3 millimetres per day (mm/day)	335m ² per m ³ of treated effluent irrigated
>600mm/year to 1000 mm/year	2mm/day	500m ² per m ³ of treated effluent irrigated
>1000mm/year	1mm/day	1000m ² per m ³ of treated effluent irrigated

D4: Treated effluent released to land must comply with the limits in Table 2.

Table 2 – Contaminant release limits to land

Quality characteristics	Release limit	Limit type
Total nitrogen*	60mg/L	maximum
Total phosphorous*	20mg/L	maximum
Electrical conductivity	1600µs/cm	maximum
pH	5.0–8.5	range
Total residual chlorine (if used for disinfection)	1mg/L	maximum
<i>E. coli</i>	<1000cfu/100ml	maximum

*note that these limits would typically correspond to long term total nitrogen and total phosphorous concentrations of 30 mg/L and 10 mg/L respectively.

D5: Quarterly monitoring of treated effluent must be carried out in accordance with the Monitoring and Sampling Manual 2009 (EHP) to assess compliance with condition (D4) and records of the results maintained.

Waste

R1: Other than effluent released to land in accordance with conditions (D1), (D3) and D4), all waste generated in carrying out the activity must be reused, recycled or lawfully disposed of offsite.

Appendix 1: Terms and definitions

Term	Definition
Activity	the environmentally relevant activity to which this environmental authority relates. An activity may be undertaken on the whole or a part of a site.
Aqueous waste	any aqueous waste including process water, water that has otherwise been used in the carrying out of the activity or sewage, whether or not the waste has been treated, but excluding stormwater.
Category A or B environmentally sensitive area	as defined in Schedule 12, Part 1 of the Environmental Protection Regulation 2008.
Chemical	as defined in Schedule 12, Part 2 of the Environmental Protection Regulation 2008.
Combustion of fuel	does not include fuel used in explosives or by vehicles.
Contaminant(s)	as defined in Section 11 of the <i>Environmental Protection Act 1994</i> .
Environmental harm	as defined in Section 14 of the <i>Environmental Protection Act 1994</i> .
Environmental nuisance	as defined in Section 15 of the <i>Environmental Protection Act 1994</i> .
Facility	the area used for carrying out the ERA including any buildings, disturbed areas or any associated infrastructure.
Land	land excluding waters and the atmosphere. Land includes land on the authorised place.
Minimise	<p>minimise by taking all reasonable and practical measures to minimise the adverse effect having regard to the following matters:</p> <ul style="list-style-type: none"> (a) the nature of the harm or potential harm (b) the sensitivity of the receiving environment (c) the current state of technical knowledge for the activity (d) the likelihood of successful application of different measures that might be taken to minimise the adverse effects (e) the financial implications of the different measures as they would relate to the type of activity (f) if the adverse effect is caused by the location of the activity being carrying out, whether it is feasible to carry out the activity at another location.
Nuisance sensitive place	<p>nuisance sensitive place includes:</p> <ul style="list-style-type: none"> • within or outside of a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises • within or outside of a motel, hotel or hostel • within or outside of a kindergarten, school, university or other educational institution • within or outside of a medical centre or hospital • within a protected area under the <i>Nature Conservation Act 1992</i>, within a marine park under the <i>Marine Parks Act 1992</i> or a world heritage area • within a public thoroughfare, park or gardens • within or outside of a place used as a workplace, an office or for business or commercial purposes and includes a place within the curtilage of such a place reasonably used by

Eligibility criteria and standard conditions
Sewage treatment works (ERA 63)

	persons at that place.
Spring	the land to which water rises naturally from below the ground and the land over which the water then flows.
Waters	all or any part of a creek, river, stream, lake, lagoon, swamp, wetland, spring, unconfined surface water, unconfined water in natural or artificial watercourses, bed and bank of any waters, non-tidal or tidal waters (including the sea), stormwater channel, stormwater drain, roadside gutter, stormwater run-off, and underground water.
Watercourse	as defined in Section 8, Schedule 12 of the Environmental Protection Regulation 2008.
Wetland	as defined in Schedule 12 of the Environmental Protection Regulation 2008, means an area shown as a wetland on the map of referable wetlands.

Appendix 2: General obligations for environmental authority holders

This appendix is not intended to provide a comprehensive assessment of all obligations under Queensland law. It provides some general information and holders are encouraged to familiarise themselves with all requirements related to their specific operation.

Responsibilities under the *Environmental Protection Act 1994*

Separate to the requirements of the standard conditions, the holder of the environmental authority must also meet their obligations under the *Environmental Protection Act 1994*, and the regulations made under that Act. For example, the holder must be aware of the following provisions of the *Environmental Protection Act 1994* which may apply unless the environmental harm is authorised by the conditions of the environmental authority.

General environmental duty

Section 319 of the *Environmental Protection Act 1994* states that we all have a general environmental duty. This means that we are all responsible for the actions we take that affect the environment. We must not carry out any activity that causes or is likely to cause environmental harm unless we take all reasonable and practicable measures to prevent or minimise the harm. To decide what meets your general environmental duty, you need to consider:

- the nature of the harm or potential harm
- the sensitivity of the receiving environment
- the current state of technical knowledge for the activity
- the likelihood of successful application of the different measures to prevent or minimise environmental harm that might be taken
- the financial implications of the different measures as they would relate to the type of activity.

It is not an offence not to comply with the general environmental duty. However, maintaining your general environmental duty is a defence against the following acts:

- (a) an act that causes serious or material environmental harm or an environmental nuisance
- (b) an act that contravenes a noise standard
- (c) a deposit of a contaminant, or release of stormwater run-off, mentioned in section 440ZG.

More information is available on the Department of Environment and Heritage Protection (EHP) website www.ehp.qld.gov.au.

Duty to notify

Section 320 of the *Environmental Protection Act 1994* explains the duty to notify. The duty to notify applies to all persons and requires a person or company to give notice where serious or material environmental harm is caused or threatened. Notice must be given of the event, its nature and the circumstances in which the event happened. Notification can be verbal, written or by public notice depending on who is notifying and being notified.

The duty to notify arises where:

- a person carries out activities or becomes aware of an act of another person arising from or connected to those activities which causes or threatens serious or material environmental harm
- while carrying out activities a person becomes aware of the happening of one or both of the following events:
 - the activity negatively affects (or is reasonably likely to negatively affect) the water quality of an aquifer
 - the activity has caused the unauthorised connection of two or more aquifers.

For more information on the duty to notify requirements refer to the guideline 'Duty to notify of environmental harm' (EM467).

Some relevant offences under the *Environmental Protection Act 1994*

Non-compliance with a condition of an environmental authority (section 430)

Section 430 of the *Environmental Protection Act 1994* requires that a person who is the holder of, or is acting under, an environmental authority must not wilfully contravene, or contravene a condition of the authority.

Environmental authority holder responsible for ensuring conditions complied with (section 431)

Section 431 of the *Environmental Protection Act 1994* requires that the holder of an environmental authority must ensure everyone acting under the authority complies with the conditions of the authority. If another person acting under the authority commits an offence against section 430, the holder also commits an offence, namely, the offence of failing to ensure the other person complies with the conditions.

Causing serious or material environmental harm (sections 437–39)

Material environmental harm is when the harm is not trivial or negligible in nature. Serious environmental harm is harm that is irreversible, of a high impact or widespread, or that is caused to an area of high conservation value or special significance. Damages, or costs required to rehabilitate the environment, of more than \$5000 also constitute serious environmental harm.

Serious or material environmental harm excludes environmental nuisance.

Causing environmental nuisance (section 440)

Environmental nuisance is unreasonable interference with an environmental value caused by aerosols, fumes, light, noise, odour, particles or smoke. It may also include an unhealthy, offensive or unsightly condition because of contamination.

Depositing a prescribed water contaminant in waters (section 440ZG)

Prescribed contaminants include a wide variety of contaminants listed in Schedule 9 of the *Environmental Protection Act 1994*.

It is your responsibility to ensure that prescribed contaminants are not left in a place where they may or do enter a waterway, the ocean or a stormwater drain. This includes making sure that stormwater falling on or running across your site does not leave the site contaminated. Where stormwater contamination occurs you must ensure that it is treated to remove contaminants. You should also consider where and how you store material used in your processes onsite to reduce the chance of water contamination.

Placing a contaminant where environmental harm or nuisance may be caused (section 443)

A person must not cause or allow a contaminant to be placed in a position where it could reasonably be expected to cause serious or material environmental harm or environmental nuisance.

Some of the relevant offences under the *Waste Reduction and Recycling Act 2011*

Littering (section 103)

Litter is any domestic or commercial waste and any material a person might reasonably believe is refuse, debris or rubbish. Litter can be almost any material that is disposed of incorrectly. Litter includes cigarette butts and drink bottles dropped on the ground, fast food wrappers thrown out of the car window, poorly secured material from a trailer or grass clippings swept into the gutter. However, litter does not include any gas, dust, smoke or material emitted or produced during, or because of, the normal operations of a building, manufacturing, mining or primary industry.

Illegal dumping of waste (section 104)

Illegal dumping is the dumping of large volumes of litter (200 litres or more) at a place. Illegal dumping can also include abandoned vehicles.

Relevant offence under the Environment Protection (Waste Management) Regulation 2000

Trackable waste to be given only to licensed transporter (section 41)

A generator of trackable waste must not give the waste to another person to transport it commercially, or in a load of more than 250 kilograms, in a vehicle unless the other person holds, or is acting under, the required authority for transporting the waste in the vehicle.

Responsibilities under other legislation

An environmental authority pursuant to the *Environmental Protection Act 1994* does not remove the need to obtain any additional approval for the activity that might be required by other state and/or Commonwealth legislation. Other legislation for which a permit may be required includes but is not limited to the:

- *Aboriginal Cultural Heritage Act 2003*
- contaminated land provisions of the *Environmental Protection Act 1994*
- *Fisheries Act 1994*
- *Forestry Act 1959*
- *Nature Conservation Act 1992*
- *Petroleum and Gas (Production and Safety) Act 2004 / Petroleum Act 1923*
- *Queensland Heritage Act 1992*
- *Sustainable Planning Act 2009*
- *Water Supply (Safety and Reliability) Act 2008*
- *Water Act 2000*.

Applicants are advised to check with all relevant statutory authorities and comply with all relevant legislation.

Appendix C Bore Reports

Queensland Government
Groundwater Information
Bore Report

Report Date: 17/08/2022 09:07

From Year:

Registered Number	Facility Type	Facility Status	Drilled Date	Office	Shire
11100014	Sub-Artesian Facility	Abandoned and Destroyed		Mareeba	4880 - MAREEBA SHIRE COUNCIL

Details			Location			
Description			Latitude	17-03-02	Basin	1110
Parish	4693 - TRINITY		Longitude	145-26-49	Sub-area	
Original Name	B116 (M38)		GIS Latitude	-17.050688991	Lot	
			GIS Longitude	145.446939771	Plan	
			Easting	371600		
Driller Name			Northing	8114100	Map Scale	503 - 1: 50 000
Drill Company			Zone	55	Map Series	C - Commission (DNR/QWRC/IWSC)
Const Method	ROTARY RIG		Accuracy		Map No	K2-53234
Bore Line			GPS Accuracy		Map Name	
D/O File No		Polygon	Checked	No	Prog Section	
R/O File No		Equipment				
H/O File No		RN of Bore Replaced				
Log Received Date		Data Owner	DNR			
Roles						

Casing	0 records for RN 11100014
--------	---------------------------

Strata Logs	14 records for RN 11100014
-------------	----------------------------

Rec	Top (m)	Bottom (m)	Strata Description
1	0.00	0.30	CLAY,SANDY,BLACK
2	0.30	3.00	CLAY,BROWN
3	3.00	8.00	CLAY,SANDY,BROWN
4	8.00	16.50	CLAY,SILTY,BLUE-GREY & SOME RED CLAY

From Year:

Water Analysis Part 2

1 records for RN 11100014

Pipe	Date	Rec	Na	K	Ca	Mg	Mn	HCO3	Fe	CO3	Cl	F	NO3	SO4	Zn	Al	B	Cu
A	24/01/1994	1																

Water Levels

0 records for RN 11100014

Wire Line Logs

0 records for RN 11100014

Field Measurements

0 records for RN 11100014

Special Water Analysis

0 records for RN 11100014

From Year:

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From Year:

Registered Number	Facility Type	Facility Status	Drilled Date	Office	Shire
171645	Sub-Artesian Facility	Existing	17/02/2017	Mareeba	4880 - MAREEBA SHIRE COUNCIL

Details			Location			
Description	DRILL LOG # 329614022017		Latitude	17-01-24	Basin	1100
Parish	6000 - NO LONGER USED		Longitude	145-27-35	Sub-area	
Original Name			GIS Latitude	-17.02333333	Lot	1
			GIS Longitude	145.45972222	Plan	RP745867
			Easting	336052		
Driller Name	YOUNGER, JASON		Northing	8117218	Map Scale	
Drill Company	INGHAM DRILLING		Zone	55	Map Series	
Const Method	ROTARY AIR		Accuracy	GPS	Map No	
Bore Line			GPS Accuracy	30	Map Name	
D/O File No	RN DRAWER	Polygon	Checked	Yes	Prog Section	
R/O File No		Equipment				
H/O File No		RN of Bore Replaced				
Log Received Date	17/03/2017	Data Owner				
Roles	Water Supply					

Casing 5 records for RN 171645

Pipe	Date	Rec	Top (m)	Bottom (m)	Material Description	Mat Size (mm)	Size Desc	Outside Diameter (mm)
A	17/02/2017	1	0.00	52.00	Polyvinyl Chloride	7.650	WT - Wall Thickness	140
A	17/02/2017	2	22.00	52.00	Perforated or Slotted Casing	2.000	AP - Aperture Size	140
X	17/02/2017	3	18.00	52.00	Gravel Pack	5.000	GR - Gravel Size	200
X	17/02/2017	4	16.00	18.00	Cuttings or other fill between casing and hole wall			200
X	17/02/2017	5	0.00	16.00	Grout			200

Report Date: 17/08/2022 09:22

Groundwater Information

GWDB8250

Bore Report

From Year:

Strata Logs

8 records for RN 171645

Rec	Top (m)	Bottom (m)	Strata Description	
1	0.00	4.00	TOPSOIL, SANDY, BROWN	
2	4.00	11.00	CLAY, STICKY, GREY, BROWN	
3	11.00	13.00	CLAY, SANDY, BROWN	
4	13.00	17.00	BASALT, HARD, BLACK	
5	17.00	21.00	SAND & GRAVEL, CLAYEY, BROWN	
6	21.00	31.00	GRAVEL - 5-30MM, MULTI COLOURED	*
7	31.00	53.00	ROCK, FRACTURED, GREY, WHITE	*
8	53.00	55.00	ROCK, HARD, GREY, WHITE	

Stratigraphies

0 records for RN 171645

Aquifers

1 records for RN 171645

Rec	Top (m)	Bottom (m)	Lithology	Date	SWL (m)	Flow	Quality	Yield (L/s)	Contr	Cond	Formation Name
1	21.00	53.00	MDST - Mudstone	17/02/2017	-13.70	N		4.00	Y	SC	HODGKINSON FORMATION

Pump Tests Part 1

0 records for RN 171645

Pump Tests Part 2

0 records for RN 171645

Bore Conditions

0 records for RN 171645

Elevations

0 records for RN 171645

Water Analysis Part 1

0 records for RN 171645

Water Analysis Part 2

0 records for RN 171645

Queensland Government
Groundwater Information
Bore Report

Report Date: 17/08/2022 09:22

From Year:

Water Levels 1 records for RN 171645

Pipe	Date	Time	Measure (m)	Meas Point	Remark	Meas Type	Coll Auth	Coll	Method	Project	Quality
A	17/02/2017		-13.70	N	Natural Surface	ACT	Actual	XX	MA	Manual/Hand	130 Data is of unknown quality

Wire Line Logs 0 records for RN 171645

Field Measurements 0 records for RN 171645

Special Water Analysis 0 records for RN 171645

From Year:

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Queensland Government
Groundwater Information
Bore Report

Report Date: 17/08/2022 09:20

From Year:

Registered Number	Facility Type	Facility Status	Drilled Date	Office	Shire
72544	Sub-Artesian Facility	Existing	25/05/1991	Mareeba	4880 - MAREEBA SHIRE COUNCIL

Details			Location			
Description	L1 RP748308		Latitude	17-01-19	Basin	1100
Parish	4581 - TINAROO		Longitude	145-27-14	Sub-area	600
Original Name			GIS Latitude	-17.022119346	Lot	1
			GIS Longitude	145.453827032	Plan	RP748308
			Easting	335423		
Driller Name			Northing	8117348	Map Scale	
Drill Company			Zone	55	Map Series	
Const Method	ROTARY PERCUSSION		Accuracy	SKET	Map No	
Bore Line			GPS Accuracy		Map Name	
D/O File No	TIN65V/1	Polygon	Checked	Yes	Prog Section	
R/O File No		Equipment				
H/O File No		RN of Bore Replaced				
Log Received Date		Data Owner				
Roles						

Casing 3 records for RN 72544

Pipe	Date	Rec	Top (m)	Bottom (m)	Material Description	Mat Size (mm)	Size Desc	Outside Diameter (mm)
A	25/05/1991	1			Plastic Casing	5.900	WT - Wall Thickness	141
A	25/05/1991	2			Perforated or Slotted Casing			141
X	25/05/1991	3	0.00		Gravel Pack	10.000	GR - Gravel Size	250

Strata Logs 15 records for RN 72544

From Year:

Rec	Top (m)	Bottom (m)	Strata Description
1	0.00	1.52	BROWN CLAY
2	1.52	1.83	BASALT
3	1.83	2.44	BROWN CLAY
4	2.44	2.74	BASALT
5	2.74	3.35	RED CLAY
6	3.35	13.41	CRUMBLY BASALT CLAY
7	13.41	17.37	BASALT
8	17.37	22.86	BROWN CLAY & BASALT
9	22.86	32.61	BROKEN BASALT * 2000 GPH
10	32.61	34.75	HARD BASALT
11	34.75	35.97	FRACTURED BASALT & QUARTZ * 600 GPH
12	35.97	38.10	HARD BASALT
13			DRILLER - T DELAI
902		25.05.1991	SWL 56 FT
903		25.05.1991	2000 GPH @ 100 FT 1 HOUR

Stratigraphies 0 records for RN 72544

Aquifers 0 records for RN 72544

Pump Tests Part 1 0 records for RN 72544

Pump Tests Part 2 0 records for RN 72544

Bore Conditions 0 records for RN 72544

Elevations 0 records for RN 72544

From Year:

Water Analysis Part 1	0 records for RN 72544
Water Analysis Part 2	0 records for RN 72544
Water Levels	0 records for RN 72544
Wire Line Logs	0 records for RN 72544
Field Measurements	0 records for RN 72544
Special Water Analysis	0 records for RN 72544

From Year:

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Report Date: 17/08/2022 09:14

Groundwater Information

GWDB8250

Bore Report

From Year:

Registered Number	Facility Type	Facility Status	Drilled Date	Office	Shire
78374	Sub-Artesian Facility	Existing		Mareeba	4880 - MAREEBA SHIRE COUNCIL

Details			Location			
Description	L4 RP808488		Latitude	17-01-31	Basin	1100
Parish	4581 - TINAROO		Longitude	145-27-02	Sub-area	600
Original Name	BAKER K		GIS Latitude	-17.025461287	Lot	4
			GIS Longitude	145.450451779	Plan	RP808488
			Easting	335067		
Driller Name			Northing	8116975	Map Scale	253 - 1: 25 000
Drill Company			Zone	55	Map Series	M - Metric Series
Const Method			Accuracy	SKET	Map No	7963-11
Bore Line			GPS Accuracy		Map Name	
D/O File No	TIN 65V/2	Polygon	Checked	Yes	Prog Section	
R/O File No		Equipment				
H/O File No		RN of Bore Replaced				
Log Received Date		Data Owner				
Roles						

Casing 0 records for RN 78374

Strata Logs 0 records for RN 78374

Stratigraphies 0 records for RN 78374

Aquifers 0 records for RN 78374

Pump Tests Part 1 0 records for RN 78374

Pump Tests Part 2 0 records for RN 78374

Report Date: 17/08/2022 09:14

Groundwater Information

GWDB8250

Bore Report

From Year:

Bore Conditions

0 records for RN 78374

Elevations

0 records for RN 78374

Water Analysis Part 1

1 records for RN 78374

Pipe	Date	Rec	Analyst	Analysis No	Depth (m)	Meth	Src	Cond (uS/cm)	pH	Si (mg/L)	Total Ions (mg/L)	Total Solids (mg/L)	Hard	Alk	Fig. of Merit	SAR	RAH
A	20/03/1987	1	GCL	119442	32.00	PU	GB	360	7.7	67	287.91	248.17	146	173	4.0	0.6	0.54

Water Analysis Part 2

1 records for RN 78374

Pipe	Date	Rec	Na	K	Ca	Mg	Mn	HCO3	Fe	CO3	Cl	F	NO3	SO4	Zn	Al	B	Cu
A	20/03/1987	1	17.0	2.2	24.0	21.0		210.0	0.01	0.6	13.0	0.10						

Water Levels

0 records for RN 78374

Wire Line Logs

0 records for RN 78374

Field Measurements

0 records for RN 78374

Special Water Analysis

0 records for RN 78374

From Year:

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Appendix D Environmental Reports

WetlandMaps Report



For selected area of interest Custom Geometry

Current as at 17/08/2022

Environmental Reports - General Information

The matters of interest reported on in this document are based upon available state mapped datasets. Where the report indicates that a matter of interest is not present within the Area of Interest (AOI) (e.g. where area related calculations are equal to zero, or no values are listed), this may be due either to the fact that state mapping has not been undertaken for the AOI, that state mapping is incomplete for the AOI, or that no matters of interest have been identified within the site.

The information presented in this report should be considered as a guide only and field survey may be required to validate values on the ground.

Important Note to User

Information presented in this report is based upon the mapping of water bodies and wetland regional ecosystems across Queensland. The Queensland wetland mapping was produced using existing information including water body mapping derived from Landsat satellite imagery, regional ecosystem mapping, topographic data, and a springs database. The result is a consistent wetland map for the whole of Queensland.

Ancillary data, such as higher resolution imagery (for example SPOT and aerial photographs), other vegetation and wetland mapping, geology, soil and land system mapping was also used in attributing and assessing the derived Queensland Wetlands Program wetland mapping products.

The wetland mapping was done in accordance with a detailed peer reviewed methodology which included quality assurance measures for all steps in the process. For more detailed information on how the Queensland Wetlands Program wetland mapping was produced, please see the [Wetland Mapping and Classification Methodology](#).

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Summary Information

The following table provides an overview of the area of interest.

Table 1. Area of interest details

Size (ha)	200.74
Local Government(s)	Mareeba Shire
Bioregion(s)	Einasleigh Uplands
Subregion(s)	Hodgkinson Basin
Catchment(s)	Barron
Drainage sub-basin	Barron River

NRM Regions

The following NRM region(s) are in the area of interest:

Terrain NRM

Water Resource Plan Boundaries

The following Water Resource Plan(s) are in the area of interest:

Barron

Learn more about how Wetlands are mapped in Queensland:

Queensland Wetlands Mapping Definitions

Wetlands are areas of permanent or periodic/intermittent inundation, with water that is static or flowing fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed 6 metres. To be a wetland the area must have one or more of the following attributes:

- at least periodically the land supports plants or animals that are adapted to and dependent on living in wet conditions for at least part of their life cycle, or
- the substratum is predominantly undrained soils that are saturated, flooded or ponded long enough to develop anaerobic conditions in the upper layers, or
- the substratum is not soil and is saturated with water, or covered by water at some time.

Examples under this definition **include**:

- those areas shown as a river, stream, creek, swamp, lake, marsh, waterhole, wetland, billabong, pool or spring on the latest Sunmap 1:25,000, 1:50,000, 1:100,000 or 1:250,000 topographic map
- areas defined as wetlands on local or regional maps prepared with the aim of mapping wetlands
- wetland regional ecosystems (REs) as defined by the Queensland Herbarium (Environmental Protection Agency 2005a)
- areas containing recognised hydrophytes as provided by the Queensland Herbarium
- saturated parts of the riparian zone
- artificial wetlands such as farm dams
- water bodies not connected to rivers or flowing water such as billabongs and rock pools.

Examples under this definition **exclude**:

- areas that may be covered by water but are not wetlands according to the definition
- floodplains that are intermittently covered by flowing water but do not meet the hydrophytes and soil criteria
- riparian zone above the saturation level.

Wetland Systems

Riverine wetlands are all wetlands and deepwater habitats within a channel. The channels are naturally or artificially created, periodically or continuously contain moving water, or connecting two bodies of standing water.

Palustrine wetlands are primarily vegetated non-channel environments of less than 8 hectares. They include billabongs, swamps, bogs, springs, soaks etc, and have more than 30% emergent vegetation.

Lacustrine wetlands are large, open, water-dominated systems (for example, lakes) larger than 8ha. This definition also applies to modified systems (for example, dams), which are similar to lacustrine systems (for example, deep, standing or slow-moving waters).

Marine wetlands include the area of ocean from the coastline or estuary, extending to the jurisdictional limits of Queensland waters (3 nautical mile limit). This definition differs from that in Ramsar, as it includes waters deeper than 6m below the lowest astronomical tide.

Estuarine wetlands are those with oceanic water sometimes diluted with freshwater run-off from the land.

Subterranean wetlands are wetlands occurring below the surface of the ground and that are fed by groundwater i.e. caves and aquifers. These wetlands provide water to groundwater dependent ecosystems.

Methodology and Wetland Classification: <https://wetlandinfo.des.qld.gov.au/wetlands/facts-maps/wetland-background/>

Links and support

Other sites that deliver wetland related information include:

WetlandSummary tool: <https://wetlandinfo.des.qld.gov.au/wetlands/facts-maps/>

Queensland Spatial Catalogue: <http://qldspatial.information.qld.gov.au/catalogue/custom/index.page>

Queensland Globe: <https://qldglobe.information.qld.gov.au/>

Environmental reports online: <https://environment.ehp.qld.gov.au/report-request/environment/>

Wetland on-line education modules: <https://wetlandinfo.des.qld.gov.au/wetlands/resources/training/>

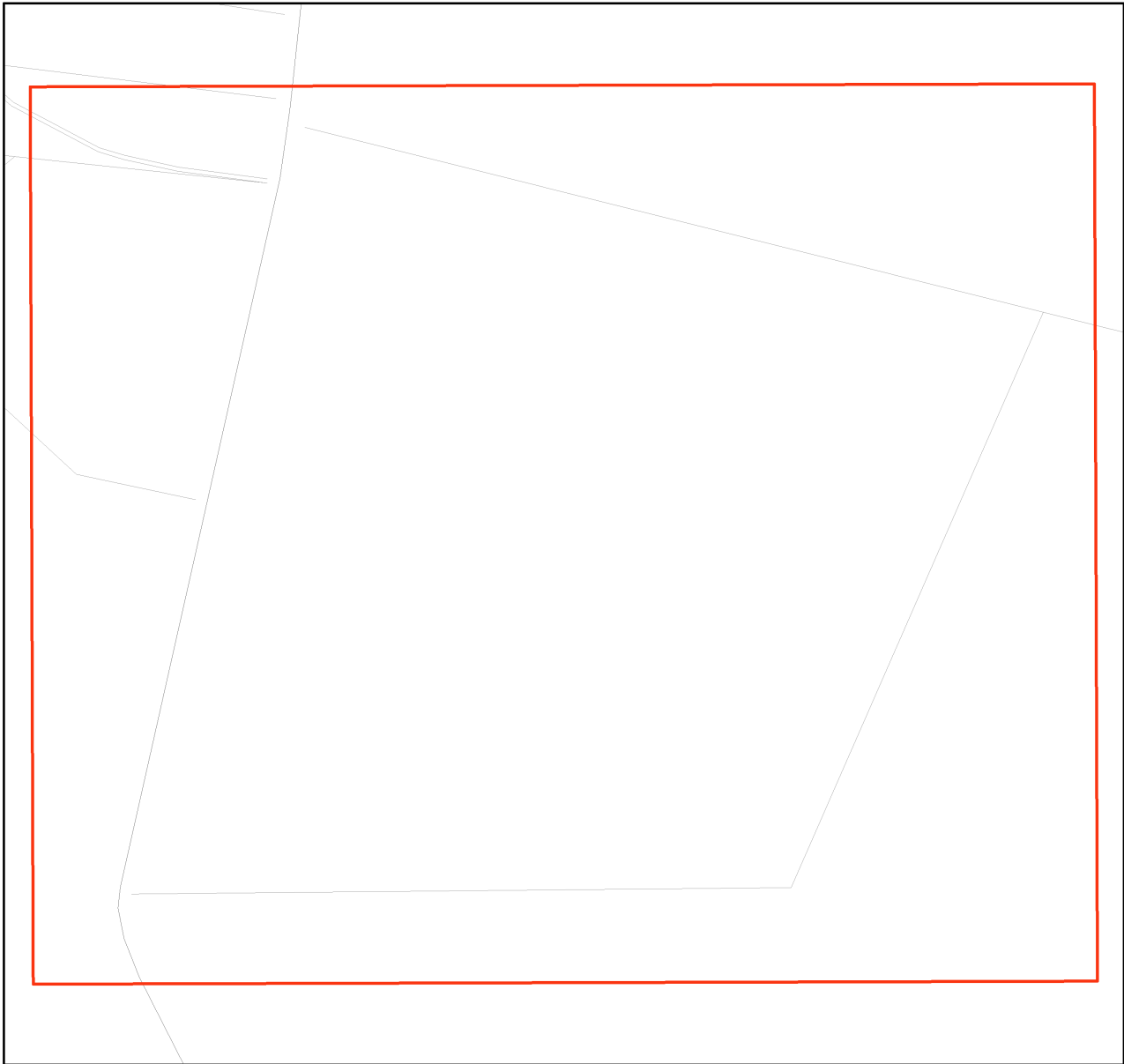
Regional Ecosystem Mapping information: :

<https://www.qld.gov.au/environment/plants-animals/plants/herbarium/mapping-ecosystems>


Aquatic Conservation Assessments: : <https://wetlandinfo.des.qld.gov.au/wetlands/assessment/assessment-methods/aca/>

Groundwater Dependant Ecosystems information:

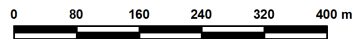
<https://wetlandinfo.des.qld.gov.au/wetlands/ecology/aquatic-ecosystems-natural/groundwater-dependent/>



Legend

-  polygon
-  Springs
-  Dams and weirs
-  Towns
-  Highways
-  Roads
-  Cadastral boundaries
-  Sub-basin
- Wetland Mapping**
- Wetland System - Water Bodies**
-  Marine Waterbodies
-  Estuarine Waterbodies
-  Riverine Waterbodies
-  Lacustrine Waterbodies
-  Palustrine Waterbodies
- Wetland System - Regional Ecosystems**
-  Marine RE
-  Estuarine RE
-  Riverine RE
-  Lacustrine RE
-  Palustrine RE
-  RE 51_80% wetland (mosaic units)
- Riverine System Drainage Lines**
-  Major
-  Minor

Queensland Wetland Map

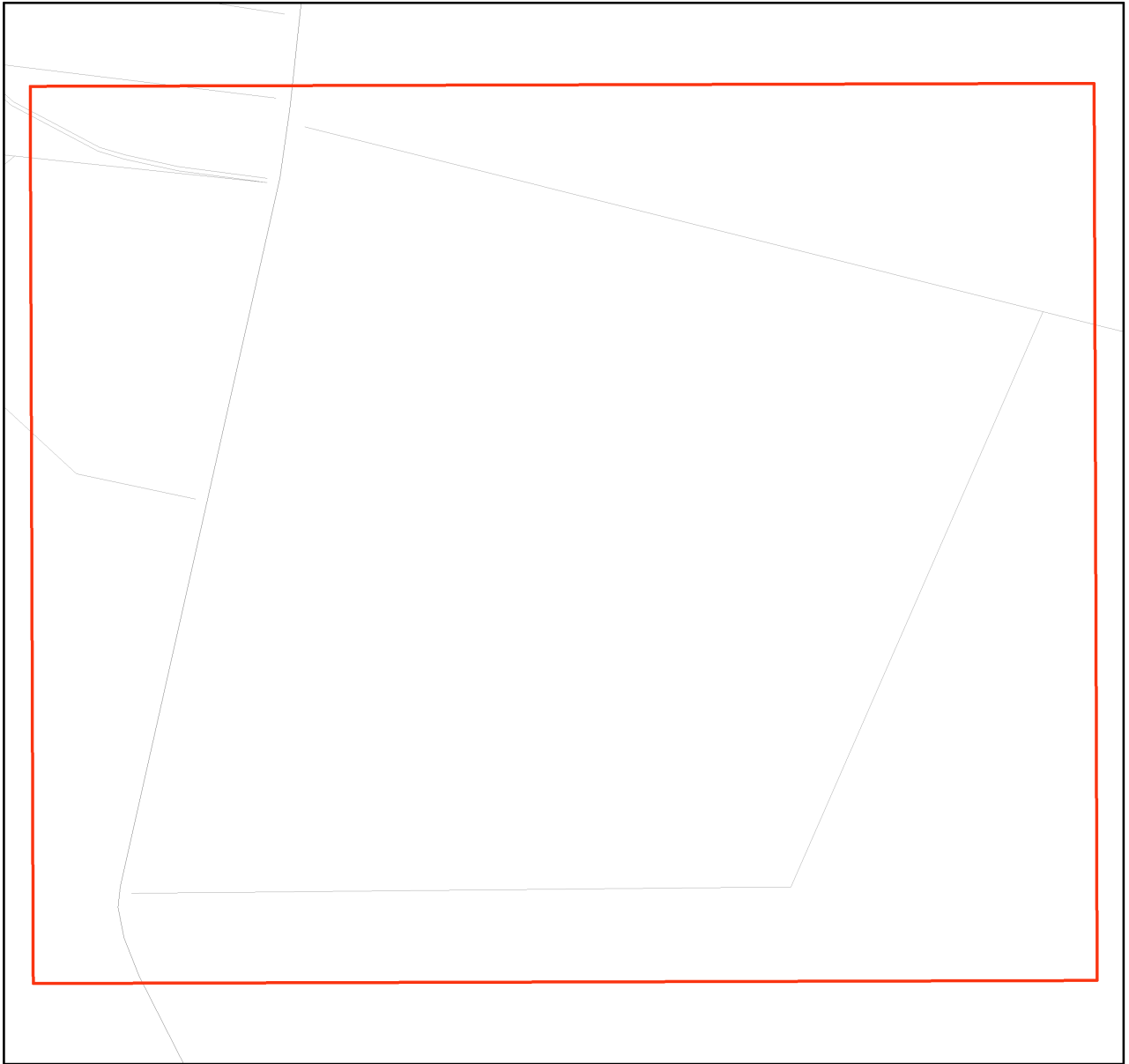


Horizontal Datum: Geographic Datum of Australia 1994 (GDA94)

This map was produced by the Queensland Wetlands Program, Department of Environment and Science, August 2022.

For further information contact: wetlands@des.qld.gov.au

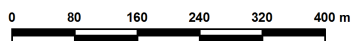
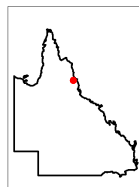
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Queensland Wetlands of Importance Map

Legend

- polygon
- Towns
- Cadastral boundaries
- Highways
- Roads
- Sub-basin
- Directory of Important Wetlands
- Ramsar Wetlands
- Riverine System Drainage Lines**
- Major
- Minor

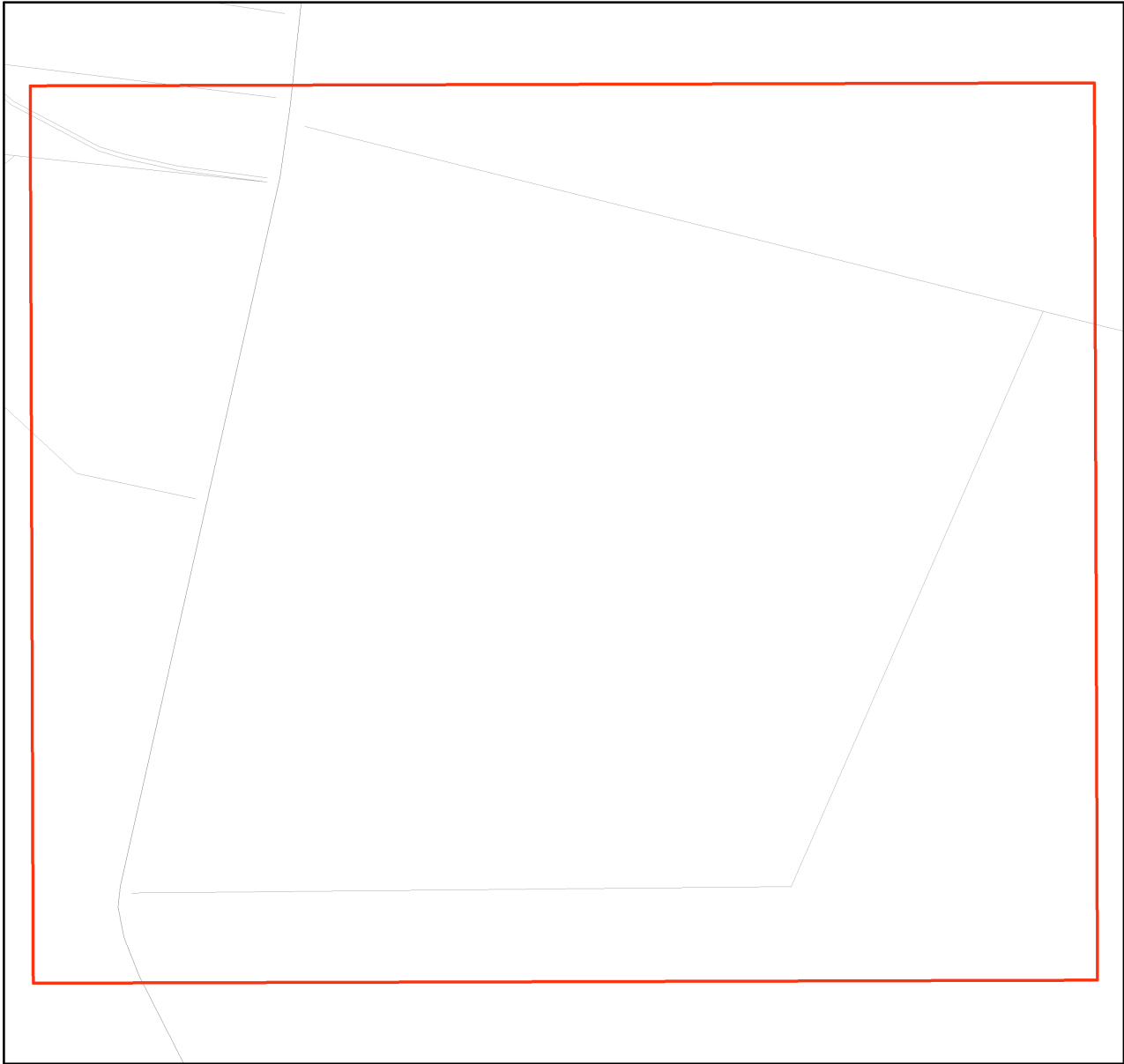


Horizontal Datum: Geographic Datum of Australia 1994 (GDA94)

This map was produced by the Queensland Wetlands Program, Department of Environment and Science, August 2022.

For further information contact: wetlands@des.qld.gov.au

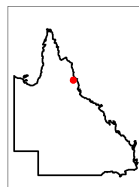
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Legend

- polygon
- Towns
- Cadastral boundaries
- Highways
- Roads
- Sub-basin
- Riverine System Drainage Lines**
- Major
- Minor
- Protected Areas**
- National Park
- National Park (Scientific)
- National Park (CYPAL)
- Conservation Park
- Resources Reserve
- Forest Reserve
- State Forest
- Timber Reserve
- Marine Parks**
- General Use Zone
- Habitat Protection Zone
- Estuarine Conservation Zone
- Conservation Park Zone
- Buffer Zone
- Scientific Research Zone
- Marine National Park Zone
- Preservation Zone

Queensland Protected Area Map



Horizontal Datum: Geographic Datum of Australia 1994 (GDA94)

This map was produced by the Queensland Wetlands Program, Department of Environment and Science, August 2022.

For further information contact: wetlands@des.qld.gov.au

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Wetland habitat types in the AOI

There are no results for Queensland Wetland Mapping in the AOI

Queensland wetland habitat typology: Major wetland habitat types for wetland conceptual models and wetland management profiles

Wetland name	Conceptual model	Wetland profile
Mangrove Wetlands	Not developed	Mangrove Wetlands
Saltmarsh Wetlands	Not developed	Saltmarsh Wetlands
Coastal and subcoastal saline swamps of all substrates, water regimes, topographic types and vegetation communities	Coastal and subcoastal saline swamps	Coastal grass-sedge wetlands
Coastal and subcoastal non-floodplain tree swamps (Melaleuca and Eucalypt) of all substrates and water regimes	Coastal and subcoastal non-floodplain tree swamps - melaleuca and eucalypt	Coastal and subcoastal tree swamps
Coastal and subcoastal non-floodplain wet heath swamps of all substrates and water regimes	Coastal and subcoastal non-floodplain wet heath swamps	Coastal and subcoastal wet heath swamps
Coastal and subcoastal non-floodplain grass, sedge and herb swamps of all substrates and water regimes	Coastal and subcoastal non-floodplain grass, sedge and herb swamps	Coastal grass-sedge wetlands
Coastal and subcoastal spring swamps of all substrates, water types, water regimes and vegetation communities	Coastal and subcoastal spring swamps	Great Artesian Basin spring wetlands
Coastal and subcoastal floodplain tree swamps - melaleuca and eucalypt of all substrates and water regimes	Coastal and subcoastal floodplain tree swamps - melaleuca and eucalypt	Coastal and subcoastal tree swamps
Coastal and subcoastal floodplain wet heath swamps of all substrates and water regimes	Coastal and subcoastal floodplain wet heath swamps	Coastal and subcoastal wet heath swamps
Coastal and subcoastal floodplain, grass, sedge herb swamps of all substrates and water regimes	Coastal and subcoastal floodplain grass, sedge, herb swamps	Coastal grass-sedge wetlands
Coastal and subcoastal tree swamps - palm of all substrates, topographic types and water regimes	Coastal and subcoastal floodplain tree swamps - palm	Coastal Palm Swamps
Coastal and subcoastal Floodplain Lakes of all substrates, water types and water regimes	Coastal and subcoastal Floodplain Lakes	Coastal and subcoastal floodplain lakes and non-floodplain soil lakes
Coastal and subcoastal non-floodplain rock lakes of all water types and water regimes	Coastal and subcoastal non-floodplain rock lakes	Coastal and subcoastal non-floodplain rock lakes
Coastal and subcoastal non-floodplain sand lakes (window) of all water types and water regimes	Coastal and subcoastal non-floodplain sand lakes - window	Coastal non-floodplain sand lakes
Coastal and subcoastal non-floodplain sand lakes (perched) of all water types and water regimes	Coastal and subcoastal non-floodplain sand lakes - perched	Coastal non-floodplain sand lakes
Coastal and subcoastal non-floodplain soil lakes of all water types and water regimes	Coastal and subcoastal non-floodplain soil lakes	Coastal and subcoastal floodplain lakes and non-floodplain soil lakes
Arid and semi-arid saline swamps of all substrates, water regimes, topographic types and vegetation communities	Arid and semi-arid saline swamps	Semi-arid swamps
Arid and semi-arid fresh tree swamps of all substrates, and water regimes and topographic types	Arid and semi-arid tree swamps	Arid swamps Semi-Arid swamps

Wetland name	Conceptual model	Wetland profile
Arid and semi-arid lignum swamps of all substrates, and water regimes and topographic types	Arid and semi-arid lignum swamps	Arid swamps Semi-Arid swamps
Arid and semi-arid grass, sedge, herb swamps of all substrates, water regimes and topographic types	Arid and semi-arid grass, sedge, herb swamps	Arid swamps Semi-Arid swamps
Arid and semi-arid fresh non-floodplain tree swamps of all substrates and water regimes	Arid and semi-arid non-floodplain tree swamps	Arid swamps Semi-Arid swamps
Arid and semi-arid fresh non-floodplain lignum swamps of all substrates and water regimes	Arid and semi-arid non-floodplain lignum swamps	Arid swamps Semi-Arid swamps
Arid and semi-arid fresh non-floodplain grass, sedge, herb swamps of all substrates and water regimes	Arid and semi-arid non-floodplain grass, sedge, herb swamps	Arid swamps Semi-Arid swamps
Arid and semi-arid, non-floodplain swamps - springs of all substrates, water regimes and vegetation communities	Arid and semi-arid spring swamps	Great Artesian Basin spring wetlands
Arid and semi-arid, saline lakes of all substrates, topographic types and water regimes	Arid and semi-arid saline lakes	Arid and semi-arid lakes
Arid and semi-arid, floodplain lakes of all, substrates and water regimes	Arid and semi-arid floodplain lakes	Arid and semi-arid lakes
Arid and semi-arid, non-floodplain Lakes of all substrates and water regimes	Arid and semi-arid non-floodplain lakes	Arid and semi-arid lakes
Arid/ semi-arid, non-floodplain (clay pans) lakes of all substrates and water regimes	Arid and semi-arid fresh non-floodplain lakes (clay pans)	Arid and semi-arid lakes
Arid and semi-arid, Permanent Lakes permanently inundated lakes of all substrates, water types, topographic types and vegetation communities	Arid and semi-arid permanent lakes	Arid and semi-arid lakes



Queensland Government

Department of Environment and Science

Environmental Reports

Biodiversity and Conservation Values

Biodiversity Planning Assessments and Aquatic Conservation Assessments

For the selected area of interest
Custom Geometry

Environmental Reports - General Information

The Environmental Reports portal provides for the assessment of selected matters of interest relevant to a user specified location, or Area of Interest (AOI). All area and derivative figures are relevant to the extent of matters of interest contained within the AOI unless otherwise stated. Please note, if a user selects an AOI via the "Central co-ordinates" option, the resulting assessment area encompasses an area extending from 2km radius from the point of interest.

All area and area derived figures included in this report have been calculated via reprojecting relevant spatial features to Albers equal-area conic projection (central meridian = 146, datum Geocentric Datum of Australia 1994). As a result, area figures may differ slightly if calculated for the same features using a different co-ordinate system.

Figures in tables may be affected by rounding.

The matters of interest reported on in this document are based upon available state mapped datasets. Where the report indicates that a matter of interest is not present within the AOI (e.g. where area related calculations are equal to zero, or no values are listed), this may be due either to the fact that state mapping has not been undertaken for the AOI, that state mapping is incomplete for the AOI, or that no values have been identified within the site.

The information presented in this report should be considered as a guide only and field survey may be required to validate values on the ground.

Please direct queries about these reports to: biodiversity.planning@des.qld.gov.au

Disclaimer

Whilst every care is taken to ensure the accuracy of the information provided in this report, the Queensland Government makes no representations or warranties about its accuracy, reliability, completeness, or suitability, for any particular purpose and disclaims all responsibility and all liability (including without limitation, liability in negligence) for all expenses, losses, damages (including indirect or consequential damage) and costs which the user may incur as a consequence of the information being inaccurate or incomplete in any way and for any reason.



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Summary Information

Tables 1 to 8 provide an overview of the AOI with respect to selected topographic and environmental values.

Table 1: Area of interest details: Custom Geometry

Size (ha)	200.74
Local Government(s)	Mareeba Shire
Bioregion(s)	Einasleigh Uplands
Subregion(s)	Hodgkinson Basin
Catchment(s)	Barron

The following table identifies available Biodiversity Planning Assessments (BPAs) and Aquatic Conservation Assessments (ACAs) with respect to the AOI.

Table 2: Available Biodiversity Planning and Aquatic Conservation Assessments

Assessment Type	Assessment Area and Version
Biodiversity Planning Assessment(s)	Einasleigh Uplands v1.1
Aquatic Conservation Assessment(s) (riverine)	Great Barrier Reef Catchments v1.1
Aquatic Conservation Assessment(s) (non-riverine)	Great Barrier Reef Catchments v1.3

Table 3: Remnant regional ecosystems within the AOI as per the Qld Herbarium's 'biodiversity status'

Biodiversity Status	Area (Ha)	% of AOI
Endangered	0.0	0.0
Of concern	75.38	37.55
No concern at present	0.0	0.0

The following table identifies the extent and proportion of the user specified area of interest (AOI) which is mapped as being of "State", "Regional" or "Local" significance via application of the Queensland Department of Environment and Science's *Biodiversity Assessment and Mapping Methodology* (BAMM).

Table 4: Summary table, biodiversity significance

Biodiversity significance	Area (Ha)	% of AOI
State Habitat for EVNT taxa	0.0	0.0
State	0.0	0.0
Regional	82.63	41.16
Local or Other Values	1.04	0.52

Table 5: Non-riverine wetlands intersecting the AOI

Non-riverine wetland types intersecting the area of interest	#
(No Records)	

NB. The figures presented in the table above are derived from the relevant non-riverine Aquatic Conservation Assessment(s). Later releases of wetland mapping produced via the Queensland Wetland Mapping Program may provide more recent

information in regards to wetland extent.

Table 6: Named waterways intersecting the AOI

(no results)

Refer to **Map 1** for general locality information.

The following two tables identify the extent and proportion of the user specified AOI which is mapped as being of "Very High", "High", "Medium", "Low", or "Very Low" aquatic conservation value for riverine and non-riverine wetlands via application of the Queensland Department of Environment and Science's *Aquatic Biodiversity Assessment and Mapping Method* (AquaBAMM).

Table 7: Summary table, aquatic conservation significance (riverine)

Aquatic conservation significance (riverine wetlands)	Area (Ha)	% of AOI
Very High	0.0	0.0
High	0.0	0.0
Medium	200.74	100.0
Low	0.0	0.0
Very Low	0.0	0.0

Table 8: Summary table, aquatic conservation significance (non-riverine)

Aquatic conservation significance (non-riverine wetlands)	Area (Ha)	% of AOI
(No Records)		

Biodiversity Planning Assessments

Introduction

The Department of Environment and Science (DES) attributes biodiversity significance on a bioregional scale through a Biodiversity Planning Assessment (BPA). A BPA involves the integration of ecological criteria using the *Biodiversity assessment and Mapping Methodology* (BAMM) and is developed in two stages: 1) **diagnostic criteria**, and 2) **expert panel criteria**. The diagnostic criteria are based on existing data which is reliable and uniformly available across a bioregion, while the expert panel criteria allows for the refinement of the mapped information from the diagnostic output by incorporating local knowledge and expert opinion.

