

18 December 2019

Our Ref: 19-468

Chief Executive Officer

Mareeba Shire Council PO Box 154 MAREEBA QLD 4880

Attention: Mr Brian Millard – Senior Planner (BrianM@msc.qld.gov.au)

Dear Brian,

DEVELOPMENT APPLICATION FOR A MATERIAL CHANGE OF USE AT 2-18 HAREN STREET, MAREEBA

We refer to the above-described matter and confirm that Urban Sync Pty Ltd has been engaged by Croft Developments Pty Ltd to submit a development application to Mareeba Shire Council for assessment with respect to the above described land. In support of the application, we attach the following documents to assist with Council's assessment:

- DA Form 1 and Landowners Consent as **Attachment 1**;
- Plans of Development as Attachment 2;
- Site Searches as Attachment 3;
- Site Survey as Attachment 4;
- Traffic & Transport Assessment as **Attachment 5**;
- Civil Layout Plans as **Attachment 6**;
- Stormwater Management Plan and Site Based Stormwater Management Plan as Attachment 7;
- Geotechnical Investigation as Attachment 8;
- Bushfire Hazard Assessment and Management Plan as Attachment 9;
- Environmental Noise Impact Assessment as Attachment 10;
- Landscape Design as **Attachment 11**;
- Waste Management Plan as Attachment 12;
- Assessment of the applicable development codes under the *Mareeba Shire Council Planning Scheme* 2016 as **Attachment 13**; and
- Assessment of the applicable State Development Assessment Provisions Code (State Code 1) as Attachment 14.

In accordance with s51(2) of *Planning Act 2016,* as the Applicant is not the owner of the land, landowners' consent has been provided in **Attachment 1.**

The \$6,460.00 application fee, as outlined in Mareeba Shire Council's 2019/2020 Fees and Charges, will be paid upon the receipt of an invoice from Mareeba Shire Council.

We trust this application can now be progressed for assessment. Should you require any further information or clarification on any matters regarding this application, please do not hesitate to contact me using the below details.

Yours faithfully,

M.S. hour

Matt Ingram Senior Planner E matt@urbansync.com.au | T 07 4051 6946 | M 0488 200 229





DEVELOPMENT APPLICATION FOR A MATERIAL CHANGE OF USE

2-18 HAREN STREET, MAREEBA

CROFT DEVELOPEMTNS PTY LTD

18 December 2019

www.urbansync.com.au

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Limitation: This report has been prepared on behalf of Urban Sync Pty Ltd for our client, Croft Developments Pty Ltd and considers the instructions and requirements of Croft Developments Pty Ltd with regards to the development being proposed. This report should not be relied upon by any third party and Urban Sync Pty Ltd accepts no liability or responsibility for the reliance on this report, or data contained within the report, by any third party.

Reference	Revision	Date	Prepared by	Checked by	Authorised by
19-468	1.1	18/12/2019	MDI	JJP	CW

18/12/2019 FINAL Version 1.1 **Urban Sync Pty Ltd Level 1, 17 Aplin Street, CAIRNS QLD 4870** <u>www.urbansync.com.au</u> admin@urbansync.com.au

EXECUTIVE SUMMARY

Croft Developments Pty Ltd (the Applicant) seeks the requisite statutory development approval from Mareeba Shire Council (Council) to support the establishment of a new residential aged care facility over Lot 1 on SP298397 at 2-18 Haren Street, Mareeba (the site).

In a planning context, the site is located within the **Low Density Residential Zone** of the *Mareeba Shire Planning Scheme 2016* (Planning Scheme), where a Material Change of Use for a residential aged care facility triggers the need for a **Code Assessable** Material Change of Use development application, subject to assessment against the provisions of the current Planning Scheme, to be lodged with and approved by Council. Accordingly, this development application seeks the following approval:

• Development Permit for a Material Change of Use - Residential Care Facility (120 Beds)

The project team have informed the preferred design configurations, as well as prepared the necessary technical supporting information to facilitate assessment. We are now instructed by the Applicant to submit this application for the consideration and approval by Council.

This development application has been undertaken to:

- Examine the physical characteristics of the site and their appropriateness in relation to the proposed development;
- Document the initial pre-lodgement discussions with Council and identify any relevant site development history;
- Accurately describe the proposed development, as reflected in the design plans prepared by Croft Developments Pty Ltd;
- Address all applicable statutory requirements triggered through the *Planning Act 2016* (PA), *Planning Regulations 2017* (PR) and the Planning Scheme; and
- Address any 'key' planning issues and non-compliances with the Planning Scheme and other, relevant assessment benchmarks and in doing so, demonstrate that the proposed development complies, or can be conditioned to comply with the relevant assessment benchmarks.

The purpose of the Low-Density Residential Zone is to provide for predominantly dwelling houses supported by community uses and small-scale services and facilities that cater for local residents. Based on a reasonable assessment, the Planning Scheme allows and encourages the use of the site for a residential aged care facility. However, the assessment of a proposed development needs to consider site features, constraints and development impacts that need to be suitably addressed before the development can demonstrate compliance with the applicable assessment benchmarks. This report outlines how these matters have been suitably addressed to allow the proposed development to proceed.

In terms of assessment of the proposed development, there are very few departures away from the 'deemed to comply' Acceptable Outcomes, although where these departures have been identified, a performance-based assessment has been provided to justify and demonstrate, based on sound planning grounds, that compliance with the corresponding Performance Outcome and in turn, the relevant Assessment Benchmarks, can still be achieved. Accordingly, we now submit this application to Council for assessment and trust that it suitably addresses all the statutory requirements under the Planning Scheme and State legislation to allow favourable consideration, subject to the imposition of reasonable and relevant conditions.