The BAMM methodology has application for identifying areas with various levels of significance solely for biodiversity reasons. These include threatened ecosystems or taxa, large tracts of habitat in good condition, ecosystem diversity, landscape context and connection, and buffers to wetlands or other types of habitat important for the maintenance of biodiversity or ecological processes. While natural resource values such as dryland salinity, soil erosion potential or land capability are not dealt with explicitly, they are included to some extent within the biodiversity status of regional ecosystems recognised by the DES.

Biodiversity Planning Assessments (BPAs) assign three levels of overall biodiversity significance.

- **State significance** - areas assessed as being significant for biodiversity at the bioregional or state scales. They also include areas assessed by other studies/processes as being significant at national or international scales. In addition, areas flagged as being of State significance due to the presence of endangered, vulnerable and/or near threatened taxa, are identified as "State Habitat for EVNT taxa".
- **Regional significance** - areas assessed as being significant for biodiversity at the subregional scale. These areas have lower significance for biodiversity than areas assessed as being of State significance.
- **Local significance and/or other values** - areas assessed as not being significant for biodiversity at state or regional scales. Local values are of significance at the local government scale.

For further information on released BPAs and a copy of the underlying methodology, go to:

<http://www.qld.gov.au/environment/plants-animals/biodiversity/planning/>

The GIS results can be downloaded from the Queensland Spatial Catalogue at:

<http://qspatial.information.qld.gov.au/geoportal/>

The following table identifies the extent and proportion of the user specified AOI which is mapped as being of "State", "Regional" or "Local" significance via application of the BAMM.

Table 9: Summary table, biodiversity significance

Biodiversity significance	Area (Ha)	% of AOI
State Habitat for EVNT taxa	0.0	0.0
State	0.0	0.0
Regional	82.63	41.16
Local or Other Values	1.04	0.52

Refer to **Map 2** for further information.

Diagnostic Criteria

Diagnostic criteria are based on existing data which is reliable and uniformly available across a bioregion. These criteria are diagnostic in that they are used to filter the available data and provide a "first-cut" or initial determination of biodiversity significance. This initial assessment is then combined through a second group of other essential criteria.

A description of the individual diagnostic criteria is provided in the following sections.

Criteria A. Habitat for EVNT taxa: Classifies areas according to their significance based on the presence of endangered, vulnerable and/or rare (EVNT) taxa. EVNT taxa are those scheduled under the *Nature Conservation Act 1992* and/or the

Environment Protection and Biodiversity Conservation Act 1999. It excludes highly mobile fauna taxa which are instead considered in Criterion H and brings together information on EVNT taxa using buffering of recorded sites or habitat suitability models (HSM) where available.

Criteria B. Ecosystem value: Classifies on the basis of biodiversity status of regional ecosystems, their extent in protected areas (presence of poorly conserved regional ecosystems), the presence of significant wetlands; and areas of national importance such as the presence of Threatened Ecological Communities, World Heritage areas and Ramsar sites. Ecosystem value is applied at a bioregional (**B1**) and regional (**B2**) scale.

Criteria C. Tract size: Measures the relative size of tracts of vegetation in the landscape. The size of any tract is a major indicator of ecological significance, and is also strongly correlated with the long-term viability of biodiversity values. Larger tracts are less susceptible to ecological edge effects and are more likely to sustain viable populations of native flora and fauna than smaller tracts.

Criteria D. Relative size of regional ecosystems: Classifies the relative size of each regional ecosystem unit within its bioregion (**D1**) and its subregion (**D2**). Remnant units are compared with all other occurrences with the same regional ecosystem. Large examples of a regional ecosystem are more significant than smaller examples of the same regional ecosystem because they are more representative of the biodiversity values particular to the regional ecosystem, are more resilient to the effects of disturbance, and constitute a significant proportion of the total area of the regional ecosystem.

Criteria F. Ecosystem diversity: Is an indicator of the number of regional ecosystems occurring within an area. An area with high ecosystem diversity will have many regional ecosystems and ecotones relative to other areas within the bioregion.

Criteria G. Context and connection: Represents the extent to which a remnant unit incorporates, borders or buffers areas such as significant wetlands, endangered ecosystems; and the degree to which it is connected to other vegetation.

A summary of the biodiversity status based upon the diagnostic criteria is provided in the following table.

Table 10: Summary of biodiversity significance based upon diagnostic criteria with respect to the AOI

Biodiversity significance	Description	Area (Ha)	% of AOI
Regional	Remnant contains at least one Of Concern RE (B1)	82.63	41.16
Local or Other Values	Refer to diagnostic data for additional information	1.04	0.52

Assessment of diagnostic criteria with respect to the AOI

The following table reflects an assessment of the individual diagnostic criteria noted above in regards to the AOI.

Table 11: Assessment of individual diagnostic criteria with respect to the AOI

Diagnostic Criteria	Very High Rating - Area (Ha)	Very High Rating - % of AOI	High Rating - Area (Ha)	High Rating - % of AOI	Medium Rating - Area (Ha)	Medium Rating - % of AOI	Low Rating - Area (Ha)	Low Rating - % of AOI
A: Habitat for EVNT Taxa					69.18	34.5	14.48	7.2
B1: Ecosystem Value (Bioregion)			82.62	41.2	1.04	0.5		
B2: Ecosystem Value (Subregion)					83.66	41.7		
C: Tract Size			75.38	37.6			8.28	4.1
D1: Relative RE Size (Bioregion)					73.93	36.8	9.73	4.8
D2: Relative RE Size (Subregion)					73.93	36.8	9.73	4.8
F: Ecosystem Diversity			1.45	0.7	73.93	36.8	8.28	4.1
G: Context and Connection	1.04	0.5			74.34	37.0	8.28	4.1

Other Essential Criteria

Other essential criteria (also known as expert panel criteria) are based on non-uniform information sources and which may rely more upon expert opinion than on quantitative data. These criteria are used to provide a "second-cut" determination of biodiversity significance, which is then combined with the diagnostic criteria for an overall assessment of relative biodiversity significance. A summary of the biodiversity status based upon the other essential criteria is provided in the following table.

Table 12: Summary of biodiversity significance based upon other essential criteria with respect to the AOI

Biodiversity significance	Description	Area (Ha)	% of AOI
Regional	Refer to Expert Panel data for additional information	4.32	2.15

A description of each of the other essential criteria and associated assessment in regards to the AOI is provided in the following sections.

Criteria H. Essential and general habitat for priority taxa: Priority taxa are those which are at risk or of management concern, taxa of scientific interest as relictual (ancient or primitive), endemic taxa or locally significant populations (such as a flying fox camp or heronry), highly specialised taxa whose habitat requirements are complex and distributions are not well correlated with any particular regional ecosystem, taxa important for maintaining genetic diversity (such as complex spatial patterns of genetic variation, geographic range limits, highly disjunct populations), taxa critical for management or monitoring of biodiversity (functionally important or ecological indicators), or economic and culturally important taxa.

Criteria I. Special biodiversity values: areas with special biodiversity values are important because they contain multiple taxa in a unique ecological and often highly biodiverse environment. Areas with special biodiversity values can include the following:

- Ia - centres of endemism - areas where concentrations of taxa are endemic to a bioregion or subregion are found.
- Ib - wildlife refugia (Morton *et al.* 1995), for example, islands, mound springs, caves, wetlands, gorges, mountain ranges and topographic isolates, ecological refuges, refuges from exotic animals, and refuges from clearing. The latter may include large areas that are not suitable for clearing because of land suitability/capability.
- Ic - areas with concentrations of disjunct populations.
- Id - areas with concentrations of taxa at the limits of their geographic ranges.
- Ie - areas with high species richness.
- If - areas with concentrations of relictual populations (ancient and primitive taxa).
- Ig - areas containing REs with distinct variation in species composition associated with geomorphology and other environmental variables.
- Ih - an artificial waterbody or managed/manipulated wetland considered by the panel/s to be of ecological significance.
- Ii - areas with a high density of hollow-bearing trees that provide habitat for animals.
- Ij - breeding or roosting sites used by a significant number of individuals.
- Ik - climate change refuge.

The following table identifies the value and extent area of the Other Essential Criteria H and I within the AOI.

Table 13: Relative importance of expert panel criteria (H and I) used to assess overall biodiversity significance with respect to the AOI

Expert Panel	Very High Rating - Area (Ha)	Very High Rating - % of AOI	High Rating - Area (Ha)	High Rating - % of AOI	Medium Rating - Area (Ha)	Medium Rating - % of AOI	Low Rating - Area (Ha)	Low Rating - % of AOI
H: Core Habitat Priority Taxa			4.32	2.2				
Ia: Centres of Endemism								
Ib: Wildlife Refugia								
Ic: Disjunct Populations								
Id: Limits of Geographic Ranges								
Ie: High Species Richness								
If: Relictual Populations								
Ig: Variation in Species Composition								
Ih: Artificial Wetland								

Expert Panel	Very High Rating - Area (Ha)	Very High Rating - % of AOI	High Rating - Area (Ha)	High Rating - % of AOI	Medium Rating - Area (Ha)	Medium Rating - % of AOI	Low Rating - Area (Ha)	Low Rating - % of AOI
li: Hollow Bearing Trees								
lj: Breeding or Roosting Site								
lk: Climate Refugia								

NB. Whilst biodiversity values associated with Criteria I may be present within the site (refer to tables 12 and 15), for the New England Tableland and Central Queensland Coast BPAs, area and % area figures associated with Criteria Ia through to lj cannot be listed in the table above (due to slight variations in data formats between BPAs).

Criteria J. Corridors: areas identified under this criterion qualify either because they are existing vegetated corridors important for contiguity, or cleared areas that could serve this purpose if revegetated. Some examples of corridors include riparian habitats, transport corridors and "stepping stones".

Bioregional and subregional conservation corridors have been identified in the more developed bioregions of Queensland through the BPAs, using an intensive process involving expert panels. Map 3 displays the location of corridors as identified under the Statewide Corridor network. The Statewide Corridor network incorporates BPA derived corridors and for bioregions where no BPA has been assessed yet, corridors derived under other planning processes. *Note: as a result of updating and developing a statewide network, the alignment of corridors may differ slightly in some instances when compared to those used in individual BPAs.*

The functions of these corridors are:

- **Terrestrial** Bioregional corridors, in conjunction with large tracts of remnant vegetation, maintain ecological and evolutionary processes at a landscape scale, by:

- Maintaining long term evolutionary/genetic processes that allow the natural change in distributions of species and connectivity between populations of species over long periods of time;
- Maintaining landscape/ecosystems processes associated with geological, altitudinal and climatic gradients, to allow for ecological responses to climate change;
- Maintaining large scale seasonal/migratory species processes and movement of fauna;
- Maximising connectivity between large tracts/patches of remnant vegetation;
- Identifying key areas for rehabilitation and offsets; and

- **Riparian** Bioregional Corridors also maintain and encourage connectivity of riparian and associated ecosystems.

The location of the corridors is determined by the following principles:

- Terrestrial

- Complement riparian landscape corridors (i.e. minimise overlap and maximise connectivity);
- Follow major watershed/catchment and/or coastal boundaries;
- Incorporate major altitudinal/geological/climatic gradients;
- Include and maximise connectivity between large tracts/patches of remnant vegetation;
- Include and maximise connectivity between remnant vegetation in good condition; and

- Riparian

- Located on the major river or creek systems within the bioregion in question.

The total extent of remnant vegetation triggered as being of "State", "Regional" or "Local" significance due to the presence of an overlying BPA derived terrestrial or riparian corridor within the AOI, is provided in the following table. For further information on how remnant vegetation is triggered due to the presence of an overlying BPA derived corridor, refer to the relevant landscape BPA expert panel report(s).

Table 14: Extent of triggered remnant vegetation due to the presence of BPA derived corridors with respect to the AOI

Biodiversity Significance	Area (Ha)	% of AOI
State	0.0	0.0
Regional	0.0	0.0
Local	0.0	0.0

NB: area figures associated with the extent of corridor triggered remnant vegetation are only available for those bioregions where a BPA has been undertaken.

Refer to **Map 3** for further information.

Threatening process/condition (Criteria K) - areas identified by experts under this criterion may be used to amend (upgrade or downgrade) biodiversity significance arising from the "first-cut" analysis. The condition of remnant vegetation is affected by threatening processes such as weeds, ferals, grazing and burning regime, selective timber harvesting/removal, salinity, soil erosion, and climate change.

Assessment of Criteria K with respect to the AOI is not currently included in the "Biodiversity and Conservation Values" report, as it has not been applied to the majority of Queensland due to data/information limitations and availability.

Special Area Decisions

Expert panel derived "Special Area Decisions" are used to assign values to Other Essential Criteria. The specific decisions which relate to the AOI in question are listed in the table below.

Table 15: Expert panel decisions for assigning levels of biodiversity significance with respect to the AOI

Decision Number	Description	Panel Recommended Significance	Criteria Values
eiu_fa_30	High precision records for priority taxa of Regional significance are contained within the remnant.	Regional	Criterion H: HIGH

Expert panel decision descriptions:

eiu_fa_30

Remnant contains Core Habitat for Priority taxa with high precision records.

Aquatic Conservation Assessments

Introduction

The Aquatic Biodiversity Assessment and Mapping Method or AquaBAMM (Clayton *et al.* 2006), was developed to assess conservation values of wetlands in Queensland, and may also have application in broader geographical contexts. It is a comprehensive method that uses available data, including data resulting from expert opinion, to identify relative wetland conservation/ecological values within a specified study area (usually a catchment). The product of applying this method is an Aquatic Conservation Assessment (ACA) for the study area.

An ACA using AquaBAMM is non-social, non-economic and identifies the conservation/ecological values of wetlands at a user-defined scale. It provides a robust and objective conservation assessment using criteria, indicators and measures that are founded upon a large body of national and international literature. The criteria, each of which may have variable numbers of indicators and measures, are naturalness (aquatic), naturalness (catchment), diversity and richness, threatened species and ecosystems, priority species and ecosystems, special features, connectivity and representativeness. An ACA using AquaBAMM is a powerful decision support tool that is easily updated and simply interrogated through a geographic information system (GIS).

Where they have been conducted, ACAs can provide a source of baseline wetland conservation/ecological information to support natural resource management and planning processes. They are useful as an independent product or as an important foundation upon which a variety of additional environmental and socio-economic elements can be added and considered (i.e. an early input to broader 'triple-bottom-line' decision-making processes). An ACA can have application in:

- determining priorities for protection, regulation or rehabilitation of wetlands and other aquatic ecosystems
- on-ground investment in wetlands and other aquatic ecosystems
- contributing to impact assessment of large-scale development (e.g. dams)
- water resource and strategic regional planning processes

For a detailed explanation of the methodology please refer to the summary and expert panel reports relevant to the ACA utilised in this assessment. These reports can be accessed at *Wetland Info*:

<http://wetlandinfo.des.qld.gov.au/wetlands/assessment/assessment-methods/aca>

The GIS results can be downloaded from the Queensland Spatial Catalogue at:

<http://qspatial.information.qld.gov.au/geoportal/>

Explanation of Criteria

Under the AquaBAMM, eight criteria are assessed to derive an overall conservation value. Similar to the Biodiversity Assessment and Mapping Methodology, the criteria may be primarily diagnostic (quantitative) or primarily expert opinion (qualitative) in nature. The following sections provide a brief description of each of the 8 criteria.

Criteria 1. Naturalness - Aquatic: This attribute reflects the extent to which a wetland's (riverine, non-riverine, estuarine) aquatic state of naturalness is affected through relevant influencing indicators which include: presence of exotic flora and fauna; presence of aquatic communities; degree of habitat modification and degree of hydrological modification.

Criteria 2. Naturalness - Catchment: The naturalness of the terrestrial systems of a catchment can have an influence on many wetland characteristics including: natural ecological processes e.g. nutrient cycling, riparian vegetation, water chemistry, and flow. The indicators utilised to assess this criterion include: presence of exotic flora and/or fauna; riparian, catchment and flow modification.

Criteria 3. Naturalness - Diversity and Richness: This criterion is common to many ecological assessment methods and can include both physical and biological features. It includes such indicators as species richness, riparian ecosystem richness and geomorphological diversity.

Criteria 4. Threatened Species and Ecosystems: This criterion evaluates ecological rarity characteristics of a wetland. This includes both species rarity and rarity of communities / assemblages. The communities and assemblages are best represented by regional ecosystems. Species rarity is determined by NCA and EPBC status with Endangered, Vulnerable or Near-threatened species being included in the evaluation. Ecosystem rarity is determined by regional ecosystem biodiversity status i.e. Endangered, Of Concern, or Not of Concern.

Criteria 5. Priority Species and Ecosystems: Priority flora and fauna species lists are expert panel derived. These are aquatic, semi-aquatic and riparian species which exhibit at least 1 particular trait in order to be eligible for consideration. For

flora species the traits included:

- It forms significant macrophyte beds (in shallow or deep water).
- It is an important food source.
- It is important/critical habitat.
- It is implicated in spawning or reproduction for other fauna and/or flora species.
- It is at its distributional limit or is a disjunct population.
- It provides stream bank or bed stabilisation or has soil binding properties.
- It is a small population and subject to threatening processes.

Fauna species are included if they meet at least one of the following traits:

- It is endemic to the study area (>75 per cent of its distribution is in the study area/catchment).
- It has experienced, or is suspected of experiencing, a serious population decline.
- It has experienced a significant reduction in its distribution and has a naturally restricted distribution in the study area/catchment.
- It is currently a small population and threatened by loss of habitat.
- It is a significant disjunct population.
- It is a migratory species (other than birds).
- A significant proportion of the breeding population (>one per cent for waterbirds, >75 per cent other species) occurs in the waterbody (see Ramsar criterion 6 for waterbirds).
- Limit of species range.

See the individual expert panel reports for the priority species traits specific to an ACA.

Criteria 6. Special Features: Special features are areas identified by flora, fauna and ecology expert panels which exhibit characteristics beyond those identified in other criteria and which the expert panels consider to be of the highest ecological importance. Special feature traits can relate to, but are not solely restricted to geomorphic features, unique ecological processes, presence of unique or distinct habitat, presence of unique or special hydrological regimes e.g. spring-fed streams. Special features are rated on a 1 - 4 scale (4 being the highest).

Criteria 7. Connectivity: This criterion is based on the concept that appropriately connected aquatic ecosystems are healthy and resilient, with maximum potential biodiversity and delivery of ecosystem services.

Criteria 8. Representativeness: This criterion applies primarily to non-riverine assessments, evaluates the rarity and uniqueness of a wetland type in relation to specific geographic areas. Rarity is determined by the degree of wetland protection within "protected Areas" estate or within an area subject to the *Fisheries Act 1994*, *Coastal Protection and Management Act 1995*, or *Marine Parks Act 2004*. Wetland uniqueness evaluates the relative abundance and size of a wetland or wetland management group within geographic areas such as catchment and subcatchment.

Riverine Wetlands

Riverine wetlands are all wetlands and deepwater habitats within a channel. The channels are naturally or artificially created, periodically or continuously contain moving water, or connecting two bodies of standing water. AquaBAMM, when applied to riverine wetlands uses a discrete spatial unit termed subsections. A subsection can be considered as an area which encompasses discrete homogeneous stream sections in terms of their natural attributes (i.e. physical, chemical, biological and utilitarian values) and natural resources. Thus in an ACA, an aquatic conservation significance score is calculated for each subsection and applies to all streams within a subsection, rather than individual streams as such.

Please note, the area figures provided in Tables 16 and 17, are derived using the extent of riverine subsections within the AOI. Refer to **Map 5** for further information. A summary of the conservation significance of riverine wetlands within the AOI is provided in the following table.

Table 16: Overall level/s of riverine aquatic conservation significance

Aquatic conservation significance (riverine wetlands)	Area (Ha)	% of AOI
Very High	0.0	0.0

Aquatic conservation significance (riverine wetlands)	Area (Ha)	% of AOI
High	0.0	0.0
Medium	200.74	100.0
Low	0.0	0.0
Very Low	0.0	0.0

The individual aquatic conservation criteria ratings for riverine wetlands within the AOI are listed below.

Table 17: Level/s of riverine aquatic conservation significance based on selected criteria

Criteria	Very High Rating - Area (Ha)	Very High Rating - % of AOI	High Rating - Area (Ha)	High Rating - % of AOI	Medium Rating - Area (Ha)	Medium Rating - % of AOI	Low Rating - Area (Ha)	Low Rating - % of AOI
1. Naturalness aquatic					74.04	36.9	126.7	63.1
2. Naturalness catchment	126.7	63.1	74.04	36.9				
3. Diversity and richness	126.7	63.1	74.04	36.9				
4. Threatened species and ecosystems			200.74	100.0				
5. Priority species and ecosystems			74.04	36.9				
6. Special features								
7. Connectivity					74.04	36.9	126.7	63.1
8. Representativeness								

The table below lists and describes the relevant expert panel decisions used to assign conservation significance values to riverine wetlands within the AOI.

Table 18: Expert panel decisions for assigning overall levels of riverine aquatic conservation significance

Decision number	Special feature	Catchment	Criteria/Indicator/Measure	Conservation rating (1-4)
(No Records)				

4 is the highest rating/value

Expert panel decision descriptions:

(No Records)

Non-riverine Wetlands

Non-riverine wetlands include both lacustrine and palustrine wetlands, however, do not currently incorporate estuarine, marine or subterranean wetland types. A summary of the conservation significance of non-riverine wetlands within the AOI is provided in the following table. Refer to **Map 6** for further information.

Table 19: Overall level/s of non-riverine aquatic conservation significance

Aquatic conservation significance (non-riverine wetlands)	Area (Ha)	% of AOI
(No Records)		

The following table provides an assessment of non-riverine wetlands within the AOI and associated aquatic conservation criteria values.

Table 20: Level/s of non-riverine aquatic conservation significance based on selected criteria

Criteria	Very High Rating - Area (Ha)	Very High Rating - % of AOI	High Rating - Area (Ha)	High Rating - % of AOI	Medium Rating - Area (Ha)	Medium Rating - % of AOI	Low Rating - Area (Ha)	Low Rating - % of AOI
(No Records)								

The table below lists and describes the relevant expert panel decisions used to assign conservation significance values to non-riverine wetlands within the AOI.

Table 21: Expert panel decisions for assigning overall levels of non-riverine aquatic conservation significance.

Decision number	Special feature	Catchment	Criteria/Indicator/Measure	Conservation rating (1-4)
(No Records)				

4 is the highest rating/value

Expert panel decision descriptions:

(No Records)

Threatened and Priority Species

Introduction

This chapter contains a list of threatened and priority flora and/or fauna species that have been recorded on, or within 4km of the Assessment Area.

The information presented in this chapter with respect to species presence is derived from compiled databases developed primarily for the purpose of BPAs and ACAs. Data is collated from a number of sources and is updated periodically.

It is important to note that the list of species provided in this report, may differ when compared to other reports generated from other sources such as the State government's WildNet, HerbreCs or the federal government's EPBC database for a number of reasons.

Records for threatened and priority species are filtered and checked based on a number of rules including:

- Taxonomic nomenclature - current scientific names and status,
- Location - cross-check co-ordinates with location description,
- Taxon by location - requires good knowledge of the taxon and history of the record,
- Duplicate records - identify and remove,
- Expert panels - check records and provide new records,
- Flora cultivated records excluded,
- Use precise records less than or equal to 2000m,
- Use recent records greater than or equal to 1975 animals, greater than or equal to 1950 plants.

Threatened Species

Threatened species are those species classified as "Endangered" or "Vulnerable" under the *Environment Protection and Biodiversity Conservation Act 1999* or "Endangered", "Vulnerable" or "Near threatened" under the *Nature Conservation Act 1992*.

The following threatened species have been recorded on, or within approximately 4km of the AOI.

Table 22: Threatened species recorded on, or within 4km of the AOI

Species	Common name	NCA status	EPBC status	Back on Track rank	Migratory species*	Wetland species**	Identified flora/fauna
<i>Crocodylus porosus</i>	estuarine crocodile	V		Low	Y	I	FA
<i>Dasyurus hallucatus</i>	northern quoll	C	E	Medium			FA
<i>Mesembriomys gouldii</i>	black-footed tree-rat	C	V	Low			FA

NB. Please note that the threatened species listed in this section are based upon the most recently compiled DES internal state-wide threatened species dataset. This dataset may contain additional records that were not originally available for inclusion in the relevant individual BPAs and ACAs.

*JAMBA - Japan-Australia Migratory Bird Agreement; CAMBA - China-Australia Migratory Bird Agreement; ROKAMBA - Republic of Korea-Australia Migratory Bird Agreement; CMS - Convention on the Conservation of Migratory Species.

**I - wetland indicator species; D - wetland dependent species.

BPA Priority Species

A list of BPA priority species that have been recorded on, or within approximately 4km of the AOI is contained in the following table.

Table 23: Priority species recorded on, or within 4km of the AOI

Species	Common name	Back on Track rank	Identified flora/fauna
<i>Climacteris picumnus</i>	Brown Treecreeper	L	FA
<i>Dipodium elegantulum</i>	None	None	FL
<i>Melaleuca monantha</i>	None	L	FL
<i>Mesembriomys gouldii</i>	Black-footed Tree-rat	L	FA
<i>Tephrosia noctiflora</i>	None	None	FL
<i>Tephrosia varians</i>	None	None	FL

NB. Please note that the list of priority species is based on those species identified in the BPAs, however records for these species may be more recent than the originals used. furthermore, the BPA priority species databases are updated from time to time. At each update, the taxonomic details for all species are amended as necessary to reflect current taxonomic name and/or status changes.

ACA Priority Species

A list of ACA priority species used in riverine and non-riverine ACAs that have been recorded on, or within approximately 4km of the AOI are contained in the following tables.

Table 24: Priority species recorded on, or within 4 km of the AOI - riverine

Species	Common name	Back on Track rank	Identified flora/fauna
<i>Casuarina cunninghamiana</i>	None	None	FL
<i>Litoria jungguy</i>	Northern Stony Creek Frog	Low	FA

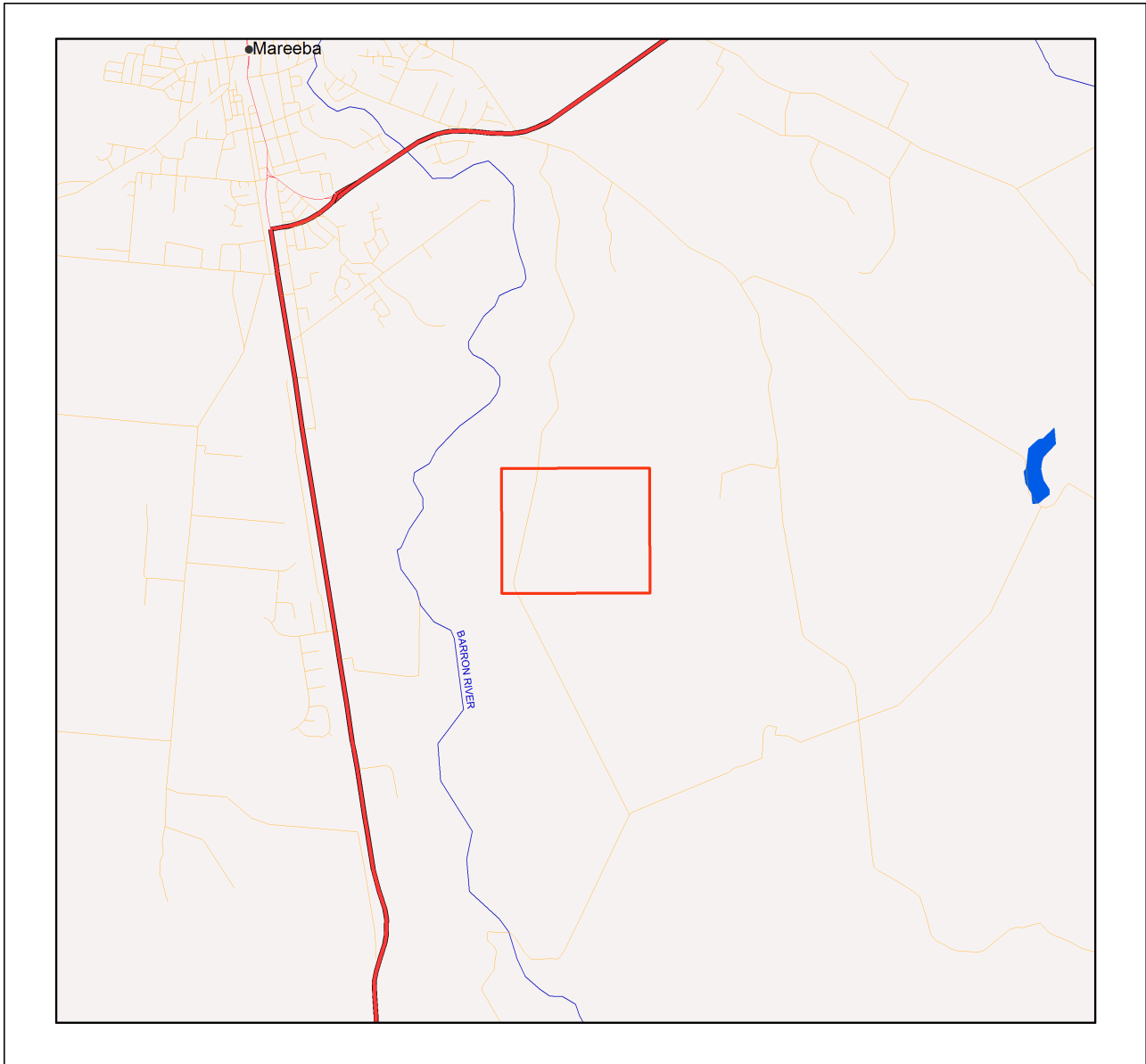
Table 25: Priority species recorded on, or within 4 km of the AOI - non-riverine

Species	Common name	Back on Track rank	Identified flora/fauna
<i>Litoria jungguy</i>	Northern Stony Creek Frog	Low	FA

NB. Please note that the priority species records used in the above two tables are comprised of those adopted for the released individual ACAs. The ACA riverine and non-riverine priority species databases are updated from time to time to reflect new release of ACAs. At each update, the taxonomic details for all ACAs records are amended as necessary to reflect current taxonomic name and/or status changes.

Maps

Map 1 - Locality Map



Locality Map

Legend

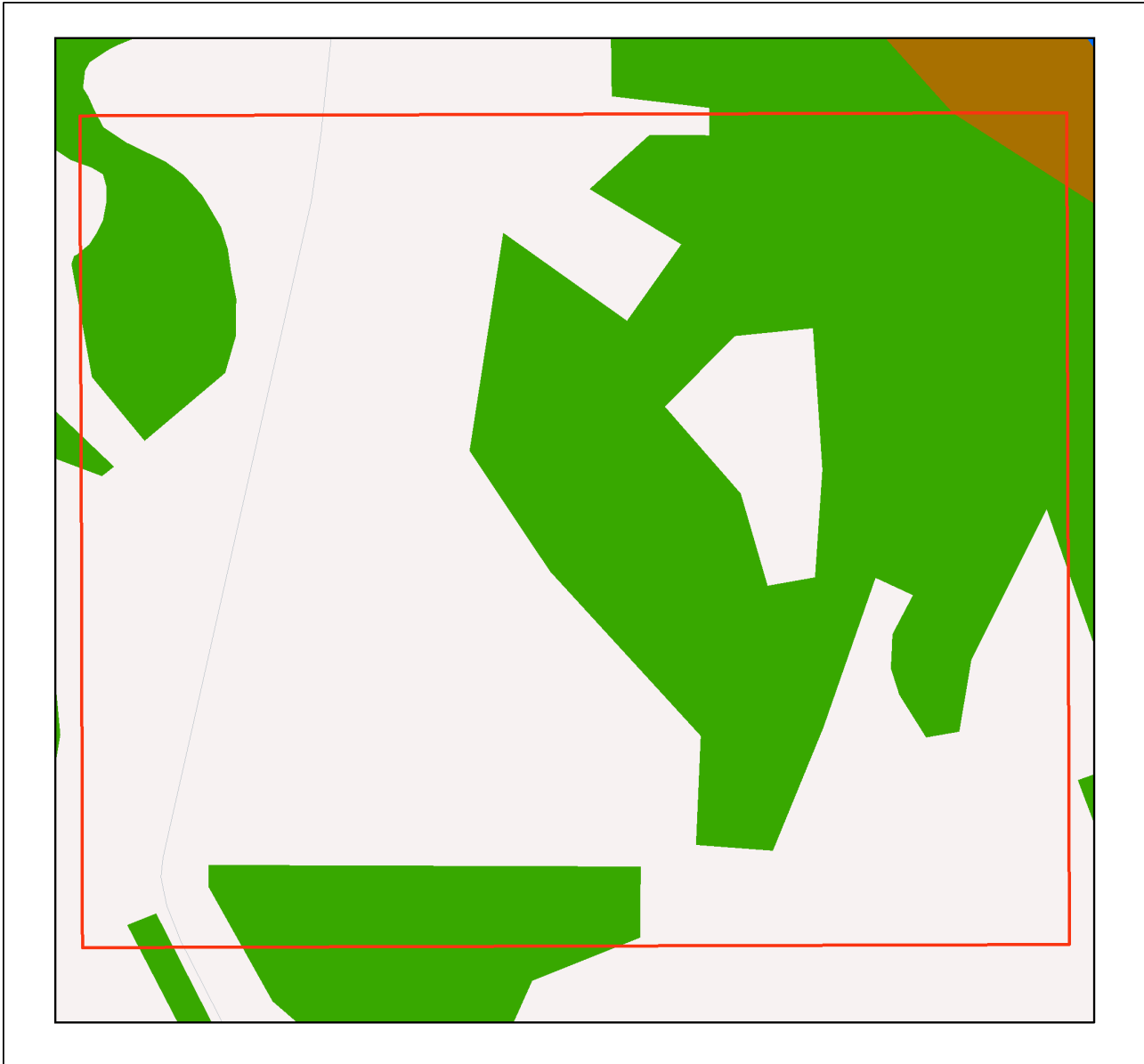
- polygon
- Towns
- Highway
- Connector
- Street/Local Road
- Reservoirs
- Lakes
- National Park (Scientific)
- National Park
- National Park (CYPAL)
- Conservation Park
- Resources Reserve
- Forest Reserve
- State Forest
- Timber Reserve
- Nature Refuges
- Coordinated Conservation Areas
- Major rivers/creeks
- Queensland



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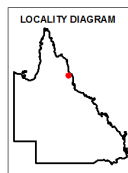
Map 2 - Biodiversity Planning Assessment (BPA)



Biodiversity Planning Assessments

Legend

- polygon
- Towns
- Roads
- Major rivers/creeks
- Queensland
- Biodiversity Planning Assessment**
- State Habitat for EVNT taxa
- State
- Regional
- Local or Other Values
- Non Bioregion Ecosystem



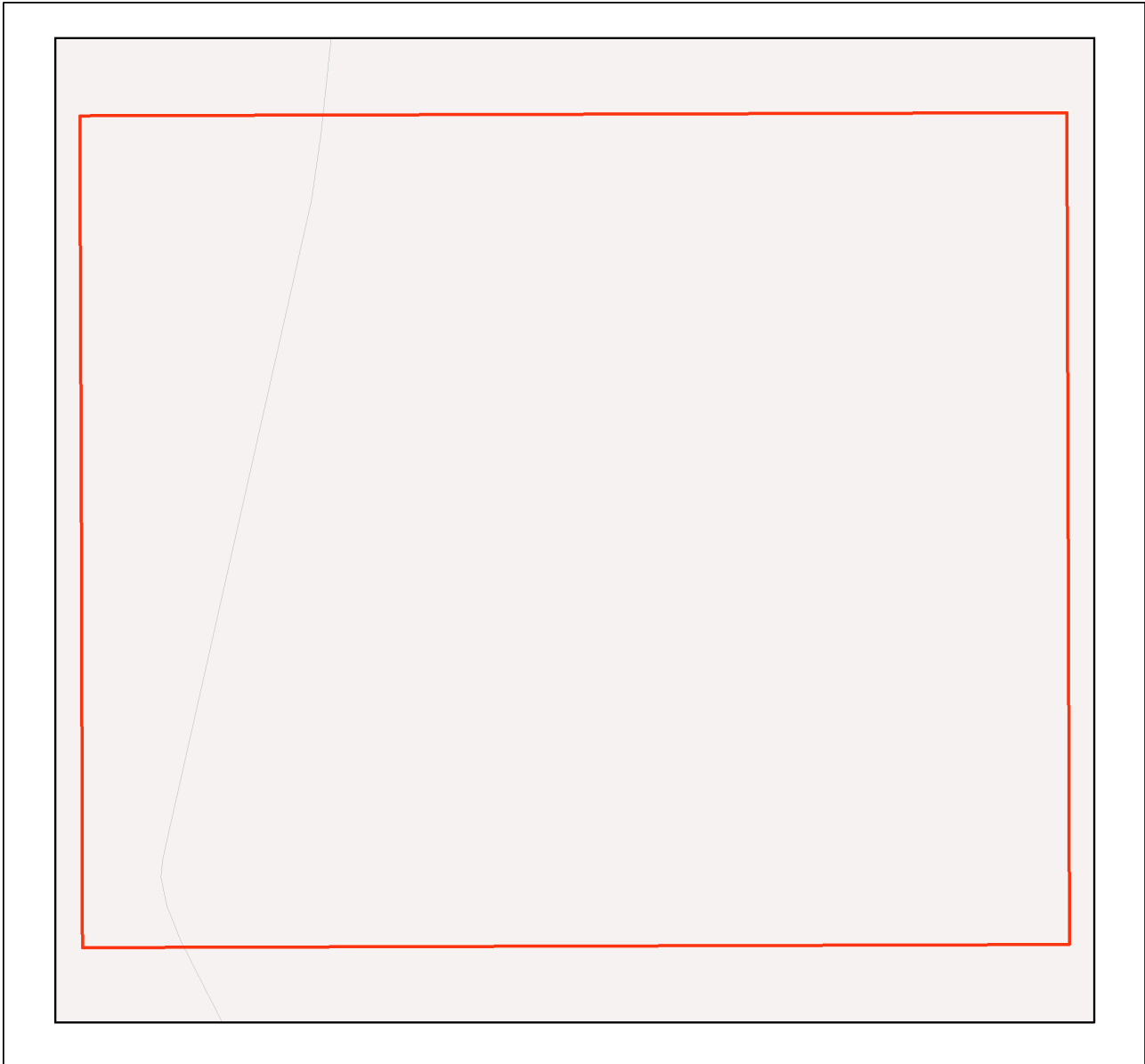
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Map 3 - Corridors



Corridors

Legend

- polygon
- Towns
- Roads
- Major rivers/creeks
- Queensland

Corridors

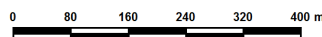
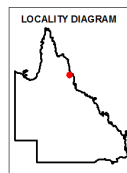
- State
- Regional

Corridor Triggered Vegetation

- State
- Regional
- Local

Core Area Vegetation

- Brigalow Belt only



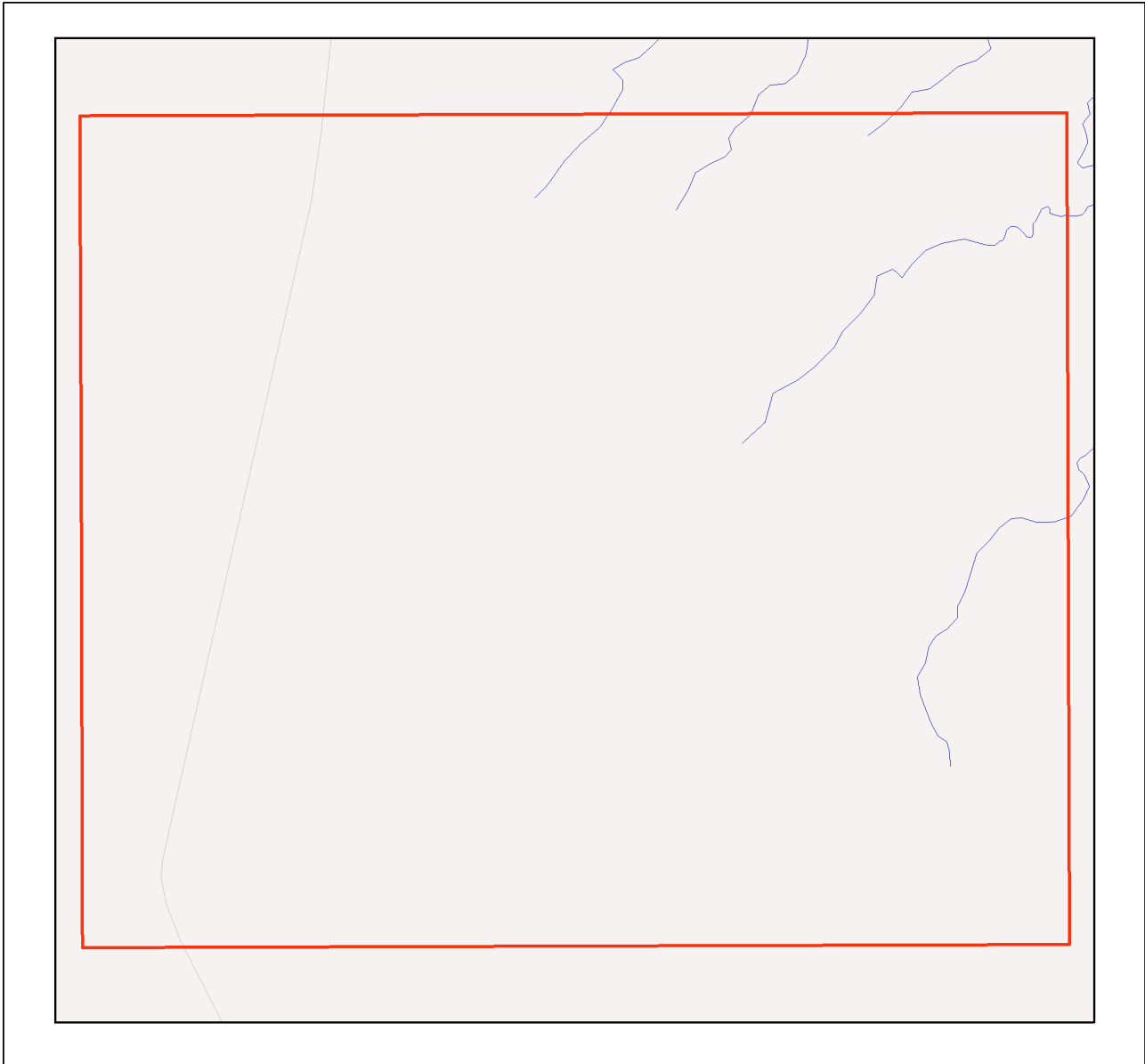
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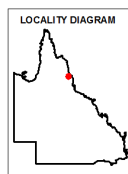
Map 4 - Wetlands and waterways



Wetlands and Waterways

Legend

- polygon
 - Towns
 - Roads
 - Springs
 - Rivers/Creeks
 - Directory of Important Wetlands
 - Ramsar Sites - QLD
 - Queensland
- Wetland Type**
- Marine Waterbodies
 - Estuarine Waterbodies
 - Riverine Waterbodies
 - Lacustrine Waterbodies
 - Palustrine Waterbodies
 - Marine RE
 - Estuarine RE
 - Riverine RE
 - Lacustrine RE
 - Palustrine RE
 - RE 51-80% wetland (mosaic units)
 - RE 1-50% wetland (mosaic units)



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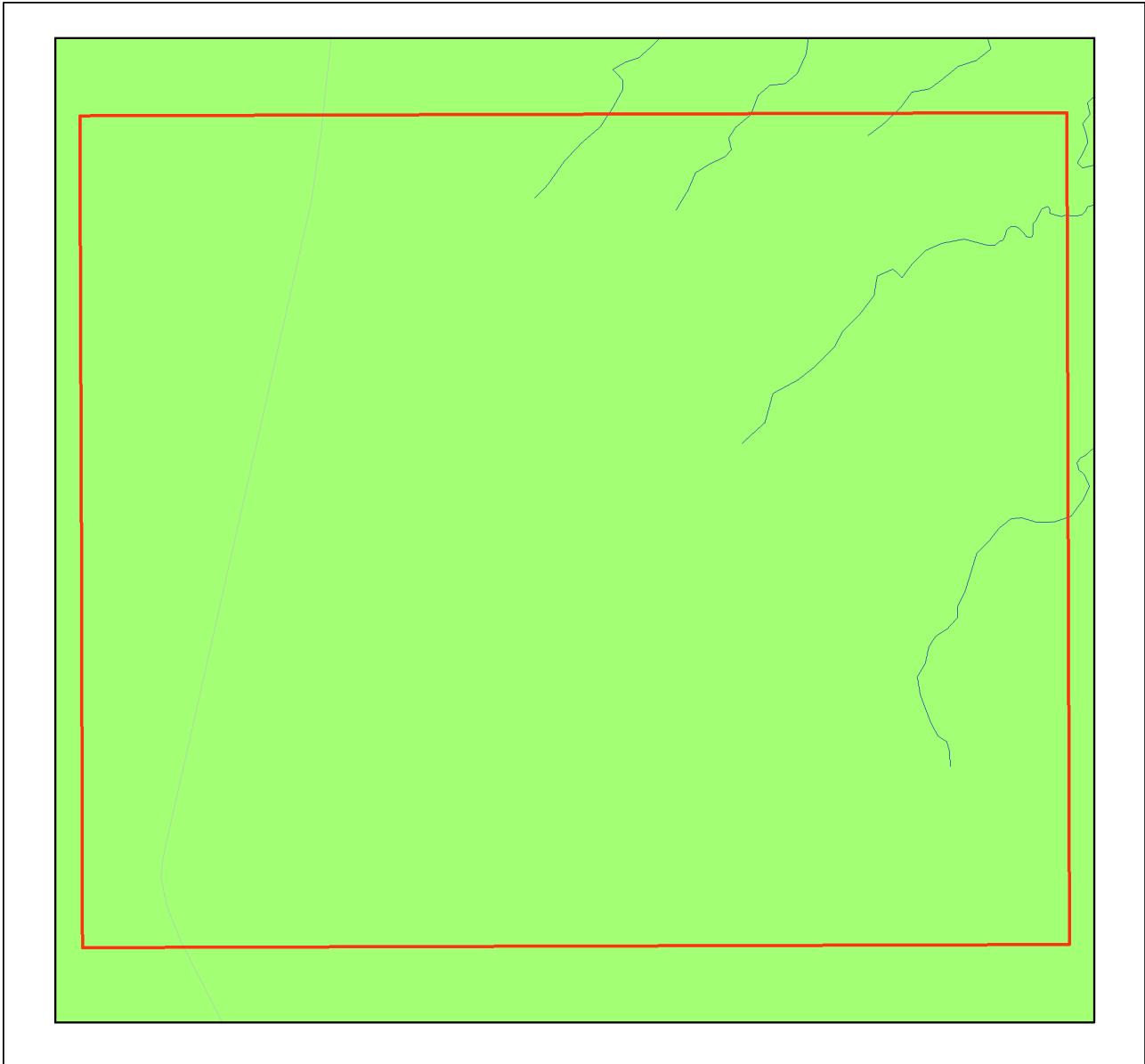
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Map 5 - Aquatic Conservation Assessment (ACA) - riverine



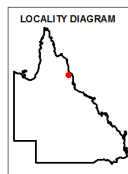
Aquatic Conservation Assessment (ACA) - riverine

Legend

- polygon
- Towns
- Roads
- Rivers/Creeks
- Queensland

ACA Riverine - Subcatchment Significance

- Very High
- High
- Medium
- Low
- Very Low



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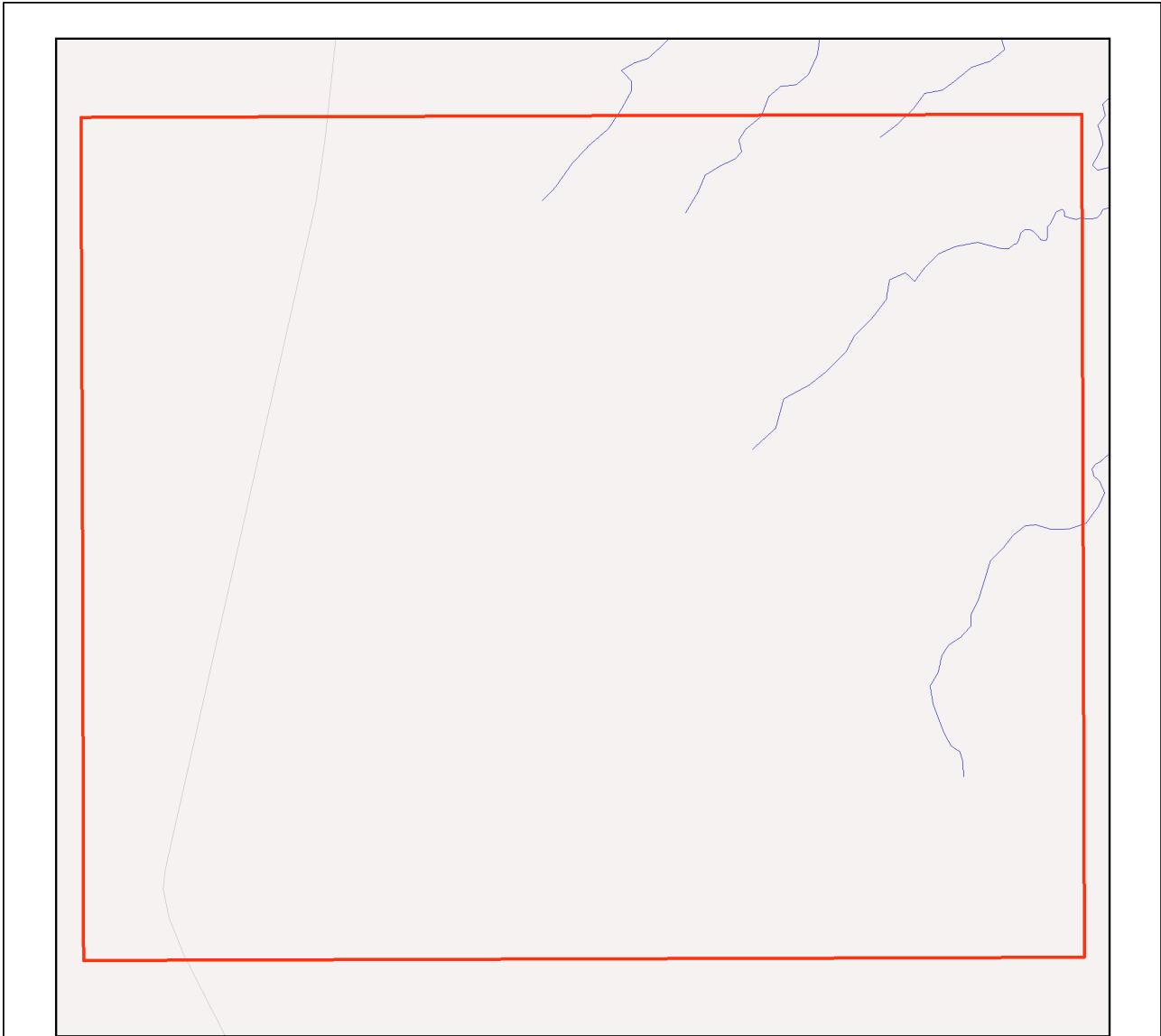
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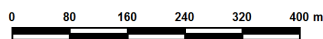
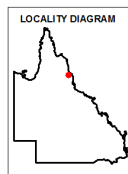
Map 6 - Aquatic Conservation Assessment (ACA) - non-riverine



Aquatic Conservation Assessment (ACA) - nonriverine

Legend

- polygon
- Towns
- Roads
- Rivers/Creeks
- Queensland
- ACA Non-riverine**
- Very High
- High
- Medium
- Low
- Very Low



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Appendices

Appendix 1 - Source Data

Theme	Datasets
Aquatic Conservation Assessments Non-riverine*	Combination of the following datasets: Cape York Peninsula Non-riverine v1.1 Eastern Gulf of Carpentaria v1.1 Great Barrier Reef Catchment Non-riverine v1.3 Lake Eyre and Bulloo Basins v1.1 QMDB Non-riverine ACA v1.4 Southeast Queensland ACA v1.1 WBB Non-riverine ACA v1.1 Southern Gulf Catchments Non-riverine ACA v1.1
Aquatic Conservation Assessments Riverine*	Combination of the following datasets: Cape York Peninsula Riverine v1.1 Eastern Gulf of Carpentaria v1.1 Great Barrier Reef Catchment Riverine v1.1 Lake Eyre and Bulloo Basins v1.1 QMDB Riverine ACA v1.4 Southeast Queensland ACA v1.1 WBB Riverine ACA v1.1 Southern Gulf Catchments Riverine ACA v1.1
Biodiversity Planning Assessments*	Combination of the following datasets: Brigalow Belt BPA v2.1 Cape York Peninsula BPA v1.1 Central Queensland Coast BPA v1.3 Channel Country BPA v1.1 Desert Uplands BPA v1.3 Einasleigh Uplands BPA v1.1 Gulf Plains BPA v1.1 Mitchell Grass Downs BPA v1.1 Mulga Lands BPA v1.4 New England Tableland v2.3 Northwest Highlands v1.1 Southeast Queensland v4.1 Wet Tropics v1.1
Statewide BPA Corridors*	Statewide corridors v1.6
Threatened Species	An internal DES database compiled from Wildnet, Herbrecks, Corveg, the QLD Museum, as well as other incidental sources.
BPA Priority Species	An internal DES database compiled from Wildnet, Herbrecks, Corveg, the QLD Museum, as well as other incidental sources.
ACA Priority Species	An internal DES database compiled from Wildnet, Herbrecks, Corveg, the QLD Museum, as well as other incidental sources.