2 APPLICATION DETAILS

2.1 APPLICATION SUMMARY

Approval Sought:	Development Permit for a Material Change of Use - Residential Care Facility (120 Beds)			
Applicant:	Croft Developments Pty Ltd			
Project Description Details:	120 bed residential aged care facility			
ASSESSMENT DETAILS				
Assessment Manager:	Mareeba Shire Council			
Development Category:	Assessable Development			
Assessment Category:	Code Assessable			
Public Notification:	No			
PRE-LODGEMENT CONSULTATION	N			
Council:	Yes			
State Authority:	Yes			
RELEVANT STATE PLANNING INS	TRUMENTS			
Legislation:	Planning Act 2016 (Qld)			
Legislation: Planning Policy:	Planning Act 2016 (Qld) Queensland State Planning Policy (July 2017)			
	-			
Planning Policy: Planning Policy Assessment	Queensland State Planning Policy (July 2017) • Agriculture; • Biodiversity; • Natural Hazards Risk and Resilience; • Transport Infrastructure; • Strategic Airports and Aviation Facilities; and			
Planning Policy: Planning Policy Assessment Benchmarks:	Queensland State Planning Policy (July 2017) • Agriculture; • Biodiversity; • Natural Hazards Risk and Resilience; • Transport Infrastructure; • Strategic Airports and Aviation Facilities; and • Water Quality			
Planning Policy: Planning Policy Assessment Benchmarks: Regional Plan:	Queensland State Planning Policy (July 2017) • Agriculture; • Biodiversity; • Natural Hazards Risk and Resilience; • Transport Infrastructure; • Strategic Airports and Aviation Facilities; and • Water Quality			

RELEVANT LOCAL PLANNING INSTRUMENTS		
Planning Scheme:	Mareeba Shire Council Planning Scheme 2016	
Local Plan:	N/A	
Zone:	Low Density Residential	
Zone Precinct:	Nil	
Overlays:	 Airport Environs; Bushfire Hazard; Residential Dwelling; and Transport Infrastructure 	

2.2 SUPPORTING REPORTS

Document	Prepared By	Reference	Version	Author	Reviewer	Date
Traffic and Transport Assessment	Cardno	V181440	F01	СТ	EK	13/12/2019
Mareeba Stormwater Management Plan	Biofilta	N/A	Rev 1	MN	РР	09/10/2019
Site Based Stormwater Management Plan	Morgen Consulting Engineers	19157	1	DY	НМ	12/12/2019
Geotechnical Investigation	Douglas Partners	90778.00	Rev 0	KR	СВ	26/10/2018
Bushfire Hazard Assessment and Management Plan	Green Tape Solutions	PR19164	В	JV	СР	13/12/2019
Environmental Noise Impact Assessment	CRGACOUSTICS	19091	1	N/A	N/A	12/12/2019
Waste Management Plan	Leigh Design	N/A	N/A	LR	N/A	17/07/2019

2.3 PLANS OF DEVELOPMENT

Sheet Title	DWG No	Sheet No	Prepared By	Rev	Date
Cover Page and Development Summary	DA00	1 of 6	Croft Developments Pty Ltd	1	12/12/2019
Site Analysis	DA01	2 of 6	Croft Developments Pty Ltd	1	12/12/2019
Proposed Site Plan	DA02	3 of 6	Croft Developments Pty Ltd	1	12/12/2019
Proposed Ground Floor Plan	DA03	4 of 6	Croft Developments Pty Ltd	1	12/12/2019
Proposed Elevations and Sections	DA04	5 of 6	Croft Developments Pty Ltd	1	12/12/2019
Shadow Diagram	DA05	6 of 6	Croft Developments Pty Ltd	1	12/12/2019
Bulk Earthworks and Drainage Cover Sheet and Drawing Index	19157	SK00	Morgan Consulting Engineers	В	12.12.2019
Existing Conditions Plan	19157	SK01	Morgan Consulting Engineers	В	12.12.2019
Bulk Earthworks Layout Plan	19157	SK02	Morgan Consulting Engineers	В	12.12.2019
Bulk Earthworks Cross Sections – Sheet 1	19157	SK03	Morgan Consulting Engineers	В	12.12.2019
Bulk Earthworks Cross Sections – Sheet 2	19157	SK04	Morgan Consulting Engineers	A	12.12.2019
Siteworks and Drainage Details	19157	SK10	Morgan Consulting Engineers	В	12.12.2019
Siteworks and Drainage Details	19157	SK11	Morgan Consulting Engineers	В	12.12.2019
Stormwater Catchment Plan	19157	SK20	Morgan Consulting Engineers	В	12.12.2019
External Roadworks Layout Plan	19157	SK30	Morgan Consulting Engineers	В	12.12.2019
Landscape Plan	1907-038- SD-L1.01	N/A	LandPlan Landscape Architecture	2	13/12/2019
Plant Palette	1907-038- SD-L2.01	N/A	LandPlan Landscape Architecture	2	13/12/2019
Detail and Contour Survey	34692/001	1 of 1	Brazier Motti	A	28/03/2019

3 SITE DETAILS

3.1 SITE DESCRIPTION

Registered Landowners:	Signature Care Land Holdings Pty Ltd A.C.N 600 935 760
Site Location:	2-18 Haren Street, Mareeba
Lot and Description:	Lot 1 on SP298397
Site Area:	2.89ha
Tenure:	Freehold
Easements/Encumbrances:	Easement 'A' on SP298397 (Stormwater) burdening the land in favour of Mareeba Shire Council
Local Government Authority:	Mareeba Shire Council



Figure 1: Site location – 2-18 Haren Street, Mareeba (Source: Queensland Globe, State of Queensland 2019).

Current Use/s:	Nil
Existing Improvements:	Nil
Topography:	The site is in general, flat, albeit with a very slight fall from west to east (generally). The site is located at approximately RL415 - RL416m AHD.
Waterways:	There are no waterways that traverse or are located adjacent to the site (a drainage gully abuts the northern boundary).
Vegetation:	The site contains sparsely located vegetation throughout.

Environmental Management & Contaminated Land:	The site is NOT listed on the Environmental Management Register or the Contaminated Lands Register (see Attachment 3).
Heritage Places:	The site is not an identified State or local 'Heritage Place', nor are any adjacent sites.

3.2 INFRASTRUCTURE AND SERVICES

Road Frontage:	The site has an approximate 310m frontage to Kenneally Road, an approximate 210m frontage to Haren Street and an approximate 35 frontage to Constance Street/Antonio Drive. Kenneally Road: Kenneally Road is identified as a State-controlled Road in Council's road hierarchy and is, in the vicinity of the site, a single lane, undivided two-way, approximately 11m wide sealed carriage way within a 40m wide road reserve. The road reserve includes a bicycle lane and pedestrian footpath on the south-eastern side of the carriageway (see also Attachment 5).
	Haren Street: Haren Street is identified as an Access Road in Council's road hierarchy and is, in the vicinity of the site, a single lane, undivided two-way, approximately 4m wide sealed carriage way within a varying 20m-40m wide road reserve. The carriageway is not line marked and includes kerb and channel on the north side only. The road reserve includes no other improvements except for a table drain on the southern side (see also Attachment 5).
	Constance Street/Antonio Drive: Constance Street/Antonio Drive is identified as an Access Road in Council's road hierarchy and is, in the vicinity of the site, a single lane, undivided two-way, approximately 8m wide sealed carriage way within a 20m wide road reserve. The carriageway is not line marked and includes kerb and channel on both sides. The road reserve includes no other improvements (see also Attachment 5).
Water & Sewerage Supply:	This site has both reticulated water and sewer available, although is not connected to these services.
Stormwater:	Please refer to the Stormwater Management Report and Site Based Stormwater Management Plan in Attachment 7 for commentary on the site's current stormwater drainage regime.
Electricity & Telecommunications:	The site has both electricity and telecommunications services available, although is not connected to these services.

4 DEVELOPMENT BACKGROUND

4.1 RELEVANT APPROVALS

There are no relevant approvals in effect on the site.

4.2 **PRELODGEMENT MEETINGS**

4.2.1 Mareeba Shire Council Pre-lodgement Advice

Preliminary and informal discussion with Council's Planning Officer Carl Ewin have been undertaken, although no formal pre-lodgement meeting was held.

The Applicant has also undertaken extensive consultation with Council's infrastructure planners in relation to stormwater matters.

4.2.2 State Pre-lodgement Advice

Pre-lodgement discussions with the State have not been undertaken.

5 DEVELOPMENT PROPOSAL

5.1 GENERAL DESCRIPTION

This development application seeks the requisite statutory development approval from Council to support the establishment of a new residential aged care facility over Lot 1 on SP298397 at 2-18 Haren Street, Mareeba. Accordingly, this development application seeks the following approval:

• Development Permit for a Material Change of Use - Residential Care Facility (120 Beds)

5.2 **PROPOSAL DETAILS**

The Applicant is a significant provider of purpose-built aged care facilities across Australia, and in particular, north Queensland, with several facilities currently constructed and operational in the Cairns region. Assessment by the Applicant has determined a need exists in the Mareeba area (and surrounds) for residential aged care.

Due to the size of the facility, site options are limited. The site was chosen due to its size, proximity to the town centre of Mareeba and adjacent and easily accessible transport infrastructure.

The proposed development will be of a nature, size and scale akin to the other, recently completed similar aged care facilities in the Cairns region and will focus on predominantly 'high care' accommodation.

The proposed development will generally include the following elements:

- Single storey with a maximum height of approximately 6.34m above ground level;
- A total building footprint of 7,630m² and a site coverage of 26%;
- 120 rooms (with several differing rooms types) each with their own ensuite, spread between five (5) 'wings';
- Several communal lounges, activity rooms and dining areas;
- Doctor and nursing facilities;
- A library, hairdresser, café, and a chapel;
- Two (2) kitchens for the on-site provision of all meals;
- Back of house (laundry, linen, staff rooms etc.);
- Reception, concierge and entry foyer;
- Offices for staff;
- Meeting rooms;
- Central, outdoor courtyards and gazebos;
- Entry signage;
- Landscaping and the removal of all existing trees from within the development footprint, generally as shown on the Landscape Plan in **Attachment 11**; and
- A mix of boundary and internal fencing, inclusive of 1.8m and 1.4m high Colourbond fencing and 1.4m high 'pool' style fencing;

Please refer to the Plans of Development in Attachment 2 for additional information.

5.3 STAGING

The proposed development will not be staged.

5.4 ENGINEERING AND INFRASTRUCTURE PROVISION

5.4.1 Water & Sewerage Supply

The proposed development will connect to the existing water and sewer infrastructure in either Haren Street or Kenneally Road. Exact connection points will be determined as part of detailed design.