*These datasets are available at:

<http://dds.information.qld.gov.au/DDS>

Appendix 2 - Acronyms and Abbreviations

AOI	- Area of Interest
ACA	- Aquatic Conservation Assessment
AQUABAMM	- Aquatic Biodiversity Assessment and Mapping Methodology
BAMM	- Biodiversity Assessment and Mapping Methodology
BoT	- Back on Track
BPA	- Biodiversity Planning Assessment
CAMBA	- China-Australia Migratory Bird Agreement
DES	- Department of Environment and Science
EPBC	- <i>Environment Protection and Biodiversity Conservation Act 1999</i>
EVNT	- Endangered, Vulnerable, Near Threatened
GDA94	- Geocentric Datum of Australia 1994
GIS	- Geographic Information System
JAMBA	- Japan-Australia Migratory Bird Agreement
NCA	- <i>Nature Conservation Act 1992</i>
RE	- Regional Ecosystem
REDD	- Regional Ecosystem Description Database
ROKAMBA	- Republic of Korea-Australia Migratory Bird Agreement



Queensland Government

Department of Environment and Science

Environmental Reports

Matters of State Environmental Significance

For the selected area of interest
Custom Geometry

Environmental Reports - General Information

The Environmental Reports portal provides for the assessment of selected matters of interest relevant to a user specified location, or area of interest (AOI). All area and derivative figures are relevant to the extent of matters of interest contained within the AOI unless otherwise stated. Please note, if a user selects an AOI via the "central coordinates" option, the resulting assessment area encompasses an area extending for a 2km radius from the point of interest.

All area and area derived figures included in this report have been calculated via reprojecting relevant spatial features to Albers equal-area conic projection (central meridian = 146, datum Geocentric Datum of Australia 1994). As a result, area figures may differ slightly if calculated for the same features using a different co-ordinate system.

Figures in tables may be affected by rounding.

The matters of interest reported on in this document are based upon available state mapped datasets. Where the report indicates that a matter of interest is not present within the AOI (e.g. where area related calculations are equal to zero, or no values are listed), this may be due either to the fact that state mapping has not been undertaken for the AOI, that state mapping is incomplete for the AOI, or that no values have been identified within the site.

The information presented in this report should be considered as a guide only and field survey may be required to validate values on the ground.

Please direct queries about these reports to: Planning.Support@des.qld.gov.au

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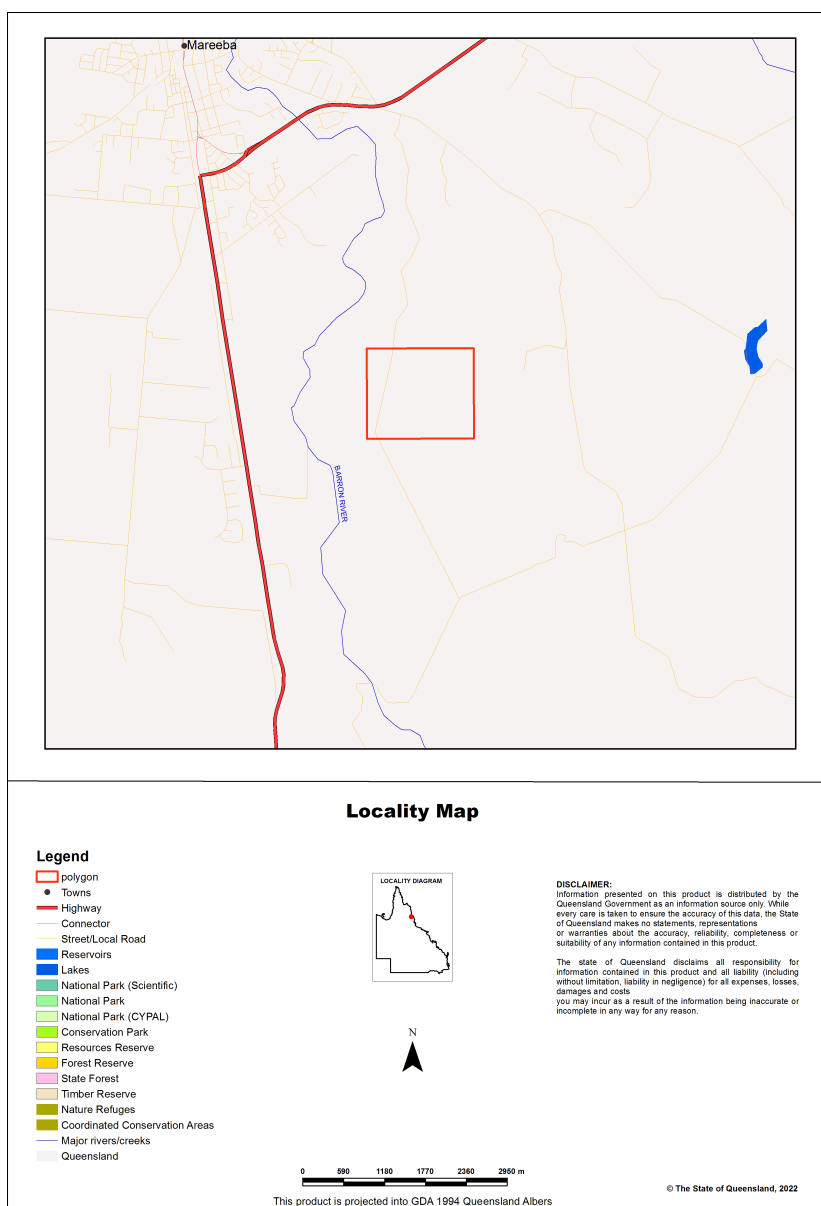
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Assessment Area Details

The following table provides an overview of the area of interest (AOI) with respect to selected topographic and environmental values.

Table 1: Summary table, details for AOI Custom Geometry

Size (ha)	200.74
Local Government(s)	Mareeba Shire
Bioregion(s)	Einasleigh Uplands
Subregion(s)	Hodgkinson Basin
Catchment(s)	Barron



Matters of State Environmental Significance (MSES)

MSES Categories

Queensland's State Planning Policy (SPP) includes a biodiversity State interest that states:

'The sustainable, long-term conservation of biodiversity is supported. Significant impacts on matters of national or state environmental significance are avoided, or where this cannot be reasonably achieved; impacts are minimised and residual impacts offset.'

The MSES mapping product is a guide to assist planning and development assessment decision-making. Its primary purpose is to support implementation of the SPP biodiversity policy. While it supports the SPP, the mapping does not replace the regulatory mapping or environmental values specifically called up under other laws or regulations. Similarly, the SPP biodiversity policy does not override or replace specific requirements of other Acts or regulations.

The SPP defines matters of state environmental significance as:

- Protected areas (including all classes of protected area except coordinated conservation areas) under the *Nature Conservation Act 1992* ;
- Marine parks and land within a 'marine national park', 'conservation park', 'scientific research', 'preservation' or 'buffer' zone under the *Marine Parks Act 2004* ;
- Areas within declared fish habitat areas that are management A areas or management B areas under the Fisheries Regulation 2008;
- Threatened wildlife under the *Nature Conservation Act 1992* and special least concern animals under the Nature Conservation (Wildlife) Regulation 2006;
- Regulated vegetation under the *Vegetation Management Act 1999* that is:
 - Category B areas on the regulated vegetation management map, that are 'endangered' or 'of concern' regional ecosystems;
 - Category C areas on the regulated vegetation management map that are 'endangered' or 'of concern' regional ecosystems;
 - Category R areas on the regulated vegetation management map;
 - Regional ecosystems that intersect with watercourses identified on the vegetation management watercourse and drainage feature map;
 - Regional ecosystems that intersect with wetlands identified on the vegetation management wetlands map;
- Strategic Environmental Areas under the *Regional Planning Interests Act 2014* ;
- Wetlands in a wetland protection area of wetlands of high ecological significance shown on the Map of Queensland Wetland Environmental Values under the Environment Protection Regulation 2019;
- Wetlands and watercourses in high ecological value waters defined in the Environmental Protection (Water) Policy 2009, schedule 2;
- Legally secured offset areas.

MSES Values Present

The MSES values that are present in the area of interest are summarised in the table below:

Table 2: Summary of MSES present within the AOI

1a Protected Areas- estates	0.0 ha	0.0 %
1b Protected Areas- nature refuges	0.0 ha	0.0 %
1c Protected Areas- special wildlife reserves	0.0 ha	0.0 %
2 State Marine Parks- highly protected zones	0.0 ha	0.0 %
3 Fish habitat areas (A and B areas)	0.0 ha	0.0 %
4 Strategic Environmental Areas (SEA)	0.0 ha	0.0 %
5 High Ecological Significance wetlands on the map of Referable Wetlands	0.0 ha	0.0 %
6a High Ecological Value (HEV) wetlands	0.0 ha	0.0 %
6b High Ecological Value (HEV) waterways	0.0 km	Not applicable
7a Threatened (endangered or vulnerable) wildlife	0.0 ha	0.0 %
7b Special least concern animals	0.0 ha	0.0 %
7c i Koala habitat area - core (SEQ)	0.0 ha	0.0 %
7c ii Koala habitat area - locally refined (SEQ)	0.0 ha	0.0 %
7d Sea turtle nesting areas	0.0 km	Not applicable
8a Regulated Vegetation - Endangered/Of concern in Category B (remnant)	0.0 ha	0.0 %
8b Regulated Vegetation - Endangered/Of concern in Category C (regrowth)	0.0 ha	0.0 %
8c Regulated Vegetation - Category R (GBR riverine regrowth)	3.64 ha	1.8%
8d Regulated Vegetation - Essential habitat	0.0 ha	0.0 %
8e Regulated Vegetation - intersecting a watercourse	1.5 km	Not applicable
8f Regulated Vegetation - within 100m of a Vegetation Management Wetland	0.0 ha	0.0 %
9a Legally secured offset areas- offset register areas	0.0 ha	0.0 %
9b Legally secured offset areas- vegetation offsets through a Property Map of Assessable Vegetation	0.0 ha	0.0 %

Additional Information with Respect to MSES Values Present

MSES - State Conservation Areas

1a. Protected Areas - estates

(no results)

1b. Protected Areas - nature refuges

(no results)

1c. Protected Areas - special wildlife reserves

(no results)

2. State Marine Parks - highly protected zones

(no results)

3. Fish habitat areas (A and B areas)

(no results)

Refer to **Map 1 - MSES - State Conservation Areas** for an overview of the relevant MSES.

MSES - Wetlands and Waterways

4. Strategic Environmental Areas (SEA)

(no results)

5. High Ecological Significance wetlands on the Map of Queensland Wetland Environmental Values

(no results)

6a. Wetlands in High Ecological Value (HEV) waters

(no results)

6b. Waterways in High Ecological Value (HEV) waters

(no results)

Refer to **Map 2 - MSES - Wetlands and Waterways** for an overview of the relevant MSES.

MSES - Species

7a. Threatened (endangered or vulnerable) wildlife

Not applicable

7b. Special least concern animals

Not applicable

7c i. Koala habitat area - core (SEQ)

Not applicable

7c ii. Koala habitat area - locally refined (SEQ)

Not applicable

7d. Wildlife habitat (sea turtle nesting areas)

Not applicable

Threatened (endangered or vulnerable) wildlife habitat suitability models

Species	Common name	NCA status	Presence
<i>Boronia keysii</i>		V	None
<i>Calyptorhynchus lathami</i>	Glossy black cockatoo	V	None
<i>Casuarium casuarium johnsonii</i>	Sthn population cassowary	E	None
<i>Crinia tinnula</i>	Wallum froglet	V	None
<i>Denisonia maculata</i>	Ornamental snake	V	None
<i>Litoria freycineti</i>	Wallum rocketfrog	V	None
<i>Litoria olongburensis</i>	Wallum sedgefrog	V	None
<i>Macadamia integrifolia</i>		V	None
<i>Macadamia ternifolia</i>		V	None
<i>Macadamia tetraphylla</i>		V	None
<i>Melaleuca irbyana</i>		E	None
<i>Petaurus gracilis</i>	Mahogany Glider	E	None
<i>Petrogale persephone</i>	Proserpine rock-wallaby	E	None
<i>Pezoporus wallicus wallicus</i>	Eastern ground parrot	V	None
<i>Phascolarctos cinereus</i>	Koala - outside SEQ*	V	None
<i>Taudactylus pleione</i>	Kroombit tinkerfrog	E	None
<i>Xeromys myoides</i>	Water Mouse	V	None

*For koala model, this includes areas outside SEQ. Check 7c SEQ koala habitat for presence/absence.

Threatened (endangered or vulnerable) wildlife species records

(no results)

Special least concern animal species records

(no results)

Shorebird habitat (critically endangered/endangered/vulnerable)

Not applicable

Shorebird habitat (special least concern)

Not applicable

**Nature Conservation Act 1992 (NCA) Status- Endangered (E), Vulnerable (V) or Special Least Concern Animal (SL). Environment Protection and Biodiversity Conservation Act 1999 (EPBC) status: Critically Endangered (CE) Endangered (E), Vulnerable (V)*

Migratory status (M) - China and Australia Migratory Bird Agreement (C), Japan and Australia Migratory Bird Agreement (J), Republic of Korea and Australia Migratory Bird Agreement (R), Bonn Migratory Convention (B), Eastern Flyway (E)

To request a species list for an area, or search for a species profile, access Wildlife Online at:

<https://www.qld.gov.au/environment/plants-animals/species-list/>

Refer to **Map 3a - MSES - Species - Threatened (endangered or vulnerable) wildlife and special least concern animals**, **Map 3b - MSES - Species - Koala habitat area (SEQ)** and **Map 3c - MSES - Wildlife habitat (sea turtle nesting areas)** for an overview of the relevant MSES.

MSES - Regulated Vegetation

For further information relating to regional ecosystems in general, go to:

<https://www.qld.gov.au/environment/plants-animals/plants/ecosystems/>

For a more detailed description of a particular regional ecosystem, access the regional ecosystem search page at:

<https://environment.ehp.qld.gov.au/regional-ecosystems/>

8a. Regulated Vegetation - Endangered/Of concern in Category B (remnant)

Not applicable

8b. Regulated Vegetation - Endangered/Of concern in Category C (regrowth)

Not applicable

8c. Regulated Vegetation - Category R (GBR riverine regrowth)

Regulated vegetation map category	Map number
R	7963

8d. Regulated Vegetation - Essential habitat

Not applicable

8e. Regulated Vegetation - intersecting a watercourse**

A vegetation management watercourse is mapped as present

8f. Regulated Vegetation - within 100m of a Vegetation Management wetland

Not applicable

Refer to **Map 4 - MSES - Regulated Vegetation** for an overview of the relevant MSES.

MSES - Offsets

9a. Legally secured offset areas - offset register areas

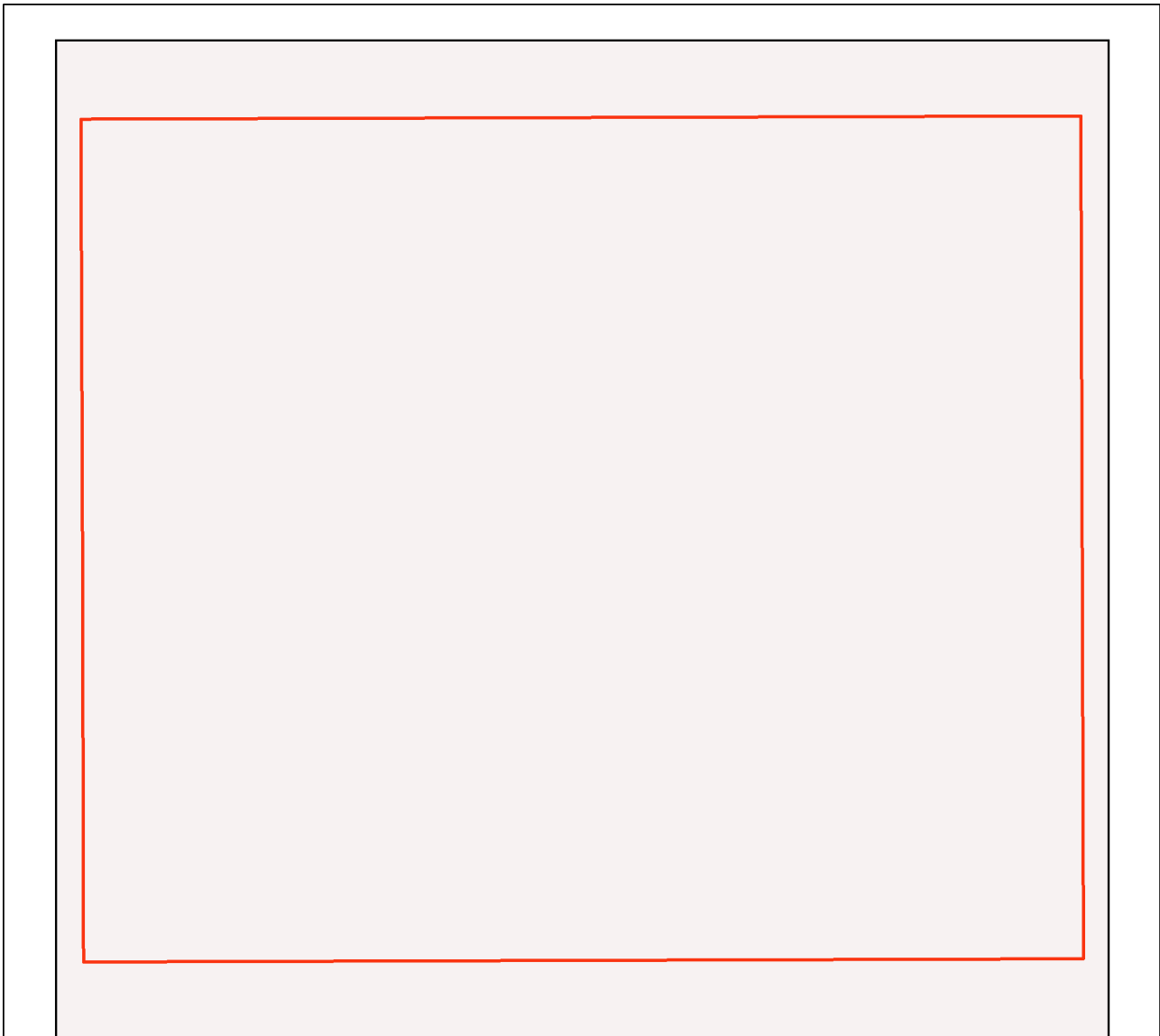
(no results)

9b. Legally secured offset areas - vegetation offsets through a Property Map of Assessable Vegetation

(no results)









Refer to **Map 5 - MSES - Offset Areas** for an overview of the relevant MSES.

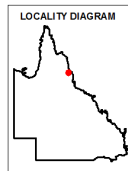
Map 1 - MSES - State Conservation Areas



MSES - State Conservation Areas

Area of Interest

-  polygon
-  Towns
-  Freeways/Highways
-  Secondary roads
-  Major rivers/creeks
-  Protected area (estates, nature refuges, special wildlife reserves)
-  Declared fish habitat area (A and B areas)
-  Marine park (highly protected)



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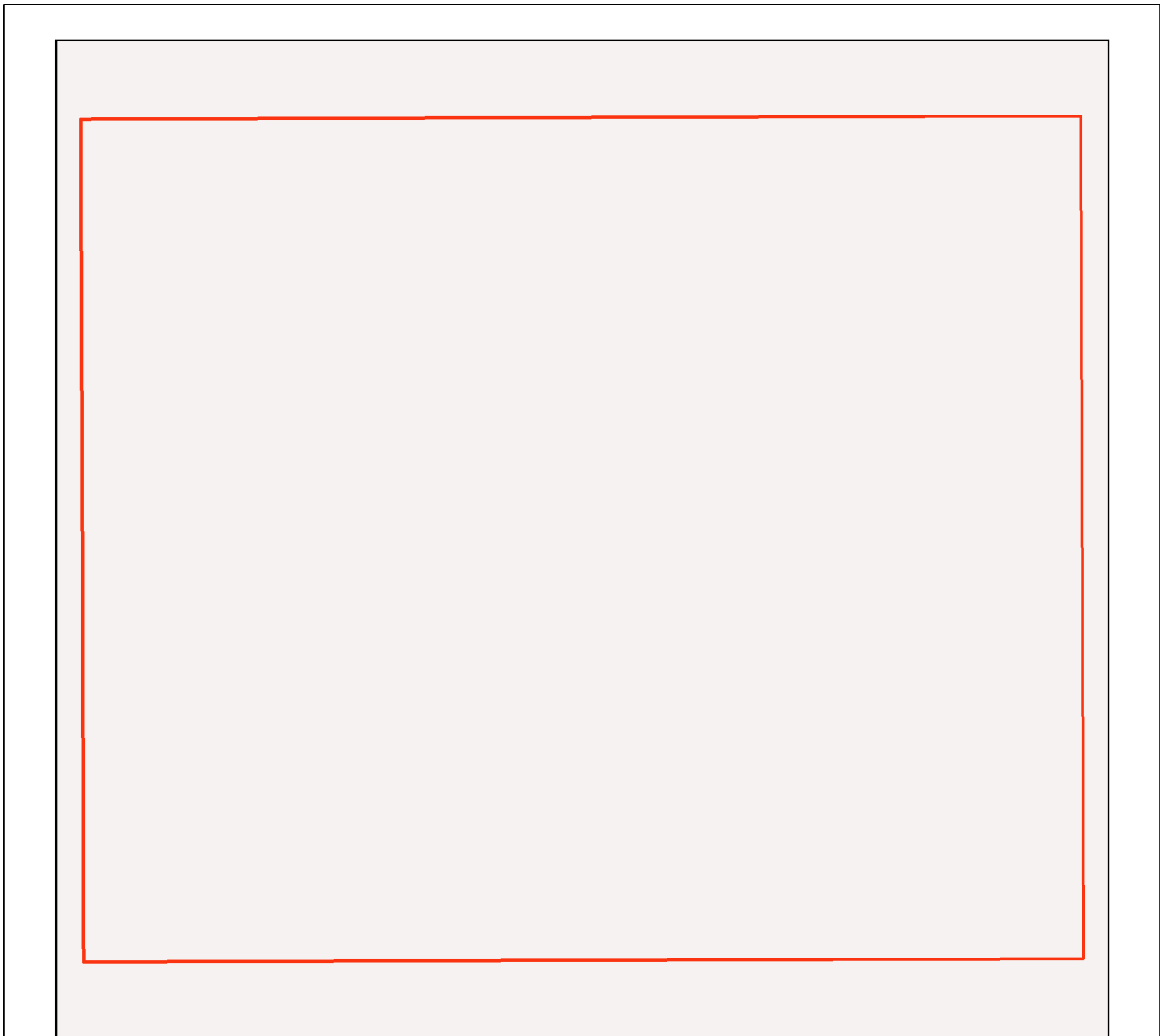
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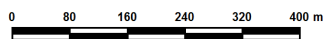
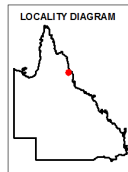
Map 2 - MSES - Wetlands and Waterways



MSES - Wetlands and Waterways

Area of Interest

-  polygon
-  Towns
-  Freeways/Highways
-  Secondary roads
-  Major rivers/creeks
-  Declared high ecological value waters (watercourse)
-  Strategic environmental area (designated precinct)
-  Declared high ecological value waters (wetland)
-  High ecological significance wetlands



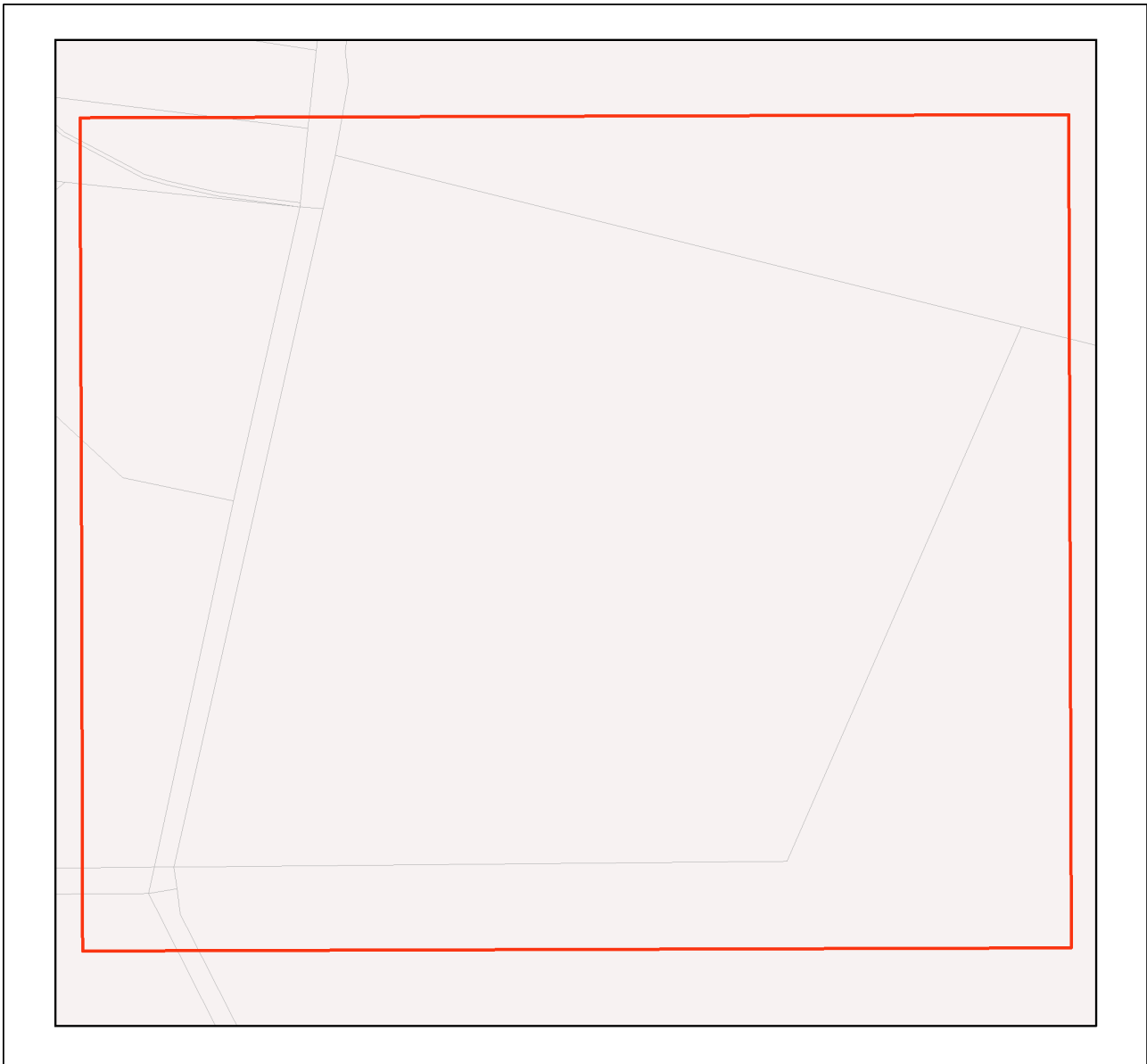
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




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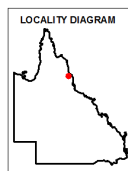
Map 3a - MSES - Species - Threatened (endangered or vulnerable) wildlife and special least concern animals



MSES - Species Threatened (endangered or vulnerable) wildlife and special least concern animals

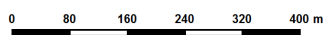
Area of Interest

-  polygon
-  Towns
-  Freeways/Highways
-  Secondary roads
-  Major rivers/creeks
-  Wildlife habitat (special least concern)
-  Wildlife habitat (endangered or vulnerable)



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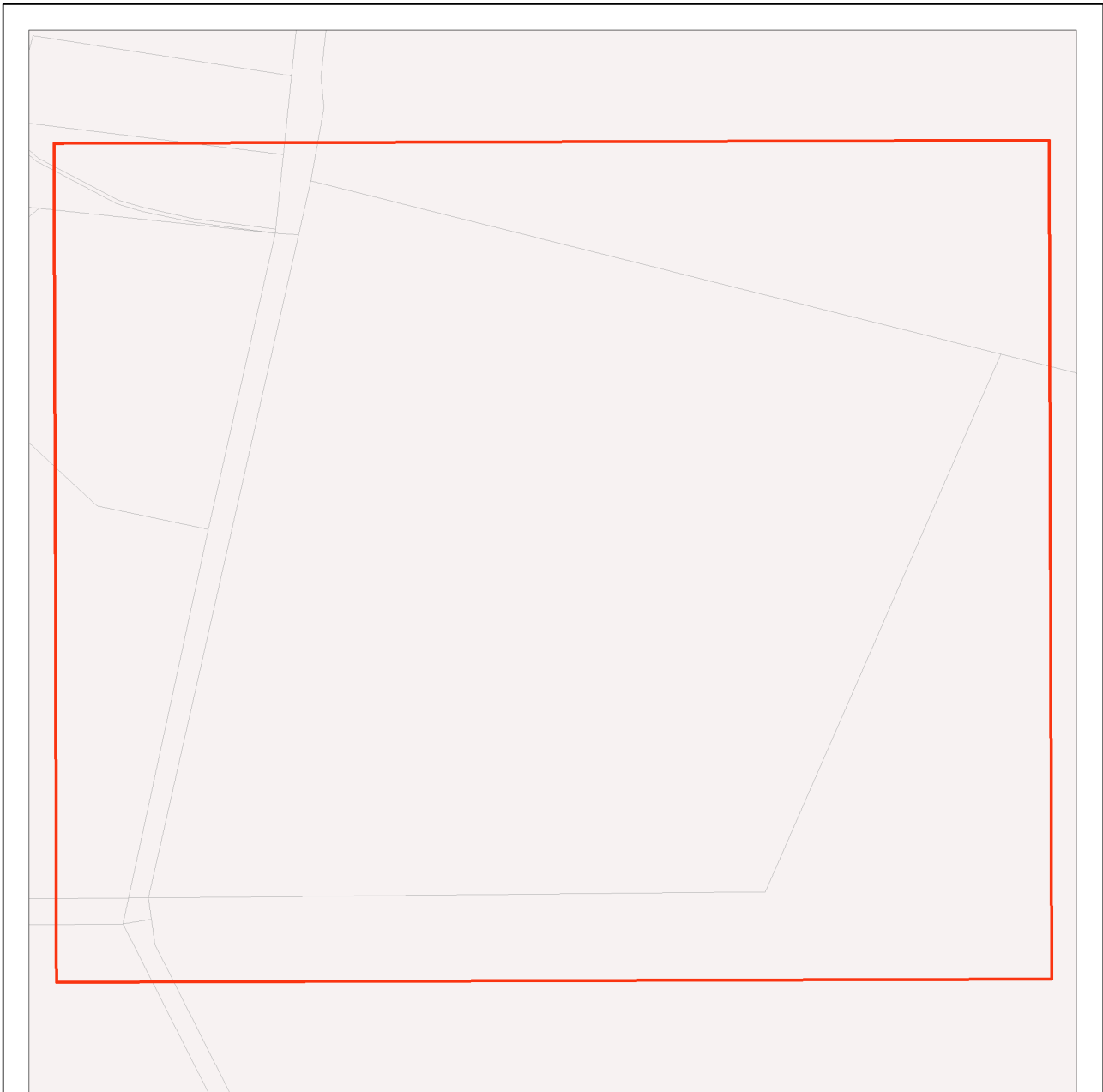
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Map 3b - MSES - Species - Koala habitat area (SEQ)



MSES - Species Koala habitat area (SEQ)

Area of Interest

- polygon
- Towns
- Freeways/Highways
- Secondary roads
- Major rivers/creeks
- Koala habitat area (core)
- Koala habitat area (locally refined)



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The represented layers for SEQ 'koala habitat area-core' and 'koala habitat area- locally refined' in MSES are sourced directly from the regulatory mapping under the Nature Conservation (Koala) Conservation Plan 2017. Whilst every effort is made to ensure the information remains current, there may be delays between updating versions. Please refer to the original mapping for the most recent version. See <https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping>

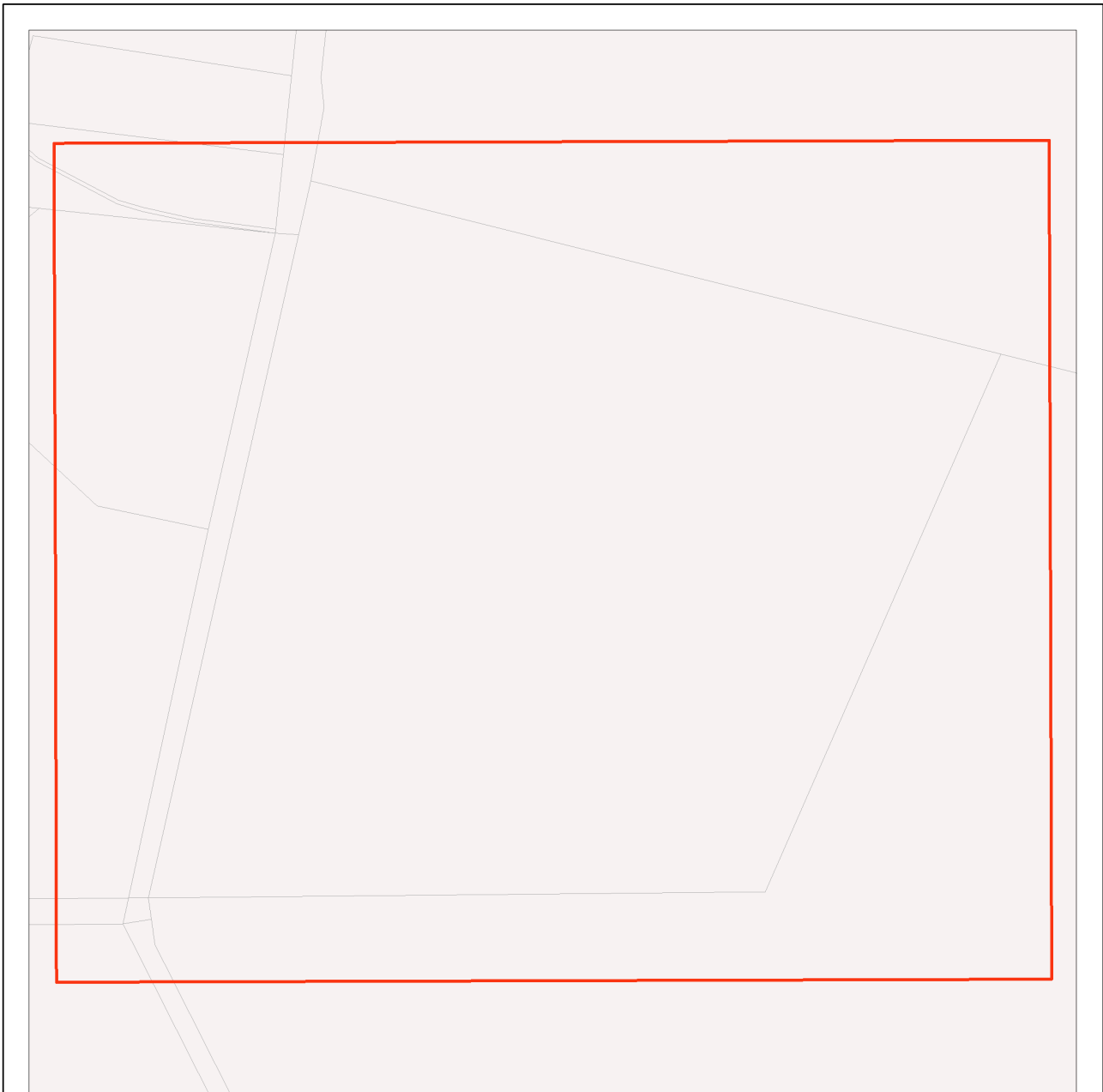
The koala habitat mapping within South East Queensland uses regional ecosystem linework compiled at a scale varying from 1:25,000 to 1:100,000. Linework should be used as a guide only. The positional accuracy of regional ecosystem data mapped at a scale of 1:100,000 is +/- 100 metres.



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Map 3c - MSES - Wildlife habitat (sea turtle nesting areas)



MSES - Wildlife habitat (sea turtle nesting areas)

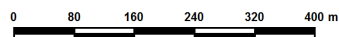
Area of Interest

-  polygon
-  Towns
-  Freeways/Highways
-  Secondary roads
-  Major rivers/creeks
-  Wildlife habitat (sea turtle nesting areas)

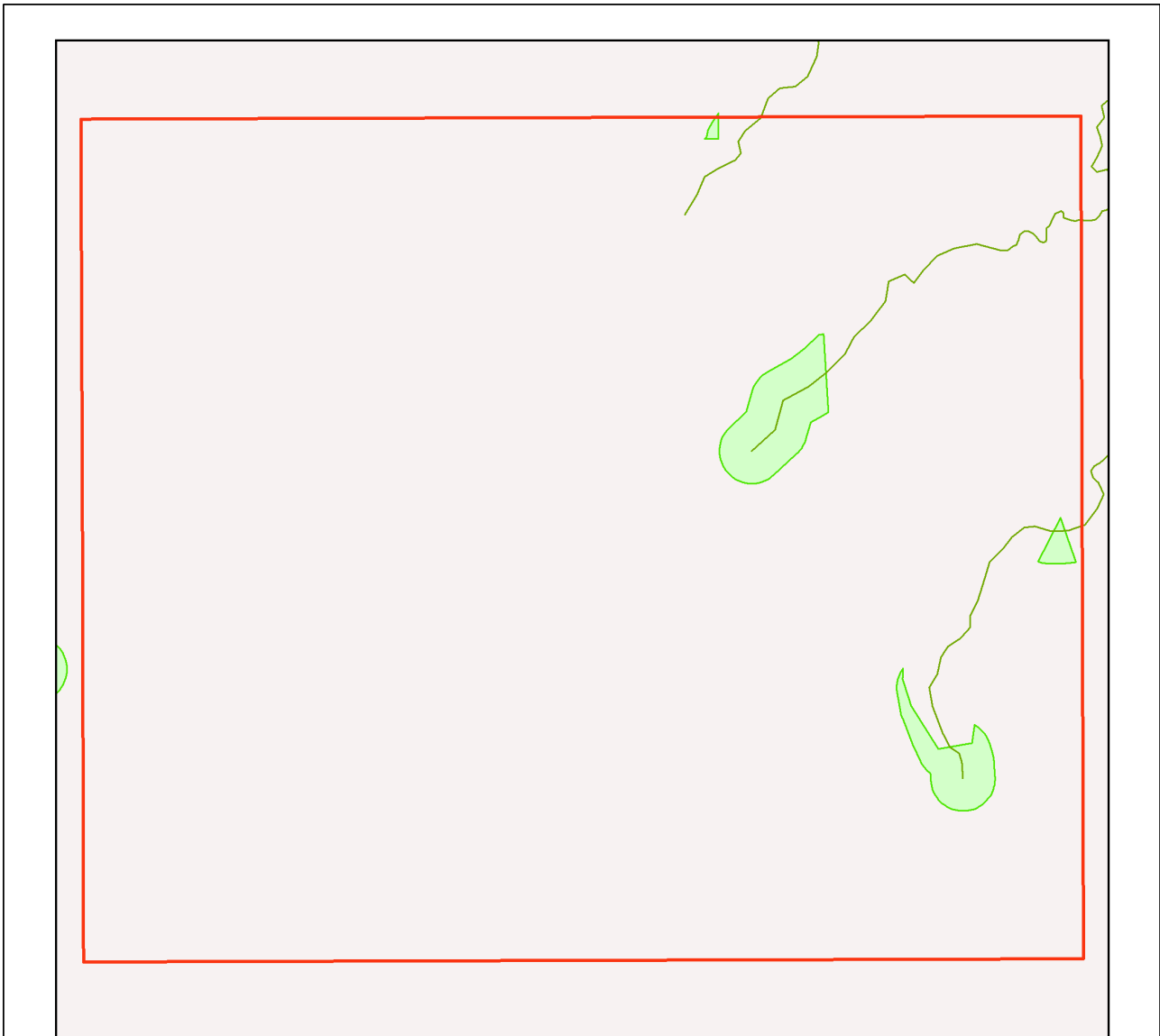


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MSES mapping of sea turtle nesting areas identifies beaches where the recorded number of turtle nests are over 1% of the turtle species or genetic stock. The linework is also deliberately extended along nearby rocky coastlines and headlands to recognise that significant numbers of nesting adults and hatchlings can become disorientated by light pollution from development on rocky coastlines and headlands while navigating offshore from nesting beaches.



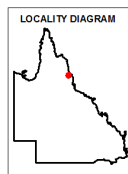
Map 4 - MSES - Regulated Vegetation



MSES - Regulated Vegetation

Area of Interest

- polygon
- Towns
- Freeways/Highways
- Secondary roads
- Major rivers/creeks
- Regulated vegetation (intersecting a watercourse)
- Regulated vegetation (100m from wetland)
- Regulated vegetation (category B - endangered or of concern)
- Regulated vegetation (category C - endangered or of concern)
- Regulated vegetation (category R - GBR riverine)
- Regulated vegetation (essential habitat)



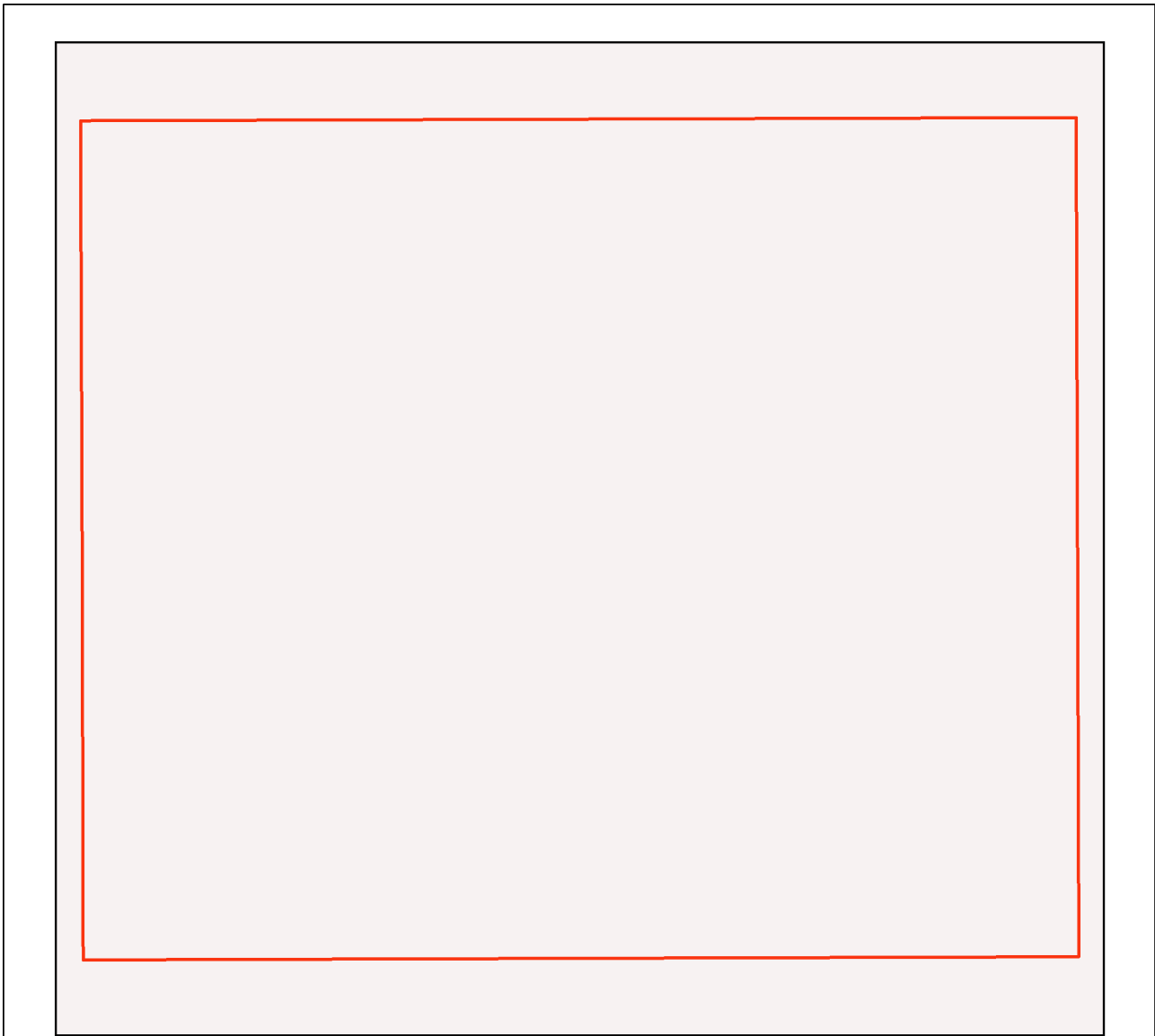
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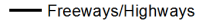
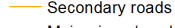
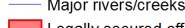
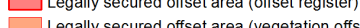
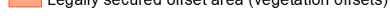
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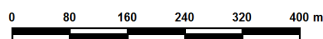
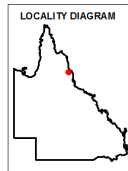
Map 5 - MSES - Offset Areas



MSES - Offsets

Area of Interest

-  polygon
-  Towns
-  Freeways/Highways
-  Secondary roads
-  Major rivers/creeks
-  Legally secured offset area (offset register)
-  Legally secured offset area (vegetation offsets)



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Appendices

Appendix 1 - Matters of State Environmental Significance (MSES) methodology

MSES mapping is a regional-scale representation of the definition for MSES under the State Planning Policy (SPP). The compiled MSES mapping product is a guide to assist planning and development assessment decision-making. Its primary purpose is to support implementation of the SPP biodiversity policy. While it supports the SPP, the mapping does not replace the regulatory mapping or environmental values specifically called up under other laws or regulations. Similarly, the SPP biodiversity policy does not override or replace specific requirements of other Acts or regulations.

The Queensland Government's "Method for mapping - matters of state environmental significance for use in land use planning and development assessment" can be downloaded from:

<http://www.ehp.qld.gov.au/land/natural-resource/method-mapping-mses.html> .

Appendix 2 - Source Data

The datasets listed below are available on request from:

<http://qldspatial.information.qld.gov.au/catalogue/custom/index.page>

- Matters of State environmental significance

Note: MSES mapping is not based on new or unique data. The primary mapping product draws data from a number of underlying environment databases and geo-referenced information sources. MSES mapping is a versioned product that is updated generally on a twice-yearly basis to incorporate the changes to underlying data sources. Several components of MSES mapping made for the current version may differ from the current underlying data sources. To ensure accuracy, or proper representation of MSES values, it is strongly recommended that users refer to the underlying data sources and review the current definition of MSES in the State Planning Policy, before applying the MSES mapping.

Individual MSES layers can be attributed to the following source data available at QSpatial:

MSES layers	current QSpatial data (http://qspatial.information.qld.gov.au)
Protected Areas-Estates, Nature Refuges, Special Wildlife Reserves	- Protected areas of Queensland - Nature Refuges - Queensland - Special Wildlife Reserves- Queensland
Marine Park-Highly Protected Zones	Moreton Bay marine park zoning 2008
Fish Habitat Areas	Queensland fish habitat areas
Strategic Environmental Areas-designated	Regional Planning Interests Act - Strategic Environmental Areas
HES wetlands	Map of Queensland Wetland Environmental Values
Wetlands in HEV waters	HEV waters: - EPP Water intent for waters Source Wetlands: - Queensland Wetland Mapping (Current version 5) Source Watercourses: - Vegetation management watercourse and drainage feature map (1:100000 and 1:250000)
Wildlife habitat (threatened and special least concern)	- WildNet database species records - habitat suitability models (various) - SEQ koala habitat areas under the Koala Conservation Plan 2019 - Sea Turtle Nesting Areas records
VMA regulated regional ecosystems	Vegetation management regional ecosystem and remnant map
VMA Essential Habitat	Vegetation management - essential habitat map
VMA Wetlands	Vegetation management wetlands map
Legally secured offsets	Vegetation Management Act property maps of assessable vegetation. For offset register data-contact DES
Regulated Vegetation Map	Vegetation management - regulated vegetation management map

Appendix 3 - Acronyms and Abbreviations

AOI	- Area of Interest
DES	- Department of Environment and Science
EP Act	- <i>Environmental Protection Act 1994</i>
EPP	- Environmental Protection Policy
GDA94	- Geocentric Datum of Australia 1994
GEM	- General Environmental Matters
GIS	- Geographic Information System
MSES	- Matters of State Environmental Significance
NCA	- <i>Nature Conservation Act 1992</i>
RE	- Regional Ecosystem
SPP	- State Planning Policy
VMA	- <i>Vegetation Management Act 1999</i>



Queensland Government

Department of Environment and Science

Environmental Reports

Regional Ecosystems

Biodiversity Status

For the selected area of interest
Custom Geometry

Environmental Reports - General Information

The Environmental Reports portal provides for the assessment of selected matters of interest relevant to a user specified location, or area of interest (AOI). All area and derivative figures are relevant to the extent of matters of interest contained within the AOI unless otherwise stated. Please note, if a user selects an AOI via the "central coordinates" option, the resulting assessment area encompasses an area extending for a 2km radius from the input coordinates.