5.4.2 Electricity

The proposed development will be provided with electricity services from the existing infrastructure adjacent to the site. A transformer will be required to supplement supply and a generator will be installed to provide a backup power supply in times of power outages.

5.4.3 Telecommunications

The proposed development will be provided with telecommunications services from the existing infrastructure adjacent to the site.

5.4.4 Stormwater (Quality & Quantity)

Please refer to the Stormwater Management Report and Site Based Stormwater Management Plan in **Attachment 7** for commentary on the stormwater measures being implemented for the proposed development.

5.4.5 Bulk Earthworks

There will be some earthworks and retaining required to level the site and ensure all infrastructure and the site, can be suitably drained.

Please refer the Civil Layout Plans in **Attachment 6** for further details on the quantum of earthworks and locations of cut and fill proposed for the site.

5.4.6 Erosion and Sediment Control

An Erosion and Sediment Control Plan for the construction phase of the proposed development will be provided to Council prior to the commencement of use.

Please refer to the Site Based Stormwater Management Plan in **Attachment 7** for further commentary on Erosion and Sediment Control measures proposed for the construction phase.

5.4.7 Waste and Refuse

Please refer to the Waste Management Plan in **Attachment 12** for commentary on how waste and refuse is being managed for the proposed development.

5.5 TRANSPORT AND ACCESSIBILITY

5.5.1 External Upgrades

Please refer to the Traffic & Transport Assessment Report in **Attachment 5** for commentary on the external road and access upgrades being proposed.

Please also refer to the Civil Layout Plans in Attachment 6 for plans of the proposed external upgrades.

5.5.2 Access Locations

Please refer to the Traffic & Transport Assessment Report in **Attachment 5** for commentary on the access arrangements being proposed to both Kenneally Road and Constance Street/Antonio Drive.

5.5.3 Vehicle & Bicycle Parking

Please refer to the Traffic & Transport Assessment Report in **Attachment 5** for commentary on the number and location of vehicle and bicycle parking being proposed.

5.5.4 Service Vehicles

Please refer to the Traffic & Transport Assessment Report in **Attachment 5** for commentary on service vehicles arrangements being proposed.

5.6 INFRASTRUCTURE CHARGES

Chapter 4 of the PA – Infrastructure, outlines provisions for local governments to prescribe infrastructure charges for demands placed on trunk infrastructure where a Local Government Infrastructure Plan (LGIP) is included as part of the Planning Scheme and is adopted by resolution. These provisions have been reflected in Mareeba Shire Council's Infrastructure Charges Resolution (No. 2) 2019 (AICR), which came into effect from 19 June 2019.

The site is in the Low-Density Residential Zone and located outside of Council's Priority Infrastructure Area. In accordance with Council's AICR, Infrastructure Charges are applicable to the development as the AICR applies to the entire Mareeba Shire Council Local Government Area and can be calculated as follows:

- Charges based on the proposed development (see Council's AICR); less;
- Credits in effect on the site

Note: Council's AICR states the unit of measure for a 'Retirement Facility' is based on a 1 or 2-bedroom dwelling OR a 3 or more-bedroom dwelling. The Planning Scheme defines a 'dwelling' as:

"A building or part of a building used or capable of being used as a self-contained residence that must include the following:

- a) Food preparation facilities;
- b) A bath or shower;
- c) A toilet and wash basin
- *d)* Clothes drying facilities

This term includes outbuildings, structures and works normally associated with a dwelling".

The proposed development, however, does not include any **'dwellings'**, rather it includes 'bedrooms' with shared communal facilities. As a result, the use of the 'dwelling' unit of measure is, in this instance, not considered appropriate for calculating the infrastructure charges for the proposed development.

As the proposed development includes 'bedrooms' only, it lends itself more closely to the unit of measure used to calculate infrastructure charges for a 'Rooming Accommodation' land use, of which is defined in the Planning Scheme as:

"Premises used for the accommodation of one or more households where each resident:

• Has a right to occupy one or more rooms;

- Does not have the right to occupy the whole of the premises in which the rooms are situated; may be provided with separate facilities for private uses;
- May share communal facilities or communal space with one or more of the other residents.

The use may include:

- Rooms not in the same building on site;
- Provision of a food or other service;
- On site management or staff and associated accommodation

Facilities includes furniture and equipment as defined in the Residential Tenancies and Rooming Accommodation Act".

Based on the above, it is proposed that the bedroom unit of measure associated with the Rooming Accommodation land use be used AND, in this instance, is a more reasonable unit of measure for the calculation of infrastructure charges associated with the proposed development. Hence, the applicable unit of measure will be 'per bedroom with 1 or 2 beds (that is not within a suite)', with the AICR listing the charge for this unit of measure as \$6,715.00 per bedroom with 1 or 2 beds.

Section 120 of the PA states that a levied charge may be only for **extra demand** placed upon trunk infrastructure (emphasis added). With this in mind (and notwithstanding the breakdown of generation rates in the LGIP) it is not considered reasonable to charge the same levied charge for a bedroom with two (2) beds as a bedroom with one (1) bed, as a reasonable person would assume that a bedroom with two (2) beds could easily accommodate more persons than a bedroom with one (1) bed and in turn, place a far greater demand on Council's trunk infrastructure. For example:

- Scenario 1: 120-bedroom Residential Care Facility with 120 beds = 120 persons plus staff
- Scenario 2: 120-bedroom Residential Care Facility with 2 beds per room = 240 persons plus staff

As is clearly evident, scenario 2 could accommodate far more people than scenario 1 which would in turn, place a far greater demand on Councils trunk infrastructure, although would have the same charge levied as scenario 1. Such an approach would clearly be in conflict with s120 of the PA as the levied charge for scenario 1 would not be reflective of the demand being placed on Council's trunk infrastructure i.e., as would be imposed under scenario 2.