All area and area derived figures included in this report have been calculated via reprojecting relevant spatial features to Albers equal-area conic projection (central meridian = 146, datum Geocentric Datum of Australia 1994). As a result, area figures may differ slightly if calculated for the same features using a different co-ordinate system.

Figures in tables may be affected by rounding.

The matters of interest reported on in this document are based upon available state mapped datasets. Where the report indicates that a matter of interest is not present within the AOI (e.g. where area related calculations are equal to zero, or no values are listed), this may be due either to the fact that state mapping has not been undertaken for the AOI, that state mapping is incomplete for the AOI, or that no matters of interest have been identified within the site.

The information presented in this report should be considered as a guide only and field survey may be required to validate values on the ground.

Important Note to User

Information presented in this report is based upon the Queensland Herbarium's Regional Ecosystem framework. The Biodiversity Status has been used to depict the extent of "Endangered", "Of Concern" and "No Concern at Present" regional ecosystems in all cases, rather than the classes used for the purposes of the *Vegetation Management Act 1999* (VMA). Mapping and figures presented in this document reflect the Queensland Herbarium's Remnant and Pre-clearing Regional Ecosystem Datasets, and not the certified mapping used for the purpose of the VMA.

For matters relevant to vegetation management under the VMA, please refer to the Department of Resources website <https://www.dnrme.qld.gov.au/>

Please direct queries about these reports to: Queensland.Herbarium@qld.gov.au

Disclaimer

Whilst every care is taken to ensure the accuracy of the information provided in this report, the Queensland Government makes no representations or warranties about its accuracy, reliability, completeness, or suitability, for any particular purpose and disclaims all responsibility and all liability (including without limitation, liability in negligence) for all expenses, losses, damages (including indirect or consequential damage) and costs which the user may incur as a consequence of the information being inaccurate or incomplete in any way and for any reason.



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Summary Information

The following table provides an overview of the AOI with respect to selected topographic and environmental themes. Refer to **Map 1** for locality information.

Table 1: Area of interest details: Custom Geometry

Size (ha)	200.74
Local Government(s)	Mareeba Shire
Bioregion(s)	Einiasleigh Uplands
Subregion(s)	Hodgkinson Basin
Catchment(s)	Barron

The table below summarizes the extent of remnant vegetation classed as "Endangered", "Of concern" and "No concern at present" regional ecosystems classified by Biodiversity Status within the area of interest (AOI).

Table 2: Summary table, biodiversity status of regional ecosystems within the AOI

Biodiversity Status	Area (Ha)	% of AOI
Endangered	0.0	0.0
Of concern	75.38	37.55
No concern at present	0.0	0.0
Total remnant vegetation	75.38	37.55

Refer to **Map 2** for further information.

Regional Ecosystems

1. Introduction

Regional ecosystems are vegetation communities in a bioregion that are consistently associated with particular combinations of geology, landform and soil (Sattler and Williams 1999). Descriptions of Queensland's Regional ecosystems are available online from the Regional Ecosystem Description Database (REDD). Descriptions are compiled from a broad range of information sources including vegetation, land system and geology survey and mapping and detailed vegetation site data. The regional ecosystem classification and descriptions are reviewed as new information becomes available. A number of vegetation communities may form a single regional ecosystem and are usually distinguished by differences in dominant species, frequently in the shrub or ground layers and are denoted by a letter following the regional ecosystem code (e.g. a, b, c). Vegetation communities and regional ecosystems are amalgamated into a higher level classification of broad vegetation groups (BVGs).

A published methodology for survey and mapping of regional ecosystems across Queensland (Neldner et al 2020) provides further details on regional ecosystem concepts and terminology.

This report provides information on the type, status, and extent of vegetation communities, regional ecosystems and broad vegetation groups present within a user specified area of interest. Please note, for the purpose of this report, the Biodiversity Status is used. This report has not been developed for application of the *Vegetation Management Act 1999* (VMA). Additionally, information generated in this report has been derived from the Queensland Herbarium's Regional Ecosystem Mapping, and not the regulated mapping certified for the purposes of the VMA. If your interest/matter relates to regional ecosystems and the VMA, users should refer to the Department of Resources website.

<https://www.dnrme.qld.gov.au/>

With respect to the Queensland Biodiversity Status,

"Endangered" regional ecosystems are described as those where:

- remnant vegetation is less than 10 per cent of its pre-clearing extent across the bioregion; or 10-30% of its pre-clearing extent remains and the remnant vegetation is less than 10,000 hectares, or
- less than 10 per cent of its pre-clearing extent remains unaffected by severe degradation and/or biodiversity loss*, or
- 10-30 per cent of its pre-clearing extent remains unaffected by severe degradation and/or biodiversity loss and the remnant vegetation is less than 10,000 hectares; or
- it is a rare** regional ecosystem subject to a threatening process.***

"Of concern" regional ecosystems are described as those where:

- the degradation criteria listed above for 'Endangered' regional ecosystems are not met and,
- remnant vegetation is 10-30 per cent of its pre-clearing extent across the bioregion; or more than 20 per cent of its pre-clearing extent remains and the remnant extent is less than 10,000 hectares, or
- 10-30 percent of its pre-clearing extent remains unaffected by moderate degradation and/or biodiversity loss.****

and "No concern at present" regional ecosystems are described as those where:

- remnant vegetation is over 30 per cent of its pre-clearing extent across the bioregion, and the remnant area is greater than 10,000 hectares, and
- the degradation criteria listed above for 'Endangered' or 'Of concern' regional ecosystems are not met.

**Severe degradation and/or biodiversity loss is defined as: floristic and/or faunal diversity is greatly reduced but unlikely to recover within the next 50 years even with the removal of threatening processes; or soil surface is severely degraded, for example, by loss of A horizon, surface expression of salinity; surface compaction, loss of organic matter or sheet erosion.*

***Rare regional ecosystem: pre-clearing extent (1000 ha); or patch size (100 ha and of limited total extent across its range).*

****Threatening processes are those that are reducing or will reduce the biodiversity and ecological integrity of a regional ecosystem. For example, clearing, weed invasion, fragmentation, inappropriate fire regime or grazing pressure, or infrastructure development.*

****Moderate degradation and/or biodiversity loss is defined as: floristic and/or faunal diversity is greatly reduced but unlikely to recover within the next 20 years even with the removal of threatening processes; or soil surface is moderately degraded.

2. Remnant Regional Ecosystems

The following table identifies the remnant regional ecosystems and vegetation communities mapped within the AOI and provides their short descriptions, Biodiversity Status, and remnant extent within the selected AOI. Please note, where heterogeneous vegetated patches (mixed patches of remnant vegetation mapped as containing multiple regional ecosystems) occur within the AOI, they have been split and listed as individual regional ecosystems (or vegetation communities where present) for the purposes of the table below. In such instances, associated area figures have been generated based upon the estimated proportion of each regional ecosystem (or vegetation community) predicted to be present within the larger mixed patch.

Table 3: Remnant regional ecosystems, description and status within the AOI

Regional Ecosystem	Short Description	BD Status	Area (Ha)	% of AOI
9.12.31a	Eucalyptus leptophleba, Corymbia clarksoniana and E. crebra +/- C. dallachiana woodland on igneous rocks	Of concern	0.31	0.15
9.12.31b	Eucalyptus leptophleba, Corymbia clarksoniana and E. crebra +/- C. dallachiana woodland on igneous rocks	Of concern	0.72	0.36
9.8.2a	Eucalyptus leptophleba +/- Corymbia clarksoniana +/- C. erythrophloia open woodland on basalt plains	Of concern	74.35	37.04
non-remnant	None	None	125.36	62.45

Refer to **Map 2** for further information. **Map 3** also provides a visual estimate of the distribution of regional ecosystems present before clearing.

Table 4 provides further information in regards to the remnant regional ecosystems present within the AOI. Specifically, the extent of remnant vegetation remaining within the bioregion, the 1:1,000,000 broad vegetation group (BVG) classification, whether the regional ecosystem is identified as a wetland, and extent of representation in Queensland's Protected Area Estate. For a description of the vegetation communities within the AOI and classified according to the 1:1,000,000 BVG, refer to **Table 6**.

Table 4: Remnant regional ecosystems within the AOI, additional information

Regional Ecosystem	Remnant Extent	BVG (1 Million)	Wetland	Representation in protected estate
9.12.31a	Pre-clearing 11000 ha; Remnant 2019 10000 ha	9b	Not a Wetland	No representation
9.12.31b	Pre-clearing 11000 ha; Remnant 2019 10000 ha	9b	Not a Wetland	No representation
9.8.2a	Pre-clearing 41000 ha; Remnant 2019 20000 ha	11c	Not a Wetland	No representation
non-remnant	None	None	None	None

Representation in Protected Area Estate: High greater than 10% of pre-clearing extent is represented; Medium 4 - 10% is represented; Low less than 4% is represented, No representation.

The distribution of mapped wetland systems within the area of interest is displayed in **Map 6**.

The following table lists known special values associated with a regional ecosystem type.

Table 5: Remnant regional ecosystems within the AOI, special values

Regional Ecosystem	Special Values
9.12.31a	Potential habitat for NCA listed species: <i>Peristylus banfieldii</i> , <i>Spathoglottis paulinae</i>
9.12.31b	Potential habitat for NCA listed species: <i>Peristylus banfieldii</i> , <i>Spathoglottis paulinae</i>
9.8.2a	Potential habitat for NCA listed species: <i>Peristylus banfieldii</i> , <i>Spathoglottis paulinae</i>
non-remnant	None

3. Remnant Regional Ecosystems by Broad Vegetation Group

BVGs are a higher-level grouping of vegetation communities. Queensland encompasses a wide variety of landscapes across temperate, wet and dry tropics and semi-arid climatic zones. BVGs provide an overview of vegetation communities across the state or a bioregion and allow comparison with other states. There are three levels of BVGs which reflect the approximate scale at which they are designed to be used: the 1:5,000,000 (national), 1:2,000,000 (state) and 1:1,000,000 (regional) scales.

A comprehensive description of BVGs is available at:

<https://publications.qld.gov.au/dataset/redd/resource/>

The following table provides a description of the 1:1,000,000 BVGs present and their associated extent within the AOI.

Table 6: Broad vegetation groups (1 million) within the AOI

BVG (1 Million)	Description	Area (Ha)	% of AOI
None	None	125.36	62.45
11c	Moist woodlands dominated by <i>Eucalyptus leptophleba</i> (Molloy red box) ± <i>Corymbia papuana</i> (ghost gum) ± <i>C. tessellaris</i> (carbeen). (land zones 8, 11) (EIU, CYP)	74.35	37.04
9b	Moist to dry woodlands dominated by <i>Eucalyptus platyphylla</i> (poplar gum) and/or <i>E. leptophleba</i> (Molloy red box). Other frequent tree species include <i>Corymbia clarksoniana</i> (grey bloodwood), <i>E. drepanophylla</i> (grey ironbark) and occasionally <i>E. chlorophylla</i> . (land zones 12, 11, 3, 10, 5). (CYP, CQC, BRB, WET, EIU)	1.04	0.52

Refer to **Map 4** for further information. **Map 5** also provides a representation of the distribution of vegetation communities as per the 1:5,000,000 BVG believed to be present prior to European settlement.

4. Technical and BioCondition Benchmark Descriptions

Technical descriptions provide a detailed description of the full range in structure and floristic composition of regional ecosystems (e.g. 11.3.1) and their component vegetation communities (e.g. 11.3.1a, 11.3.1b). See:

<http://www.qld.gov.au/environment/plants-animals/plants/ecosystems/technical-descriptions/>

The descriptions are compiled using site survey data from the Queensland Herbarium's CORVEG database. Distribution maps, representative images (if available) and the pre-clearing and remnant extent (hectares) of each vegetation community derived from the regional ecosystem mapping data are included. The technical descriptions should be used in conjunction with the fields from the regional ecosystem description database (REDD) for a full description of the regional ecosystem.

Technical descriptions include data on canopy height, canopy cover and native plant species composition of the predominant layer, which are attributes relevant to assessment of the remnant status of vegetation under the *Vegetation Management Act 1999*. However, as technical descriptions reflect the full range in structure and floristic composition across the climatic, natural disturbance and geographic range of the regional ecosystem, local reference sites should be used for remnant assessment where possible (Neldner et al. 2020 (PDF)* section 3.3 of:

<https://publications.qld.gov.au/dataset/redd/resource/>

The technical descriptions are subject to review and are updated as additional data becomes available.

When conducting a BioCondition assessment, these technical descriptions should be used in conjunction with BioCondition benchmarks for the specific regional ecosystem, or component vegetation community.

<http://www.qld.gov.au/environment/plants-animals/biodiversity/benchmarks/>

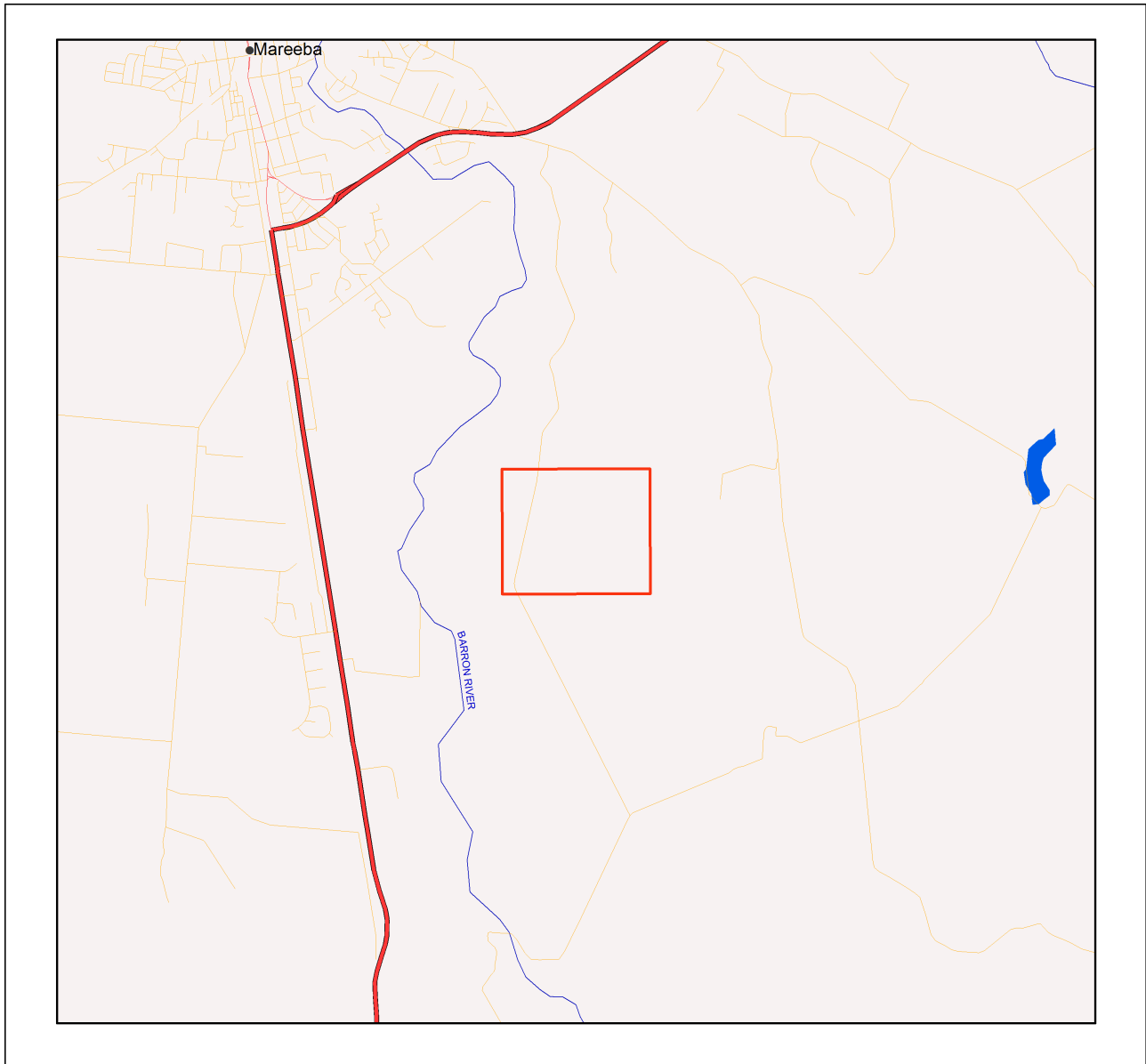
Benchmarks are based on a combination of quantitative and qualitative information and should be used as a guide only. Benchmarks are specific to one regional ecosystem vegetation community, however, the natural variability in structure and floristic composition under a range of climatic and natural disturbance regimes has been considered throughout the geographic extent of the regional ecosystem. Local reference sites should be used for this spatial and temporal (seasonal and annual) variability.

Table 7: List of remnant regional ecosystems within the AOI for which technical and biocondition benchmark descriptions are available

Regional ecosystems mapped as within the AOI	Technical Descriptions	Biocondition Benchmarks
9.12.31a	Available	Not currently available
9.12.31b	Available	Not currently available
9.8.2a	Available	Not currently available
non-remnant	Not currently available	Not currently available

Maps

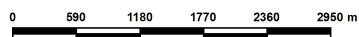
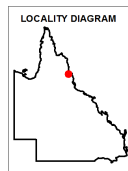
Map 1 - Location



Locality Map

Legend

- polygon
- Towns
- Highway
- Connector
- Street/Local Road
- Reservoirs
- Lakes
- National Park (Scientific)
- National Park
- National Park (CYPAL)
- Conservation Park
- Resources Reserve
- Forest Reserve
- State Forest
- Timber Reserve
- Nature Refuges
- Coordinated Conservation Areas
- Major rivers/creeks
- Queensland



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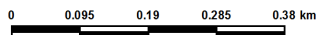
Map 2 - Remnant 2019 regional ecosystems



Remnant 2019 Regional Ecosystems

Biodiversity Status

- polygon
- Endangered - Dominant vegetation
- Endangered - Sub-dominant
- Of Concern - Dominant
- Of Concern - Sub-dominant
- No concern at present
- Non-remnant vegetation, cultivated or built environment
- Plantation
- Water
- Cadastral Boundaries



This product is projected into GDA 1994 Queensland Albers

Regional ecosystem mapping over the majority of Queensland is produced at a scale of 1:100,000. At this scale, the minimum remnant polygon area is 5 hectares or minimum remnant width of 75 metres. Regional ecosystem linework reproduced at a scale greater than 1:100,000, except in designated areas, should be used as a guide only. The precision of polygon boundaries or positional accuracy of linework is 100 metres.

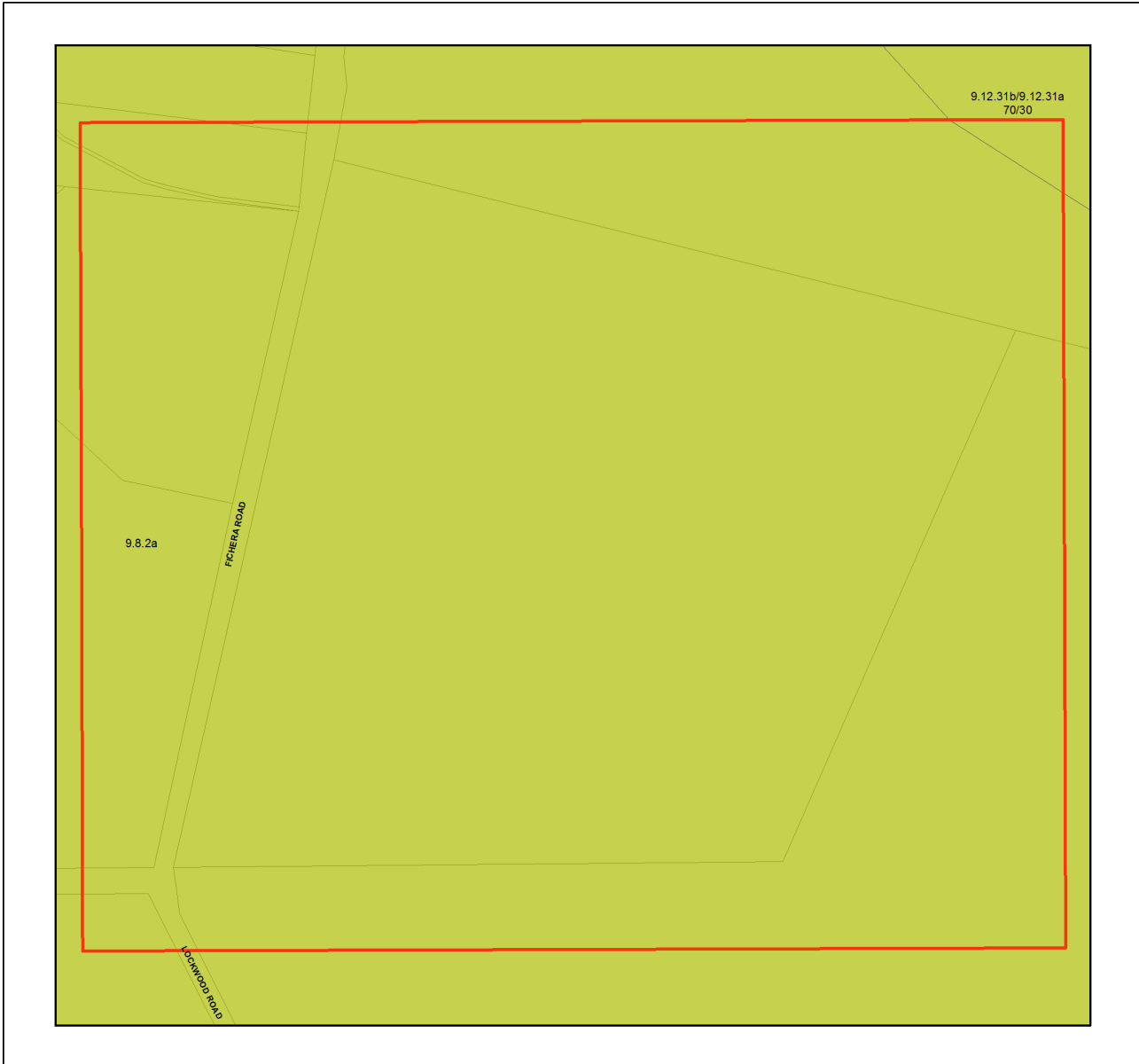
Regional ecosystems are defined as vegetation communities in a bioregion that are consistently associated with a particular combination of geology, landform and soil. The polygons are labelled by regional ecosystem (RE); where more than one RE occurs, the percentage of each is labelled. The label consists of 3 components: bioregion, land zone, and vegetation community – the dominant canopy species. e.g.: RE 12.3.3. Descriptions of REs are found online. Use the search term "Regional Ecosystem Framework".

Regional ecosystem mapping at 1:100,000 map scale is derived from the following sources: 1:80,000 B&W 1960's aerial photography, Landsat TM imagery, geology, soils, land systems data, field survey and historical records.

Remnant woody vegetation is defined as vegetation that has not been cleared or vegetation that has been cleared but where the dominant canopy has >70% of the height and >50% of the cover relative to the undisturbed height and cover of that stratum and is dominated by species characteristic of the vegetation's undisturbed canopy. Non-remnant vegetation includes regrowth and disturbed native vegetation.

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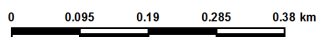
Map 3 - Pre-clearing regional ecosystems



Pre-clearing Regional Ecosystems

Biodiversity Status

- polygon
- Endangered - Dominant vegetation
- Endangered - Sub-dominant
- Of Concern - Dominant
- Of Concern - Sub-dominant
- No concern at present
- Water
- Cadastral Boundaries



This product is projected into GDA 1994 Queensland Albers

Regional ecosystem mapping over the majority of Queensland is produced at a scale of 1:100,000. At this scale, the minimum remnant polygon area is 5 hectares or minimum remnant width of 75 metres. Regional ecosystem linework reproduced at a scale greater than 1:100,000, except in designated areas, should be used as a guide only. The precision of polygon boundaries or positional accuracy of linework is 100 metres.

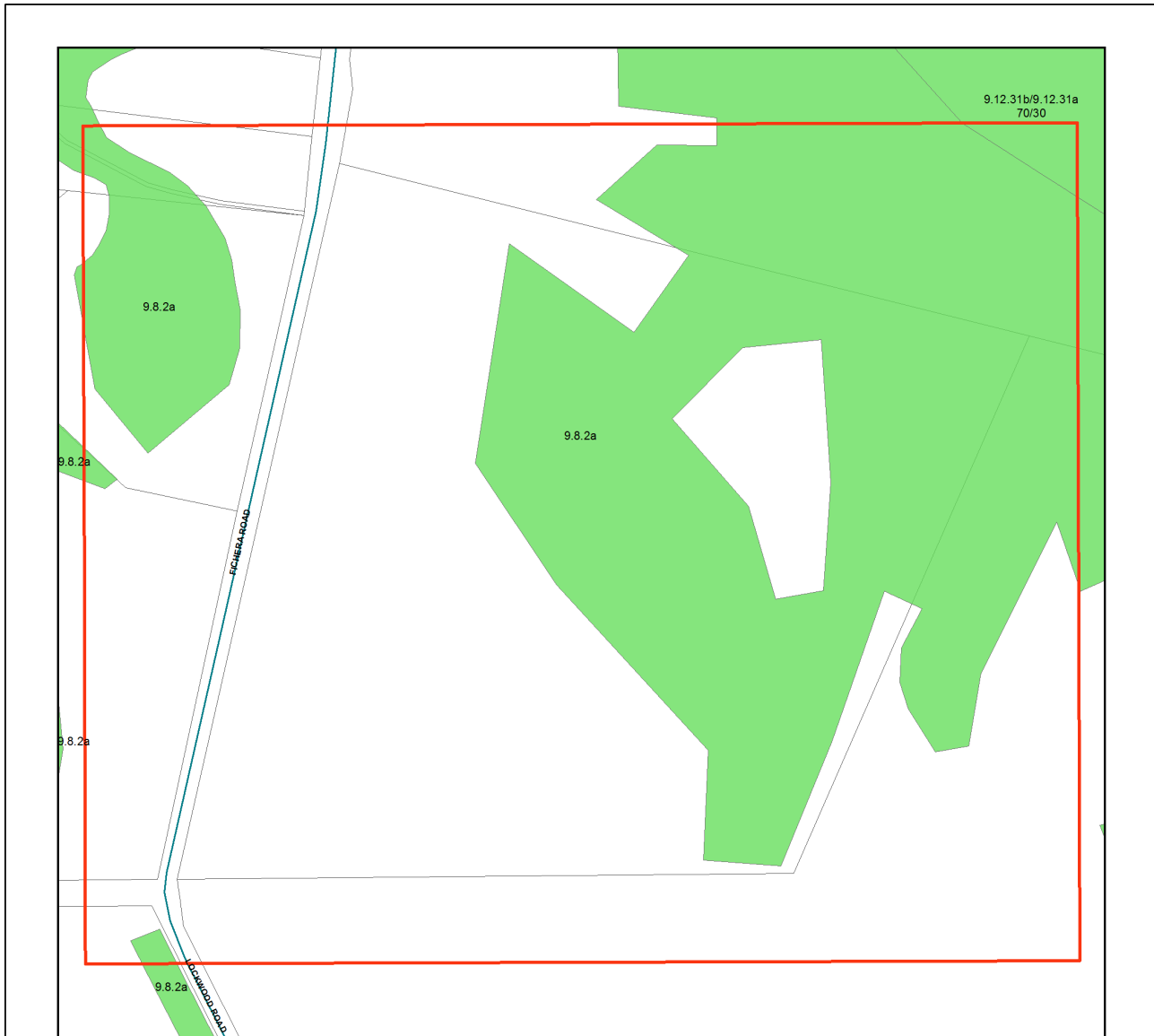
Regional ecosystems are defined as vegetation communities in a bioregion that are consistently associated with a particular combination of geology, landform and soil.

The polygons are labelled by regional ecosystem (RE); where more than one RE occurs, the percentage of each is labelled. The label consists of 3 components: bioregion, land zone, and vegetation community – the dominant canopy species. e.g.: RE 12.3.3. Descriptions of REs are found online. Use the search term "Regional Ecosystem Framework".

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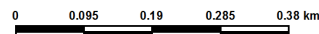
Map 4 - Remnant 2019 regional ecosystems by BVG (5M)



Remnant 2019 Regional Ecosystems coloured by Broad Vegetation Groups

Broad Vegetation Groups BVG5M Description (BVG1M codes)

- polygon
- 1. Rainforests and scrubs (1-7b)
- 2. Wet eucalypt open forests (8-8b)
- 3. Eucalypt woodlands to open forests (mainly eastern Qld) (9-15b)
- 4. Eucalypt open forests to woodlands on floodplains (16-16d)
- 5. Eucalypt dry woodlands on inland depositional plains (17-18d)
- 6. Eucalypt low open woodlands usually with spinifex understorey (19-19d)
- 7. Callitris woodland - open forests (20a)
- 8. Melaleuca open woodlands on depositional plains (21-22c)
- 9. Acacia aneura (mulga) dominated open forests, woodlands and shrublands (23-23b)
- 10. Other acacia dominated open forests, woodlands and shrublands (24-26a)
- 11. Mixed species woodlands, open woodland - (inland bioregions) includes wooded downs (27-27c)
- 12. Other coastal communities or heaths (28-29b)
- 13. Tussock grasslands, forblands (30-32b)
- 14. Hummock grasslands (33-33b)
- 15. Wetlands (swamps and lakes) (34-34g)
- 16. Mangroves and saltmarshes (35-35b)
- Non-remnant vegetation, cultivated or built environment
- Water
- Cadastral Boundaries



This product is projected into GDA 1994 Queensland Albers

Broad Vegetation Groups (BVG) of Queensland are applied by look up table to the regional ecosystem vegetation communities. Each polygon is coloured by the dominant BVG5M and the component regional ecosystems labelled. Where more than one regional ecosystem occurs, the percentage of each is labelled.

Regional ecosystem mapping over the majority of Queensland is produced at a scale of 1:100,000. At this scale, the minimum remnant polygon area is 5 hectares or minimum remnant width of 75 metres. Regional ecosystem linework reproduced at a scale greater than 1:100,000, except in designated areas, should be used as a guide only. The precision of polygon boundaries or positional accuracy of linework is 100 metres.

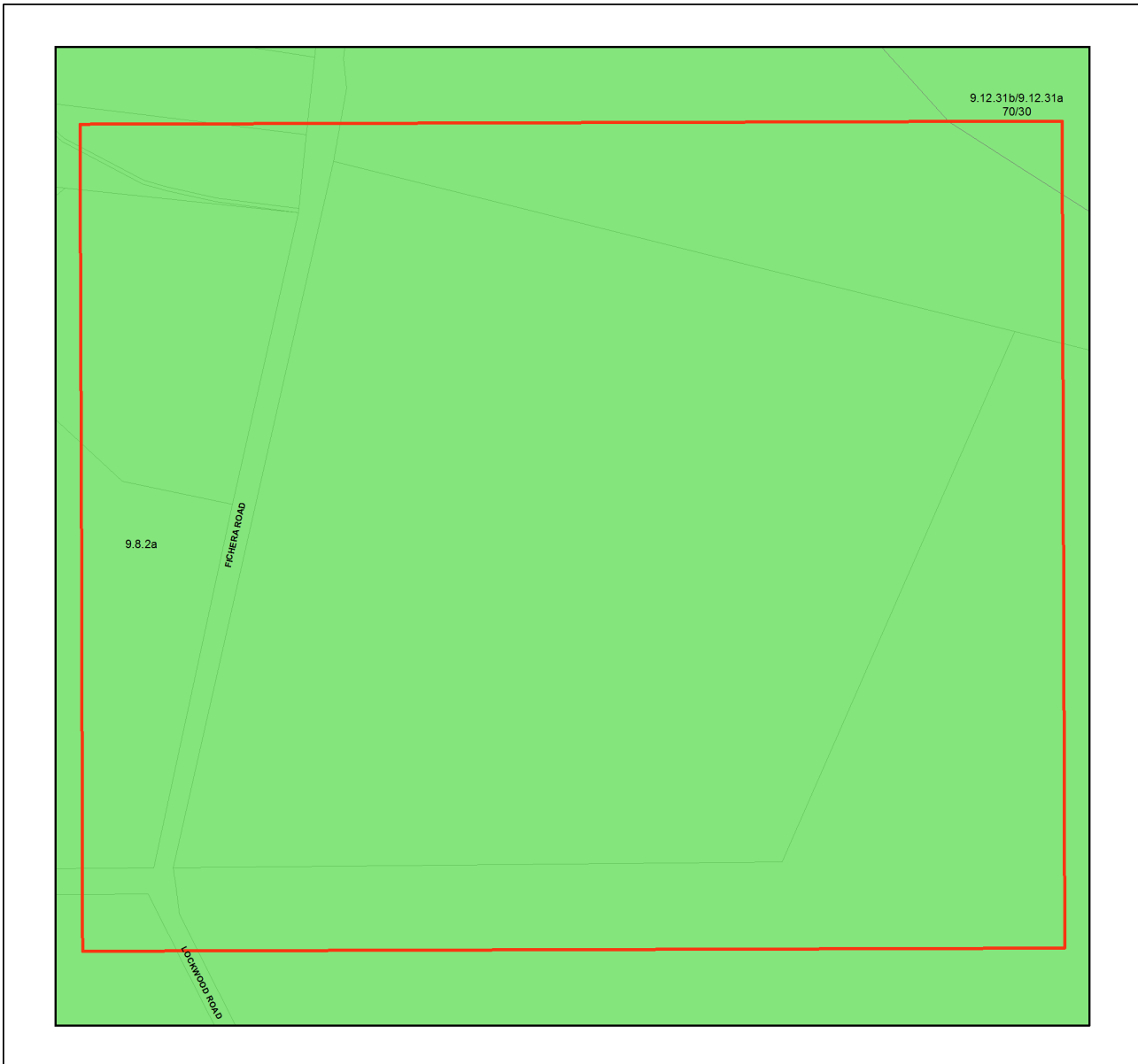
Regional ecosystems are defined as vegetation communities in a bioregion that are consistently associated with a particular combination of geology, landform and soil.

The label consists of 3 components: bioregion, land zone, and vegetation community – the dominant canopy species. e.g.: RE 12.3.3. Descriptions of REs are found online. Use the search term "Regional Ecosystem Framework". Regional ecosystem mapping at 1:100,000 map scale is derived from the following sources: 1:80,000 B&W 1960's aerial photography, Landsat TM imagery, geology, soils, land systems data, field survey and historical records.

Remnant woody vegetation is defined as vegetation that has not been cleared or vegetation that has been cleared but where the dominant canopy has >70% of the height and >50% of the cover relative to the undisturbed height and cover of that stratum and is dominated by species characteristic of the vegetation's undisturbed canopy.

Non-remnant vegetation includes regrowth and disturbed native vegetation.

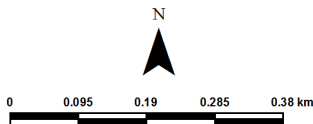
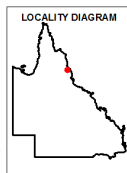
Map 5 - Pre-clearing regional ecosystems by BVG (5M)



Pre-clearing Regional Ecosystems coloured by Broad Vegetation Groups

Broad Vegetation Groups BVG5M Description (BVG1M codes)

- polygon
- 1. Rainforests and scrubs (1-7b)
- 2. Wet eucalypt open forests (8-8b)
- 3. Eucalypt woodlands to open forests (mainly eastern Qld) (9-15b)
- 4. Eucalypt open forests to woodlands on floodplains (16-16d)
- 5. Eucalypt dry woodlands on inland depositional plains (17-18d)
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- 9. Acacia aneura (mulga) dominated open forests, woodlands and shrublands (23-23b)
- 10. Other acacia dominated open forests, woodlands and shrublands (24-26a)
- 11. Mixed species woodlands, open woodland - (inland bioregions) includes wooded downs (27-27c)
- 12. Other coastal communities or heaths (28-29b)
- 13. Tussock grasslands, forblands (30-32b)
- 14. Hummock grasslands (33-33b)
- 15. Wetlands (swamps and lakes) (34-34g)
- 16. Mangroves and saltmarshes (35-35b)
- Water
- Cadastral Boundaries



This product is projected into GDA 1994 Queensland Albers

Broad Vegetation Groups (BVG) of Queensland are applied by look up table to the regional ecosystem vegetation communities. Each polygon is coloured by the dominant BVG5M and the component regional ecosystems labelled. Where more than one regional ecosystem occurs, the percentage of each is labelled.

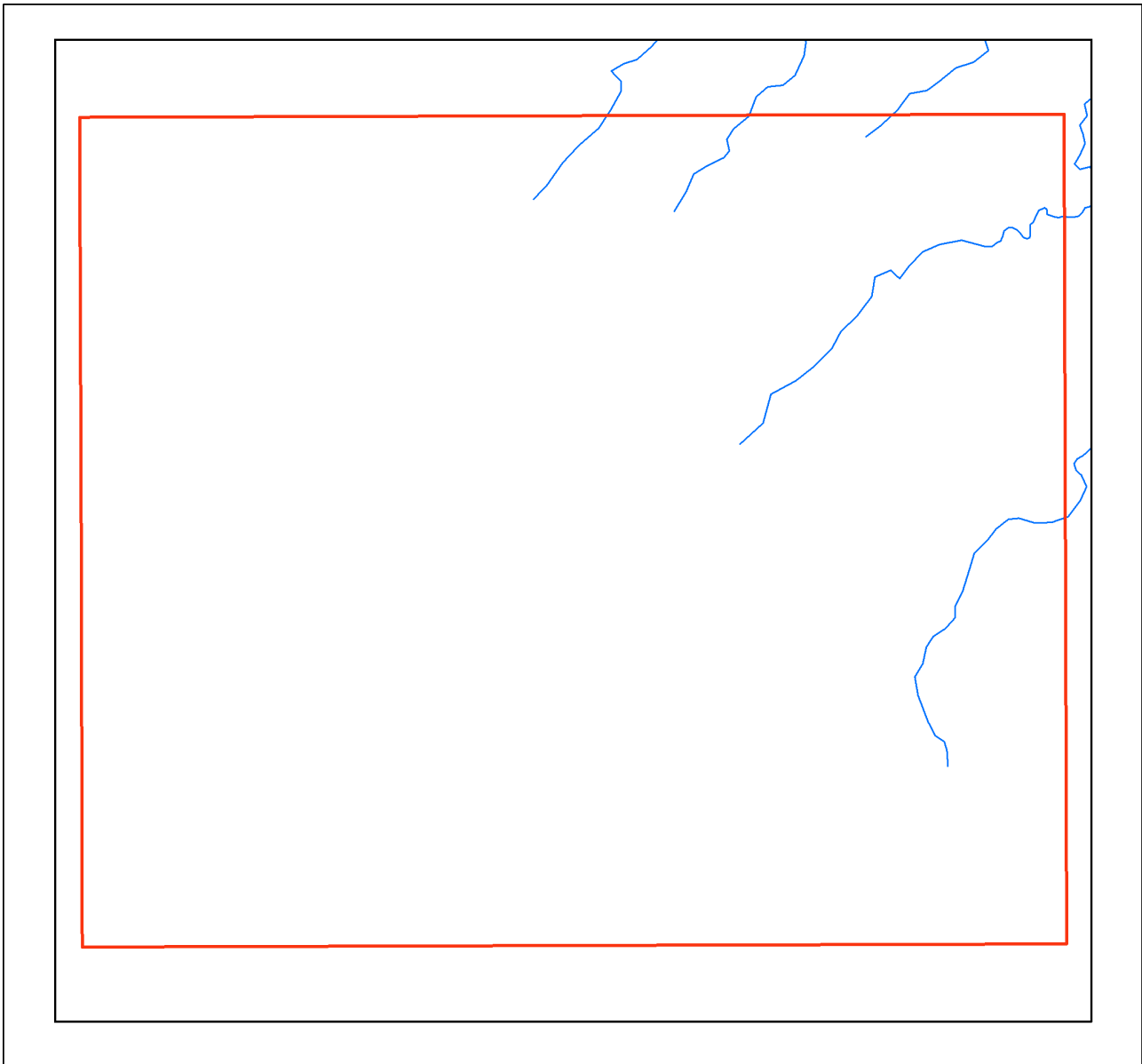
Regional ecosystem mapping over the majority of Queensland is produced at a scale of 1:100,000. At this scale, the minimum remnant polygon area is 5 hectares or minimum remnant width of 75 metres. Regional ecosystem line work reproduced at a scale greater than 1:100,000, except in designated areas, should be used as a guide only. The precision of polygon boundaries or positional accuracy of line work is 100 metres.

Regional ecosystems are defined as vegetation communities in a bioregion that are consistently associated with a particular combination of geology, landform and soil.

The label consists of 3 components: bioregion, land zone, and vegetation community – the dominant canopy species. e.g.: RE 12.3.3. Descriptions of REs are found online. Use the search term "Regional Ecosystem Framework". Regional ecosystem mapping at 1:100,000 map scale is derived from the following sources: 1:80,000 B&W 1960's aerial photography, Landsat TM imagery, geology, soils, land systems data, field survey and historical records.

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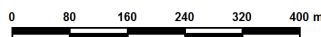
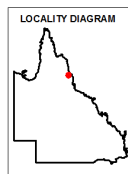
Map 6 - Wetlands and waterways



Queensland Wetland Data

Legend

- polygon
- ▲ Towns
- Queensland Wetland Data**
- Riverine Drainage Lines
- ▲ Springs
- Wetland System - Water Bodies**
- Marine Waterbodies
- Estuarine Waterbodies
- Riverine Waterbodies
- Lacustrine Waterbodies
- Palustrine Waterbodies
- Wetland System - Regional Ecosystems**
- Marine RE
- Estuarine RE
- Riverine RE
- Lacustrine RE
- Palustrine RE
- RE 51-80% wetland (mosaic units)
- RE 1-50% wetland (mosaic units)



Accuracy information: The positional accuracy of wetland data mapped at a scale of 1:100,000 is +/-100m with a minimum polygon size of 5ha or 75m wide for linear features, except for areas along the east coast which are mapped at the 1:50,000 scale with a positional accuracy of +/-50m, with a minimum polygon size of 1ha or 35m wide for linear features. Wetlands smaller than 1ha are not delineated on the wetland data. Consideration of the effects of mapped scale is necessary when interpreting data at a larger scale, e.g. 1:25,000. For property assessment, digital linework should be used as a guide only. The extent of wetlands depicted on this map is based on rectified 2013 Landsat ETM+ imagery supplied by Statewide Landcover and Trees Study (SLATS), Department of Environment and Science. The extent of water bodies is based on the maximum extent of inundation derived from available Landsat imagery up to and including the 2013 imagery.

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This product is projected into GDA 1994 Queensland Albers

Links and Other Information Sources

The Department of Environment and Science's Website -

<http://www.qld.gov.au/environment/plants-animals/plants/ecosystems/>

provides further information on the regional ecosystem framework, including access to links to the Regional Ecosystem Database, Broad Vegetation Group Definitions, Regional Ecosystem and Land zone descriptions.

Descriptions of the broad vegetation groups of Queensland can be downloaded from:

<https://publications.qld.gov.au/dataset/redd/resource/>

The methodology for mapping regional ecosystems can be downloaded from:

<https://publications.qld.gov.au/dataset/redd/resource/>

Technical descriptions for regional ecosystems can be obtained from:

<http://www.qld.gov.au/environment/plants-animals/plants/ecosystems/technical-descriptions/>

Benchmarks can be obtained from:

<http://www.qld.gov.au/environment/plants-animals/biodiversity/benchmarks/>

For further information associated with the remnant regional ecosystem dataset used by this report, refer to the metadata associated with the Biodiversity status of pre-clearing and Remnant Regional Ecosystems of Queensland dataset (version listed in **Appendix 1**) which is available through the Queensland Government Information System portal,

<http://dds.information.qld.gov.au/dds/>

The Queensland Globe is a mapping and data application. As an interactive online tool, Queensland Globe allows you to view and explore Queensland maps, imagery (including up-to-date satellite images) and other spatial data, including regional ecosystem mapping. To further view and explore regional ecosystems over an area of interest, access the Biota Globe (a component of the Queensland Globe). The Queensland Globe can be accessed via the following link:

<http://www.dnrm.qld.gov.au/mapping-data/queensland-globe>

References

Neldner, V.J., Niehus, R.E., Wilson, B.A., McDonald, W.J.F., Ford, A.J. and Accad, A. (2019). The Vegetation of Queensland. Descriptions of Broad Vegetation Groups. Version 4.0. Queensland Herbarium, Department of Environment and Science.

<https://publications.qld.gov.au/dataset/redd/resource/78209e74-c7f2-4589-90c1-c33188359086>

Neldner, V.J., Wilson, B.A., Dillewaard, H.A., Ryan, T.S., Butler, D.W., McDonald, W.J.F., Addicott, E.P. and Appelman, C.N. (2020). Methodology for survey and mapping of regional ecosystems and vegetation communities in Queensland. Version 5.1. Updated March 2020. Queensland Herbarium, Queensland Department of Environment and Science, Brisbane.

<https://publications.qld.gov.au/dataset/redd/resource/6dee78ab-c12c-4692-9842-b7257c2511e4>

Sattler, P.S. and Williams, R.D. (eds) (1999). *The Conservation Status of Queensland's Bioregional Ecosystems*. Environmental Protection Agency, Brisbane.