Accordingly, we consider it reasonable to reduce the Rooming Accommodation unit of measure by 50%. This would result in the levied infrastructure charge per bedroom being \$3,357.50. This is considered a reasonable reduction to reflect a bedroom with only one (1) bed and hence, be a commensurate reduction to not only reflect the true number of beds, but also the number of persons that will be accommodated in the facility and in turn, the true additional demand on Council's trunk infrastructure i.e., 144 persons not 288 persons.

Using this methodology, **Table 1** below summarises the infrastructure charges applicable to the proposed development.

Category	Use Charge	Unit of Measure	Charge Rate	No of Units	Amount
Proposal					
Accommodation (Long Term)	Retirement Facility	Per 1 Bedroom Dwelling	\$3,357.50 ¹	120	\$402,900.00
Proposal Sub-Tota	ıl				\$402,900.00
Credit					
Residential	Dwelling House	Per 3 or more- bedroom dwelling	\$18,800.00	1	\$18,800.00
Credit Sub-Total \$18,800.00					
					\$384,100.00

Table 1: Calculation of Infrastructure Charaes

¹Using 50% of the rooming accommodation charge rate reflective of 1 bed per room configuration, as is proposed, with no ability to accommodate 2 beds per room (max persons can be conditioned); and ²All fees are calculated in accordance with Council's AICR and are subject to further CPI increases.

6 LEGISLATIVE REQUIREMENTS

6.1 PLANNING ACT 2016

6.1.1 Confirmation that the Development is not Prohibited

The proposed development is not prohibited. This has been established by considering all the relevant State and local instruments which can provide prohibitions under the PA, including Schedule 10, Parts 2-5, Parts 10-11 and Parts 16 and 20, of the *Planning Regulation 2016* ('PR').

6.1.2 Assessable Development

The proposed development involves a Material Change of Use in respect of the 'start of a new use of the premises'. A Material Change of Use for a residential aged care facility in the Low Density Residential Zone is **Code Assessable** and is hence, deemed to be considered "Assessable Development" pursuant to Section 44 (3) of the PA, which states that "Assessable Development is development for which a development approval is required."

6.1.3 Statutory Considerations for Assessable Development

When assessing the development application, the relevant considerations of the Assessment Manager in making the decision are in accordance with Sections 59, 60(2), and 62 of the PA and Sections 25 to 28 of the PR.

Specifically, section 60(2) of the PA states for a Code Assessable application, the Assessment Manager:

- a) "Must decide to approve the application to the extent the development complies with all of the assessment benchmarks;
- b) May decide to approve the application even if it does not comply with some of the assessment benchmarks, provided for example, a decision to approve resolves a conflict between the assessment benchmarks;
- c) May impose development conditions on a development approval; and
- d) May, to the extent the development does not comply with some or all the assessment benchmarks, decide to refuse the application, only if compliance cannot be achieved by imposing development conditions"

6.1.4 Assessment Manager

The Assessment Manager for this development application is Mareeba Shire Council, as determined by Schedule 8 of the PR.

6.2 FAR NORTH QUEENSLAND REGIONAL PLAN

The site is located within the 'Urban Footprint' Regional Land Use Category of the Far North Queensland 2009-2031 (see **Attachment 3**). The Minister has identified that the planning scheme, specifically the Strategic Framework, appropriately advances the FNQRP 2009-2031. Hence, compliance with the FNQRP is demonstrated through the compliance with the Planning Scheme (refer to this report and attachments for demonstration of this compliance).

6.3 STATE PLANNING POLICY

The State Planning Policy (SPP) came into effect on July 2017 under the PA. Part E of the SPP includes an array of State interests and associated assessment benchmarks which need to be considered during the development assessment process, where these State interests have not already been appropriately reflected within the relevant planning scheme. A review of the SPP mapping indicates that the proposed development/site is subject to several State interests, as outlined below (see also **Attachment 3**):

- Agriculture (Important Agricultural Areas);
- Biodiversity (MSES Regulated Vegetation (Essential Habitat);

- Natural Hazards Risk and Resilience (Bushfire Prone Area);
- Transport Infrastructure (State-controlled Road);
- Strategic Airports and Aviation Facilities (Wildlife Hazard Buffer Zone); and
- Water Quality (Climatic Regions Stormwater Management Design)

The Minister has identified that the Planning Scheme appropriately advances the SPP. Accordingly, all the applicable State interests have been appropriately reflected in the Planning Scheme and in turn, compliance with the SPP is demonstrated through the compliance with the Planning Scheme (refer to this report and attachments for demonstration of this compliance).

6.4 **REFERRALS & STATE DEVELOPMENT ASSESSMENT PROVISIONS**

A review of the DA mapping system indicates that the site is subject to the following matters of State interest (see **Attachment 3**):

- Native Vegetation Clearing (Category B on the Regulated Vegetation Management Map);
- State Transport Corridor (State-controlled Road and Areas within 25m of a State Transport Corridor; and
- Water Resources (Water Resource Planning Area Boundary)

In consultation with the PR and the above identified matters of interest, the proposed subdivison triggers the following referral:

State Assessment Referral Agency – Schedule 10 Part 9, Division 4, Subdivision 2, Table 4 – Material Change
of Use of premises near a State Transport Corridor or that is a future State Transport Corridor (within 25m of
State Transport Corridor).

Note: Referral under Schedule 10 Part 9, Division 4, Subdivision 1, Table 1 of the PR is not triggered as the proposed development does not include any 'dwellings' as defined in the PR.

As a result, the following module of the State Development Assessment Provisions (version 2.5) are applicable:

• State Code 1 – Development in a State-controlled Road Environment

A full assessment against State Code 1 is provided in Attachment 14.

6.5 PLANNING SCHEME (MAREEBA SHIRE COUNCIL PLANNING SCHEME 2016)

6.5.1 Use Definition

The proposed development is defined under the Planning Scheme as:

'Residential Care Facility':

"A residential use of premises for supervised accommodation where the use includes medical and other support facilities for residents who cannot live independently and require regular nursing or personal care"

6.5.2 Applicable Overlays

The site is affected by the following Planning Scheme overlays:

- Airport Environs (Bird and Bat Strike Zones (Distance from Airport 8kms));
- Bushfire Hazard (Potential Impact Buffer (100 Meters) and Medium Potential Bushfire Intensity);
- Residential Dwelling (Residential Dwelling House and Outbuilding); and

Transport Infrastructure - Road Hierarchy (Kenneally Street - State-controlled Road, Haren Street and • Antonio Drive – Access Road)

6.5.3 **Applicable Codes**

Table 2 below lists the following relevant codes and provisions of the Planning Scheme that are applicable to the development:

Table 2: Applicable Codes			
Scheme Component	Comment		
Zone Code			
Low Density Residential Zone Code	Refer to Attachment 13 and Section 6.6.2		
Local Plan Code			
N/A	N/A		
Overlay Codes			
Airport Environs Overlay Code;	Refer to Attachment 13 and Section 6.6.3		
Bushfire Hazard Overlay Code			
Residential Dwelling Overlay Code;			
Transport Infrastructure Overlay Code			
Development Codes			
Accommodation Activities Code;	Refer to Attachment 13 and Section 6.6.4.		
Landscaping Code;			
Parking and Access Code; and			
Works, Services and Infrastructure Code.			

PLANNING SCHEME ASSESSMENT 6.6

6.6.1 Strategic Framework

The proposed development is Code Assessable and hence, in accordance with s45(3) of the PA, no assessment against the Strategic Framework is required.

6.6.2 Low Density Residential Zone Code

The proposed development complies with or can be conditioned to comply with the Low-Density Residential Zone Code.

6.6.3 **Overlay Codes**

Airport Environs Overlay Code

The proposed development complies with or can be conditioned to comply with the Airport Environs Overlay Code.

Bushfire Hazard Overlay Code

The proposed development complies with, or can be conditioned to comply with, the Bushfire Hazard Overlay Code (see Table 2 of the Bushfire Hazard Assessment and Management Plan in Attachment 9 for demonstration of compliance).



Residential Dwelling Overlay Code

The proposed development complies with or can be conditioned to comply with the Residential Dwelling Overlay Code.

Transport Infrastructure Overlay Code

The proposed development complies with the Transport Infrastructure Overlay Code.

6.6.4 Development Codes

Accommodation Activities Code

The proposed development complies with or can be conditioned to comply with the Accommodation Activities Code.

Landscaping Code

The proposed development complies with or can be conditioned to comply with the Landscaping Code.

Parking and Access Code

The proposed development complies with or can be conditioned to comply with the Parking and Access Code.

Works, Services and Infrastructure Code

The proposed development complies with or can be conditioned to comply with the Works, Services and Infrastructure Code.

7 DISCUSSION – KEY PLANNING MATTERS

This section of the report provides additional commentary in support of the key matters considered relevant to the assessment of this development application and in particular, those areas of non-compliance with the 'deemed to comply' Acceptable Outcomes.

7.1 ACCOMMODATION DENSITY

The proposed development involves a density that slightly exceeds that outlined in **Table 6.2.6.3B** of the Low-Density Residential Zone Code. Accordingly, to demonstrate compliance with the Low-Density Residential Zone Code and in particular, PO4 of the Code, a full assessment against the Performance Outcome is required.

PO4 of the Code states:

"The density of Accommodation activities:

a) Contributes to housing choice and affordability":

Response:

The proposed development involves aged care which will add to, and diversify the housing choices available in Mareeba, as well as the Shire in general for elderly residents and will assist in allowing such residents to stay in the Shire rather than relocate elsewhere.

b) "Respects the nature and density of surrounding land use":

Response:

Whilst the proposed development is of a greater density than the surrounding residential areas, it is only seeking a minor discretion in that it only involves a slightly greater density than that permitted in the zone (1 unit per 240m² of site area instead of 1 unit per 250m²). In addition, the site and proposed development will be suitably buffered from the surrounding residential areas by Haren Street to the north, Kenneally Road to the south and west and a vacant parcel of land to the east. These buffer areas will ensure the proposed development does not conflict with the nature/density of the surrounding residential areas.

Note: The proposed development is also providing a service which is needed in the region and by providing a density such as is proposed, will ensure this service can be offered to all persons who need it and better future proofs the region from further short falls in this accommodation sector.

c) "Does not cause amenity impacts beyond the reasonable expectation of accommodation density for the zone":

Response:

Given the separation the site and proposed development has to adjoining residential areas (as outlined above), combined with the fact it is located on the main highway entry/exit road to/from Mareeba, it is not expected the proposed development will generate any unacceptable amenity impacts over and above that which exist in the locality already. Moreover, the nature of the use being proposed is that of a low noise and traffic generator and hence, despite the additional density being proposed, is unlikely to result in amenity impacts of the same scale as those that could be attributed to other consistent uses in the zone such as a conventional residential subdivision. As such, the proposed development will not result in amenity impacts beyond the reasonable expectation of the zone.

d) "Is commensurate to the scale and frontage of the site":

Response:

The site is 2.89ha in area and has an approximate 310m frontage to Kenneally Road and 210m frontage to Haren Street. Given the minor discretion being sought in relation to density, we are of the view that the proposed development is commensurate with the scale and frontage of the site.