Appendices

Appendix 1 - Source Data

The dataset listed below is available for download from:

<http://www.qld.gov.au/environment/plants-animals/plants/ecosystems/download/>

- Regional Ecosystem Description Database

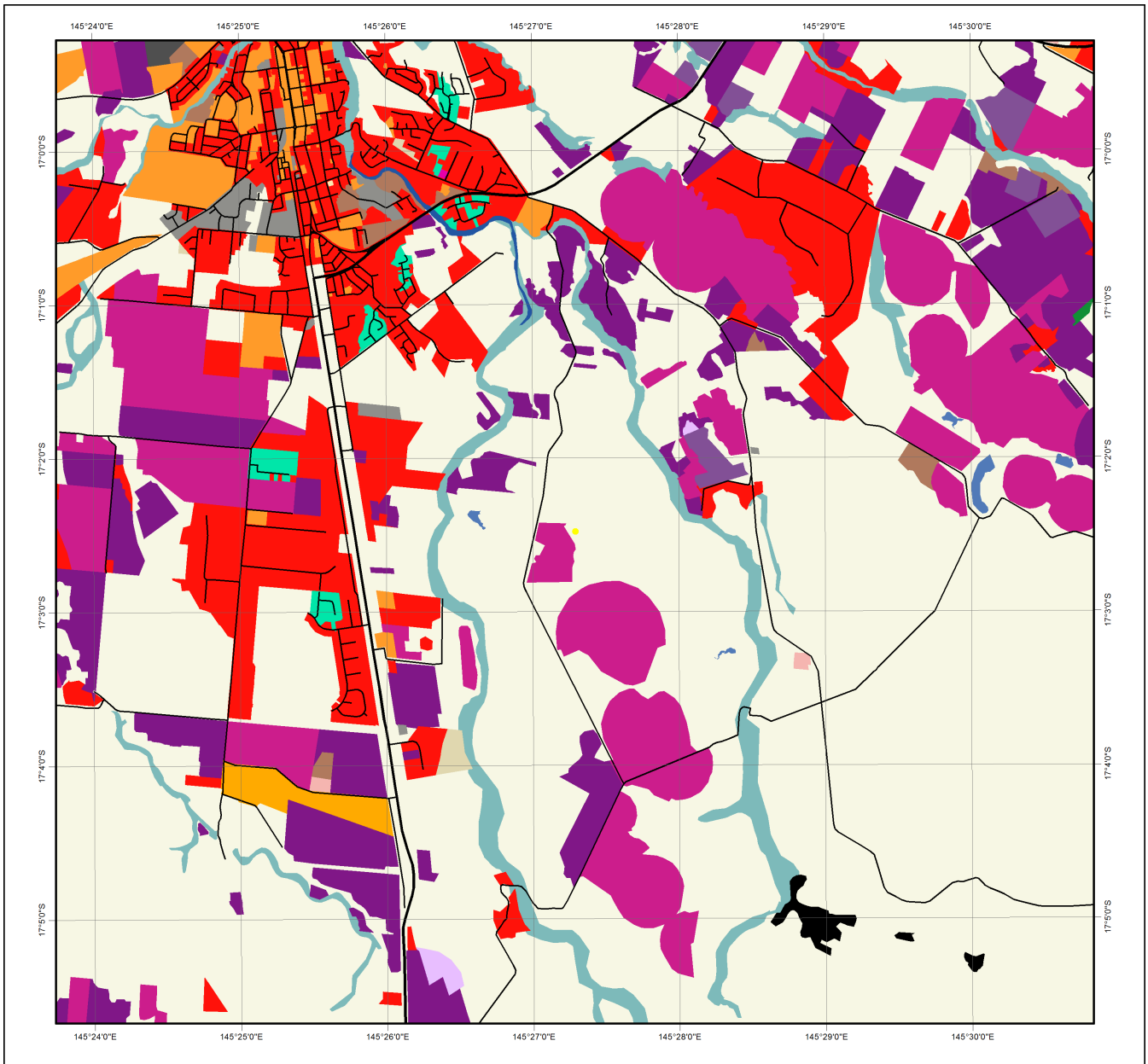
The datasets listed below are available for download from:

<http://dds.information.qld.gov.au/dds/>

- Biodiversity status of pre-clearing and 2019 remnant regional ecosystems of Queensland
- Pre-clearing Vegetation Communities and Regional Ecosystems of Queensland
- Queensland Wetland Data Version - Wetland lines
- Queensland Wetland Data Version - Wetland points
- Queensland Wetland Data Version - Wetland areas

Appendix 2 - Acronyms and Abbreviations

AOI	- Area of Interest
GDA94	- Geocentric Datum of Australia 1994
GIS	- Geographic Information System
RE	- Regional Ecosystem
REDD	- Regional Ecosystem Description Database
VMA	- <i>Vegetation Management Act 1999</i>



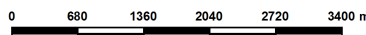
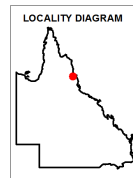
Land Use

Queensland Land Use Mapping Program

Legend

ALUM v8 Secondary level

- Coordinates
- Nature conservation
- Other minimal use
- Grazing native vegetation
- Cropping
- Land in transition
- Irrigated cropping
- Irrigated perennial horticulture
- Irrigated seasonal horticulture
- Irrigated land in transition
- Intensive horticulture
- Intensive animal production
- Manufacturing and industrial
- Residential and farm infrastructure
- Services
- Utilities
- Transport and communication
- Mining
- Waste treatment and disposal
- Reservoir/dam
- River
- Marsh/wetland
- Freeways / motorways; Highways
- Secondary roads; Streets



This product is projected into GDA 1994 Queensland Albers

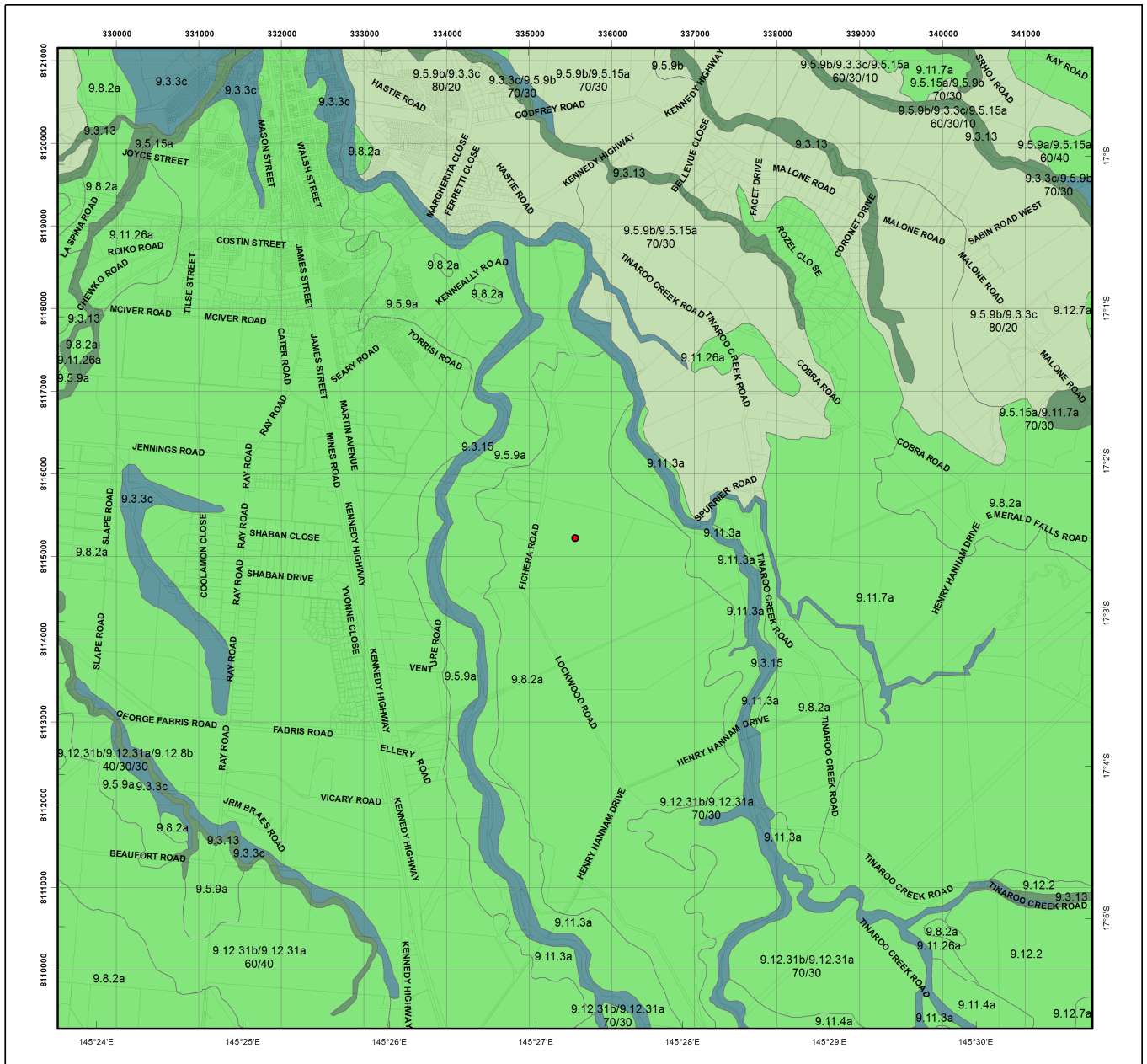
The land use dataset is a product of the Queensland Land use Mapping Program (QLUMP), at a nominal scale of 1:50,000. The layer is a polygon dataset with each feature having attributes describing land use. It presents the most current land use information available in Queensland.

Land use is classified according to the Australian Land Use and Management Classification (ALUMC) Version 8, October 2016. Primary and secondary levels relate to land use (i.e. the principal use of the land in terms of the objectives of the land manager), the tertiary level further discriminates land use, eg. commodity/intensity. Where required and possible, attribution is performed to tertiary level. QLUMP maps the land use classes of sugar and cotton consistently to tertiary level. The minimum attribution level for land use mapping in Queensland is secondary land use, as presented in this map.

Refer to the contact position for additional information regarding source data. Further information relating to land use mapping can be found at <http://www.qld.gov.au/environment/land/vegetation/mapping/qlump/> and <http://www.agriculture.gov.au/abares/aclump/land-use/>

While every care is taken to ensure the accuracy of this information, the Department of Environment and Science makes no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and disclaims all responsibility and all liability (including without limitation, liability in negligence) for all expenses, losses, damages (including indirect or consequential damage) and costs which might be incurred as a result of the information being inaccurate or incomplete in any way and for any reason.

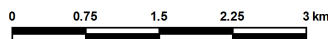
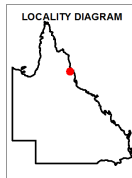
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Pre-clearing Regional Ecosystems coloured by Broad Vegetation Groups

Broad Vegetation Groups BVG5M Description (BVG1M codes)

- Coordinates
- 1. Rainforests and scrubs (1-7b)
- 2. Wet eucalypt open forests (8-8b)
- 3. Eucalypt woodlands to open forests (mainly eastern Qld) (9-15b)
- 4. Eucalypt open forests to woodlands on floodplains (16-16d)
- 5. Eucalypt dry woodlands on inland depositional plains (17-18d)
- 6. Eucalypt low open woodlands usually with spinifex understorey (19-19d)
- 7. Callitris woodland - open forests (20a)
- 8. Melaleuca open woodlands on depositional plains (21-22c)
- 9. Acacia aneura (mulga) dominated open forests, woodlands and shrublands (23-23b)
- 10. Other acacia dominated open forests, woodlands and shrublands (24-26a)
- 11. Mixed species woodlands, open woodland - (inland bioregions) includes wooded downs (27-27c)
- 12. Other coastal communities or heaths (28-29b)
- 13. Tussock grasslands, forblands (30-32b)
- 14. Hummock grasslands (33-33b)
- 15. Wetlands (swamps and lakes) (34-34g)
- 16. Mangroves and saltmarshes (35-35b)
- Water
- Cadastral Boundaries



This product is projected into GDA 1994 MGA Zone 55

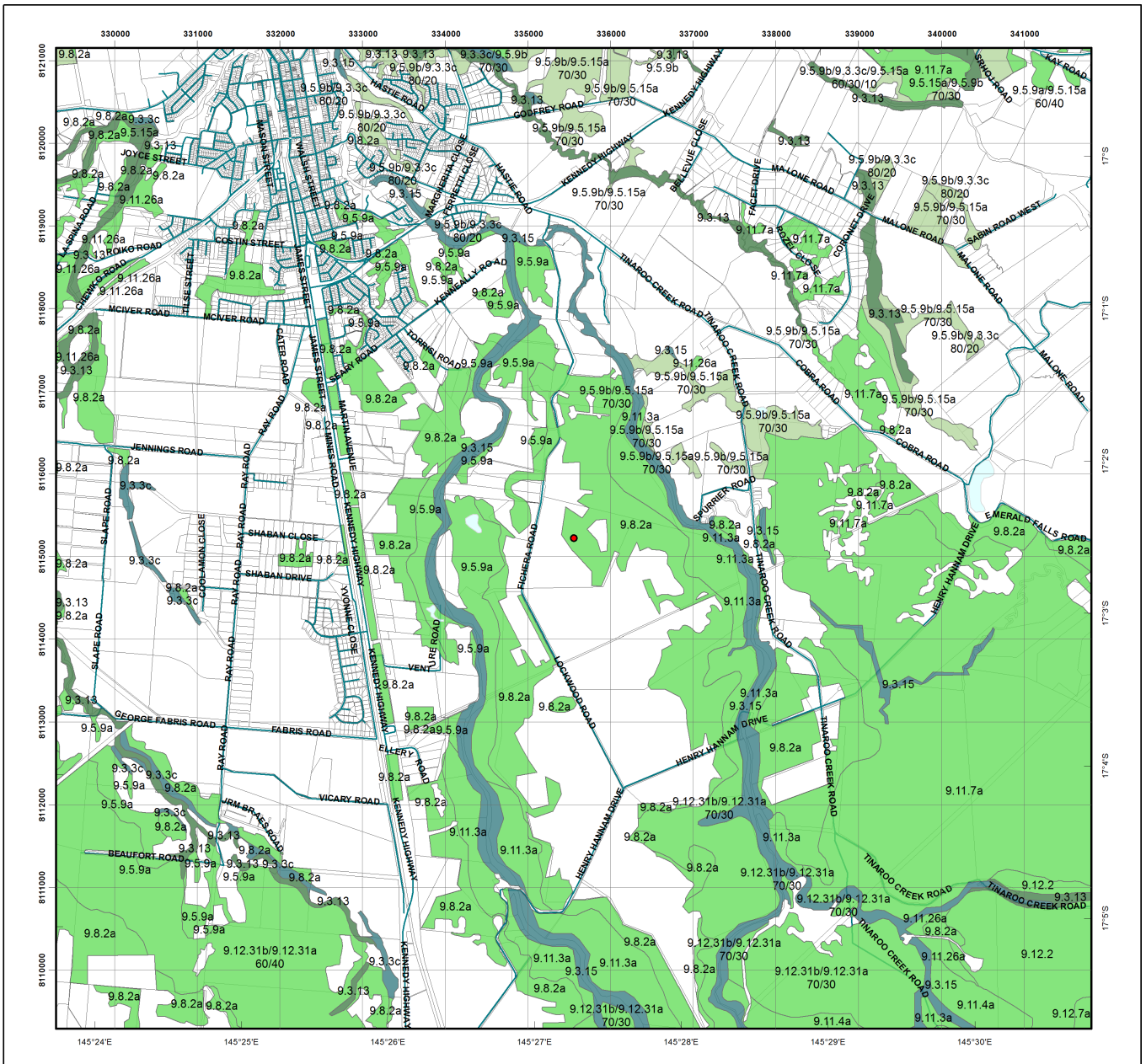
Broad Vegetation Groups (BVG) of Queensland are applied by look up table to the regional ecosystem vegetation communities. Each polygon is coloured by the dominant BVG5M and the component regional ecosystems labelled. Where more than one regional ecosystem occurs, the percentage of each is labelled.

Regional ecosystem mapping over the majority of Queensland is produced at a scale of 1:100,000. At this scale, the minimum remnant polygon area is 5 hectares or minimum remnant width of 75 metres. Regional ecosystem linework reproduced at a scale greater than 1:100,000, except in designated areas, should be used as a guide only. The precision of polygon boundaries or positional accuracy of linework is 100 metres.

Regional ecosystems are defined as vegetation communities in a bioregion that are consistently associated with a particular combination of geology, landform and soil.

The label consists of 3 components - the dominant canopy species, e.g.: RE 12.3.3. Descriptions of REs are found online. Use the search term "Regional Ecosystem Framework".

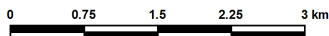
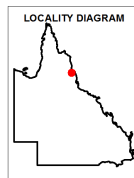
Regional ecosystem mapping at 1:100,000 map scale is derived from the following sources: 1:80,000 B&W 1960's aerial photography, Landsat TM imagery, geology, soils, land systems data, field survey and historical records.



Remnant 2019 Regional Ecosystems coloured by Broad Vegetation Groups

Broad Vegetation Groups BVG5M Description (BVG1M codes)

- Coordinates
- 1. Rainforests and scrubs (1-7b)
- 2. Wet eucalypt open forests (8-8b)
- 3. Eucalypt woodlands to open forests (mainly eastern Qld) (9-15b)
- 4. Eucalypt open forests to woodlands on floodplains (16-16d)
- 5. Eucalypt dry woodlands on inland depositional plains (17-18d)
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- 10. Other acacia dominated open forests, woodlands and shrublands (24-26a)
- 11. Mixed species woodlands, open woodland - (inland bioregions) includes wooded downs (27-27c)
- 12. Other coastal communities or heaths (28-29b)
- 13. Tussock grasslands, forblands (30-32b)
- 14. Hummock grasslands (33-33b)
- 15. Wetlands (swamps and lakes) (34-34g)
- 16. Mangroves and saltmarshes (35-35b)
- Non-remnant vegetation, cultivated or built environment
- Water
- Cadastral Boundaries



This product is projected into GDA 1994 MGA Zone 55

Broad Vegetation Groups (BVG) of Queensland are applied by look up table to the regional ecosystem vegetation communities. Each polygon is coloured by the dominant BVG5M and the component regional ecosystems labelled. Where more than one regional ecosystem occurs, the percentage of each is labelled.

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Regional ecosystem mapping at 1:100,000 map scale is derived from the following sources: 1:80,000 B&W 1960's aerial photography, Landsat TM imagery, geology, soils, land systems data, field survey and historical records.

Remnant woody vegetation is defined as vegetation that has not been cleared or vegetation that has been cleared but where the dominant canopy has >70% of the height and >50% of the cover relative to the undisturbed height and cover of that stratum and is dominated by species characteristic of the vegetation's undisturbed canopy. Non-remnant vegetation includes regrowth and disturbed native vegetation.

Attachment 4 – ARO Industries – Traffic Report

ARO INDUSTRIES

429 FICHERA ROAD
WORKERS
ACCOMMODATION
TRAFFIC REPORT



DOCUMENT CONTROL SHEET

<p>Title: 429 Fichera Road Workers Accommodation Traffic Report</p> <p>Document No: ARO0276</p> <p>Project Director: Andrew Armstrong</p> <p>Author: Andrew Armstrong</p> <p>Client: Lakeshore Avocados</p> <p>Client Contact: Neil Beck</p> <p>Client Reference: 429 Fichera Road Workers Accommodation</p> <p>Purpose: This engineering report has been prepared by ARO Industries to assess the traffic impacts of a proposed change of use to establish workers accommodation at 429 Fichera Road, Mareeba.</p>	<p>ARO Industries Pty Ltd 51 Sheridan Street Cairns, QLD, 4870</p> <p>PO Box 6490 Cairns QLD 4870</p> <p>Phone: (07) 4281 6897 www.aroindustries.com.au</p>
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Recommendations contained in this report are based largely on our understanding of the information that has been supplied to us and should be balanced against additional information that you may hold or seek. The client is cautioned to exercise due commercial diligence in the interpretation of any material herein and accept our findings as suggestions given in good faith requiring interpretation within the context of the client's own enterprise environment.

Distribution	Document Revision Number								
	0	1	2	3	4	5	6	7	8
Neil Beck	1	1							
ARO Industries Record	1	1							


Revision History					
Revision No.	Author	Reviewer	Approved For issue		
			RPEQ No.	Signature	Date
1	A. Armstrong	Kael Whitnell	21116		1/12/2022

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TRAFFIC DATA	APPENDIX B

INTRODUCTION

This engineering report has been prepared by ARO Industries to assess the traffic impacts of a proposed change of use to establish workers accommodation on Fichera Road, Mareeba. The workers accommodation will have a capacity of 144 workers and a manager's residence. The workers accommodation will service the farms and packaging centre located on Henry Hannam Drive, Mareeba and State Farm Road, Kairi.

The site is Lot 414 on RP835556, 429 Fichera Road, Mareeba. It is located approximately 6km southeast of the central Mareeba township and is shown in *Figure 1*. The site is located within the jurisdiction of the Mareeba Shire Council and is subject to its planning controls.



Figure 1 – Locality Plan (Courtesy of Queensland Globe)

The traffic assessment has been commissioned to confirm traffic generation rates for the proposed development and investigate if upgrades on Fichera Road are necessary to ameliorate the impact of the development. vehicular access to the site, specifically sight distance and safe ingress/egress of the site will be assessed.

Plans for the development are attached in Appendix A.

EXISTING USE OF SITE

Lot 414 on RP835556 is 102.6 hectares. The site of the proposed workers accommodation is located on unimproved vacant land in the northwestern corner of the lot. A single dwelling is located on the balance of the lot, approximately 500m south of the proposed development. The surrounding land use is rural/agricultural.

The proposed development on the lot is shown in *Figure 2*, below.

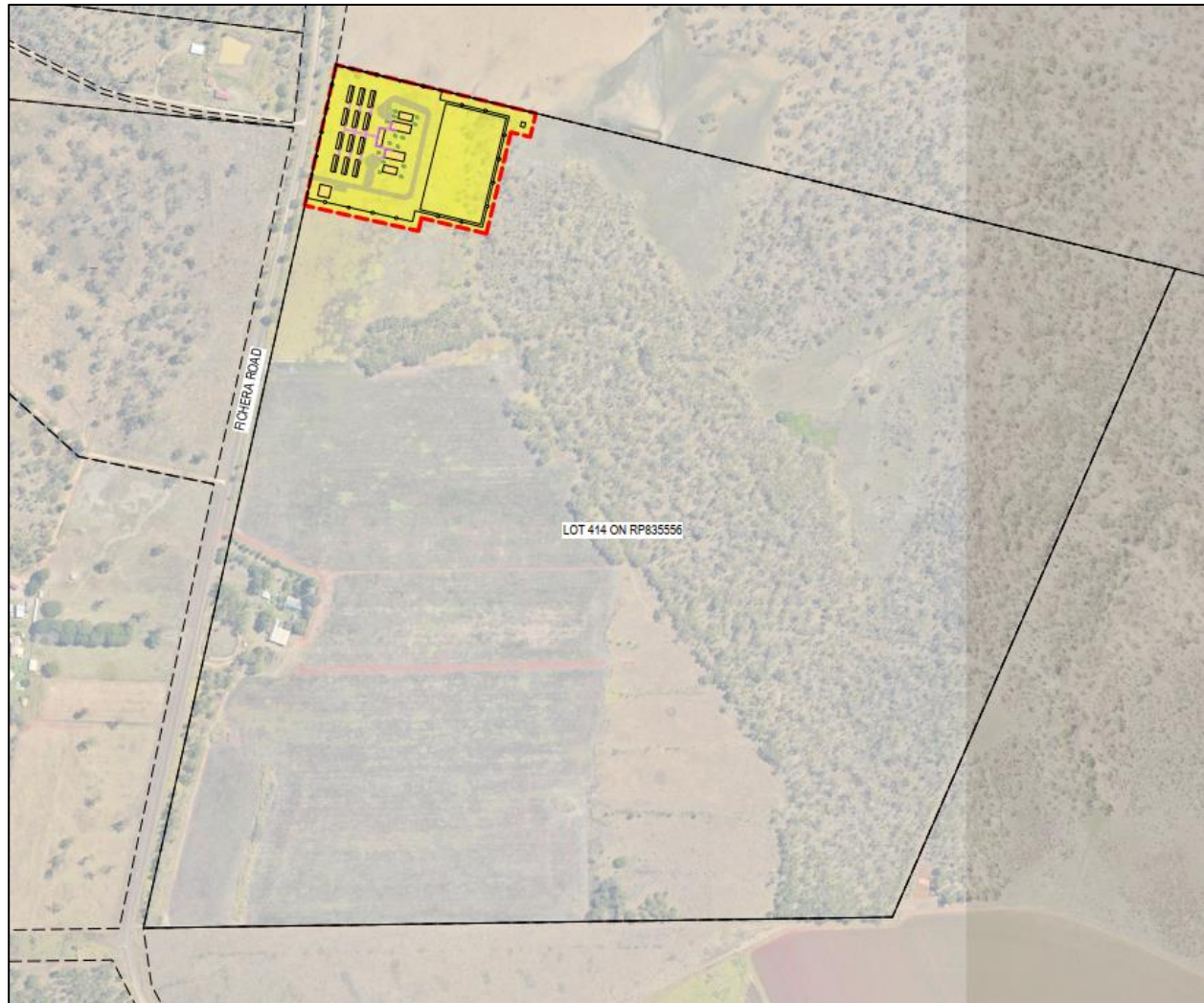


Figure 2 – Site Location

TRAFFIC ENVIRONMENT ON FICHERA ROAD

Fichera Road is a local rural road intersecting Tinaroo Creek Road in the north and Henry Hannam Drive (via Lockwood Road) in the south. The formation of Fichera Road adjacent to the site consists of a sprayed seal, nominally 4m wide with 1.5m wide gravel shoulders which widens to a 5m seal approximately 200m south of the site. The seal width of Fichera Road varies between 3.8m to 6.5m along its length. The existing speed zone adjacent to the site is 80km/hr.

TRAFFIC VOLUMES ON FICHERA ROAD

2021 traffic data has been obtained from Mareeba Shire Council for a survey location approximately 1km South of the development site on Lockwood Road. Traffic data is available for Fichera Road at a site near the intersection with Tinaroo Creek Road, however due to its proximity to the proposed development, the site on Lockwood Road is considered to more accurately reflect the actual traffic characteristics adjacent to the site. Traffic data at these survey locations is attached in Appendix B.

This data has been extrapolated for the year 2023 by assuming a linear growth rate of 2%. The diurnal pattern shows prominent AM and PM peaks. It is assumed that the traffic volume in each direction is equal during the peaks.

The background traffic volume on Fichera Road has been summarised in *Table 1* below.

Table 1: Traffic Volumes for Fichera Road (Lockwood Road)

Period	2021 Count	2023 forecast	Comments
AM Peak	14	15	AM Peak 6:00AM – 7:00AM 50:50 directional split
PM Peak	15	16	PM Peak 4:00PM – 5:00PM 50:50 directional split
Daily	107	112	Average Annual Daily Traffic 31.34% heavy vehicles

TRAFFIC GENERATION

To analyse the impact of the workers accommodation on Fichera Road, it is necessary to assess the number of trips generated to and from the site and where they are likely to travel.

The potential development traffic generation from the site has been reviewed based on information provided by the applicant. This can be summarised as:

- Accommodation will be limited to a maximum of 144 workers with a manager's residence on site;
- Very low car ownership rates for the workers;
- Workers will be shuttled to and from work by 12 buses (12 seats) during AM and PM peaks;
- The buses will travel north and south along Fichera Road (Lockwood Road) to various farms and packing facilities;
- Buses will remain at the farms and packaging facilities until end of work shifts.
- Manager will use 1 light vehicle daily during peaks; and
- Workers will be transported to Mareeba Business District in the evenings by bus, as required outside of network peak.

The daily and peak hour traffic volumes are presented in *Table 2* below.

Table 2: Development Traffic Volumes

Vehicle type	Peak hour trips	Daily trips	Comments
Car	2	6	AM Peak – Approximately 60% of the development traffic exits the site and travels north along Fichera Road (right turn) PM Peak – Approximately 40% of the development traffic enters the site from the south (right turn)
Bus	12	26	
Total	14	32	

ACCESS

It is acknowledged that the traffic volume on Fichera Road adjacent to the development is very low. However, the buses returning in the PM peak period increases the probability of conflict with the right turn into the development. The seal width adjacent to the development access will need to be increased to 6.0m to allow vehicles to pass. The widening will need to extend a minimum of 40m (including taper) in both directions from the access to take into account the storage length of a 12-seat bus. The functional layout is presented below in Figure 4.

The development access will be a rural allotment access in accordance with FNQROC Standard Drawing S1105(F).

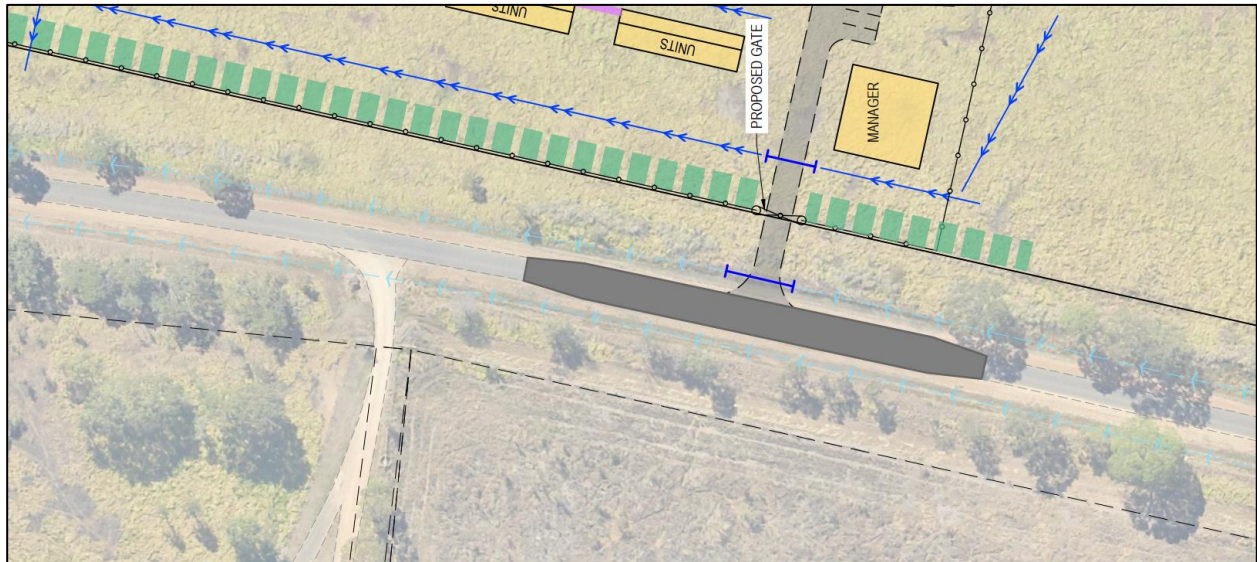


Figure 4: Fichera Road widening

SIGHT DISTANCE

The approach sight distance to the access off Fichera Road is approximately 600m to the north and 1000m to the south. The requirements for Minimum Gap Sight Distance and Safe Intersection Sight Distance, in accordance with the Austroads Guide to Road Design Part 4A is 181m in an 80km/hr zone. These distances exceed the minimum requirements of the Austroads Guide. Sight distance is demonstrated in Figure 5 & 6 below.

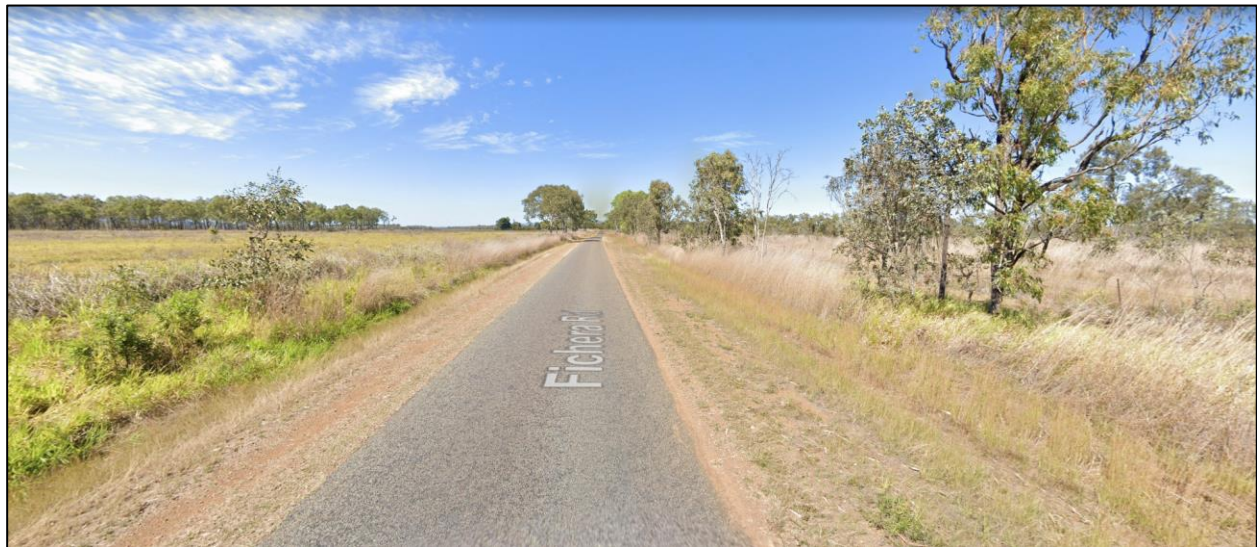


Figure 5 – Sight distance to the south from the proposed access location.



Figure 6 – Sight distance to the North from the proposed access location.

FICHERA ROAD GEOMETRY

The Austroads Guide to Road Design Part 3: Geometric Design provides guidance on Rural Road widths. Accordingly, it is acceptable to have a single sealed lane of 3.7m minimum width where the traffic volumes are less than 150 vehicles per day, particularly where terrain is open and sparsely settled.

The traffic volume on the section of Fichera Road, adjacent to the proposed development is less than 150 vehicles per day including the forecast development traffic and background traffic growth to 2023. The terrain is open and sparsely settled. It is further noted that Fichera Road turns into Lockwood Road which is unsealed. Therefore, the development does not warrant the upgrade of Fichera Road.

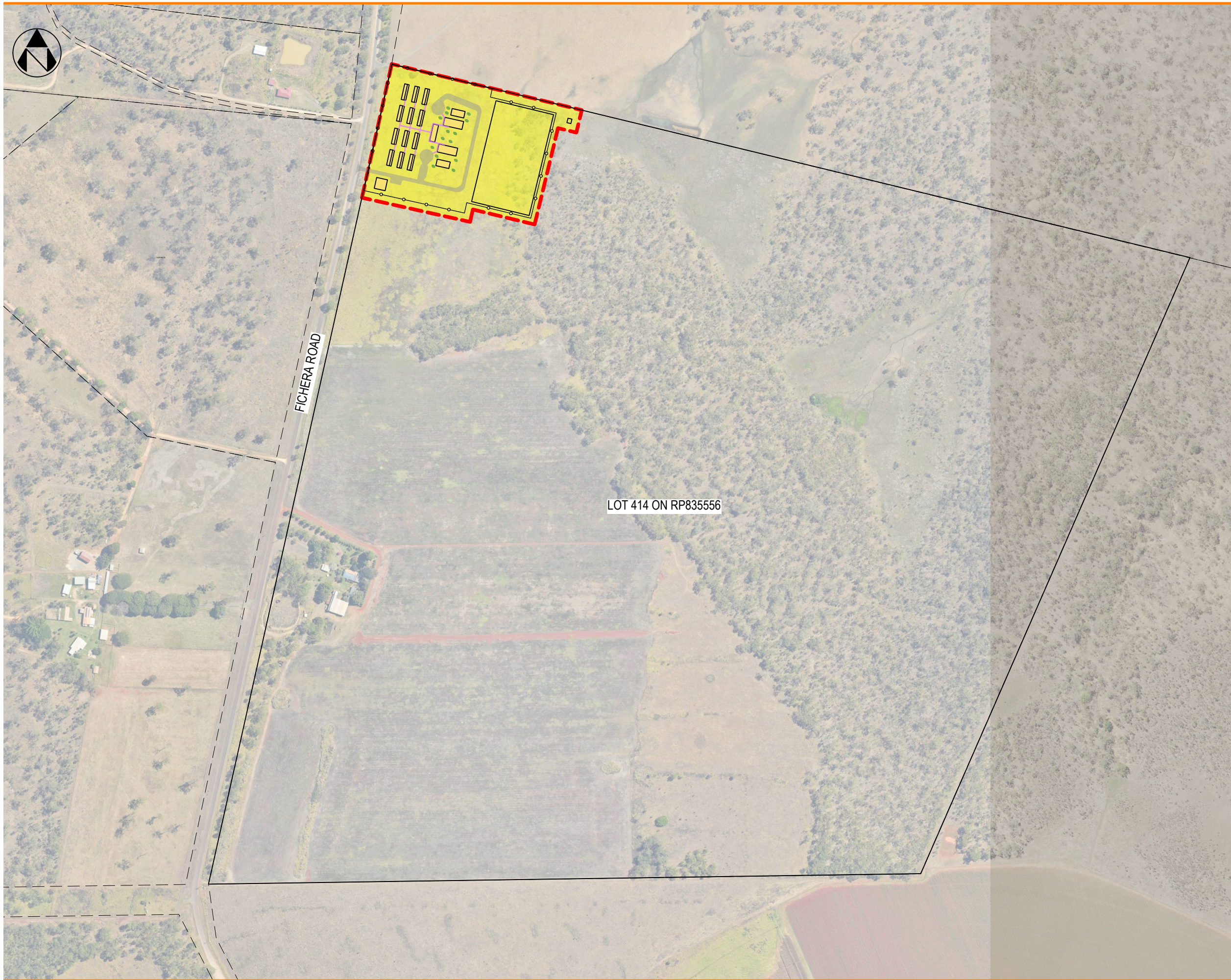
CONCLUSION


The proposed development of Lot 414 on RP835556, 429 Fichera Road, Mareeba consisting of workers accommodation and manager's residence, has been assessed as having a minor impact on the surrounding transport network. Accordingly, the impact of the development does not necessitate upgrading of Fichera Road.

The safe access to the development has been assessed using the Austroads Guide and the following works are required:

- Widening of Fichera Road adjacent to the site access; and
- Construction of a Rural allotment access in accordance with the FNQROC standard drawings.

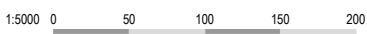
**APPENDIX A
DEVELOPMENT PLANS**



LEGEND
 ACCOMMODATION SITE AREA

FICHERA ROAD

LOT 414 ON RP835556



NOT FOR EXTERNAL USE

Rev	Date	Revision Notes

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MATTY KLEYN

Drawn	Design	Check'd	Appr'd
PAM	PAM	CJC	CJC

WORKERS ACCOMMODATION - FICHERA ROAD, MAREEBA

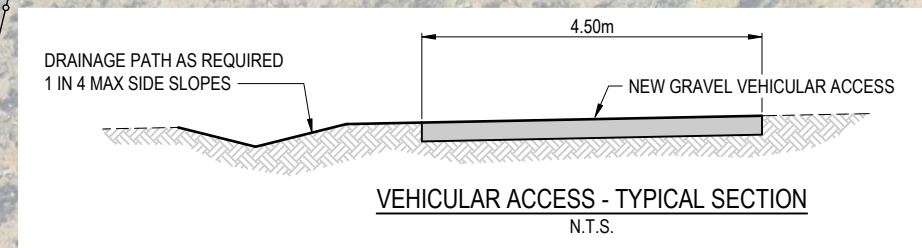
MASTERPLANS
OVERALL SITE PLAN

A3 Full Size (Scale as shown)

033-2201-00-SK-0002



LEGEND	
	PROPOSED STRUCTURE
	PROPOSED GRAVEL ROAD/ACCESS
	PROPOSED PATHWAY/HARDSTAND
	PROPOSED FENCE
	PROPOSED PLANTED BUFFER
	PROPOSED PLANTING
	PROPOSED DRAIN
	PROPOSED CULVERT
	EXISTING DRAIN



NOT FOR EXTERNAL USE

Rev Date Revision Notes
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MATTY KLEYN

Drawn	Design	Check'd	Appr'd
PAM	PAM	CJC	CJC

WORKERS ACCOMMODATION - FICHERA ROAD, MAREEBA

MASTERPLANS
ACCOMMODATION AREA SITE PLAN

A3 Full Size (Scale as shown)

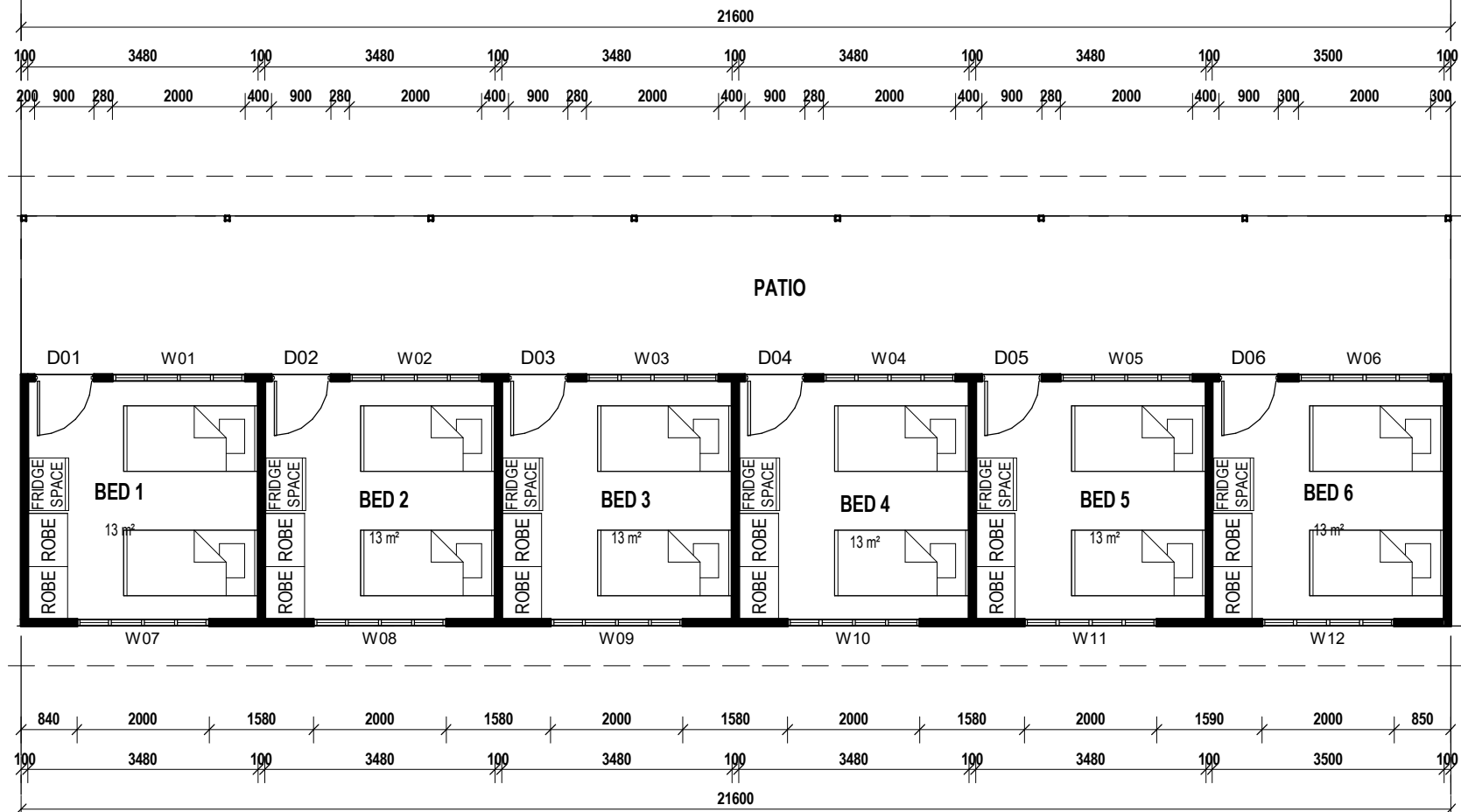
033-2201-00-SK-0003



ELEVATION KEY

FLOOR AREAS LEGEND	
BREEZEWAY	96.36 m ²
UNITS 1, 2, 3	60.72 m ²
UNITS 4, 5, 6	60.72 m ²
KITCHEN	25.55 m ²
	243.35 m ²

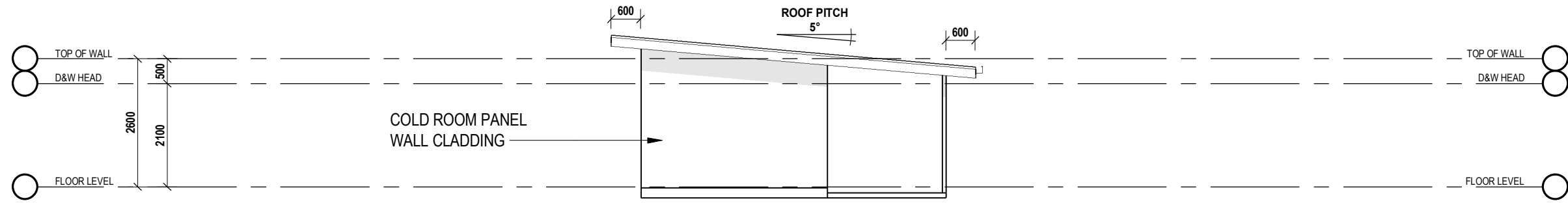
Door Schedule						
Mark	Room	Height	Width	Comments	Description	
D01	BED 1	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR	
D02	BED 2	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR	
D03	BED 3	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR	
D04	BED 4	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR	
D05	BED 5	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR	
D06	BED 6	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR	



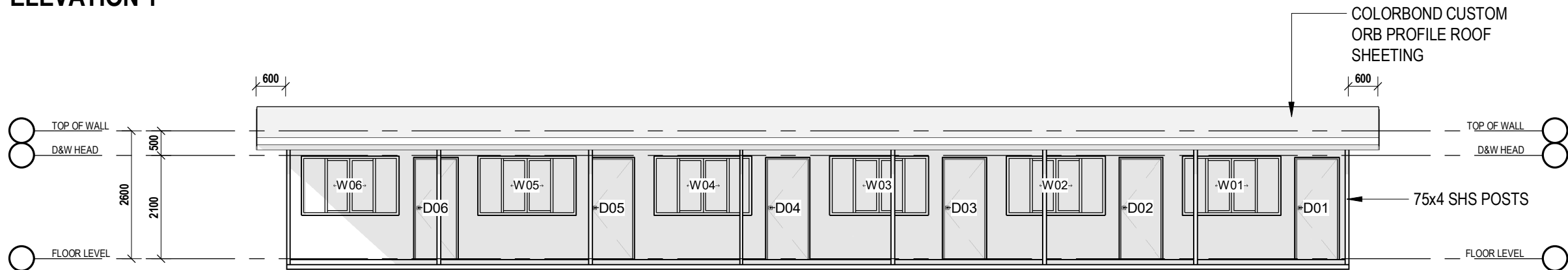
Window Schedule						
Mark	Room	Height	Width	Head Height	Description	
W01	BED 1	1200 mm	2000 mm	2100 mm	OXXO SLIDING GLASS WINDOW	
W02	BED 2	1200 mm	2000 mm	2100 mm	OXXO SLIDING GLASS WINDOW	
W03	BED 3	1200 mm	2000 mm	2100 mm	OXXO SLIDING GLASS WINDOW	
W04	BED 4	1200 mm	2000 mm	2100 mm	OXXO SLIDING GLASS WINDOW	
W05	BED 5	1200 mm	2000 mm	2100 mm	OXXO SLIDING GLASS WINDOW	
W06	BED 6	1200 mm	2000 mm	2100 mm	OXXO SLIDING GLASS WINDOW	
W07	BED 1	1200 mm	2000 mm	2100 mm	OXXO SLIDING GLASS WINDOW	
W08	BED 2	1200 mm	2000 mm	2100 mm	OXXO SLIDING GLASS WINDOW	
W09	BED 3	1200 mm	2000 mm	2100 mm	OXXO SLIDING GLASS WINDOW	
W10	BED 4	1200 mm	2000 mm	2100 mm	OXXO SLIDING GLASS WINDOW	
W11	BED 5	1200 mm	2000 mm	2100 mm	OXXO SLIDING GLASS WINDOW	
W12	BED 6	1200 mm	2000 mm	2100 mm	OXXO SLIDING GLASS WINDOW	

DESIGN WIND SPEED -	C-	SOIL CLASSIFICATION -	TBA
A			
No.	DATE	DESCRIPTION	
VARIATIONS INCLUDED IN THIS DRAWING			
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FLOOR PLAN			
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A3	SCALE:	ISSUE:	A
	1:100 AT A3	DRAWN BY:	WE
PRELIMINARY ISSUE			
SSHJQ JOB No.	-	DRAWING No.	22071101
PROJECT			
PROPOSED WORKERS ACCOMMODATION			
Lot 414 on RP835556			
429 FICHERA ROAD			
MAREEBA			
CLIENT			
LAKESHORE AVOCADOS			
PO BOX 876		QBCC. 1097802	
ATHERTON QLD 4883			
33-35 ALBRECHT ST			
TOLGA INDUSTRIAL ESTATE, QLD, 4882			
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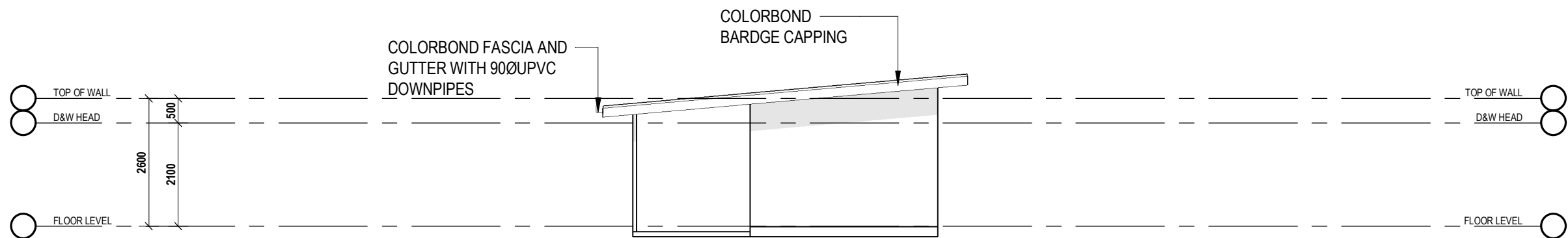
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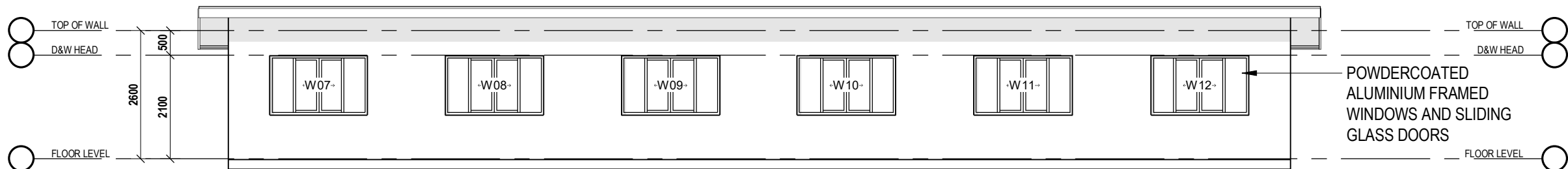
ELEVATION 1




ELEVATION 2



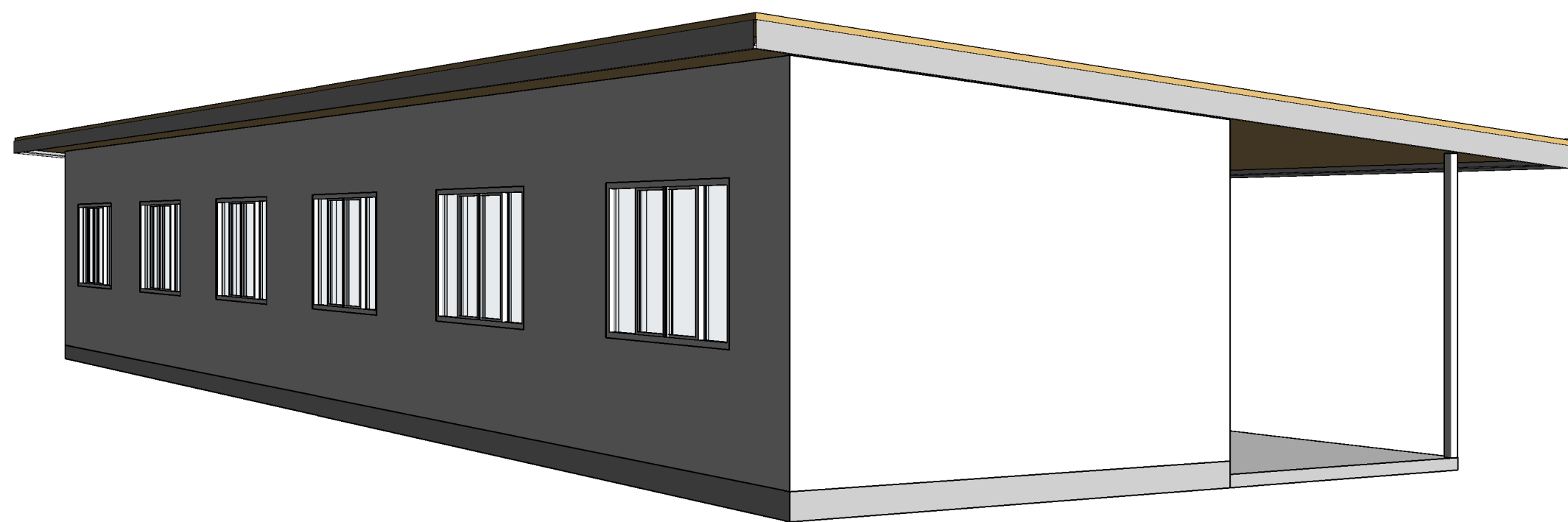
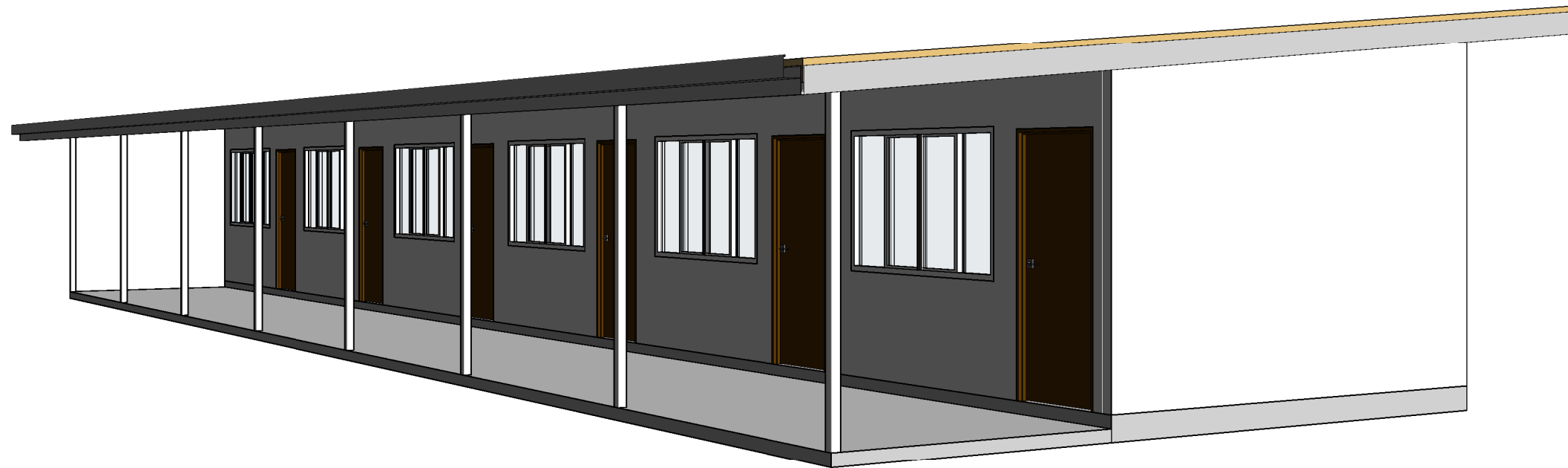
ELEVATION 3




ELEVATION 4

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PRELIMINARY ISSUE			
SSHNG JOB No.	-	DRAWING No.	22071101
PROJECT			
PROPOSED WORKERS ACCOMMODATION			
Lot 414 on RP835556			
429 FICHERA ROAD			
MAREEBA			
CLIENT			
LAKESHORE AVOCADOS			
			
PO BOX 876		QBCC. 1097802	
ATHERTON QLD 4883			
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DESIGN WIND SPEED -	C-	SOIL CLASSIFICATION -	TBA
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PRELIMINARY ISSUE			
SSHQ JOB No.	-	DRAWING No.	22071101
PROJECT			
PROPOSED WORKERS ACCOMMODATION			
Lot 414 on RP835556			
429 FICHERA ROAD			
MAREEBA			
CLIENT			
LAKESHORE AVOCADOS			
			
PO BOX 876		QBCC. 1097802	
ATHERTON QLD 4883			
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PH: 07 4095 4008			
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WEB: www.superiorsteelhomesnq.com.au			
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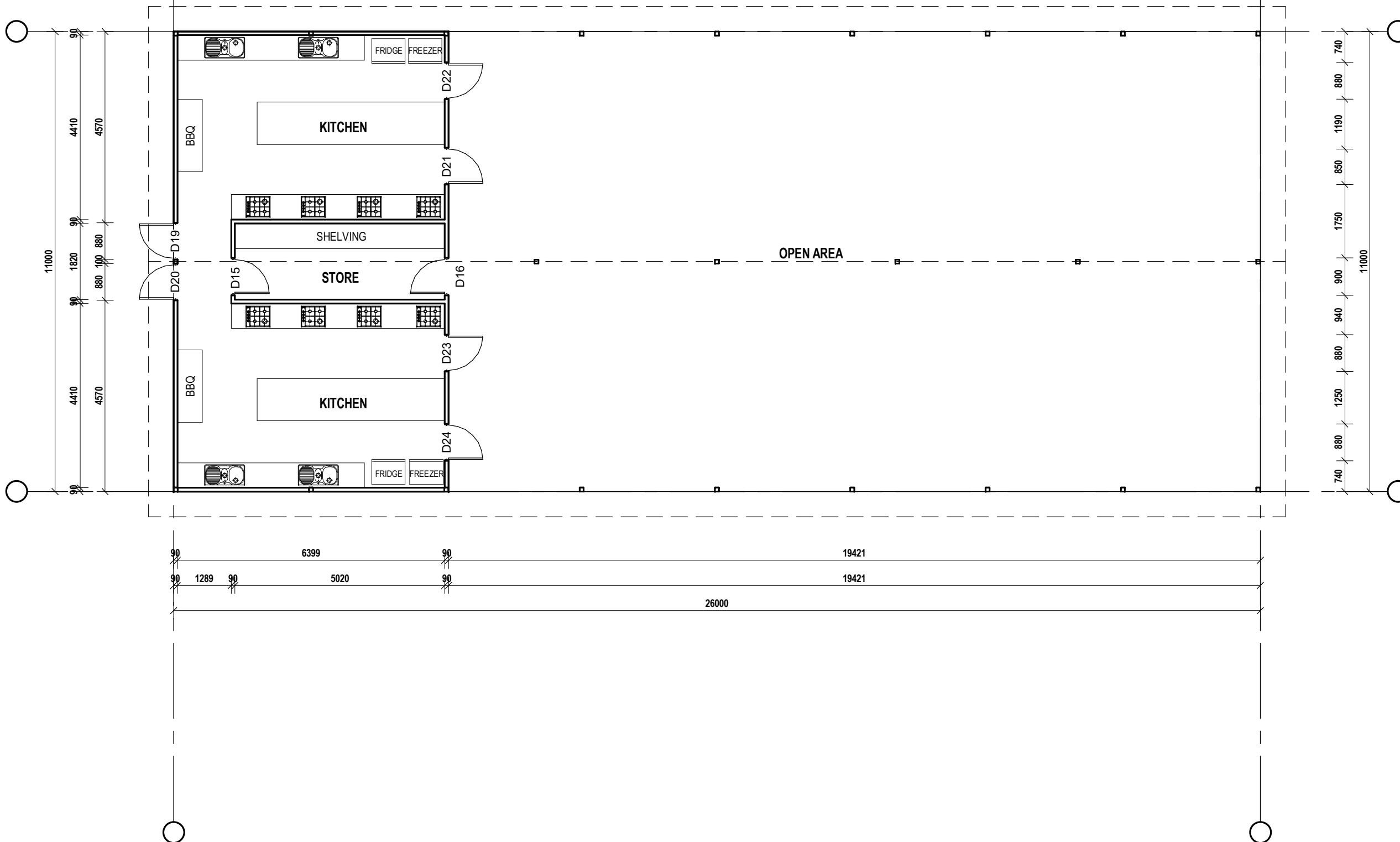
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ELEVATION KEY

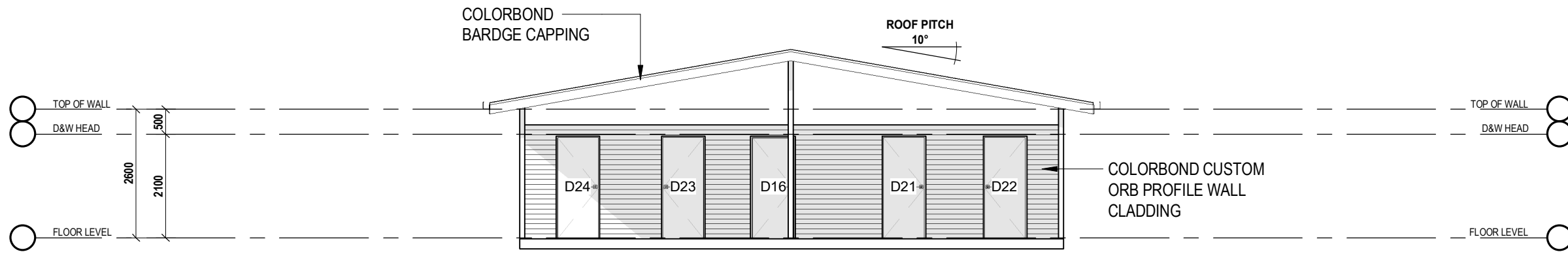
FLOOR AREAS LEGEND	
KITCHEN	72.36 m ²
OPEN AREA	213.64 m ²
	286.00 m ²

Mark	Room	Height	Width	Comments	Description
D15	STORE	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR
D16	STORE	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR
D19	KITCHEN	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR
D20	KITCHEN	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR
D21	KITCHEN	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR
D22	KITCHEN	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR
D23	KITCHEN	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR
D24	KITCHEN	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR

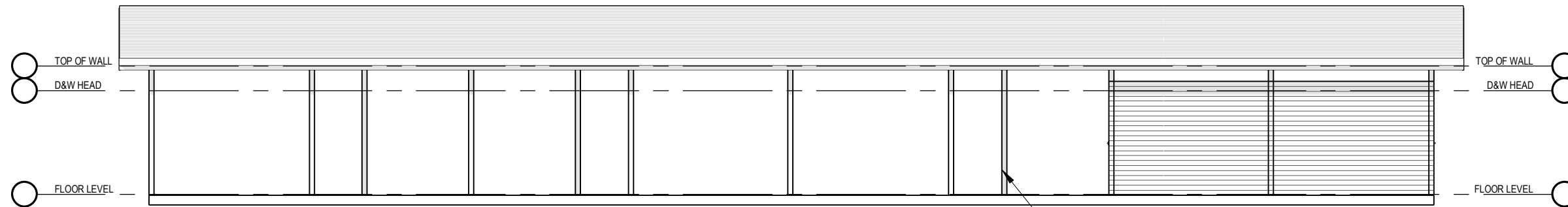


DESIGN WIND SPEED -	C-	SOIL CLASSIFICATION -	TBA
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PRELIMINARY ISSUE			
SSHNO JOB No.	-	DRAWING No.	21080401
PROJECT			
PROPOSED WORKERS ACCOMMODATION			
Lot 414 on RP835556			
429 FICHERA ROAD			
MAREEBA			
CLIENT			
LAKESHORE AVOCADOS			
PO BOX 876		QBCC. 1097802	
ATHERTON QLD 4883			
33-35 ALBRECHT ST			
TOLGA INDUSTRIAL ESTATE, QLD, 4882			
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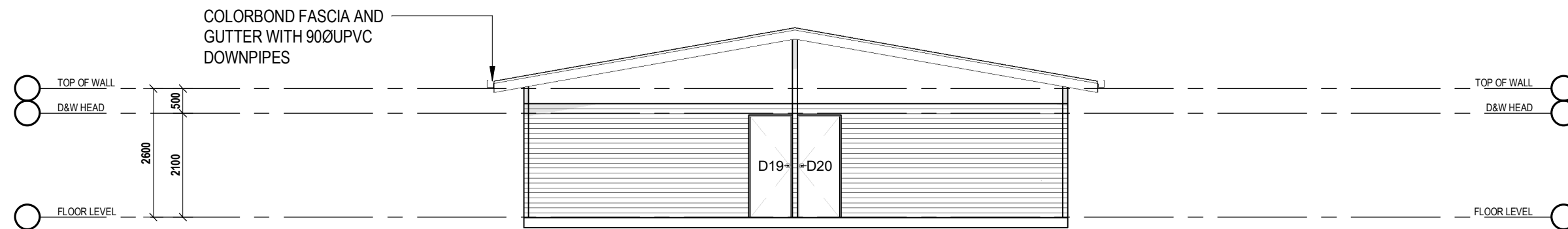
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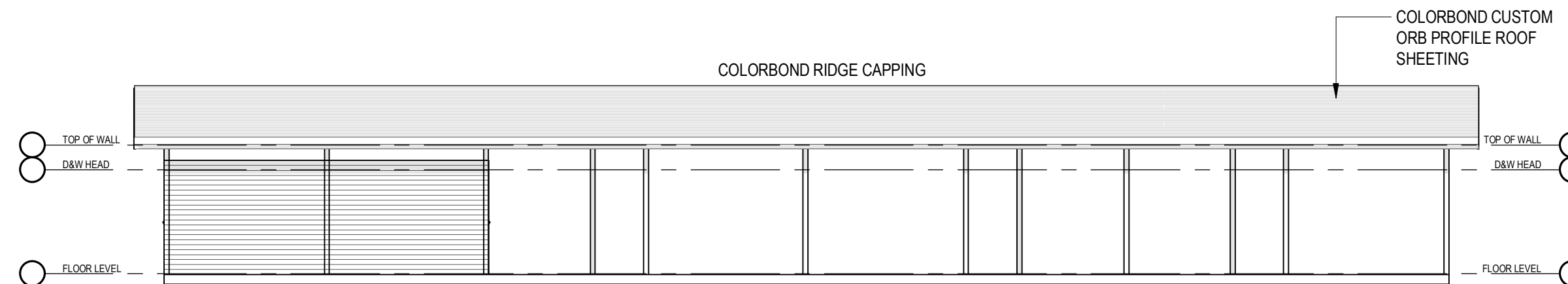
ELEVATION 1



ELEVATION 2



ELEVATION 3



ELEVATION 4

DESIGN WIND SPEED -	C-	SOIL CLASSIFICATION -	TBA
A			
No.	DATE	DESCRIPTION	

VARIATIONS INCLUDED IN THIS DRAWING

DRAWING TITLE
ELEVATIONS

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PRELIMINARY ISSUE

SSHQ JOB No.	-	DRAWING No.	21080401
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PROJECT
PROPOSED WORKERS ACCOMMODATION
 Lot 414 on RP835556
 429 FICHERA ROAD
 MAREEBA

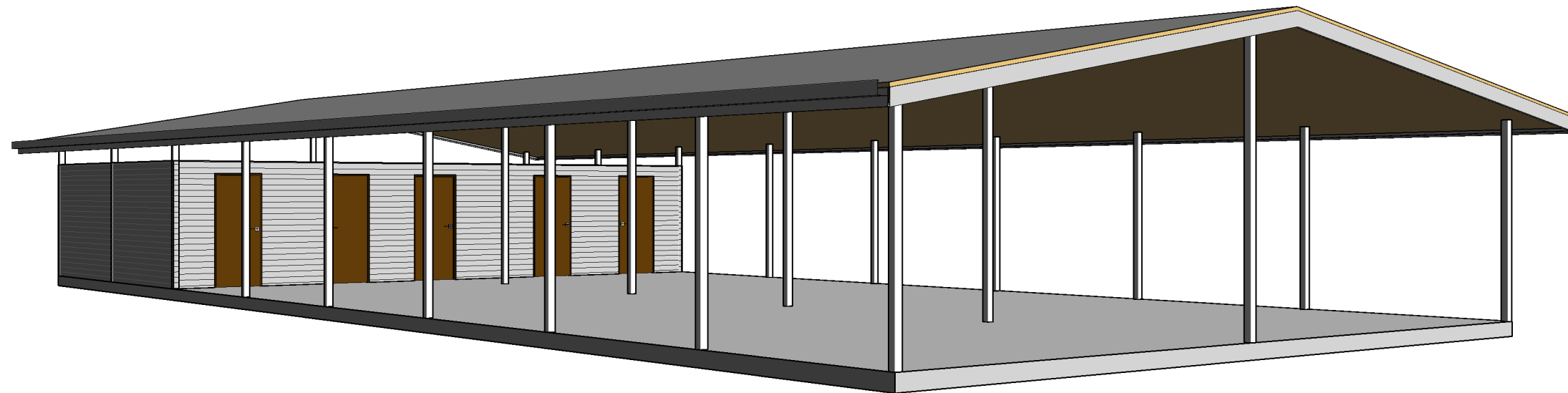
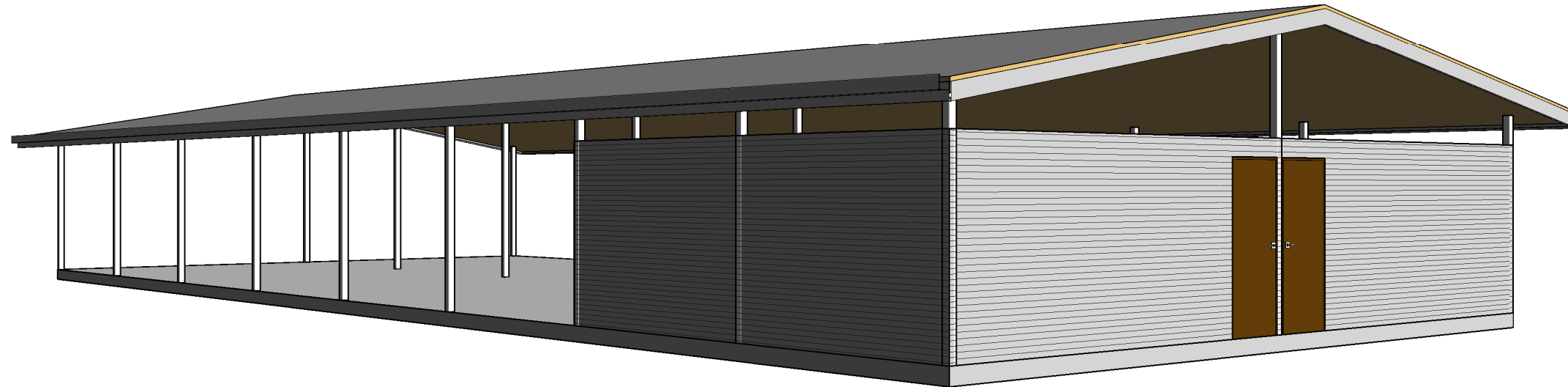
CLIENT
LAKESHORE AVOCADOS




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DESIGN WIND SPEED -	C-	SOIL CLASSIFICATION -	TBA
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PRELIMINARY ISSUE			
SSHQ JOB No.	-	DRAWING No.	21080401
PROJECT			
PROPOSED WORKERS ACCOMMODATION			
Lot 414 on RP835556			
429 FICHERA ROAD			
MAREEBA			
CLIENT			
LAKESHORE AVOCADOS			
			
PO BOX 876		QBCC. 1097802	
ATHERTON QLD 4883			
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TOLGA INDUSTRIAL ESTATE, QLD, 4882			
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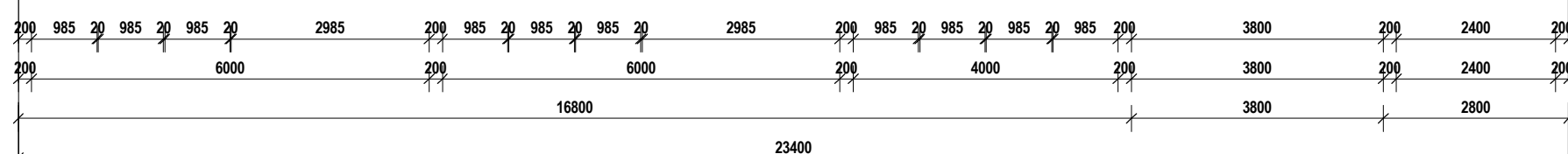
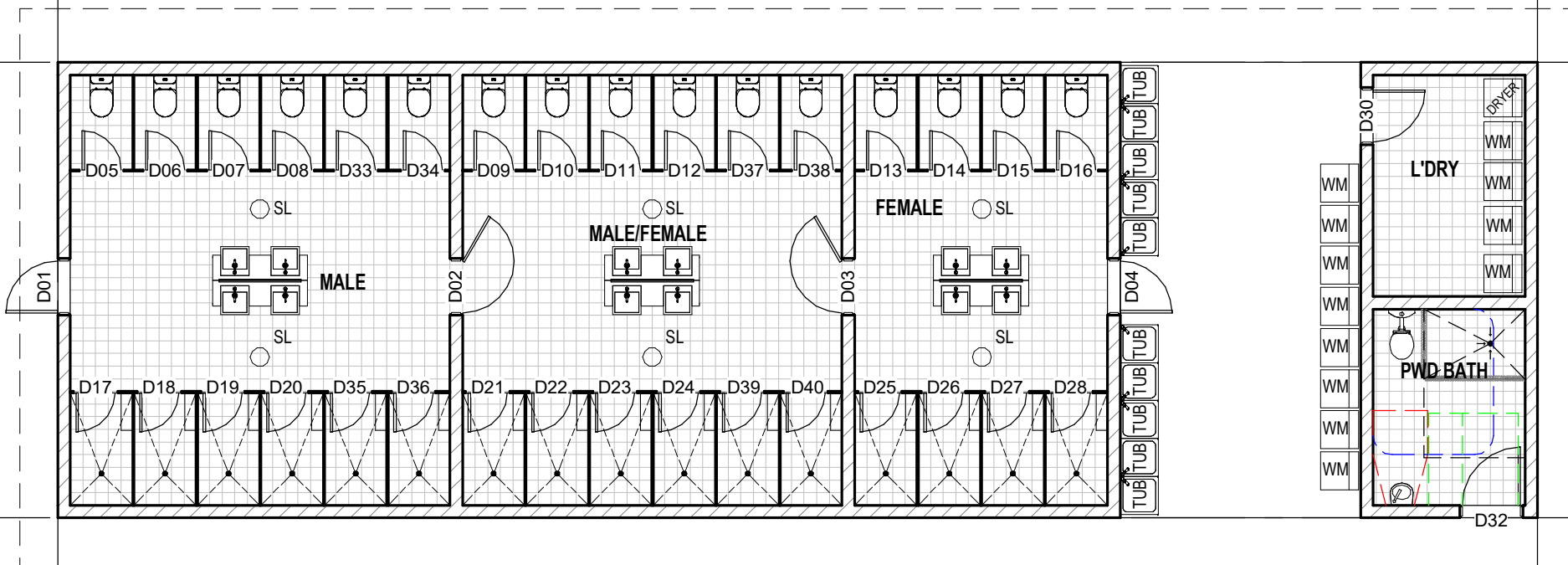
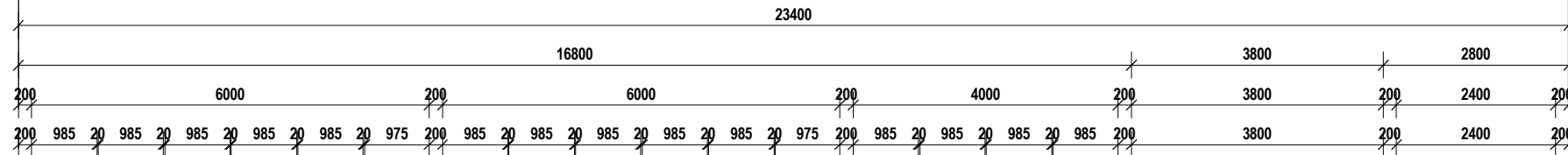


ELEVATION KEY

FLOOR AREAS LEGEND	
TOILET BLOCK	120.79 m ²
BREZZEWAY	27.36 m ²
L'DRY	20.17 m ²
	168.32 m ²

Door Schedule					
Mark	Room	Height	Width	Comments	Description
D01	MALE	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR
D02	MALE	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR
D03	FEMALE	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR
D04	FEMALE	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR
D05	MALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D06	MALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D07	MALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D08	MALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR

Door Schedule					
Mark	Room	Height	Width	Comments	Description
D09	MALE/FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D10	MALE/FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D11	MALE/FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D12	MALE/FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D13	FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D14	FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D15	FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR



Door Schedule					
Mark	Room	Height	Width	Comments	Description
D16	FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D17	MALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D18	MALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D19	MALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D20	MALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D21	MALE/FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D22	MALE/FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D23	MALE/FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D24	MALE/FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D25	FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D26	FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D27	FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR

Door Schedule					
Mark	Room	Height	Width	Comments	Description
D28	FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D30	L'DRY	2040 mm	820 mm	DOOR LEAF SIZE	820 SINGLE SWING DOOR
D32	PWD BATH	2040 mm	920 mm	DOOR LEAF SIZE	920 SINGLE SWING DOOR
D33	MALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D34	MALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D35	MALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D36	MALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D37	MALE/FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D38	MALE/FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D39	MALE/FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR
D40	MALE/FEMALE	2040 mm	620 mm	DOOR LEAF SIZE	620 SINGLE SWING DOOR

DESIGN WIND SPEED -	C-	SOIL CLASSIFICATION -	TBA
A			
No.	DATE	DESCRIPTION	
VARIATIONS INCLUDED IN THIS DRAWING			
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PRELIMINARY:	11/07/22	CONSTRUCTION:	-
A3	SCALE:	ISSUE:	A
	1:100 AT A3	DRAWN BY:	WE

PRELIMINARY ISSUE

SSHQ JOB No.	-	DRAWING No.	21040101
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PROJECT
PROPOSED TOILET BLOCK
 Lot 414 on RP835556
 429 FICHERA ROAD,
 MAREEBA

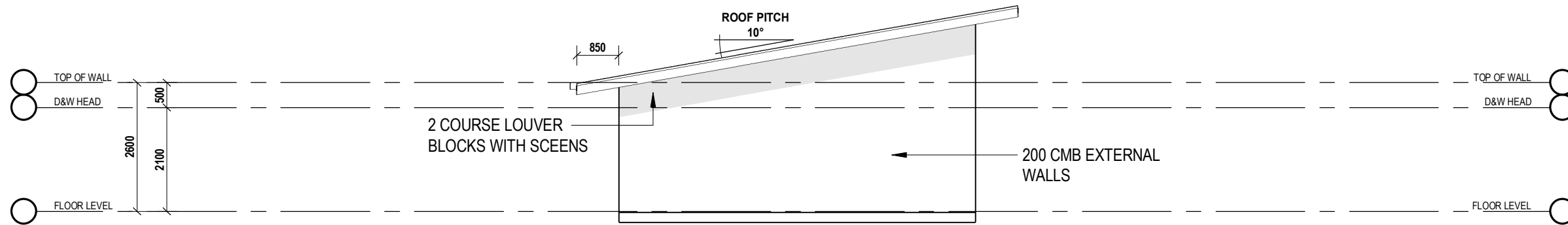
CLIENT
LAKESHORE AVOCADOS



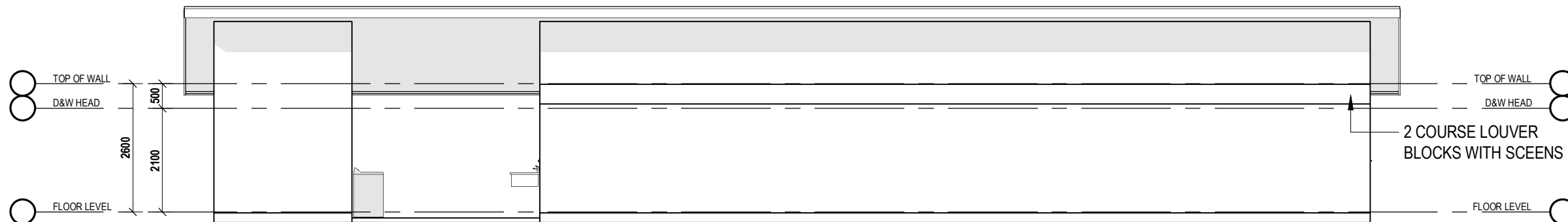
PO BOX 876
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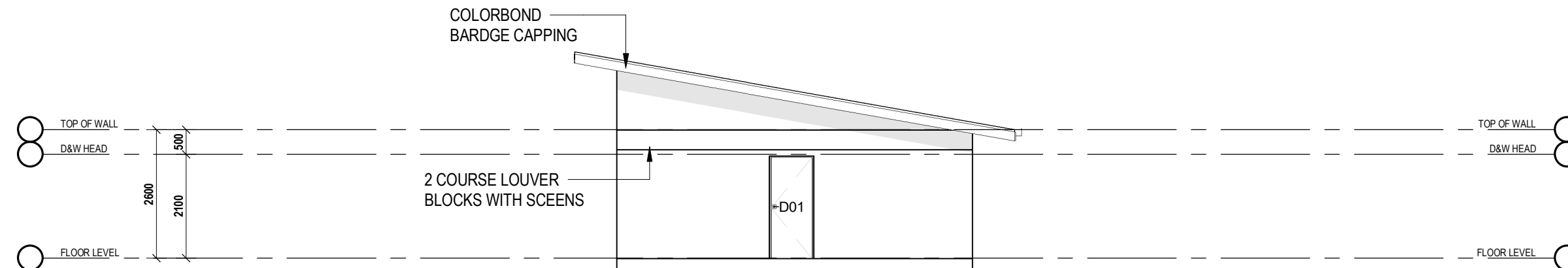
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ELEVATION 1




ELEVATION 2



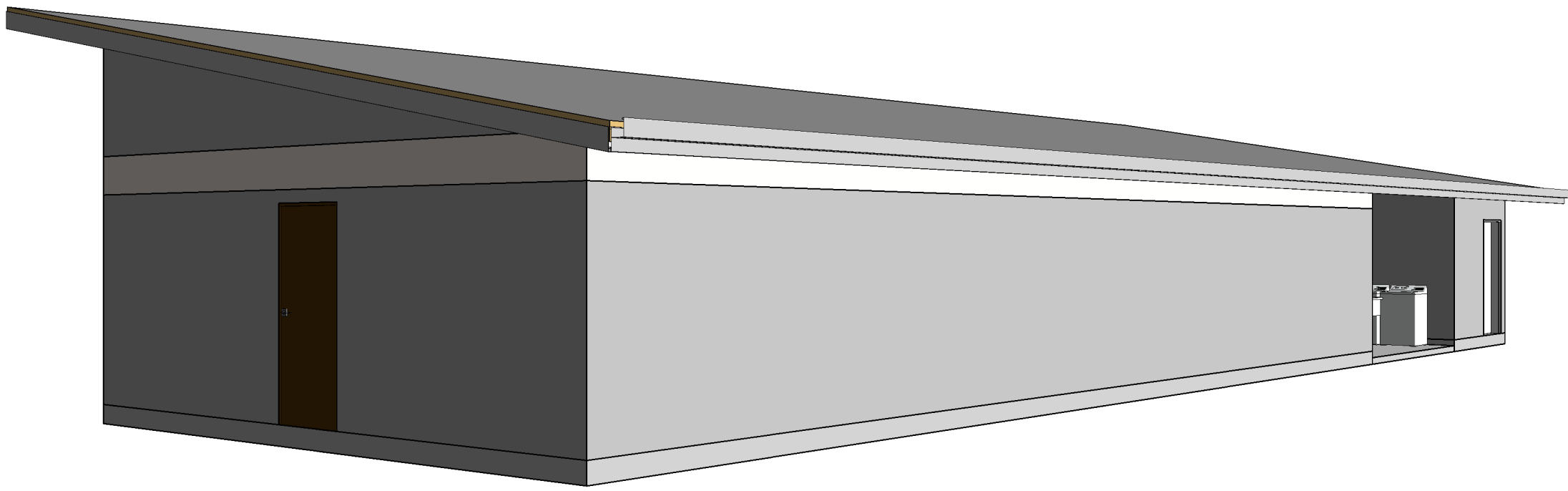
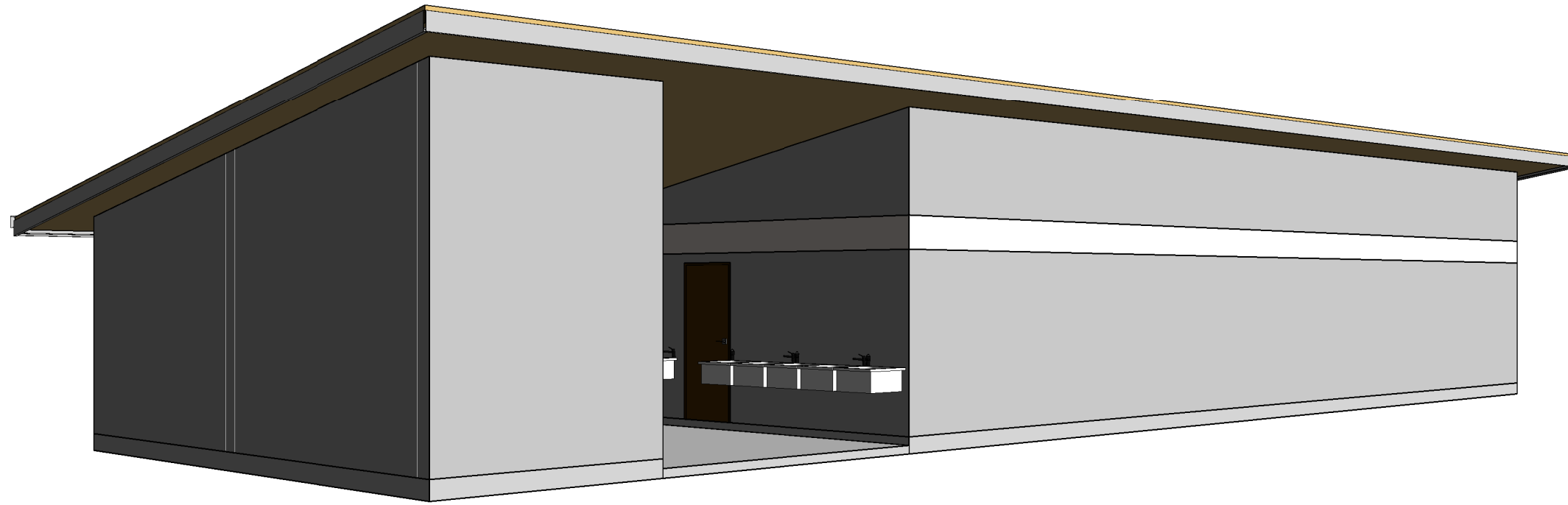
ELEVATION 3




ELEVATION 4

DESIGN WIND SPEED -	C-	SOIL CLASSIFICATION -	TBA
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No.	DATE	DESCRIPTION	
VARIATIONS INCLUDED IN THIS DRAWING			
DRAWING TITLE			
ELEVATIONS			
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	1:100 AT A3	DRAWN BY:	WE
PRELIMINARY ISSUE			
SSHQ JOB No.	-	DRAWING No.	21040101
PROJECT			
PROPOSED TOILET BLOCK			
Lot 414 on RP835556			
429 FICHERA ROAD,			
MAREEBA			
CLIENT			
LAKESHORE AVOCADOS			
			
PO BOX 876		QBCC. 1097802	
ATHERTON QLD 4883			
33-35 ALBRECHT ST			
TOLGA INDUSTRIAL ESTATE, QLD, 4882			
PH: 07 4095 4008			
EMAIL: info@sshq.com.au			
WEB: www.superiorsteelhomesq.com.au			
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NOTE: (1). VERIFY ALL DIMENSIONS AND LEVELS BEFORE COMMENCING ANY WORK. (2). VERIFY ALL ON SITE DIMENSIONS BEFORE COMMENCING ANY FABRICATION. (3). FIGURED DIMENSIONS TO TAKE PRECEDENCE OVER SCALED MEASUREMENTS. (4). ALL WORK TO COMPLY WITH LOCAL AUTHORITY REQUIREMENTS, THE STANDARD BUILDING BY-LAWS, THE BUILDING CODE OF AUSTRALIA AND RELEVANT AUSTRALIAN STANDARDS. (5). SUBSTITUTION OF ANY STRUCTURAL MEMBERS, & OR VARIATIONS TO ANY PART OF THE DESIGN, **WILL VOID** ANY RESPONSIBILITIES OF THE BUILDING DESIGNER FOR THE STRUCTURAL INTEGRITY & PERFORMANCE OF THE BUILDING



DESIGN WIND SPEED -	C-	SOIL CLASSIFICATION -	TBA
A			
No.	DATE	DESCRIPTION	
VARIATIONS INCLUDED IN THIS DRAWING			
DRAWING TITLE			
3D VIEWS			
SHEET NO.	05	PRINT TIME:	12/07/2022 6:54:10 AM
PRELIMINARY:	11/07/22	CONSTRUCTION:	-
A3	SCALE:	ISSUE:	A
	NTS AT A3	DRAWN BY:	WE
PRELIMINARY ISSUE			
SSHQ JOB No.	-	DRAWING No.	21040101
PROJECT			
PROPOSED TOILET BLOCK			
Lot 414 on RP835556			
429 FICHERA ROAD,			
MAREEBA			
CLIENT			
LAKESHORE AVOCADOS			
			
PO BOX 876		QBCC. 1097802	
ATHERTON QLD 4883			
33-35 ALBRECHT ST			
TOLGA INDUSTRIAL ESTATE, QLD, 4882			
PH: 07 4095 4008			
EMAIL: info@sshq.com.au			
WEB: www.superiorsteelhomesnq.com.au			
THIS DRAWING IS COPYRIGHT ©			

NOTE: (1). VERIFY ALL DIMENSIONS AND LEVELS BEFORE COMMENCING ANY WORK. (2). VERIFY ALL ON SITE DIMENSIONS BEFORE COMMENCING ANY FABRICATION. (3). FIGURED DIMENSIONS TO TAKE PRECEDENCE OVER SCALED MEASUREMENTS. (4). ALL WORK TO COMPLY WITH LOCAL AUTHORITY REQUIREMENTS, THE STANDARD BUILDING BY-LAWS, THE BUILDING CODE OF AUSTRALIA AND RELEVANT AUSTRALIAN STANDARDS. (5). SUBSTITUTION OF ANY STRUCTURAL MEMBERS, & OR VARIATIONS TO ANY PART OF THE DESIGN, **WILL VOID** ANY RESPONSIBILITIES OF THE BUILDING DESIGNER FOR THE STRUCTURAL INTEGRITY & PERFORMANCE OF THE BUILDING

**APPENDIX B
TRAFFIC DATA**



Lockwood Rd - TC Location Ch 45

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MetroCount Traffic Executive Class Speed Matrix

ClassMatrix-419 -- English (ENA)

Datasets:

Site: [Lockwood Road] Intersection Fichera Road @ Ch 45 <100>
Attribute: Mareeba
Direction: 7 - North bound A>B, South bound B>A. **Lane:** 0
Survey Duration: 14:22 Monday, 21 June 2021 => 10:34 Monday, 28 June 2021,
Zone:
File: Lockwood Road 0 2021-06-28 1034.EC0 (Plus)
Identifier: FN47XFS5 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm: Factory default axle (v5.07)
Data type: Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time: 14:23 Monday, 21 June 2021 => 10:34 Monday, 28 June 2021 (6.84134)
Included classes: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range: 10 - 160 km/h.
Direction: North, East, South, West (bound), P = North, Lane = 0-16
Separation: Headway > 0 sec, Span 0 - 100 metre
Name: Default Profile
Scheme: Vehicle classification (AustRoads94)
Units: Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile: Vehicles = 734 / 737 (99.59%)

Class Speed Matrix

ClassMatrix-419

Site: Lockwood Road.0.1NS
Description: Intersection Fichera Road @ Ch 45 <100>
Filter time: 14:23 Monday, 21 June 2021 => 10:34 Monday, 28 June 2021
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1-12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100) Lane(0-16)

km/h	Class												Total	
	SV 1	SVT 2	TB2 3	TB3 4	T4 5	ART3 6	ART4 7	ART5 8	ART6 9	BD 10	DRT 11	TRT 12		
10- 20	5	.	2	.	.	.	.	.	.	.	.	.	7	1.0%
20- 30	14	.	2	1	1	.	.	.	2	2	.	.	22	3.0%
30- 40	20	.	1	1	.	.	.	.	2	15	.	.	39	5.3%
40- 50	28	4	5	.	1	.	.	.	2	59	.	.	99	13.5%
50- 60	86	2	13	1	1	.	1	.	5	69	.	.	178	24.3%
60- 70	142	.	12	1	1	.	.	.	2	6	.	.	164	22.3%
70- 80	147	2	8	.	.	.	.	.	2	2	.	.	161	21.9%
80- 90	47	2	9	.	.	.	.	.	.	.	.	.	58	7.9%
90-100	5	.	1	.	.	.	.	.	.	.	.	.	6	0.8%
100-110	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
110-120	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
120-130	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
130-140	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
140-150	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
150-160	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
Total	494	10	53	4	4	0	1	0	15	153	0	0	734	
	67.3%	1.4%	7.2%	0.5%	0.5%	0.0%	0.1%	0.0%	2.0%	20.8%	0.0%	0.0%		
ESA	0.0	0.0	106.0	8.0	8.0	0.0	3.0	0.0	45.0	612.0	0.0	0.0	782.0	
Raw axle	988	36	106	12	18	0	4	0	90	1367	0	0	2621	
Single	986	24	106	4	0	0	2	0	15	151	0	0	1288	
T steer	0	0	0	0	4	0	0	0	0	2	0	0	6	
Double	1	6	0	4	3	0	1	0	15	165	0	0	195	
Triple	0	0	0	0	2	0	0	0	15	294	0	0	311	
Quad+	0	0	0	0	0	0	0	0	0	0	0	0	0	

Total vehicles = 734, Total heavies = 230 (31.34%), Average ESA per heavy = 3.40
 Twinsteers = 2.61% of heavies, 0.82% of total.

MetroCount Traffic Executive Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-420 -- English (ENA)

Datasets:

Site: [Lockwood Road] Intersection Fichera Road @ Ch 45 <100>
Attribute: Mareeba
Direction: 7 - North bound A>B, South bound B>A. **Lane:** 0
Survey Duration: 14:22 Monday, 21 June 2021 => 10:34 Monday, 28 June 2021,
Zone:
File: Lockwood Road 0 2021-06-28 1034.EC0 (Plus)
Identifier: FN47XFS5 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm: Factory default axle (v5.07)
Data type: Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time: 14:23 Monday, 21 June 2021 => 10:34 Monday, 28 June 2021 (6.84134)
Included classes: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range: 10 - 160 km/h.
Direction: North, East, South, West (bound), P = North, Lane = 0-16
Separation: Headway > 0 sec, Span 0 - 100 metre
Name: Default Profile
Scheme: Vehicle classification (AustRoads94)
Units: Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile: Vehicles = 734 / 737 (99.59%)

Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-420

Site: Lockwood Road.0.1NS
Description: Intersection Fichera Road @ Ch 45 <100>
Filter time: 14:23 Monday, 21 June 2021 => 10:34 Monday, 28 June 2021
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1-12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100) Lane(0-16)

Hour	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages	
								1 - 5	1 - 7
0000-0100	3.0	0.0	0.0	0.0	1.0	5.0	0.0	0.8	1.3
0100-0200	1.0	2.0	0.0	0.0	1.0	1.0	0.0	0.8	0.7
0200-0300	2.0	0.0	0.0	0.0	6.0	0.0	0.0	1.6	1.1
0300-0400	1.0	0.0	2.0	0.0	0.0	0.0	0.0	0.6	0.4
0400-0500	0.0	1.0	0.0	0.0	0.0	1.0	1.0	0.2	0.4
0500-0600	1.0	0.0	2.0	1.0	0.0	0.0	2.0	0.8	0.9
0600-0700	12.0	19.0	13.0	14.0	12.0	2.0	5.0	14.0	11.0
0700-0800	5.0	2.0	2.0	3.0	7.0	0.0	0.0	3.8	2.7
0800-0900	7.0	7.0	7.0	16.0	4.0	5.0	0.0	8.2	6.6
0900-1000	6.0	10.0	9.0	3.0	2.0	7.0	6.0	6.0	6.1
1000-1100	3.0	3.0	5.0	2.0	9.0	6.0	7.0	4.4	5.0
1100-1200	*	5.0	2.0	2.0	15.0	6.0	3.0	6.0	5.5
1200-1300	*	5.0	4.0	1.0	7.0	10.0	7.0	4.3	5.7
1300-1400	*	6.0	4.0	6.0	15.0	7.0	7.0	7.8	7.5
1400-1500	4.0	5.0	2.0	5.0	3.0	13.0	5.0	3.8	5.3
1500-1600	9.0	6.0	3.0	9.0	5.0	5.0	6.0	6.4	6.1
1600-1700	21.0	15.0	18.0	15.0	7.0	5.0	6.0	15.2	12.4
1700-1800	12.0	12.0	5.0	11.0	6.0	5.0	10.0	9.2	8.7
1800-1900	12.0	2.0	5.0	8.0	7.0	4.0	7.0	6.8	6.4
1900-2000	6.0	3.0	0.0	4.0	6.0	4.0	0.0	3.8	3.3
2000-2100	4.0	2.0	0.0	5.0	4.0	3.0	3.0	3.0	3.0
2100-2200	5.0	0.0	0.0	7.0	1.0	4.0	4.0	2.6	3.0
2200-2300	3.0	0.0	0.0	3.0	4.0	5.0	2.0	2.0	2.4
2300-2400	1.0	0.0	0.0	3.0	5.0	3.0	1.0	1.8	1.9
Totals									
0700-1900	*	78.0	66.0	81.0	87.0	73.0	64.0	81.8	78.1
0600-2200	*	102.0	79.0	111.0	110.0	86.0	76.0	105.2	98.4
0600-0000	*	102.0	79.0	117.0	119.0	94.0	79.0	109.0	102.7
0000-0000	*	105.0	83.0	118.0	127.0	101.0	82.0	113.8	107.5
AM Peak	*	0600	0600	0800	1100	0900	1000		
	*	19.0	13.0	16.0	15.0	7.0	7.0		
PM Peak	*	1600	1600	1600	1300	1400	1700		
	*	15.0	18.0	15.0	15.0	13.0	10.0		

* - No data.



Fichera Rd - TC Location Ch 70

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MetroCount Traffic Executive Class Speed Matrix

ClassMatrix-432 -- English (ENA)

Datasets:

Site: [Fichera Road] Intersection Tinaroo Creek Road @ Ch 70 <100>
Attribute: Mareeba
Direction: 7 - North bound A>B, South bound B>A. **Lane:** 0
Survey Duration: 10:53 Monday, 28 June 2021 => 13:34 Friday, 9 July 2021,
Zone:
File: Fichera Road 0 2021-07-09 1334.EC0 (Plus)
Identifier: FN47XFS5 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm: Factory default axle (v5.07)
Data type: Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time: 10:54 Monday, 28 June 2021 => 13:34 Friday, 9 July 2021 (11.1116)
Included classes: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range: 10 - 160 km/h.
Direction: North, East, South, West (bound), P = North, Lane = 0-16
Separation: Headway > 0 sec, Span 0 - 100 metre
Name: Default Profile
Scheme: Vehicle classification (AustRoads94)
Units: Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile: Vehicles = 5703 / 5766 (98.91%)

Class Speed Matrix

ClassMatrix-432

Site: Fichera Road.0.1NS
Description: Intersection Tinaroo Creek Road @ Ch 70 <100>
Filter time: 10:54 Monday, 28 June 2021 => 13:34 Friday, 9 July 2021
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1-12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100) Lane(0-16)

km/h	Class												Total	
	SV 1	SVT 2	TB2 3	TB3 4	T4 5	ART3 6	ART4 7	ART5 8	ART6 9	BD 10	DRT 11	TRT 12		
10- 20	182	5	34	19	1	.	3	2	8	10	.	.	264	4.6%
20- 30	659	63	119	41	3	.	9	3	17	20	.	.	934	16.4%
30- 40	1678	138	257	36	4	3	33	3	16	4	.	.	2172	38.1%
40- 50	1520	54	216	13	5	.	8	.	3	.	.	.	1819	31.9%
50- 60	403	3	60	1	.	.	.	.	.	.	.	.	467	8.2%
60- 70	38	.	8	.	.	.	.	.	.	.	.	.	46	0.8%
70- 80	1	.	.	.	.	.	.	.	.	.	.	.	1	0.0%
80- 90	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
90-100	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
100-110	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
110-120	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
120-130	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
130-140	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
140-150	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
150-160	.	.	.	.	.	.	.	.	.	.	.	.	0	0.0%
Total	4481	263	694	110	13	3	53	8	44	34	0	0	5703	
	78.6%	4.6%	12.2%	1.9%	0.2%	0.1%	0.9%	0.1%	0.8%	0.6%	0.0%	0.0%		
ESA	0.0	0.0	1388.0	220.0	26.0	9.0	159.0	24.0	132.0	136.0	0.0	0.0	2094.0	
Raw axle	8962	1003	1388	330	60	9	212	40	264	300	0	0	12568	
Single	8918	577	1388	110	0	9	106	11	49	34	0	0	11202	
T steer	0	0	0	0	13	0	0	1	0	0	0	0	14	
Double	29	210	1	110	8	0	53	12	43	40	0	0	506	
Triple	0	2	0	0	8	0	0	1	43	62	0	0	116	
Quad+	0	0	0	0	0	0	0	0	0	0	0	0	0	

Total vehicles = 5703, Total heavies = 959 (16.82%), Average ESA per heavy = 2.18
 Twinsteers = 1.46% of heavies, 0.25% of total.

MetroCount Traffic Executive Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-431 -- English (ENA)

Datasets:

Site: [Fichera Road] Intersection Tinaroo Creek Road @ Ch 70 <100>
Attribute: Mareeba
Direction: 7 - North bound A>B, South bound B>A. **Lane:** 0
Survey Duration: 10:53 Monday, 28 June 2021 => 13:34 Friday, 9 July 2021,
Zone:
File: Fichera Road 0 2021-07-09 1334.EC0 (Plus)
Identifier: FN47XFS5 MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm: Factory default axle (v5.07)
Data type: Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time: 10:54 Monday, 28 June 2021 => 13:34 Friday, 9 July 2021 (11.1116)
Included classes: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12
Speed range: 10 - 160 km/h.
Direction: North, East, South, West (bound), P = North, Lane = 0-16
Separation: Headway > 0 sec, Span 0 - 100 metre
Name: Default Profile
Scheme: Vehicle classification (AustRoads94)
Units: Metric (metre, kilometre, m/s, km/h, kg, tonne)
In profile: Vehicles = 5703 / 5766 (98.91%)

Weekly Vehicle Counts (Virtual Week)

VirtWeeklyVehicle-431

Site: Fichera Road.0.1NS
Description: Intersection Tinaroo Creek Road @ Ch 70 <100>
Filter time: 10:54 Monday, 28 June 2021 => 13:34 Friday, 9 July 2021
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1-12) Dir(NESW) Sp(10,160) Headway(>0) Span(0 - 100) Lane(0-16)

Hour	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages	
								1 - 5	1 - 7
0000-0100	3.0	0.5	0.0	3.5	5.0	8.0	2.0	2.3	2.8
0100-0200	1.0	1.5	0.0	0.0	2.5	6.0	4.0	1.0	1.7
0200-0300	6.0	0.0	0.0	0.0	2.0	3.0	0.0	1.1	1.2
0300-0400	1.0	0.0	0.5	0.5	0.5	1.0	2.0	0.4	0.6
0400-0500	1.0	0.5	1.0	2.0	2.0	2.0	1.0	1.3	1.4
0500-0600	6.0	7.0	7.5	8.5	7.0	5.0	1.0	7.3	6.5
0600-0700	18.0	25.0	23.5	26.0	28.0	6.0	4.0	24.8	21.2
0700-0800	22.0	12.5	15.5	20.0	26.0	11.0	8.0	18.9	17.2
0800-0900	26.0	30.0	24.5	36.0	31.5	27.0	16.0	30.0	28.5
0900-1000	37.0	40.5	44.0	42.0	39.5	47.0	41.0	41.0	41.5
1000-1100	20.5	38.0	43.0	34.5	42.0	40.0	48.0	35.6	37.0
1100-1200	34.5	39.5	41.0	45.5	44.0	39.0	37.0	40.9	40.4
1200-1300	32.0	53.5	35.5	39.5	50.0	35.0	50.0	42.1	42.2
1300-1400	41.0	36.5	41.5	42.0	34.5	43.0	30.0	39.1	38.7
1400-1500	29.0	43.0	46.0	43.5	39.0	38.0	47.0	40.2	40.6
1500-1600	45.5	39.0	38.0	38.0	44.0	37.0	45.0	40.6	40.6
1600-1700	47.5	47.5	43.0	51.5	37.0	33.0	46.0	46.2	45.0
1700-1800	35.5	40.5	44.0	44.5	45.0	18.0	29.0	41.6	38.3
1800-1900	17.5	21.0	23.0	22.5	27.0	19.0	21.0	21.7	21.4
1900-2000	11.5	14.0	16.5	12.5	7.0	13.0	9.0	12.9	12.5
2000-2100	6.0	12.5	7.5	12.0	10.0	14.0	11.0	9.6	10.1
2100-2200	3.5	3.0	3.0	11.5	14.0	8.0	6.0	6.2	6.4
2200-2300	5.0	1.0	3.5	6.0	12.0	9.0	7.0	4.8	5.4
2300-2400	2.0	0.5	0.0	2.0	10.0	8.0	5.0	2.1	2.9
Totals									
0700-1900	388.0	441.5	439.0	459.5	459.5	387.0	418.0	437.8	431.3
0600-2200	427.0	496.0	489.5	521.5	518.5	428.0	448.0	491.3	481.5
0600-0000	434.0	497.5	493.0	529.5	540.5	445.0	460.0	498.1	489.8
0000-0000	452.0	507.0	502.0	544.0	559.5	470.0	470.0	511.7	504.1
AM Peak	0900	0900	0900	1100	1100	0900	1000		
	37.0	40.5	44.0	45.5	44.0	47.0	48.0		
PM Peak	1600	1200	1400	1600	1200	1300	1200		
	47.5	53.5	46.0	51.5	50.0	43.0	50.0		

* - No data.