We also note that the proposed development generally complies with the relevant built form provisions of the Planning Scheme i.e., height, setback, site coverage, car parking and landscaping. Further emphasising the fact, the density being proposed will not result in an overdevelopment of the site and in turn, is suitable for the site.

7.2 GROSS FLOOR AREA

Acceptable Outcome AO5 of the Low-Density Residential Zone Code and Acceptable Outcome AO3 of the Residential Dwelling House and Outbuilding Overlay Code requires a maximum gross floor area of 600m². The proposed development involves a gross floor area that exceeds 600m². Accordingly, a full assessment against the corresponding Performance Outcomes of both Codes is required.

PO5 of the Low-Density Residential Zone Code and PO3 Residential Dwelling House and Outbuilding Overlay Code both state:

"Buildings and structures occupy the site in a manner that:

a) Makes efficient use of land":

Response:

As the proposed development generally complies with the relevant built form provisions of the Planning Scheme and is proposing a density that only slightly exceeds that permitted in the zone, the proposed development is considered to be making efficient use of the land i.e., it is not proposing under development of the site and can comfortably accommodate the required built form provisions of the Planning Scheme without seeking large number of discretions i.e., it is not overdevelopment of the site.

b) "Is consistent with the bulk and scale of surrounding buildings":

Response:

It is unreasonable to expect a new development of this nature to be entirely consistent with the bulk and scale of different land uses such is those that surround the site i.e., dwelling houses. However, the proposed development does not exceed the height, setback or site coverage requirements for the zone and only seeks a minor discretion in terms of the density. As a result, the proposed development is not proposing a bulk or scale that is considered to conflict with the intent sought by the Low-density residential zone and as a result, is considered to be acceptable.

c) "Appropriately balances built and natural features":

Response:

The proposed development involves a site coverage of 26%, with a large portion of the remaining, undeveloped portions of the site being inclusive of grassed and landscaped areas (see **Attachment 11**). A large amount of existing vegetation is also to be retained. This will ensure the built form of the proposed development is softened and a suitable balance between the natural and built environment is achieved.

7.3 AMENITY

The proposed development involves a density that slightly exceeds that permitted within the Low-Density Residential Zone Code. Accordingly, to demonstrate compliance with the Low-Density Residential Zone Code and in particular, PO9 of the Code, commentary is provided below to demonstrate the proposed development will not have any unacceptable amenity impacts on the surrounding locality.

PO9 of the Low-Density Residential Zone Code states:

"Development must not detract from the amenity of the local area, having regard to:

a) Noise":

Response:

The nature of the use being proposed does not lend itself to that of a high noise generator. Hence, it is not expected that the proposed development will have any negative impacts on the amenity of the area relating to noise. Compliance can also be conditioned.

b) "Hours of operation":

Response:

As above.

c) "Traffic":

Response:

The 'Traffic & Transport Assessment' (see **Attachment 5**) details that the proposed development will generate on average, approximately 30 vehicle movements per hour in each of the AM and PM peaks and significantly less than this for large portions of the day outside of these hours. Recent traffic counts indicate that Kenneally Road currently accommodates over 600 vehicle movements during these AM and PM peaks. Hence, the proposed development will result in only a very small increase (circa 5%) in traffic over and above that which is currently experienced by residents living adjacent to Kenneally Road.

The proposed development will also result in additional traffic utilising local roads, namely Byrnes Street, Haren Street and Constance Street/Antonio Drive. This will, however, only be a very small number of private vehicles (as the car park at the rear of the proposed development only has eight (8) spaces) and the occasional service vehicle.

The traffic generated by the proposed development is also likely to be considerably less than that which would be generated should the site be developed for other uses consistent with the zone i.e., conventional residential subdivision, of which could generate upwards of 333 vehicle trips per day (based on approximately 33 lots and 10vpd's per day, per lot).

Hence, in summary, due to the small increase in traffic attributable to the proposed development over and above current levels, as well as what should reasonably be expected based on the zoning of the site, it is not expected the proposed development will result in any unacceptable amenity impacts on surrounding residential premises as a result of traffic.

d) "Advertising devices":

Response:

This will be controlled through Council's Local Law.

e) "Visual amenity":

Response:

The proposed development will include large amounts of green, open space, landscaping internal to the site, as well as the retention of large amounts of existing, mature vegetation both internal and external to the site (see **Attachment 11**). The proposed development also does not exceed the majority of built form provisions contained within the Planning Scheme. As a result, the proposed development will be suitably buffered and will not be built at a bulk or scale that may negatively impact upon the visual amenity of the area, in particular given the zoning intent for the site.

Note: Examples of other facilities constructed by the Applicant can be provided to Council which demonstrates the high level of visual amenity that is achieved by these developments.

f) "Privacy":

Response:

The proposed development will be suitably buffered from the surrounding residential areas by new, internal landscaping, internal and external vegetation that is to be retained, as well as Haren Street to the north, Kenneally Road to the south and west, and a vacant parcel of land to the east. These buffer areas will ensure there are no privacy issues for existing residents in adjacent areas or residents of the facility as a result of the proposed development.

g) "Lighting":

Response:

Compliance can be conditioned.

h) "Odour":

Response:

The nature of the use being proposed does not lend itself to that of a high odour generator. Hence, it is not expected that the proposed development will have any negative impacts on the amenity of the area relating to odour. Compliance can also be conditioned.

i) "Emissions":

Response:

The nature of the use being proposed does not lend itself to that of a high odour generator. Hence, it is not expected that the proposed development will have any negative impacts on the amenity of the area relating to odour. Compliance can also be conditioned.