Attachment 5 – Statements of Planning Scheme Code Compliance

6.2.9 Rural zone code

6.2.9.1 Application

- (1) This code applies to assessing development where:
 - (a) located in the Rural zone; and
 - (b) it is identified in the assessment benchmarks for assessable development and requirements for accepted development column of an assessment table in Part 5 of the planning scheme.

6.2.9.2 Purpose

- (1) The purpose of the Rural zone code is to:
 - (a) provide for rural uses including cropping, intensive horticulture, intensive animal industries, animal husbandry, animal keeping and other primary production activities;
 - (b) provide opportunities for non-rural uses that are compatible with agriculture, the environmental features, and landscape character of the rural area where the uses do not compromise the long-term use of the land for rural purposes;
 - (c) protect or manage significant natural resources and processes to maintain the capacity for primary production.
- (2) Mareeba Shire Council's purpose of the Rural zone code is to recognise the importance of primary production to the economy of the region and to maintain and strengthen the range of primary industries which contribute to the rural economy.

The purpose of the Rural zone code is to:

- (a) recognise the diversity of rural uses that exists throughout the region;
 - (b) protect the rural character of the region;
 - (c) provide facilities for visitors and tourists that are accessible and offer a unique experience;
 - (d) protect the infrastructure of the Mareeba-Dimbulah Irrigation Scheme Area from development which may compromise long term use for primary production;
 - (e) maintain distinct boundaries between the rural areas and the villages, towns and urban areas of the region;
 - (f) provide for a range of uses, compatible and associated with rural or ecological values including recreational pursuits and tourist activities;
 - (g) prevent adverse impacts of development on ecological values;
 - (h) preserve land in large holdings; and
 - (i) facilitate the protection of strategic corridors across the landscape which link remnant areas of intact habitat and transport corridors.
- (3) The purpose of the Rural zone code will be achieved through the following overall outcomes:
 - (a) Areas for use for primary production are conserved and fragmentation below economically viable lot sizes is avoided;
 - (b) The establishment of a wide range of rural pursuits is facilitated, including cropping, intensive horticulture, forestry, intensive animal industries, animal husbandry and animal keeping and other compatible primary production uses;
 - (c) The establishment of extractive industries, mining and associated activities and alternative forms of energy generation is appropriate where environmental impacts and land use conflicts are minimised;
 - (d) Uses that require isolation from urban areas as a consequence of their impacts such as noise or odour may be appropriate where land use conflicts are minimised;
 - (e) Development is reflective of and responsive to the environmental constraints of the land;
 - (f) Residential and other development is appropriate only where directly associated with the rural nature of the zone;
 - (g) Low-impact tourism and recreation activities do not compromise the long-term use of the land for rural purposes;

- (h) The viability of both existing and future rural uses and activities is protected from the intrusion of incompatible uses;
- (i) Visual impacts of clearing, building, materials, access ways and other aspects of development are minimised or appropriately managed;
- (j) Adverse impacts of development both on-site and from adjoining areas are avoided and any impacts are minimised through location, design, operation and management; and
- (k) Natural features such as creeks, gullies, waterways, wetlands and bushland are retained, managed, enhanced and separated from adjacent development.

6.2.9.3 Criteria for assessment

Table 6.2.9.3—Rural zone code - For accepted development subject to requirements and assessable development

Performance outcomes	Acceptable outcomes	Complies	Comments
For accepted development subject to requirements and assessable development			
Height			
PO1 Building height takes into consideration and respects the following: <ul style="list-style-type: none"> (a) the height of existing buildings on adjoining premises; (b) the development potential, with respect to height, on adjoining premises; (c) the height of buildings in the vicinity of the site; (d) access to sunlight and daylight for the site and adjoining sites; (e) privacy and overlooking; and (f) site area and street frontage length. 	AO1.1 Development, other than buildings used for rural activities, has a maximum building height of: <ul style="list-style-type: none"> (a) 8.5 metres; and (b) 2 storeys above ground level. 	✓	Building height limited to single storey
	AO1.2 Buildings and structures associated with a rural activity including machinery, equipment, packing or storage buildings do not exceed 10 metres in height.	✓	Complies
Siting, where not involving a Dwelling house			
Note—Where for Dwelling house, the setbacks of the Queensland Development Code apply.			
PO2 Development is sited in a manner that considers and respects: <ul style="list-style-type: none"> (a) the siting and use of adjoining premises; (b) access to sunlight and daylight for the site and adjoining sites; (c) privacy and 	AO2.1 Buildings and structures include a minimum setback of: <ul style="list-style-type: none"> (a) 40 metres from a frontage to a State-controlled road; and (b) 10 metres from a boundary to an adjoining lot. 	✓	Complies – building setbacks exceed the nominated assessment benchmark

Performance outcomes	Acceptable outcomes	Complies	Comments
overlooking; (d) air circulation and access to natural breezes; (e) appearance of building bulk; and (f) relationship with road corridors.	AO2.2 Buildings and structures, where for a Roadside stall, include a minimum setback of 0 metres from a frontage to a road that is not a State-controlled road.	x	N/A
	AO2.3 Buildings and structures, expect where a Roadside stall, include a minimum setback of: (a) 10 metres from a frontage to a sealed road that is not a State-controlled road; and (b) 100 metres from a frontage to any other road that is not a State-controlled road;	✓	Complies – setbacks exceed to the assessment benchmark
Accommodation density			
PO3 The density of Accommodation activities: (a) respects the nature and density of surrounding land use; (b) is complementary and subordinate to the rural and natural landscape values of the area; and (c) is commensurate to the scale and frontage of the site.	AO3.1 Residential density does not exceed one dwelling house per lot.	✓ / x	
	AO3.2 Residential density does not exceed two dwellings per lot and development is for: (a) a secondary dwelling; or (b) Caretaker's accommodation and includes building work or minor building work with a maximum gross floor area of 100m ² ; or (c) Rural worker's accommodation.	✓	The development complies with the performance outcome as the development provides for workforce accommodation that is directly aligned and associated with the agricultural sector. The development is modest in scale and will be screened via landscaped buffers adjacent the road and side boundaries.
For assessable development			
Site cover			

Performance outcomes	Acceptable outcomes	Complies	Comments
<p>PO4 Buildings and structures occupy the site in a manner that:</p> <ul style="list-style-type: none"> (a) makes efficient use of land; (b) is consistent with the bulk and scale of buildings in the surrounding area; and (c) appropriately balances built and natural features. 	<p>AO4 No acceptable outcome is provided.</p>	✓	<p>Complies – refer to above comments.</p>
<p>PO5 Development complements and integrates with the established built character of the Rural zone, having regard to:</p> <ul style="list-style-type: none"> (a) roof form and pitch; (b) eaves and awnings; (c) building materials, colours and textures; and (d) window and door size and location. 	<p>AO5 No acceptable outcome is provided.</p>	✓	<p>The development is single storey and will not be visually prominent. Refer to proposal plans of the accommodation and amenity buildings to view building design. No issues are raised with this element.</p>

Performance outcomes	Acceptable outcomes	Complies	Comments
Amenity			
<p>PO6 Development must not detract from the amenity of the local area, having regard to:</p> <ul style="list-style-type: none"> (a) noise; (b) hours of operation; (c) traffic; (d) advertising devices; (e) visual amenity; (f) privacy; (g) lighting; (h) odour; and (i) emissions. 	<p>AO6 No acceptable outcome is provided.</p>	✓	<p>The development will not have an impact on adjoining properties or the amenity of the area.</p>
<p>PO7 Development must take into account and seek to ameliorate any existing negative environmental impacts, having regard to:</p> <ul style="list-style-type: none"> (a) noise; (b) hours of operation; (c) traffic; (d) advertising devices; (e) visual amenity; (f) privacy; (g) lighting; (h) odour; and (i) emissions. 	<p>AO7 No acceptable outcome is provided.</p>	✓	<p>The development is taking place on unconstrained land with regard to environmental impacts. Wastewater disposal will be undertaken in accordance with an environmental authority for ERA 63.</p>

9.3.1 Accommodation activities code

9.3.1.1 Application

- (1) This code applies to assessing development where:
 - (a) involving Accommodation activities; and
 - (b) it is identified in the assessment benchmarks for assessable development and requirements for accepted development column of an assessment table in Part 5 of the planning scheme.

9.3.1.2 Purpose

- (1) The purpose of the Accommodation activities code is to facilitate the provision of Accommodation activities in appropriate locations throughout the shire.
- (2) The purpose of the code will be achieved through the following overall outcomes:
 - (a) Accommodation activities are designed, located and operated to minimise any adverse impacts on the natural environment and amenity of surrounding uses;
 - (b) Accommodation activities in the Centre zone are facilitated where they can integrate and enhance the fabric of the centre and are located behind or above commercial development;
 - (c) Accommodation activities provide a high level of amenity and are reflective of the surrounding character of the area;
 - (d) Accommodation activities are generally established in accessible, well-connected locations with access or future access to public transport, cycling and pedestrian networks;
 - (e) Accommodation activities do not compromise the viability of the hierarchy and network of centres, namely:
 - (i) Mareeba as a major regional activity centre, which accommodates the most significant concentrations of regional-scale business, retail, entertainment, government administration, secondary and tertiary educational facilities and health and social services within the shire;
 - (ii) Kuranda as a village activity centre, which accommodates services, arts and cultural facilities, sports and recreation facilities, business and employment uses to support the village and its constituent surrounding rural and rural residential communities;
 - (iii) Chillagoe and Dimbulah as Rural activity centres, which provide commercial and community services to their rural catchments; and
 - (iv) Biboohra, Irvinebank, Julatten, Koah, Mutchilba, Mt Molloy, Myola and Speewah as rural villages, that have limited centre activities and other non-residential activities; and
 - (f) Accommodation activities are responsive to site characteristics and employ best practice industry standards.

9.3.1.3 Criteria for assessment

Table 9.3.1.3A—Accommodation activities code – For accepted development subject to requirements and assessable development

Performance outcomes	Acceptable outcomes	Complies	Comments
For accepted development subject to requirements and assessable development			
All Accommodation activities, apart from Dwelling house			
<p>PO1 Accommodation activities are located on a site that includes sufficient area:</p> <p>(a) to accommodate all buildings, structures, open space and infrastructure associated with the use; and</p> <p>(b) to avoid adverse impacts on the amenity or privacy of nearby land uses.</p>	<p>AO1 Development is located on a site which provides the applicable minimum site area and minimum road frontage specified in Table 9.3.1.3B.</p>		<p>This form of development is not included in Table 9.3.1.3B however the development is proposed to take place on a large rural lot with adequate road frontage.</p>
All Accommodation activities, apart from Tourist park and Dwelling house			
<p>PO2 Accommodation activities are provided with on-site refuse storage areas that are:</p> <p>(a) sufficient to meet the anticipated demand for refuse storage; and</p> <p>(b) appropriately located on the site having regard to potential odour and noise impacts on uses on the site and adjoining sites.</p>	<p>AO2.1 A refuse area is provided that:</p> <p>(a) includes a water connection;</p> <p>(b) is of a size and configuration to accommodate 2x240 litre bins per dwelling or accommodation unit where involving a use other than a residential care facility or retirement facility; and</p> <p>(c) is of a size and configuration to accommodate a minimum of two bulk refuse bins where involving a residential care facility or retirement facility.</p>	✓	<p>While not shown on the plan, an adequately sized refuse area will be provided for the accommodation facility. Refer to comments in the Planning Report on this element.</p>
All Accommodation activities, except for Dwelling house			

Performance outcomes	Acceptable outcomes	Complies	Comments
<p>PO3 Accommodation activities are designed to avoid overlooking or loss of privacy for adjoining uses.</p> <p>Note—These provisions apply to any adjoining use, both on an adjoining site and on the same site.</p>	<p>AO3 The windows of habitable rooms:</p> <p>(a) do not overlook the windows of a habitable room in an adjoining dwelling or accommodation unit; or</p> <p>(b) are separated from the windows of a habitable room in an adjoining dwelling or accommodation unit by a distance greater than:</p> <p>(i) 2 metres at ground level; and</p> <p>(ii) 8 metres above ground level; or</p> <p>(c) are treated with:</p> <p>(i) a minimum sill height of 1.5 metres above floor level; or</p> <p>(ii) fixed opaque glassed installed below 1.5 metres; or</p> <p>(iii) fixed external screens; or</p> <p>(iv) a 1.5 metre high screen fence along the common boundary.</p>	<p>✓</p>	<p>Accommodation buildings are separated for a distance greater than the nominated assessment benchmark of 2 metres.</p> <p>The sill heights for the windows are set are a standard height to maximize access to breezes and sunlight. Windows will be fitted with blinds for increased privacy.</p>
<p>PO4 Accommodation activities are provided with sufficient private and communal open space areas which:</p> <p>(a) accommodate a range of landscape treatments, including soft and hard landscaping;</p> <p>(b) provide a range of</p>	<p>AO4.1 Development, except for Caretaker's accommodation, Dwelling house, Dual occupancy or Home based business, includes communal open space which meets or exceeds the minimum area, dimension and design parameters specified in Table 9.3.1.3C.</p>	<p>✓</p>	<p>Development taking place in a rural setting with ample communal open space and recreational facilities.</p>

Performance outcomes	Acceptable outcomes	Complies	Comments
<p>opportunities for passive and active recreation;</p> <p>(c) provide a positive outlook and high quality of amenity to residents;</p> <p>(d) is conveniently located and easily accessible to all residents; and</p> <p>(e) contribute to an active and attractive streetscape.</p>	<p>AO4.2 Development includes private open space for each dwelling or accommodation unit which meets or exceeds the minimum area, dimension and design parameters specified in Table 9.3.1.3D.</p>		<p>The layout and design of the facility is consistent with similar types of workforce or rural workers accommodation.</p> <p>Each accommodation building is provided with a patio in addition to the communal facility buildings.</p>
	<p>AO4.3 Clothes drying areas are provided at the side or rear of the site so that they are not visible from the street.</p>	✓	<p>Laundry facilities are provided onsite.</p>
	<p>AO4.4 If for Dual occupancy, Multiple dwelling, Residential care facility or Retirement facility, development provides a secure storage area for each dwelling or accommodation unit which:</p> <p>(a) is located to facilitate loading and unloading from a motor vehicle;</p> <p>(b) is separate to, and does not obstruct, on-site vehicle parking or manoeuvring areas;</p> <p>(c) has a minimum space of 2.4m² per dwelling or accommodation unit;</p> <p>(d) has a minimum height of 2.1 metres;</p> <p>(e) has minimum dimensions to enable secure bicycle storage;</p> <p>(f) is weather proof; and</p> <p>(g) is lockable.</p>	x	N/A
If for Caretaker's Accommodation			

Performance outcomes	Acceptable outcomes	Complies	Comments
<p>PO5 Caretaker's accommodation is of a scale and intensity which is consistent with that of the surrounding area.</p> <p>Note—Where Caretaker's Accommodation is assessable development additional assessment benchmarks are provided under "for assessable development".</p>	<p>AO5.1 Only one caretaker's accommodation is established on the title of the non-residential use.</p>	✓	<p>Manager's residence provided on the site to oversee the day to day management of the facility.</p>
	<p>AO5.2 In the Rural zone, Caretaker's accommodation has a maximum gross floor area of 200m².</p>	✓	<p>Complies</p>

Performance outcomes	Acceptable outcomes	Complies	Comments
If for Dwelling house			
PO6 Where a Dwelling house involves a secondary dwelling, it is designed and located to: (a) not dominate the site; (b) remain subservient to the primary dwelling; and (c) be consistent with the character of the surrounding area;	AO6.1 The secondary dwelling is located within: (a) 10 metres of the primary dwelling where on a lot that has an area of 2 hectares or less; or (b) 20 metres of the primary dwelling where on a lot that has an area of greater than 2 hectares.	x	N/A
	AO6.2 A secondary dwelling has a maximum gross floor area of 100m ² .	x	N/A
If for Dual occupancy			
PO7 Where establishing a Dual occupancy on a corner lot, the building is designed to: (a) maximise opportunities for causal surveillance; (b) provide for separation between the two dwellings; and (c) provide activity and visual interest on both frontages.	AO7.1 Where located on a corner allotment, each dwelling is accessed from a different road frontage.	x	N/A
	AO7.2 The maximum width of garage or carport openings that face a public street is 6 metres or 50% of the building width, whichever is the lesser.	x	N/A
If for Multiple dwelling, Residential care facility or Retirement facility			
PO8 Development is appropriately located within the Shire to: (a) maximise the efficient utilisation of existing infrastructure, services and facilities; and (b) minimise amenity impacts through the collocation of compatible uses. Note—Where Residential care facility or Retirement facility is assessable development additional assessment benchmarks are provided under “for assessable development”.	AO8 Multiple dwelling, Residential care facility or Retirement facility uses are located on land within 800 metres of the boundary of land within the Centre zone.	x	The proposed development is appropriately located on a large rural lot.

Performance outcomes	Acceptable outcomes	Complies	Comments
<p>PO9 Buildings are designed to:</p> <p>(a) reduce the appearance of building bulk;</p> <p>(b) provide visual interest through articulation and variation;</p> <p>(c) be compatible with the embedded, historical character for the locality; and</p> <p>(d) be compatible with the scale of surrounding buildings</p> <p>Note—Where Residential care facility or Retirement facility is assessable development additional assessment benchmarks are provided under “for assessable development”.</p>	<p>AO9.1 External walls do not exceed 10 metres in continuous length unless including a minimum of three of the following building design features and architectural elements:</p> <p>(a) a change in roof profile; or</p> <p>(b) a change in parapet coping; or</p> <p>(c) a change in awning design; or</p> <p>(d) a horizontal or vertical change in the wall plane; or</p> <p>(e) a change in the exterior finishes and exterior colours of the development.</p>	x	N/A
	<p>AO9.2 For a Multiple dwelling, Residential care facility or Retirement facility, the maximum width of a garage or carport opening that faces a road is 6 metres.</p>	x	N/A
	<p>AO9.3 For a Multiple dwelling, Residential care facility or Retirement facility, the building(s) include awnings with a minimum overhang of 600mm.</p>	x	N/A
	<p>AO9.4 For a Multiple dwelling, Residential care facility or Retirement facility, roof forms include one or more of the following types:</p> <p>(a) pyramidal;</p> <p>(b) hip or hipped;</p> <p>(c) gable;</p> <p>(d) skillion.</p>	x	N/A
If for Residential care facility or Retirement facility			
<p>PO10 The layout and design of the site:</p> <p>(a) promotes safe and easy pedestrian, cycle</p>	<p>AO10.1 The development incorporates covered walkways and ramps on site for weather protection between all buildings.</p>	x	N/A

Performance outcomes	Acceptable outcomes	Complies	Comments
<p>and mobility device movement;</p> <p>(b) defines areas of pedestrian movement; and</p> <p>(c) assists in navigation and way finding.</p> <p>Note—Where Residential care facility or Retirement facility is assessable development additional assessment benchmarks are provided under “for assessable development”.</p>	<p>AO10.2 Pedestrian paths include navigational signage at intersections.</p> <p>AO10.3 Buildings, dwellings and accommodation units include identification signage at entrances.</p> <p>AO10.4 An illuminated sign and site map is provided at the main site entry.</p> <p>AO10.5 Buildings, structures and pathways associated with a Residential care facility or Retirement facility are not located on land with a gradient greater than 8%.</p>		
If for Home based business			
<p>PO11 Home based businesses are compatible with the built form, character and amenity of the surrounding area, having regard to:</p> <p>(a) size and scale;</p> <p>(b) intensity and nature of use;</p> <p>(c) number of employees; and</p> <p>(d) hours of operation.</p>	<p>AO11.1 The Home based business is located within a dwelling house or outbuilding associated with a dwelling house.</p> <p>AO11.2 The Home based business does not occupy a gross floor area of more than 50m².</p> <p>AO11.3 No more than 1 person (other than the residents of the site) is employed by the Home based business at any one time.</p> <p>AO11.4 The Home based business, unless a home office, bed and breakfast or farm stay, does not operate outside the hours of 7.00 am and 6.00 pm.</p> <p>AO11.5 The Home based business does not involve the public display of goods external to the building.</p> <p>AO11.6 The Home based business does not involve the repair, cleaning or servicing of any motors, vehicles or other machinery.</p>	x	N/A

Performance outcomes	Acceptable outcomes	Complies	Comments
	<p>AO11.7 Any equipment or materials associated with the Home based business are screened from public view and adjacent properties by fencing or landscaping.</p> <p>AO11.8 The business does not involve the use of power tools or similar noise generating devices.</p>	x	N/A
<p>PO12 Home based businesses involving accommodation activities are appropriately scaled and designed to avoid detrimental impacts on the amenity and privacy of surrounding residences.</p>	<p>AO12.1 Home based businesses involving accommodation activities are limited to the scale specified in Table 9.3.1.3E.</p>		
	<p>AO12.2 A farm stay dwelling or accommodation unit is located within 20 metres of the primary dwelling house.</p>		
	<p>AO12.3 A farm stay is setback 100 metres from any property boundary.</p>		
	<p>AO12.4 Entertainment and dining facilities associated with an accommodation activity are: (a) located at least 5 metres from the bedrooms of adjoining residences; and (b) located or screened so that they do not directly overlook private open space areas of adjoining properties.</p>		
If for Rural workers' accommodation			
<p>PO13 The Rural workers' accommodation is directly associated with an agricultural based rural activity on the same premises and is commensurate with the scale of agricultural operations.</p>	<p>AO13.1 A Rural workers' accommodation building is limited to the accommodation of: (a) one rural worker for every 50 hectares; and (b) a maximum of ten rural workers in total.</p>	x	<p>The development is for Workforce Accommodation being an undefined use in the Planning Scheme.</p>

Performance outcomes	Acceptable outcomes	Complies	Comments
	<p>AO13.2 The agricultural based rural activity is a minimum of 50 hectares in area.</p>	<p>✓</p>	<p>The workforce to be accommodated on the site will work at various rural properties across the Shire and region more broadly.</p>

Performance outcomes	Acceptable outcomes	Complies	Comments
PO14 Rural workers' accommodation is provided with amenities commensurate with the: <ul style="list-style-type: none"> (a) needs of the employees; and (b) permanent or seasonal nature of the employment. 	AO14.1 The Rural workers' accommodation is: <ul style="list-style-type: none"> (a) for permanent occupation; and (b) fully self-contained. OR	✓	While not rural workers accommodation, the development provides appropriate amenities and recreational areas to meet the needs of the occupants.
	AO14.2 The Rural workers' accommodation: <ul style="list-style-type: none"> (a) is for seasonal occupation (up to 3 months); (b) shares facilities with an existing Dwelling house or Caretaker's residence; and (c) is located within 100 metres of the Dwelling house or Caretaker's residence. 	✓	Stays will typically range from 3 – 6 months. The Caretakers residence is located in close proximity to the accommodation and facilities.
For assessable development			
If for Caretaker's Accommodation			
PO15 The inclusion of Caretaker's accommodation on the site is necessary for the operation of the primary use, having regard to: <ul style="list-style-type: none"> (a) hours of operation; (b) nature of the use; (c) security requirements; (d) site location and access; and (e) proximity to other land uses. 	AO15 No acceptable outcome is provided.	✓	Caretaker's accommodation is warranted for the type of development being proposed.
If for Residential care facility or Retirement facility			

Performance outcomes	Acceptable outcomes	Complies	Comments
<p>PO16 Retirement facilities include a range of housing designs and types that:</p> <ul style="list-style-type: none"> (a) meet the needs of residents; (b) allow for 'ageing in place'; (c) consider differing mobility needs; (d) accommodate differing financial situations; and (e) cater for different household types. 	<p>AO16 No acceptable outcome is provided.</p>	x	N/A
If for Tourist park			
<p>PO17 The Tourist park is appropriately located to provide park users with convenient access to tourist attractions, community facilities and infrastructure.</p>	<p>AO17 No acceptable outcome is provided.</p>	x	N/A
<p>PO18 The density of accommodation provided within the Tourist park:</p> <ul style="list-style-type: none"> (a) is commensurate with the size and utility of the site; (b) is consistent with the scale and character of development in the surrounding area; (c) ensures sufficient infrastructure and services can be provided; (d) does not adversely impact on the existing amenity of nearby uses; (e) ensures a high level of amenity is enjoyed by residents of the site; and (f) does not place undue pressure on environmental processes in the surrounding area. 	<p>AO18.1 Where park areas are proposed to exclusively accommodate caravans, motor homes, tents or cabins, accommodation site densities do not exceed:</p> <ul style="list-style-type: none"> (a) 40 caravan or motor home sites per hectare of the nominated area(s); or (b) 60 tent sites per hectare of the nominated area(s); or (c) 10 cabins (maximum 30m² gross floor area per cabin) per hectare of the nominated area(s). 	x	N/A
	<p>AO18.2 Where park areas are proposed to be used for any combination of caravans, motor homes, tents or cabins, then the lowest applicable density identified by AO18.1 shall be applied to the nominated area(s).</p>	x	N/A

Performance outcomes	Acceptable outcomes	Complies	Comments
<p>PO19 Accommodation sites are designed and located:</p> <p>(a) to provide sufficient land for necessary services and infrastructure;</p> <p>(b) to achieve sufficient separation between land uses;</p> <p>(c) is consistent with the scale and character of development in the surrounding area; and</p> <p>(d) to prevent amenity and privacy impacts on nearby land uses.</p>	<p>AO19.1 A minimum of 50% of provided caravan and motor home accommodation sites have a concrete slab with a minimum length of 6 metres and a minimum width of 2.4 metres.</p>	x	N/A
	<p>AO19.2 Caravan, motor home, tent and cabin accommodation sites are set back a minimum of:</p> <p>(a) 2 metres from an internal road; and</p> <p>(b) 1.5 metres from the side and rear boundaries of the site.</p>	x	N/A
<p>PO20 A Tourist park is provided with sufficient and appropriately located refuse collection areas.</p>	<p>AO20.1 A central refuse collection area is provided to service all accommodation sites.</p>	x	<p>While not a Tourist park, appropriate refuse area will be provided to service the development.</p>
	<p>AO20.2 The refuse collection area must be kept in a sanitary condition at all times with all refuse stored in weather-proof and securable receptacles to prevent them from attracting vermin and wildlife.</p>		
	<p>AO20.3 The refuse collection area is constructed on an impervious surface such as a concrete slab.</p>		
	<p>AO20.4 A water connection is provided within the refuse collection area to facilitate cleaning of receptacles and the collection area.</p>		
	<p>AO20.5 Refuse collection areas are located a minimum of 10 metres from any recreational areas, communal cooking facilities and accommodation sites.</p>		

Table 9.3.1.3B – Minimum site area and minimum site frontage

Use	Minimum site area	Minimum frontage
Dual occupancy	(a) 600m ² in the Medium density residential zone; or (b) 1,000m ² in the Low density residential zone; or (c) 600m ² in the Centre zone.	20 metres
Home based business	600m ²	-
Multiple dwelling	800m ²	20 metres
Residential care facility	2,000m ²	30 metres
Retirement facility	2,000m ²	30 metres
Rooming accommodation	800m ²	20 metres
Short-term accommodation	800m ²	20 metres
Tourist park	1 hectare	50 metres
• Caravan and motor home sites	100m ² including sufficient area for the parking of a motor vehicle.	10 metres to an internal road
• Tent sites	40m ² including sufficient area for the parking of a motor vehicle.	6 metres to an internal road
• Cabin sites	130m ² including sufficient area for the parking of a motor vehicle.	10 metres to an internal road

Table 9.3.1.3C – Communal open space

Use	Minimum area	Minimum dimension	Design elements
Multiple dwelling	50m ²	5 metres	<ul style="list-style-type: none"> • Provides for clothes drying and recreational facilities; • One continuous area; and • Separated from any habitable room by a minimum of 3 metres.
Retirement facility or Residential care facility	Indoor communal space and communal open space as specified below.		
Rooming accommodation	Rate of 5m ² per resident	5 metres	<ul style="list-style-type: none"> • One continuous area; • 20% shaded; and • 10% of the provided area is screened for use for clothes drying.
• Indoor communal space	Rate of 1m ² per resident and 40m ²	-	<ul style="list-style-type: none"> • Located centrally; and • Provides a range of facilities.
• Communal open space	30% site area and 50m ²	5 metres	<ul style="list-style-type: none"> • Provided at ground level.

Use	Minimum area	Minimum dimension	Design elements
Short-term accommodation	50m ² and 20% site area	5 metres	<ul style="list-style-type: none"> • Located at ground level; • One continuous area; and • 10% of the provided area is screened for use for clothes drying.
Tourist park	Includes at least each of the below communal facilities.		<ul style="list-style-type: none"> • Located within 100 metres of the sites they serve (unless private recreation facilities are provided); and • Separated from any site by a minimum of 10 metres.
<ul style="list-style-type: none"> • Covered cooking area 	50m ²	-	<ul style="list-style-type: none"> • Including barbeque and dish washing facilities
<ul style="list-style-type: none"> • Laundry 	-	-	<ul style="list-style-type: none"> • Including clothes drying facilities.
<ul style="list-style-type: none"> • Recreational open space 	Rate of 5m ² per site	-	<ul style="list-style-type: none"> • Including a children's playground.

Note—Provision of communal open space for a Multiple dwelling is not required by **Table 9.3.1.3C** where more than 75% have access to ground floor private open space.

Note—For a Tourist park, the calculation of recreational open space is inclusive of pool areas, sporting facilities, such as football fields and tennis courts, and any unobstructed grassed areas having a minimum dimension of 3 metres that are provided in addition to accommodation sites for recreational purposes. Planted landscape areas and vegetated areas are excluded from the calculation.

Note—Indoor communal space may include lounge areas, a library / reading room, a TV/games/recreation room, meeting space/s, hairdresser or a convenience store.

Table 9.3.1.3D – Private open space

Use	Minimum area per dwelling or accommodation unit	Minimum dimension	Design elements
Caretaker's accommodation	As specified below.		
<ul style="list-style-type: none"> • Ground level 	50m ²	5 metres	<ul style="list-style-type: none"> • Provided as unobstructed area; and • Directly accessible from the main living area.
<ul style="list-style-type: none"> • Above ground level 	15m ²	2.5 metres	<ul style="list-style-type: none"> • Provided as a balcony.
<ul style="list-style-type: none"> • Outdoor service court 	5m ²	-	<ul style="list-style-type: none"> • Provided for clothes drying
Dual occupancy	40m ²	3 metres	<ul style="list-style-type: none"> • Located at ground level. • 20% shaded; and • Accessed from the main living area of the dwelling.

Use	Minimum area per dwelling or accommodation unit	Minimum dimension	Design elements
Dwelling house	40m ²	3 metres	<ul style="list-style-type: none"> • Located at ground level; • 20% shaded; and • Accessed from the main living area of the dwelling.
Home based business	40m ²	3 metres	<ul style="list-style-type: none"> • Located at ground level; • 20% shaded; and • Accessed from the main living area of the dwelling.
<ul style="list-style-type: none"> • Ground level 	15m ²	3 metres	<ul style="list-style-type: none"> • 20% shaded; and • Directly accessible from the main living area.
<ul style="list-style-type: none"> • Above ground level 	10m ²	3 metres	<ul style="list-style-type: none"> • Directly accessible from the main living area.
Multiple dwelling	As specified below.		
<ul style="list-style-type: none"> • Ground level 	35m ²	3 metres	<ul style="list-style-type: none"> • 20% shaded; and • Directly accessible from the main living area.
<ul style="list-style-type: none"> • Above ground level 	15m ²	3 metres	<ul style="list-style-type: none"> • Directly accessible from the main living area.
Residential care facility	6m ²	2 metres	<ul style="list-style-type: none"> • Provided as a shaded courtyard or balcony; and • Directly accessible from the main living area.
Retirement facility	As specified below.		
<ul style="list-style-type: none"> • Ground level 	20m ²	3 metres	<ul style="list-style-type: none"> • Provided as a courtyard or similar space; • Grade does not exceed 5%; and • Directly accessible from the main living area at ground level.
<ul style="list-style-type: none"> • Above ground level 	6m ²	2 metres	<ul style="list-style-type: none"> • Provided as a balcony or similar space; and • Directly accessible from the main living area.
Rooming accommodation	As specified below.		
Short-term accommodation	As specified below.		
<ul style="list-style-type: none"> • Ground level 	15m ²	3 metres	<ul style="list-style-type: none"> • 20% shaded; and • Directly accessible from the main living area.
<ul style="list-style-type: none"> • Above ground level 	10m ²	3 metres	<ul style="list-style-type: none"> • Directly accessible from the main living area.

Note—For Caretaker's accommodation, the outdoor service court may form part of the provided private open space.

Table 9.3.1.3E – Maximum scale of accommodation activities associated with a Home based business

Design	Maximum number of rooms	Maximum number of guests
Bed and breakfast	3 rooms for guest accommodation	6 guests at any one time
Farm stay	1 farm stay dwelling or accommodation unit in addition to the primary dwelling	10 guests at any one time

8.2.1 Agricultural land overlay code

8.2.1.1 Application

- (1) This code applies to assessing development where:
 - (a) land the subject of development is located within the agricultural land areas identified on the **Agricultural land overlay maps (OM-001a-n)**; and
 - (b) it is identified in the assessment benchmarks for assessable development and requirements for accepted development column of an assessment table in Part 5 of the planning scheme.

Note—Agriculture is appropriately reflected in Overlay Map 1 and is required to be mapped by State Government in response to Economic Growth State Interests.

8.2.1.2 Purpose

- (1) The purpose of the Agricultural land overlay code is to protect or manage important agricultural areas, resources, and processes which contribute to the shire's capacity for primary production.
- (2) The purpose of the code will be achieved through the following overall outcomes:
 - (a) The alienation, fragmentation or reduction in primary production potential of land within the 'Class A' area or 'Class B' area is avoided, except where:
 - (i) an overriding need exists for the development in terms of public benefit,
 - (ii) no suitable alternative site exists; and
 - (iii) the fragmentation or reduced production potential of agricultural land is minimised;
 - (b) 'Class A' areas and 'Class B' areas continue to be used primarily for more intensive agricultural activities which utilise the land quality provided in these areas;
 - (c) Grazing on very large land holdings is maintained as the dominant rural activity in the 'Broadhectare rural' area; and
 - (d) Land with the 'Broadhectare rural' area is maintained in its current configuration.

8.2.1.3 Criteria for assessment

Table 8.2.1.3 – Agricultural land overlay code - For accepted development subject to requirements and assessable development

Performance outcomes	Acceptable outcomes	Complies	Comments
For accepted development subject to requirements and assessable development			
<p>PO1 The fragmentation or loss of productive capacity of land within the 'Class A' area or 'Class B' area identified on the Agricultural land overlay maps (OM-001a-n) is avoided unless:</p> <p>(a) an overriding need exists for the development in terms of public benefit;</p> <p>(b) no suitable alternative site exists; and</p> <p>(c) loss or fragmentation is minimised to the extent possible.</p>	<p>AO1 Buildings and structures are not located on land within the 'Class A' area or 'Class B' area identified on the Agricultural land overlay maps (OM-001a-n) unless they are associated with:</p> <p>(a) animal husbandry; or</p> <p>(b) animal keeping; or</p> <p>(c) cropping; or</p> <p>(d) dwelling house; or</p> <p>(e) home based business; or</p> <p>(f) intensive animal industry (only where for feedlotting); or</p> <p>(g) intensive horticulture; or</p> <p>(h) landing; or</p> <p>(i) roadside stalls; or</p> <p>(j) winery.</p>	✓	<p>Buildings are located on land within the Class A area and are associated with primary production, in particular cropping and intensive horticulture.</p>
For assessable development			
<p>PO2 Sensitive land uses in the 'Class A' area, 'Class B' area or the 'Broadhectare rural' area identified on the Agricultural land overlay maps (OM-001a-n) are designed and located to:</p> <p>(a) avoid land use conflict;</p> <p>(b) manage impacts from agricultural activities, including chemical spray drift, odour, noise, dust, smoke and ash;</p> <p>(c) avoid reducing primary production potential; and</p> <p>(d) not adversely affect public health, safety and amenity.</p>	<p>AO2 No acceptable outcome is provided.</p>	✓	<p>The land adjoining the development to the north is being used as a Tourist park or a similar use. The layout of the development includes a substantial building setback greater than the nominated assessment benchmark of 10 metres and is complimented by a mounded landscape buffer. Refer to section details on proposal plans.</p>

Performance outcomes	Acceptable outcomes	Complies	Comments
<p>PO3 Development in the 'Class A' area or 'Class B' area identified on the Agricultural land overlay maps (OM-001a-n):</p> <p>(a) ensures that agricultural land is not permanently alienated;</p> <p>(b) ensures that agricultural land is preserved for agricultural purposes; and</p> <p>(c) does not constrain the viability or use of agricultural land.</p>	<p>AO3 No acceptable outcome is provided.</p>	✓	<p>The development is aligned and associated with primary production and achieves compliance with PO1 which provides for the ability for development to locate on Class A land in certain circumstances.</p> <p>The layout of the development has been kept to a minimum to increase the availability of Class A land on the allotment.</p>
If for Reconfiguring a lot			
<p>PO4 The 'Broadhectare rural area' identified on the Agricultural land overlay maps (OM-001a-n) is retained in very large rural holdings viable for broad scale grazing and associated activities.</p>	<p>AO4 Development does not involve the creation of a new lot within the 'Broadhectare rural' area identified on the Agricultural land overlay maps (OM-001a-n).</p>	×	N/A
<p>PO5 Reconfiguring a lot in the 'Class A' area, 'Class B' area or the 'Broadhectare rural' area identified on the Agricultural land overlay maps (OM-001a-n) that is severed by a gazetted road occurs only where it does not fragment land used for agricultural purposes.</p>	<p>AO5 No acceptable outcome is provided.</p>	×	N/A

Performance outcomes	Acceptable outcomes	Complies	Comments
<p>PO6 Any Reconfiguring a lot in the 'Class A' area, 'Class B' area or the 'Broadhectare rural' area identified on the Agricultural land overlay maps (OM-001a-n), including boundary realignments, only occurs where it:</p> <ul style="list-style-type: none"> (a) improves agricultural efficiency; (b) facilitates agricultural activity; or (c) facilitates conservation outcomes; or (d) resolves boundary issues where a structure is built over the boundary line of two lots. 	<p>AO6 No acceptable outcome is provided.</p>	x	N/A

9.4.2 Landscaping code

9.4.2.1 Application

This code applies where it is identified in the assessment benchmarks for assessable development and requirements for accepted development column of an assessment table in Part 5 of the planning scheme.

9.4.2.2 Purpose

- (1) The purpose of the Landscaping code is to ensure all development is landscaped to a standard that:
 - (a) complements the scale and appearance of the development;
 - (b) protects and enhances the amenity and environmental values of the site;
 - (c) complements and enhances the streetscape and local landscape character; and
 - (d) ensures effective buffering of incompatible land uses to protect local amenity.

- (2) The purpose of the code will be achieved through the following overall outcomes:
 - (a) Landscaping is a functional part of development design and is commensurate with the intended use;
 - (b) Landscaping accommodates the retention of existing significant on site vegetation where appropriate and practical;
 - (c) Landscaping treatments complement the scale, appearance and function of the development;
 - (d) Landscaping contributes to an attractive streetscape;
 - (e) Landscaping enhances the amenity and character of the local area;
 - (f) Landscaping enhances natural environmental values of the site and the locality;
 - (g) Landscaping provides effective screening both on site, if required, and between incompatible land uses;
 - (h) Landscaping provides shade in appropriate circumstances;
 - (i) Landscape design enhances personal safety and reduces the potential for crime and vandalism; and
 - (j) Intensive land uses incorporate vegetated buffers to provide effective screening of buildings, structures and machinery associated with the use.

9.4.2.3 Criteria for assessment

Table 9.4.2.3A—Landscaping code - For accepted development subject to requirements and assessable development

Performance outcomes	Acceptable outcomes	Complies	Comments
For accepted development subject to requirements and assessable development			
<p>PO1 Development, other than in the Rural zone, includes landscaping that:</p> <ul style="list-style-type: none"> (a) contributes to the landscape character of the Shire; (b) compliments the character of the immediate surrounds; (c) provides an appropriate balance between built and natural elements; and (d) provides a source of visual interest. 	<p>AO1 Development, other than in the Rural zone, provides:</p> <ul style="list-style-type: none"> (a) a minimum of 10% of the site as landscaping; (b) planting in accordance with Planning Scheme Policy 6 - Landscaping and preferred plant species; (c) for the integration of retained significant vegetation into landscaping areas; (d) on-street landscaping works in accordance with the Design Guidelines set out in Section D9 Landscaping, of the Planning Scheme Policy 4 - FNQROC Regional Development Manual. <p>Note—Where development exceeds a site cover of 90%, areas of landscaping may be provided above ground level to achieve a total supply of landscaping equivalent to 10% of the site area.</p>	x	<p>Notwithstanding the development is within the Rural zone, landscaping treatments will be installed adjacent the front and side boundaries as detailed on the proposal plans.</p> <p>Landscaping treatments will also be installed internally to the development to improve the appearance, amenity and functionality of the facility</p>

Performance outcomes	Acceptable outcomes	Complies	Comments
<p>PO2 Development, other than in the Rural zone, includes landscaping along site frontages that:</p> <ul style="list-style-type: none"> (a) creates an attractive streetscape; (b) compliments the character of the immediate surrounds; (c) assists to break up and soften elements of built form; (d) screen areas of limited visual interest or servicing; (e) provide shade for pedestrians; and (f) includes a range and variety of planting. 	<p>AO2 Development, other than in the Rural zone, includes a landscape strip along any site frontage:</p> <ul style="list-style-type: none"> (a) with a minimum width of 2 metres where adjoining a car parking area; (b) with a minimum width of 1.5 metres in all other locations; and (c) in accordance with Planning Scheme Policy 6 - Landscaping and preferred plant species. <p>Note—Where development is setback from a frontage less than 1.5 metres, the setback area is provided as a landscape strip</p>	x	Refer to above comments
<p>PO3 Development includes landscaping and fencing along side and rear boundaries that:</p> <ul style="list-style-type: none"> (a) screens and buffer land uses; (b) assists to break up and soften elements of built form; (c) screens areas of limited visual interest; (d) preserves the amenity of sensitive land uses; and (e) includes a range and variety of planting. 	<p>AO3.1 Development provides landscape treatments along side and rear boundaries in accordance with Table 9.4.2.3B.</p>	✓	Landscaping treatments to be installed along front and side boundaries. Landscaping along the rear of the site is not necessary.
	<p>AO3.2 Shrubs and trees provided in landscape strips along side and rear boundaries:</p> <ul style="list-style-type: none"> (a) are planted at a maximum spacing of 1 metre; (b) will grow to a height of at least 2 metres; (c) will grow to form a screen of no less than 2 metres in height; and (d) are mulched to a minimum depth of 0.1 metres with organic mulch. 	✓	Will comply. Further details regarding landscaping treatments and planting densities will be established as plans for the facility progress.

Performance outcomes	Acceptable outcomes	Complies	Comments
	<p>AO3.3 Any landscape strip provided along a side or rear boundary is designed in accordance with Planning Scheme Policy 6 - Landscaping and preferred plant species.</p>	✓	<p>Will comply. As detailed above, landscaping treatments will be further refined once development approval has been obtained. Landscaping treatments will comply with the Planning Scheme Policy 6 - Landscaping.</p>
<p>PO4 Car parking areas are improved with a variety of landscaping that:</p> <ul style="list-style-type: none"> (a) provides visual interest; (b) provides a source of shade for pedestrians; (c) assists to break up and soften elements; and (d) improves legibility. 	<p>AO4.1 Landscaping is provided in car parking areas which provides:</p> <ul style="list-style-type: none"> (a) a minimum of 1 shade tree for every 4 parking spaces, or part thereof, where the car parking area includes 12 or more spaces; (b) a minimum of 1 shade tree for every 6 parking spaces, or part thereof, otherwise; and (c) where involving a car parking area in excess of 500m²: <ul style="list-style-type: none"> (i) shade structures are provided for 50% of parking spaces; and (ii) a minimum of 10% of the parking area as landscaping. <p>Note—Where a shade structure is provided over part of a car parking area, shade tree planting is not required in this area of the car parking area.</p>	✓	<p>Onsite car parking areas is limited and therefore landscaping being installed in car parking areas is unnecessary.</p>
	<p>AO4.2 Landscaping in car parking areas is designed in accordance with Planning Scheme Policy 6 - Landscaping and preferred plant species.</p>	x	<p>N/A</p>

Performance outcomes	Acceptable outcomes	Complies	Comments
PO5 Landscaping areas include a range and variety of planting that: <ul style="list-style-type: none"> (a) is suitable for the intended purpose and local conditions; (b) contributes to the natural character of the Shire; (c) includes native species; (d) includes locally endemic species, where practical; and (e) does not include invasive plants or weeds. 	AO5.1 Plant species are selected from the Plant Schedule in Planning Scheme Policy 6 - Landscaping and preferred plant species.	✓	Landscaping treatments will comply with this requirement.
	AO5.2 A minimum of 25% of (new and existing) plants is provided as larger, advanced stock with a minimum plant height of 0.7 metres and mulched to a minimum depth of 0.1 metres with organic mulch.	✓	Landscaping treatments will comply with this requirement.
PO6 Landscaping does not impact on the ongoing provision of infrastructure and services to the Shire.	AO6.1 Tree planting is a minimum of <ul style="list-style-type: none"> (a) 2 metres from any underground water, sewer, gas, electricity or telecommunications infrastructure; and (b) 4 metres from any inspection chamber. 	✓	Landscaping will not impact infrastructure or services.
	AO6.2 Vegetation below or within 4 metres of overhead electricity lines and power poles has a maximum height of 3.5 metres at maturity.	✓	Landscaping will accommodate any site constraints
	AO6.3 Vegetation adjoining an electricity substation boundary, at maturity, will have: <ul style="list-style-type: none"> (a) a height of less than 4 metres; and (b) no foliage within 3 metres of the substation boundary, unless the substation has a solid wall along any boundary. 	x	N/A
For assessable development			

Performance outcomes	Acceptable outcomes	Complies	Comments
<p>PO7 Landscaping areas are designed to:</p> <ul style="list-style-type: none"> (a) be easily maintained throughout the ongoing use of the site; (b) allow sufficient area and access to sunlight and water for plant growth; (c) not cause a nuisance to occupants of the site or members of the public; and (d) maintain or enhance the safety of pedestrians through the use of Crime Prevention Through Environmental Design principles. 	<p>A07 No acceptable outcome is provided.</p>	<p>✓</p>	<p>Landscaping treatments will be installed in a manner which will provide for strong and healthy vegetation growth and will provide an effective screen overtime.</p>

Table 9.4.2.3B—Side and rear boundary landscape treatments

Location or use	Landscape Strip Minimum Width	Screen Fencing Minimum Height	Extent of treatment
Where car parking, servicing or manoeuvring areas adjoin a side or rear boundary	1 metre	Not applicable	To the extent these areas adjoin the boundary
Where involving a use other than a dwelling house on a site with a common boundary with land in the Low density residential zone, the Medium density residential zone or the Rural residential zone:	1.5 metres	1.8 metres	Along the common boundary.
Development for an industrial activity which has a common boundary with land not within the Industry zone	2 metres	1.8 metres	Along the common boundary
Development involving (a) Tourist park not in the Rural zone (b) Sales office (c) Multiple dwelling (d) Residential care facility; or (e) Dual occupancy	Not applicable	1.8 metres	Along all side and rear boundaries and between dwellings for a Dual occupancy.
Development involving (a) Tourist park in the Rural zone (b) Service station (c) Car wash; or (d) Utility installation	2 metres	Not applicable	Along all side and rear boundaries
For: (a) waste storage; (b) equipment; (c) servicing areas; and (d) private open space and site facilities associated with Caretaker's accommodation.	Not applicable	1.8 metres	To prevent visibility

Note—Where more than one landscape treatment is applicable to a development in the above table, the development is to provide a landscape treatment that satisfies all applicable minimum specifications.

9.4.3 Parking and access code

9.4.3.1 Application

This code applies to assessing development where it is identified in the assessment benchmarks for assessable development and requirements for accepted development column of an assessment table in Part 5 of the planning scheme.

9.4.3.2 Purpose

- (1) The purpose of the Parking and access code is to ensure:
 - (a) parking areas are appropriately designed, constructed and maintained;
 - (b) the efficient functioning of the development and the local road network; and
 - (c) all development provides sufficient parking, loading/service and manoeuvring areas to meet the demand generated by the use.

- (2) The purpose of the code will be achieved through the following overall outcomes:
 - (a) Land uses have a sufficient number of parking and bicycle spaces designed in a manner to meet the requirements of the user;
 - (b) Parking spaces and associated manoeuvring areas are safe, functional and provide equitable access;
 - (c) Suitable access for all types of vehicles likely to utilise a parking area is provided in a way that does not compromise the safety and efficiency of the surrounding road network;
 - (d) Premises are adequately serviced to meet the reasonable requirements of the development; and
 - (e) End of trip facilities are provided by new major developments to facilitate alternative travel modes.

9.4.3.3 Criteria for assessment

Table 9.4.3.3A—Parking and access code – For accepted development subject to requirements and assessable development

Performance outcomes	Acceptable outcomes	Complies	Comments
For accepted development subject to requirements and assessable development			
Car parking spaces			

Performance outcomes	Acceptable outcomes	Complies	Comments
<p>PO1 Development provides sufficient car parking to accommodate the demand likely to be generated by the use, having regard to the:</p> <ul style="list-style-type: none"> (a) nature of the use; (b) location of the site; (c) proximity of the use to public transport services; (d) availability of active transport infrastructure; and (e) accessibility of the use to all members of the community. 	<p>AO1 The number of car parking spaces provided for the use is in accordance with Table 9.4.3.3B.</p> <p>Note—Car parking spaces provided for persons with a disability are to be considered in determining compliance with AO1.</p>	✓	<p>Onsite car parking and bus parking is being provided which will be sufficient to accommodate the demands of the development. In the event that additional spaces are required once the development is operational, there is ample opportunity to provide for additional spaces if required.</p>
Vehicle crossovers			
<p>PO2 Vehicle crossovers are provided to:</p> <ul style="list-style-type: none"> (a) ensure safe and efficient access between the road and premises; (b) minimize interference with the function and operation of roads; and (c) minimise pedestrian to vehicle conflict. 	<p>AO2.1 Vehicular access to/from Council roads is designed and constructed in accordance with the Standard drawings in Planning Scheme Policy 4 - FNQROC Regional Development Manual.</p>	✓	<p>A new access is proposed to Fichera Road. Such works will be undertaken in accordance with the FNQROC Development Manual.</p>
	<p>AO2.2 Development on a site with two or more road frontages provides vehicular access from:</p> <ul style="list-style-type: none"> (a) the primary frontage where involving Community activities or Sport and recreation activities, unless the primary road frontage is a State-controlled road; or (b) from the lowest order road in all other instances. 	x	N/A

Performance outcomes	Acceptable outcomes	Complies	Comments
	AO2.3 Vehicular access for particular uses is provided in accordance with Table 9.4.3.3E.	✓ / x	
PO3 Access, manoeuvring and car parking areas include appropriate pavement treatments having regard to: (a) the intensity of anticipated vehicle movements; (b) the nature of the use that they service; and (c) the character of the surrounding locality.	AO3 Access, manoeuvring and car parking areas include pavements that are constructed in accordance with Table 9.4.3.3C.	x	Proposed land use is not listed however the access will be designed to accommodate the type of vehicles that will be used to service the development.
For assessable development			
Parking area location and design			
PO4 Car parking areas are located and designed to: (a) ensure safety and efficiency in operation; and (b) be consistent with the character of the surrounding locality.	AO4.1 Car parking spaces, access and circulation areas have dimensions in accordance with AS/NZS 2890.1 Off-street car parking.	✓	Complies – refer to proposal plans for details.
	AO4.2 Disabled access and car parking spaces are located and designed in accordance with AS/NZS 2890.6 Parking facilities - Off-street parking for people with disabilities.	x	People with disabilities will not be accommodated at the premises.
	AO4.3 The car parking area includes designated pedestrian routes that provide connections to building entrances.	✓	Being a workers accommodation facility, pedestrian routes throughout the development will largely be informal.

Performance outcomes	Acceptable outcomes	Complies	Comments
	<p>AO4.4 Parking and any set down areas are:</p> <ul style="list-style-type: none"> (a) wholly contained within the site; (b) visible from the street where involving Commercial activities, Community activities, Industrial activities or a use in the Recreation and open space zone; (c) are set back behind the main building line where involving a Dual occupancy, Multiple dwelling, Residential care facility or Retirement facility; and (d) provided at the side or rear of a building in all other instances. 	✓	<p>All parking and loading and unloading areas are wholly contained within the site.</p>
Site access and manoeuvring			
<p>PO5 Access to, and manoeuvring within, the site is designed and located to:</p> <ul style="list-style-type: none"> (a) ensure the safety and efficiency of the external road network; (b) ensure the safety of pedestrians; (c) provide a functional and convenient layout; and (d) accommodate all vehicles intended to use the site. 	<p>AO5.1 Access and manoeuvrability is in accordance with :</p> <ul style="list-style-type: none"> (a) AS28901 – Car Parking Facilities (Off Street Parking); and (b) AS2890.2 – Parking Facilities (Off-street Parking) Commercial Vehicle Facilities. <p>Note—Proposal plans should include turning circles designed in accordance with AP34/95 (Austroads 1995) Design Vehicles and Turning Path Templates.</p>	✓	<p>Complies – refer to plans of development</p>
	<p>AO5.2 Vehicular access has a minimum sight distance in accordance with Part 5 of AUSTROADS.</p>	✓	<p>Complies – refer to proposal plans and the Traffic Report prepared by ARO Industries.</p>

Performance outcomes	Acceptable outcomes	Complies	Comments
	<p>AO5.3 Vehicular access is located and designed so that all vehicles enter and exit the site in a forward gear.</p>	✓	Complies
	<p>AO5.4 Pedestrian and cyclist access to the site: (a) is clearly defined; (b) easily identifiable; and (c) provides a connection between the site frontage and the entrance to buildings and end of trip facilities (where provided).</p>	✓	Complies
<p>PO6 Development that involves an internal road network ensures that it's design: (a) ensure safety and efficiency in operation; (b) does not impact on the amenity of residential uses on the site and on adjoining sites, having regard to matters of: (i) hours of operation; (ii) noise (iii) light; and (iv) odour; (c) accommodates the nature and volume of vehicle movements anticipated to be generated by the use; (d) allows for convenient access to key on-site features by pedestrians, cyclists and motor vehicles; and (e) in the Rural zone, avoids environmental degradation.</p>	<p>AO6.1 Internal roads for a Tourist park have a minimum width of: (a) 4 metres if one way; or (b) 6 metres if two way.</p>	x	N/A
	<p>AO6.2 For a Tourist park, internal road design avoids the use of cul-de-sacs in favour of circulating roads, where unavoidable, cul-de-sacs provide a full turning circle for vehicles towing caravans having: (a) a minimum approach and departure curve radius of 12 metres; and (b) a minimum turning circle radius of 8 metres.</p>	x	N/A
	<p>AO6.3 Internal roads are imperviously sealed and drained, apart from those for an Energy and infrastructure activity or Rural activity.</p>	✓	Internal driveway and parking areas will be constructed using a gravel surface.

Performance outcomes	Acceptable outcomes	Complies	Comments
	<p>AO6.4 Speed control devices are installed along all internal roads, apart from those for an Energy and infrastructure activity or Rural activity, in accordance with Complete Streets.</p>	x	N/A
	<p>AO6.5 Internal roads, apart from those for an Energy and infrastructure activity or Rural activity, are illuminated in accordance with AS 4282 (as amended) - Control of Obtrusive effects of outdoor lighting.</p>	x	N/A
	<p>AO6.6 Where involving an accommodation activity, internal roads facilitate unobstructed access to every dwelling, accommodation unit, accommodation site and building by emergency services vehicles.</p>	x	While not an accommodation activity, suitable access for emergency vehicles is provided
	<p>AO6.7 For an Energy and infrastructure activity or Rural activity, internal road gradients: (a) are no steeper than 1:5; or (b) are steeper than 1:5 and are sealed.</p>	✓	Road gradients are gentle in slope.
Servicing			
<p>PO7 Development provides access, maneuvering and servicing areas on site that: (a) accommodate a service vehicle commensurate with the likely demand generated by the use; (b) do not impact on the safety or efficiency of internal car parking or maneuvering areas; (c) do not adversely impact on the safety or efficiency of</p>	<p>AO7.1 All unloading, loading, service and waste disposal areas are located: (a) on the site; (b) to the side or rear of the building, behind the main building line; (c) not adjacent to a site boundary where the adjoining property is used for a sensitive use.</p>	✓	Loading and unloading facilities to be contained on site and located as to not impact on adjoining properties.

Performance outcomes	Acceptable outcomes	Complies	Comments
(d) the road network; provide for all servicing functions associated with the use; and (e) are located and designed to minimise their impacts on adjoining sensitive land uses and streetscape quality.	AO7.2 Unloading, loading, service and waste disposal areas allow service vehicles to enter and exit the site in a forward gear.	✓	Complies
	AO7.3 Development provides a servicing area, site access and maneuvering areas to accommodate the applicable minimum servicing vehicle specified in Table 9.4.3.3B .	×	Land use not specified however will be designed to accommodate vehicles accessing the site.
Maintenance			
PO8 Parking areas are used and maintained for their intended purpose.	AO8.1 Parking areas are kept and used exclusively for parking and are maintained in a suitable condition for parking and circulation of vehicles.	✓	Will comply
	AO8.2 All parking areas will be compacted, sealed, drained, line marked and maintained until such time as the development ceases.	✓	Car parking and internal driveway will not be sealed however these areas will be maintained for the life of the development.
End of trip facilities			
PO9 Development within the Centre zone; Industry zone or Emerging community zone provides facilities for active transport users that: (a) meet the anticipated demand generated from the use; (b) comprise secure and convenient bicycle parking and storage; and (c) provide end of trip facilities for all active transport users.	AO9.1 The number of bicycle parking spaces provided for the use is in accordance with Table 9.4.3.3D .	×	N/A
	AO9.2 End of trip facilities are provided in accordance with Table 9.4.3.3D .	×	N/A
If for Educational establishment or Child care centre where involving more than 100 vehicle movements per day or Renewable energy facility, Sport and recreation activities or Tourist park			

Performance outcomes	Acceptable outcomes	Complies	Comments
<p>PO10 The level of traffic generated by the development on the surrounding local road network must not result in unacceptable impacts on adjacent land and local road users.</p>	<p>AO10 A traffic impact report is prepared by a suitably qualified person that identifies:</p> <ul style="list-style-type: none"> (a) the expected traffic movements to be generated by the facility; (b) any associated impacts on the road network; and (c) any works that will be required to address the identified impacts. 	✓	<p>Refer to the Traffic Report prepared by ARO Industries. External works to Fichera Road is identified to accommodate the development.</p>
<p>If for Educational establishment or Child care centre where involving more than 100 vehicle movements per day or Renewable energy facility, Sport and recreation activities or Tourist park</p>			
<p>PO11 The level of traffic generated by the development on the surrounding local road network must not result in unacceptable impacts on adjacent land and local road users.</p>	<p>AO11 A traffic impact report is prepared by a suitably qualified person that identifies:</p> <ul style="list-style-type: none"> (d) the expected traffic movements to be generated by the facility; (e) any associated impacts on the road network; and (f) any works that will be required to address the identified impacts. 	x	<p>N/A</p>

Table 9.4.3.3B—Vehicle Parking and Service Vehicle Space Requirements

Definition	Minimum number of Car parking spaces	Minimum Service Vehicle Space Provision
Adult store	<p><u>Inside the Centre zone:</u> One space per 50m² or part thereof of GFA up to 400m² GFA, and one space per 20m² or part thereof of GFA above 400m².</p> <p><u>Outside the Centre zone:</u> One space per 25m² or part thereof of GFA up to 400m² GFA, and one space per 10m² or part thereof of GFA above 400m².</p>	One SRV space.
Agricultural supplies store	<p><u>Inside the Centre zone:</u> One space per 50m² or part thereof of GFA up to 400m² GFA, and one space per 15m² or part thereof of GFA above 400m².</p> <p><u>Outside the Centre zone:</u> One space per 30m² or part thereof of GFA up to 400m² GFA, and one space per 10m² or part thereof of GFA above 400m².</p> <p>Queuing for 3 vehicles should be supplied where a GFA is greater than 600m².</p>	One HRV space.
Air services	<p><u>If accepted development subject to requirements development:</u> One space per 90m² or part thereof of net lettable area; or</p> <p><u>If Assessable development:</u> As determined by Council.</p>	<p><u>If accepted development subject to requirements:</u> One space per 200m² or part thereof of net lettable area.</p> <p><u>If assessable development:</u> As determined by Council.</p>
Animal husbandry	<p><u>If accepted development subject to requirements :</u> One space.</p> <p><u>If assessable development:</u> As determined by Council.</p>	<p><u>If accepted development subject to requirements:</u> Nil.</p> <p><u>If assessable development:</u> As determined by Council.</p>
Animal keeping	Minimum of three spaces or one space per 200m ² of use area, whichever is greater.	One SRV space.

Definition	Minimum number of Car parking spaces	Minimum Service Vehicle Space Provision
Aquaculture	<p>If accepted development subject to requirements:</p> <ul style="list-style-type: none"> In the rural or rural residential zones - two spaces; or Enclosed within a building - one space per 90m² of net lettable area. <p>If assessable development: As determined by Council.</p>	<p>If accepted development subject to requirements: Nil.</p> <p>If assessable development: As determined by Council.</p>
Brothel	As determined by Council.	As determined by Council.
Bulk landscape supplies	Minimum of five spaces or one space per 250m ² of use area, whichever is greater.	One AV if the site has an area of greater than 2,000m ² ; or One HRV space.
Car wash	Minimum of two parking spaces plus 1 car queuing space for each car wash or service bay and parking at rates applicable to ancillary use/s.	One AV space.
Caretaker's accommodation	One space per dwelling unit.	Nil.
Cemetery	As determined by Council.	As determined by Council.
Child care centre	A minimum of 3 spaces will be required to be used for setting down and picking up of children, plus one space per 10 children for staff parking.	One SRV space.
Club	Minimum of 5 spaces per use or one space per 25m ² or part thereof of GFA, whichever is greater.	One SRV space; and One HRV space if greater than 500m ² .
Community care centre	Minimum of 5 spaces per use or one space per 25m ² or part thereof of GFA, whichever is greater.	One SRV space.
Community residence	Three spaces.	Nil.
Community use	Minimum of 5 spaces per use or one space per 50m ² or part thereof of GFA, whichever is greater.	One SRV space if greater than 500m ² GFA.
Crematorium	One space per 30m ² GFA or part thereof.	As determined by Council.

Definition	Minimum number of Car parking spaces	Minimum Service Vehicle Space Provision
Cropping	<p><u>If accepted development subject to requirements:</u> Two spaces.</p> <p><u>If assessable development:</u> As determined by Council.</p>	<p><u>If accepted development subject to requirements:</u> Nil.</p> <p><u>If assessable development:</u> As determined by Council.</p>
Detention facility	As determined by Council.	As determined by Council.
Dual occupancy	One covered space per dwelling; and One visitor space.	Nil.
Dwelling house	One covered space per dwelling house. One space per secondary dwelling.	Nil.
Dwelling unit	<p>One covered space per dwelling unit.</p> <p>A minimum of 0.25 spaces per dwelling is to remain in common property for visitor use.</p>	Nil
Educational establishment	<p><u>For all establishments:</u> 1 space per every 10 students plus 1 space per employee, and</p> <p>Provision for 3 vehicles for loading and unloading of passengers in addition to the requirements above.</p>	<p><u>For accepted development subject to requirements:</u> One HRV space; and One SRV space; and A minimum of 3 Bus / coach parking / set down areas.</p> <p><u>For assessable development:</u> As determined by Council.</p>
Emergency services	Minimum of 5 spaces per use or one space per 25m ² or part thereof of GFA, whichever is greater.	As determined by Council.
Environment facility	As determined by Council.	As determined by Council.
Extractive industry	As determined by Council.	As determined by Council.

Definition	Minimum number of Car parking spaces	Minimum Service Vehicle Space Provision
Food and drink outlet	<p>Accepted in an existing building within the Centre zone.</p> <p><u>Inside the Centre zone:</u> One space per 50m² or part thereof of GFA up to 400m² GFA and one space per 15m² or part thereof of GFA above 400m².</p> <p><u>Outside the Centre zone:</u> One space per 25m² or part thereof of GFA up to 400m² GFA and one space per 10m² or part thereof of GFA above 400m².</p> <p><u>Drive-through:</u> Queuing spaces for 6 passenger vehicles within the site boundaries.</p> <p>One service vehicle space per use or one service vehicle space per 1,000m² GFA, whichever is greater.</p>	One HRV space.
Function facility	One space per 30m ² or part thereof of GFA.	One SRV space.
Funeral parlour	<p>Accepted in an existing building within the Centre zone.</p> <p><u>Inside the Centre zone:</u> One space per 20m² or part thereof of GFA up to 400m² GFA, and one space per 10m² or part thereof of GFA above 400m².</p> <p><u>Outside the Centre zone:</u> One space per 25m² or part thereof of GFA up to 400m² GFA, and one space per 15m² or part thereof of GFA above 400m².</p>	One SRV space.
Garden centre	<p>A minimum of 5 spaces for customer parking or one space per 150m² or part thereof of use area, whichever is greater.</p> <p>One service vehicle space per use or one service vehicle space per 800m² use area, whichever is greater.</p>	One AV if the site has an area of greater than 2,000m ² , otherwise One HRV space.
Hardware and trade supplies	<p>Accepted in an existing building within the Centre zone.</p> <p><u>Inside the Centre zone:</u> One space per 50m² or part thereof of GFA up to 400m² GFA, and one space per or part thereof of GFA above 400m².</p> <p><u>Outside the Centre zone:</u> One space per or part thereof of GFA up to 400m² GFA, and one space per 15m² or part thereof of GFA above 400m².</p>	One AV if the site has an area of greater than 2,000m ² , otherwise One HRV space.

Definition	Minimum number of Car parking spaces	Minimum Service Vehicle Space Provision
Health care services	<p>Accepted in an existing building within the Centre zone.</p> <p><u>Inside the Centre zone:</u> One space per 40m² or part thereof of net lettable area.</p> <p><u>Outside the Centre zone:</u> One space per 20m² of or part thereof of net lettable area.</p>	One SRV space per 500m ² GFA.
High impact industry	One space per 90m ² GFA or part thereof.	One AV space if the site has an area greater than 2,000m ² , otherwise One HRV.
Home based business	<p><u>Bed and breakfasts:</u> One space per guest room.</p> <p><u>Other home based business:</u> One space for home based business and one covered space for the dwelling.</p>	Nil.
Hospital	<p>One space per 6 residential care beds.</p> <p>One space per 4 hostel unit beds.</p> <p>Visitor parking at 30% of resident parking requirements.</p>	<p>One HRV space.</p> <p>One SRV for every 800m² of GFA and part thereof; and</p> <p>One space for an emergency vehicle.</p>
Hotel	<p>One space per 10m² or part thereof of GFA per bar, beer garden and other public area.</p> <p>One space per 50m² or part thereof of GFA per bulk liquor sales area.</p> <p>One space per guest room.</p>	One HRV space.
Indoor sport and recreation	<p><u>If accepted development subject to requirements:</u> One space per 25m² of net lettable area.</p> <p><u>If assessable development:</u> As determined by Council.</p>	<p>An internal bus set down and pick up area that enables the bus to be in a forward motion at all times whilst onsite</p> <p>Internal dedicated taxi bays provided within 200 metres of the site entrance.</p>

Definition	Minimum number of Car parking spaces	Minimum Service Vehicle Space Provision
Intensive animal industries	<p>If accepted development subject to requirements: Two spaces.</p> <p>If assessable development: As determined by Council.</p>	One SRV space.
Intensive horticulture	<p>If accepted development subject to requirements: Two spaces.</p> <p>If assessable development: As determined by Council.</p>	<p>If accepted development subject to requirements: Nil.</p> <p>If assessable development: As determined by Council.</p>
Landing	As determined by Council.	As determined by Council.
Low impact industry	One space per 90m ² GFA or part thereof.	One AV space if the site has an area greater than 2,000m ² , otherwise One HRV.
Major electricity infrastructure	As determined by Council.	As determined by Council.
Major sport, recreation and entertainment facility	As determined by Council.	As determined by Council.
Marine industry	One space per 90m ² GFA or part thereof.	One HRV space if the site has an area greater than 1,000m ² , otherwise One SRV space.
Market	As determined by Council.	As determined by Council.
Medium impact industry	One space per 90m ² GFA or part thereof.	One AV space if the site has an area greater than 2,000m ² , otherwise One HRV.
Motor sport facility	As determined by Council.	As determined by Council.

Definition	Minimum number of Car parking spaces	Minimum Service Vehicle Space Provision
Multiple dwelling	<p>One covered space per dwelling.</p> <p>One dedicated vehicle wash-down bay for premises containing 5 or more dwellings.</p> <p>A minimum of 0.25 spaces per dwelling is to remain in common property for visitor use.</p>	Nil.
Nature-based tourism	One space per dwelling; or 0.75 spaces per guest room if in dormitory or shared facilities.	As determined by Council.
Nightclub entertainment facility	One space per 60m ² GFA or part thereof.	Nil.
Non-resident workforce accommodation	One space per dwelling unit.	Nil.
Office	<p>Accepted in an existing building within the Centre zone.</p> <p><u>Inside the Centre zone:</u> One space per 20m² or part thereof of GFA up to 400m² GFA, and one space per 10m² or part thereof of GFA above 400m².</p> <p><u>Outside the Centre zone:</u> One space per 25m² or part thereof of GFA up to 400m² GFA, and one space per 15m² or part thereof of GFA above 400m².</p>	One SRV space.
Outdoor sales	<p>A minimum of 5 spaces for customer parking or one space per 150m² of use area, whichever is greater.</p> <p>One service vehicle space per use or one service vehicle space per 800m², whichever is greater.</p>	<p>One AV if the site has an area of greater than 2,000m², otherwise One HRV space.</p>

Definition	Minimum number of Car parking spaces	Minimum Service Vehicle Space Provision
Outdoor sport and recreation	Coursing, horse racing, pacing or trotting: <ul style="list-style-type: none"> • One space per five seated spectators; plus • One space per 5m² of other spectator areas. Football: <ul style="list-style-type: none"> • 50 spaces per field. Lawn bowls: <ul style="list-style-type: none"> • 30 spaces per green. Swimming pool: <ul style="list-style-type: none"> • 15 spaces; plus • One space per 100m² of useable site area. Tennis or other Court: <ul style="list-style-type: none"> • Four spaces per court. Golf Course: <ul style="list-style-type: none"> • Four spaces per tee on the course; plus • One space per 50m² of net lettable area. <p><u>Any other use:</u> As determined by council.</p>	An internal bus set down and pick up area that enables the bus to be in a forward motion at all times whilst onsite Internal dedicated taxi bays provided within 200 metres of the site entrance.
Park	As determined by Council.	As determined by Council.
Parking station	Not applicable	Nil.
Permanent plantation	<p><u>If accepted development subject to requirements:</u> Two spaces.</p> <p><u>If assessable development:</u> As determined by Council.</p>	<p><u>If accepted development subject to requirements:</u> Nil.</p> <p><u>If assessable development:</u> As determined by Council.</p>
Place of worship	Minimum of 5 spaces per use or one space per 25m ² or part thereof of GFA, whichever is greater.	One SRV space.
Port services	As determined by Council.	As determined by Council.
Relocatable home park	One space for each home site plus 1 space for each 5 home sites or part thereof for visitors.	One HRV space.
Renewable energy facility	As determined by Council.	As determined by Council.

Definition	Minimum number of Car parking spaces	Minimum Service Vehicle Space Provision
Research and technology industry	One space per 90m ² GFA or part thereof.	One HRV space if the site has an area greater than 1,000m ² , otherwise One SRV space.
Residential care facility	One space per 4 hostel unit beds. Visitor parking at 30% of resident parking requirements.	One SRV space; and One space for an emergency vehicle.
Resort complex	As determined by Council.	As determined by Council.
Retirement facility	One covered space per unit and 0.5 spaces for visitors parking.	One SRV space; and One space for an emergency vehicle.
Roadside stall	One space per stall.	Nil.
Rooming accommodation	<u>Inside the Centre zone:</u> One space per 15 beds. <u>Outside the Centre zone:</u> One space per 8 beds.	One SRV space. One space for a 20 seater bus.
Rural industry	One space per 90m ² GFA or part thereof.	One AV space.
Rural workers' accommodation	<u>If accepted development subject to requirements:</u> Nil <u>If Assessable development:</u> As determined by Council.	<u>If accepted development subject to requirements:</u> Nil <u>If Assessable development:</u> As determined by Council.
Sales office	One space per 25m ² GFA or part thereof.	Nil.
Service industry	Accepted where in an existing building within the Centre zone. <u>Inside the Centre zone:</u> One space per 50m ² or part thereof of GFA up to 400m ² GFA, and one space per 10m ² or part thereof of GFA above 400m ² . <u>Outside the Centre zone:</u> One space per 25m ² or part thereof of GFA up to 400m ² GFA, and one space per 15m ² or part thereof of GFA above 400m ² .	One HRV space if the site is greater than 2,000m ² , otherwise One SRV space.
Service station	Minimum of four spaces plus car parking at rates applicable to ancillary use/s.	One AV space.

Definition	Minimum number of Car parking spaces	Minimum Service Vehicle Space Provision
Shop	<p>Accepted where in an existing building within the Centre zone.</p> <p><u>Inside the Centre zone:</u> One space per 50m² or part thereof of GFA up to 400m² GFA, and one space per 10m² or part thereof of GFA above 400m².</p> <p><u>Outside the Centre zone:</u> One space per 25m² or part thereof of GFA up to 400m² GFA, and one space per 15m² or part thereof of GFA above 400m².</p>	One HRV space if the site is greater than 2,000m ² , otherwise One SRV space.
Shopping centre	<p><u>Inside the Centre zone:</u> One space per 50m² or part thereof of GFA up to 400m² GFA and one space per 25m² or part thereof of GFA above 400m².</p> <p><u>Outside the Centre zone:</u> One space per 25m² or part thereof of GFA up to 400m² GFA and one space per 15m² or part thereof of GFA above 400m².</p>	One AV space per 1,000m ² ; and One SRV space per 500m ² ; or One SRV space per every 2 specialty uses, whichever the greater.
Short-term accommodation	One space per unit.	One HRV space if involves the serving of food or beverage; otherwise One SRV space.
Showroom	<p>Accepted in an existing building within the Centre zone.</p> <p><u>Inside the Centre zone:</u> One space per 25m² or part thereof of GFA up to 400m² GFA, and one space per 10m² or part thereof of GFA above 400m².</p> <p><u>Outside the Centre zone:</u> One space per 50m² or part thereof of GFA up to 400m² GFA, and one space per 15m² or part thereof of GFA above 400m².</p>	One AV space and One SRV space if the site is greater than 2,000m ² ; or One HRV space; and One SRV Space.
Special industry	One space per 90m ² GFA or part thereof.	One AV space if the site has an area greater than 2,000m ² , otherwise One HRV.
Substation	<u>If assessable development:</u> As determined by Council.	As determined by Council.

Definition	Minimum number of Car parking spaces	Minimum Service Vehicle Space Provision
Telecommunications facility	<p>If accepted development subject to requirements: Nil.</p> <p>If assessable development: As determined by Council.</p>	<p>If accepted development subject to requirements: Nil.</p> <p>If assessable development: As determined by Council.</p>
Theatre	One space per 15m ² or part thereof of net lettable area, or one space per 5 seated spectators whichever is the greater.	One SRV space.
Tourist attraction	As determined by Council.	As determined by Council.
Tourist park	<p>One space within each accommodation site plus 1 additional visitor space per 10 accommodation sites.</p> <p>Queuing for 2 vehicles towing caravans and 1 holding bay for a vehicle towing a caravan plus additional queuing for 1 vehicle towing a caravan per 40 accommodation sites.</p>	One HRV space.
Transport depot	One space per 125m ² GFA or part thereof.	One AV space if the site has an area greater than 2,000m ² , otherwise One HRV.
Utility installation	<p>If accepted development subject to requirements: Nil.</p> <p>If assessable development: As determined by Council.</p>	<p>If accepted development subject to requirements: Nil.</p> <p>If assessable development: As determined by Council.</p>
Veterinary services	<p>Accepted in an existing building within the Centre zone.</p> <p>Inside Centre zone: One space per 40m² or part thereof of net lettable area.</p> <p>Outside Centre zone: One space per 20m² or part thereof of net lettable area.</p>	One HRV space if greater than 500m ² GFA; and One SRV space per 500m ² GFA.

Definition	Minimum number of Car parking spaces	Minimum Service Vehicle Space Provision
Warehouse	One space per 90m ² GFA or part thereof.	One AV space if the site has an area greater than 2,000m ² , otherwise One HRV.
Wholesale nursery	As determined by Council.	As determined by Council.
Winery	As determined by Council.	As determined by Council.

Note—Any use not herein defined - as determined by Council.

Table 9.4.3.3C—Pavement Standards for Access, Manoeuvring and Car Parking areas

Zone	Compacted Gravel Base (minimum thickness)	Surfacing Options
All development other than dwelling house		
All zones other than the Conservation zone or the Rural zone	75mm	Reinforced concrete with a minimum thickness of: <ul style="list-style-type: none"> • 100mm for parking areas; and • 150mm for access ways.
	150mm	Asphalt with a minimum thickness of 25mm
	150mm	Two coat sprayed bitumen seal
	150mm	Concrete pavers
Conservation zone or Rural zone	Not applicable	Minimum 150mm thickness compacted gravel suitable for all weather and dust free
Dwelling house		
All zones	75mm	Reinforced concrete with a minimum thickness of: <ul style="list-style-type: none"> • 100mm for parking areas; and • 150mm for access ways.
	150mm	Asphalt with a minimum thickness of 25mm
	150mm	Two coat sprayed bitumen seal
	150mm	Concrete pavers
	Not applicable	Minimum 150mm thickness compacted gravel suitable for all weather and dust free

Note—Where more than one surfacing option is listed, any one of the treatments listed may be provided.

Table 9.4.3.3D—Bicycle Parking and End of Trip Facility Requirements

Definition	Minimum number of bicycle parking spaces	Minimum end of trip facilities
Commercial activities	<p>New or redeveloped commercial activities buildings (other than a shopping centre), provide:</p> <ul style="list-style-type: none"> • For employees - secure bicycle storage for 8% of building staff (based on one person per 60m² Gross leasable area). Secure bicycle parking involves a bicycle locker or bicycle rail in a locked compound/cage; and • visitor facilities: <ul style="list-style-type: none"> - one bicycle rack space per 750m² NLA or part thereof; and - bicycle parking, signposted; and adjacent to a major public entrance to the building. 	<p>New or redeveloped commercial activities buildings (other than a shopping centre), provide the following employee facilities, which are continually accessible to employees:</p> <ul style="list-style-type: none"> • accessible showers at the rate of one shower per 10 bicycle spaces provided or part thereof; • changing facilities adjacent to showers; and • secure lockers in the changing facilities for 20% of building staff (based on one person per 60m² GLA to cater for walkers, cyclists and other active users.
Community use	Four spaces per 1,500m ² GFA.	As determined by Council.
Educational establishment	<p>New or redeveloped education facilities, provide:</p> <ul style="list-style-type: none"> • For employees - secure bicycle storage for 8% of building staff (based on one person per 75m² GLA). Secure bicycle parking involves a bicycle locker or bicycle rail in a locked compound/cage; and • For students: <ul style="list-style-type: none"> - minimum of 8% of the peak number of students using the building at any one time (with 75% occupancy); and - bicycle storage within 100m of the building front entrance(s); or added to the campus central bicycle storage area. 	<p>New or redeveloped education facilities, provide the following employee facilities, which are continually accessible to employees:</p> <ul style="list-style-type: none"> • accessible showers at the rate of one per 10 bicycle spaces provided or part thereof; • changing facilities adjacent to showers; and • secure lockers in changing facilities for 20% of building staff (based on one person per 75m² GLA) to cater for cyclists, walkers and other active users.

Definition	Minimum number of bicycle parking spaces	Minimum end of trip facilities
Food & drink outlet	One space per 100m ² GFA.	As determined by Council.
Function facility	One space per 300m ² GFA.	As determined by Council.
Health care services	<p>New or redeveloped healthcare facilities, provide the following facilities:</p> <ul style="list-style-type: none"> • For employees - secure bicycle storage for 5% of building staff (based on one person per 75m² GLA). Secure bicycle parking involves a bicycle locker or bicycle rail in a locked compound/cage; and • For visitors: <ul style="list-style-type: none"> - facilities with in-patient accommodation provide one space per each 30 beds; - facilities without in-patient accommodation provide one space per each 4 practitioners; - aged care facilities provide one space per each 60 beds; - In every instance above, provide a minimum of 5 bicycle parking spaces; and - bicycle parking provided: in an accessible location, signposted and within 10m a major public entrance to the building. 	<p>New or redeveloped healthcare facilities, provide the following employee facilities, which are continually accessible to employees:</p> <ul style="list-style-type: none"> • accessible showers at the rate of one per 10 bicycle spaces provided or part thereof; • changing facilities adjacent to showers; and • secure lockers in changing facilities for 20% of building staff (based on one person per 75m² GLA) to cater for cyclists, walkers and other active users.
Hospital	As determined by Council.	As determined by Council.
Indoor sport and recreation	One space per employee plus 1 space per 200m ² GFA	As determined by Council.
Park	As determined by Council.	As determined by Council.
Rooming accommodation	One space per 4 letting rooms.	As determined by Council.
Short term accommodation	One space per 4 letting rooms.	As determined by Council.

Definition	Minimum number of bicycle parking spaces	Minimum end of trip facilities
Shop or Shopping centre	<p>New or redeveloped shopping centres, provide:</p> <ul style="list-style-type: none"> • For employees - secure bicycle storage for 8% of building staff (based on one person per 60m² Gross leasable area). Secure bicycle parking involves a bicycle locker or bicycle rail in a locked compound/cage; and • visitor facilities: <ul style="list-style-type: none"> - one space per 500m² GLA or part thereof for centres under 30,000m²; or - one space per 750m² GLA or part thereof for centres between 30,000m² and 50,000m²; and - bicycle parking is signposted and within 10m of a major public entrance to the building. 	<p>New or redeveloped shopping centres, provide the following employee facilities, which are continually accessible to employees:</p> <ul style="list-style-type: none"> • accessible showers at the rate of one shower per 10 bicycle spaces provided or part thereof; • changing facilities adjacent to showers; and • secure lockers in the changing facilities for 20% of building staff (based on one person per 60m² GLA to cater for walkers, cyclists and other active users.
Theatre	One space per 100m ² GFA.	As determined by Council.

Table 9.4.3.3E—Vehicular Access for Specific Uses

Use	Design
Dwelling house	A secondary dwelling shares a vehicle crossover with the Dwelling house.
Car wash	Site access involves:
Service station	<ul style="list-style-type: none"> (a) a maximum width of 9 metres of any vehicle crossover across a footpath; (b) a minimum separation of 12 metres between any vehicle crossover and a road intersection; (c) a separate entrance and exit; and (d) a minimum separation between vehicle crossovers of 14 metres.
Industrial activities	Each lot is provided with no more than one access point every 15 metres.
Roadside stall	A single vehicular access point is provided to the site.
Tourist park	<ul style="list-style-type: none"> (a) a single vehicular access point is provided to the site; and (b) no accommodation site has individual vehicular access.

9.4.5 Works, services and infrastructure code

9.4.5.1 Application

- (1) This code applies to assessing development where it is identified in the assessment benchmarks for assessable development and requirements for accepted development column of an assessment table in Part 5 of the planning scheme.

9.4.5.2 Purpose

- (1) The purpose of the Works, services and infrastructure code is to ensure that all development is appropriately serviced by physical infrastructure, public utilities and services and that work associated with development is carried out in a manner that does not adversely impact on the surrounding area.
- (2) The purpose of the code will be achieved through the following overall outcomes:
 - (a) Development provides an adequate, safe and reliable supply of potable, fire-fighting and general use water in accordance with relevant standards;
 - (b) Development provides for the treatment and disposal of wastewater and ensures there are no adverse impacts on water quality, public health, local amenity or ecological processes;
 - (c) Development provides for the disposal of stormwater and ensures that there are no adverse impacts on water quality or ecological processes;
 - (d) Development connects to the road network and any adjoining public transport, pedestrian and cycle networks while ensuring no adverse impacts on the safe, convenient and efficient operation of these networks;
 - (e) Development provides electricity and telecommunications services that meet its desired requirements;
 - (f) Development is connected to a nearby electricity network with adequate capacity without significant environment, social or amenity impact;
 - (g) Development does not affect the efficient functioning of public utility mains, services or installations;
 - (h) Infrastructure dedicated to Council is cost effective over its life cycle;
 - (i) Work associated with development does not cause adverse impacts on the surrounding area; and
 - (j) Development prevents the spread of weeds, seeds or other pests.

9.4.5.3 Criteria for assessment

Table 9.4.5.3 - Works, services and infrastructure code – For accepted development subject to requirements and assessable development

Performance outcomes	Acceptable outcomes	Complies	Comments
For accepted development subject to requirements and assessable development			
Water supply			

Performance outcomes	Acceptable outcomes	Complies	Comments
<p>PO1 Each lot has an adequate volume and supply of water that:</p> <ul style="list-style-type: none"> (a) meets the needs of users; (b) is adequate for fire-fighting purposes; (c) ensures the health, safety and convenience of the community; and (d) minimises adverse impacts on the receiving environment. 	<p>AO1.1 Development is connected to a reticulated water supply system in accordance with the Design Guidelines and Specifications set out in the Planning Scheme Policy 4 – FNQROC Regional Development Manual other than where located:</p> <ul style="list-style-type: none"> (a) in the Conservation zone, Rural zone or Rural residential zone; and (b) outside a reticulated water supply service area. 	x	N/A
	<p>AO1.2 Development, where located outside a reticulated water supply service area and in the Conservation zone, Rural zone or Rural residential zone is provided with:</p> <ul style="list-style-type: none"> (a) a bore or bores are provided in accordance with the Design Guidelines set out in the Planning Scheme Policy 4 – FNQROC Regional Development Manual; or (b) on-site water storage tank/s: <ul style="list-style-type: none"> (i) with a minimum capacity of 90,000L; (ii) fitted with a 50mm ball valve with a camlock fitting; and (iii) which are installed and connected prior to the occupation or use of the development. 	✓	<p>Water supply will be sourced from the irrigation scheme and will be treated to ensure it is suitable for human consumption.</p>
Wastewater disposal			

Performance outcomes	Acceptable outcomes	Complies	Comments
<p>PO2 Each lot provides for the treatment and disposal of effluent and other waste water that:</p> <ul style="list-style-type: none"> (a) meets the needs of users; (b) is adequate for fire-fighting purposes; (c) ensures the health, safety and convenience of the community; and (d) minimises adverse impacts on the receiving environment. 	<p>AO2.1 Development is connected to a reticulated sewerage system in accordance with the Design Guidelines and Specifications set out in the Planning Scheme Policy 4 – FNQROC Regional Development Manual other than where located:</p> <ul style="list-style-type: none"> (a) in the Conservation zone, Rural zone or Rural residential zone; and (b) outside a reticulated sewerage service area. 	x	N/A
	<p>AO2.2 An effluent disposal system is provided in accordance with ASNZ 1547 On-Site Domestic Wastewater Management (as amended) where development is located:</p> <ul style="list-style-type: none"> (a) in the Conservation zone, Rural zone or Rural residential zone; and (b) outside a reticulated sewerage service area. 	✓	Wastewater to be disposed onsite in accordance with an environmental authority to be obtained for ERA 63.
Stormwater infrastructure			
<p>PO3 Stormwater infrastructure is designed and constructed to collect and convey the design storm event to a lawful point of discharge in a manner that mitigates impacts on life and property.</p>	<p>AO3.1 Where located within a Priority infrastructure area or where stormwater infrastructure is available, development is connected to Council's stormwater network in accordance with the Design Guidelines and Specifications set out in the Planning Scheme Policy 4 – FNQROC Regional Development Manual.</p>	x	N/A

Performance outcomes	Acceptable outcomes	Complies	Comments
	<p>AO3.2 On-site drainage systems are constructed:</p> <ul style="list-style-type: none"> (a) to convey stormwater from the premises to a lawful point of discharge; and (b) in accordance with the Design Guidelines and Specifications set out in the Planning Scheme Policy 4 – FNQROC Regional Development Manual. 	✓	<p>Stormwater will be controlled and managed onsite and discharged to Fichera Road as the lawful point of discharge for the site.</p>
Electricity supply			
<p>PO4 Each lot is provided with an adequate supply of electricity</p>	<p>AO4 The premises:</p> <ul style="list-style-type: none"> (a) is connected to the electricity supply network; or (b) has arranged a connection to the transmission grid; or (c) where not connected to the network, an independent energy system with sufficient capacity to service the development (at near average energy demands associated with the use) may be provided as an alternative to reticulated electricity where: <ul style="list-style-type: none"> (i) it is approved by the relevant regulatory authority; and (ii) it can be demonstrated that no air or noise emissions; and (iii) it can be demonstrated that no adverse impact on visual amenity will occur. 	✓	<p>The development has access to the electrical network. Any upgrades required to the network will be established as part of the next detailed design phase of the development.</p>
Telecommunications infrastructure			

Performance outcomes	Acceptable outcomes	Complies	Comments
PO5 Each lot is provided with an adequate supply of telecommunication infrastructure	A05 Development is provided with a connection to the national broadband network or telecommunication services.	✓	Telecommunications are available to the site.
Existing public utility services			
PO6 Development and associated works do not affect the efficient functioning of public utility mains, services or installations.	A06 Public utility mains, services are relocated, altered or repaired in association with the works so that they continue to function and satisfy the relevant Design Guidelines and Specifications set out in the Planning Scheme Policy 4 – FNQROC Regional Development Manual.	✓	The development will not impact on any public utility.
Excavation or filling			
PO7 Excavation or filling must not have an adverse impact on the: (a) streetscape; (b) scenic amenity; (c) environmental values; (d) slope stability; (e) accessibility; or (f) privacy of adjoining premises.	A07.1 Excavation or filling does not occur within 1.5 metres of any site boundary.	✓	Minor works are proposed adjacent the side boundary for landscaping treatments.
	A07.2 Excavation or filling at any point on a lot is to be no greater than 1.5 metres above or below natural ground level.	✓	No significant earthworks proposed.
	A07.3 Earthworks batters: (a) are no greater than 1.5 metres in height; (b) are stepped with a minimum width 2 metre berm; (c) do not exceed a maximum of two batters and two berms (not greater than 3.6 metres in total height) on any one lot; (d) have a slope no greater than 1 in 4; and (e) are retained.	✓	Complies – refer to above comments

Performance outcomes	Acceptable outcomes	Complies	Comments
	<p>A07.4 Soil used for filling or spoil from excavation is not stockpiled in locations that can be viewed from:</p> <p>(a) adjoining premises; or (b) a road frontage, for a period exceeding 1 month from the commencement of the filling or excavation.</p>	✓	Will comply
	<p>A07.5 All batters and berms to be constructed in accordance with the Design Guidelines and Specifications set out in the Planning Scheme Policy 4 – FNQROC Regional Development Manual.</p>	✓	Will comply
	<p>A07.6 Retaining walls have a maximum height of 1.5 metres and are designed and constructed in accordance with the Design Guidelines and Specifications set out in the Planning Scheme Policy 4 – FNQROC Regional Development manual.</p>	✓	No retaining structures proposed
	<p>A07.7 Excavation or filling at any point on a lot is to include measures that protect trees at the foot or top of cut or fill batters by the use of appropriate retaining methods and sensitive earth removal or placement and in accordance with the Design Guidelines and Specifications set out in the Planning Scheme Policy 4 – FNQROC Regional Development manual.</p>	x	N/A
For assessable development			
Transport network			

Performance outcomes	Acceptable outcomes	Complies	Comments
PO8 The development has access to a transport network of adequate standard to provide for the safe and efficient movement of vehicles, pedestrians and cyclists.	A08.1 Vehicle access, crossovers, road geometry, pavement, utilities and landscaping to the frontage/s of the site are designed and constructed in accordance with the Design Guidelines and Specifications set out in the Planning Scheme Policy 4 – FNQROC Regional Development manual.	✓	Refer to the Traffic Report prepared by ARO Industries
	A08.2 Development provides footpath pavement treatments in accordance with Planning Scheme Policy 9 – Footpath Paving.	×	N/A
Public infrastructure			
PO9 The design, construction and provision of any infrastructure that is to be dedicated to Council is cost effective over its life cycle and incorporates provisions to minimise adverse impacts.	A09 Development is in accordance with the Design Guidelines and Specifications set out in the Planning Scheme Policy 4 – FNQROC Regional Development Manual.	×	No donated assets being constructed.
Stormwater quality			

Performance outcomes	Acceptable outcomes	Complies	Comments
<p>PO10 Development has a non-worsening effect on the site and surrounding land and is designed to:</p> <ul style="list-style-type: none"> (a) optimise the interception, retention and removal of waterborne pollutants, prior to the discharge to receiving waters; (b) protect the environmental values of waterbodies affected by the development, including upstream, on-site and downstream waterbodies; (c) achieve specified water quality objectives; (d) minimise flooding; (e) maximise the use of natural channel design principles; (f) maximise community benefit; and 	<p>AO10.1 The following reporting is prepared for all Material change of use or Reconfiguring a lot proposals:</p> <ul style="list-style-type: none"> (a) a Stormwater Management Plan and Report that meets or exceeds the standards of design and construction set out in the Queensland Urban Drainage Manual (QUDM) and the Design Guidelines and Specifications set out in the Planning Scheme Policy 4 – FNQROC Regional Development Manual; and (b) an Erosion and Sediment Control Plan that meets or exceeds the Soil Erosion and Sedimentation Control Guidelines (Institute of Engineers Australia), including: <ul style="list-style-type: none"> (i) drainage control; (ii) erosion control; (iii) sediment control; and (iv) water quality outcomes. 	<p>✓</p>	<p>Will comply. These aspects of the development will be addressed at the construction phase of the development.</p>

Performance outcomes	Acceptable outcomes	Complies	Comments
(g) minimise risk to public safety.	<p>AO10.2 For development on land greater than 2,500m² or that result in more than 5 lots or more than 5 dwellings or accommodation units, a Stormwater Quality Management Plan and Report prepared and certified by a suitably qualified design engineer (RPEQ) is prepared that demonstrates that the development:</p> <ul style="list-style-type: none"> (a) meets or exceeds the standards of design and construction set out in the Urban Stormwater Quality Planning Guideline and the Queensland Water Quality Guideline; (b) is consistent with any local area stormwater water management planning; (c) accounts for development type, construction phase, local climatic conditions and design objectives; and (d) provides for stormwater quality treatment measures reflecting land use constraints, such as soil type, landscape features (including landform), nutrient hazardous areas, acid sulfate soil and rainfall erosivity. 	✓	Will comply. These aspects of the development will be addressed at the construction phase of the development.

Performance outcomes	Acceptable outcomes	Complies	Comments
<p>PO11 Storage areas for stormwater detention and retention:</p> <p>(a) protect or enhance the environmental values of receiving waters;</p> <p>(b) achieve specified water quality objectives;</p> <p>(c) where possible, provide for recreational use;</p> <p>(d) maximise community benefit; and</p> <p>(e) minimise risk to public safety.</p>	<p>AO11 No acceptable outcome is provided.</p>	✓	<p>No onsite storage detention is proposed or required.</p>
Excavation or filling			
<p>PO12 Traffic generated by filling or excavation does not impact on the amenity of the surrounding area.</p>	<p>AO12.1 Haul routes used for transportation of fill to or from the site only use major roads and avoid residential areas.</p>	✓	<p>Limited earthworks proposed.</p>
	<p>AO12.2 Transportation of fill to or from the site does not occur:</p> <p>(a) within peak traffic times; and</p> <p>(b) before 7am or after 6pm Monday to Friday;</p> <p>(c) before 7am or after 1pm Saturdays; and</p> <p>(d) on Sundays or Public Holidays.</p>	✓	<p>Will comply. No requirements for the transport of material to or from the site.</p>

Performance outcomes	Acceptable outcomes	Complies	Comments
PO13 Air pollutants, dust and sediment particles from excavation or filling, do not cause significant environmental harm or nuisance impacts.	AO13.1 Dust emissions do not extend beyond the boundary of the site.	✓	Will comply
	AO13.2 No other air pollutants, including odours, are detectable at the boundary of the site.	✓	Will comply
	AO13.3 A management plan for control of dust and air pollutants is prepared and implemented.	✓	Limited earthworks to generate dust issues.
PO14 Access to the premises (including driveways and paths) does not have an adverse impact on: (a) safety; (b) drainage; (c) visual amenity; and (d) privacy of adjoining premises.	AO14 Access to the premises (including all works associated with the access): (a) must follow as close as possible to the existing contours; (b) be contained within the premises and not the road reserve, and (c) are designed and constructed in accordance with the Design Guidelines and Specifications set out in the Planning Scheme Policy 4 – FNQROC Regional Development manual.	✓	The layout of the development has given due regard to stormwater management. Refer to proposal plans.
Weed and pest management			
PO15 Development prevents the spread of weeds, seeds or other pests into clean areas or away from infested areas.	AO15 No acceptable outcome is provided.	✓	Will comply.
Contaminated land			
PO16 Development is located and designed to ensure that users and nearby sensitive land uses are not exposed to unacceptable levels of contaminants	AO16 Development is located where: (a) soils are not contaminated by pollutants which represent a health or safety risk to users; or (b) contaminated soils are remediated prior to plan sealing, operational works permit, or issuing of building works permit.	x	N/A
Fire services in developments accessed by common private title			

Performance outcomes	Acceptable outcomes	Complies	Comments
<p>PO17 Fire hydrants are located in positions that will enable fire services to access water safely, effectively and efficiently.</p>	<p>AO17.1 Fire hydrants are located in accessways or private roads held in common private title at a maximum spacing of: (a) 120 metres for residential development; and (b) 90 metres for any other development.</p>	<p>✓</p>	<p>The development is being provided with a reliable source of water supply for consumption and for fire services.</p> <p>These aspects will be addressed at the detailed design phase.</p>
	<p>AO17.2 Fire hydrants are located at all intersections of accessways or private roads held in common private title.</p>	<p>x</p>	<p>Will comply.</p> <p>These aspects will be addressed at the detailed design phase.</p>

Attachment 6 – Title Search

CURRENT TITLE SEARCH
QUEENSLAND TITLES REGISTRY PTY LTD

Request No: 43099004
Search Date: 13/12/2022 07:00

Title Reference: 21481097
Date Created: 10/12/1991

Previous Title: 21473006

REGISTERED OWNER

Dealing No: 718838878 28/06/2018

MLK SPRINGS PTY LTD A.C.N. 619 216 376
TRUSTEE
UNDER INSTRUMENT 718838878

ESTATE AND LAND

Estate in Fee Simple

LOT 414 REGISTERED PLAN 835556
Local Government: MAREEBA

EASEMENTS, ENCUMBRANCES AND INTERESTS

1. Rights and interests reserved to the Crown by
Deed of Grant No. 21473006 (POR 414)
2. MORTGAGE No 718838879 28/06/2018 at 12:30
NATIONAL AUSTRALIA BANK LIMITED A.C.N. 004 044 937

ADMINISTRATIVE ADVICES - NIL
UNREGISTERED DEALINGS - NIL

Caution - Charges do not necessarily appear in order of priority

** End of Current Title Search **

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Requested By: D-ENQ INFOTRACK PTY LIMITED