7.4 COMMUNAL RECREATION AREAS

The proposed development does not provide all the communal open space requirements necessitated by Table 9.3.1.3C of the Accommodation Activities Code and hence, does not comply with AO4.1 of the Code. As a result, a full assessment against PO4 of the Code is required.

Note: The proposed development is a purpose built complex for a specific demographic, i.e., elderly persons who need a specific level of care and is akin to various other examples of similar development undertaken by the Applicant across Australia. Based on previous examples, the Applicant is aware of the key elements that need to be included to ensure a successful and functional operation. Accordingly, the proposed development will be designed to suitably accommodate all resident's needs. With this in mind, it is not considered all the open space requirements are, nor should they necessarily be applicable. However, for completeness, a full assessment against PO4 is provided below.

PO4 of the code states:

"Accommodation activities are provided with sufficient private and communal open space areas which:

a) accommodate a range of landscape treatments, including soft and hard landscaping":

Response:

Please refer to the landscape design in **Attachment 11** which details the hard and soft landscape treatments that will be implemented throughout the proposed development.

b) "Provide a range of opportunities for passive and active recreation":

Response:



Indoor lounge, TV and activity areas, internal, albeit outdoor courtyards and the wider grassed outdoor grounds (playgrounds and gazebos etc.) will provide ample opportunity for a variety of recreational pursuits for both residents and their families when visiting;

c) "Provide a positive outlook and high quality of amenity to residents":

Response:

All recreational areas will be of a high quality and provide high levels of amenity (refer to **Attachment 11**). Further reasonable and relevant conditions can also be imposed to ensure compliance.

d) "Is conveniently located and easily accessible to all residents":

Response:

Numerous indoor recreation and outdoor courtyards are proposed, ensuring both indoor and outdoor recreation opportunities are provided to and easily accessible by each resident;

e) "Contribute to an active and attractive streetscape":

Response:

Please refer to the elevations in **Attachment 2** and the landscape design in **Attachment 11** which demonstrates that the proposed development will not have a negative impact on the surrounding streetscapes. Further reasonable and relevant conditions can also be imposed to ensure compliance.

8 CONCLUSION

This report supports a development application made by Croft Developments Pty Ltd seeking the requisite statutory development approval from Mareeba Shire Council to support the establishment of a new residential aged care facility over Lot 1 on SP298397 at 2-18 Haren Street, Mareeba. Accordingly, this development application seeks the following approval:

Development Permit for a Material Change of Use - Residential Care Facility (120 Beds)

This report has described the proposed development, identified the applicable statutory and legislative requirements of Mareeba Shire Council under their Planning Scheme, the *Mareeba Shire Council Planning Scheme 2016*, as well as those at the State level under the *Planning Act 2016* and other, relevant State legislation and requirements, and in doing so, demonstrated the suitability of the land to accommodate the residential aged care facility.

This report has highlighted that the proposed development is generally compliant with all the 'deemed to comply' Acceptable Outcomes. Where a non-compliance has occurred, a performance-based assessment has been provided to justify and demonstrate, based on sound planning grounds, that compliance with the corresponding Performance Outcome and in turn, the applicable code, can still be achieved. Accordingly, the proposed development should be approved subject to the imposition of reasonable and relevant conditions of approval.

ATTACHMENT 1:

DA FORM 1 AND LANDOWNERS CONSENT

DA Form 1 – Development application details

Approved form (version 1.1 effective 22 JUNE 2018) 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 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.

This form and any other form relevant to the development application must be used to make a development application relating to strategic port land and Brisbane core port land under the *Transport Infrastructure Act 1994*, and airport land under the *Airport Assets (Restructuring and Disposal) Act 2008*. For the purpose of assessing a development application relating to strategic port land and Brisbane core port land, any reference to a planning scheme is taken to mean a land use plan for the strategic port land, Brisbane port land use plan for Brisbane core port land, or a land use plan for airport land.

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) (individual or company full name)	Croft Developments Pty Ltd
Contact name (only applicable for companies)	C/- Matt Ingram of Urban Sync Pty Ltd
Postal address (P.O. Box or street address)	PO Box 2970
Suburb	Cairns
State	Queensland
Postcode	4870
Country	Australia
Contact number	(07) 4051 6946
Email address (non-mandatory)	matt@urbansync.com.au
Mobile number (non-mandatory)	
Fax number (non-mandatory)	
Applicant's reference number(s) (if applicable)	19-468

2) Owner's consent

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

 \boxtimes Yes – the written consent of the owner(s) is attached to this development application \square 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 <u>DA</u> <u>Forms Guide: Relevant plans</u> .							
3.1) Street address and lot on plan							
					ots must be liste		
Water bu	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).						
	Unit No.	Street N	۱o.	Stree	t Name and	Туре	Suburb
2)		2-18		Harer	n Street		Mareeba
a)	Postcode	Lot No.		Plan	Plan Type and Number (e.g. RP, SP)		Local Government Area(s)
	4880	1		SP29	8397		Mareeba Shire Council
	Unit No.	Street N	lo.	Stree	t Name and	Туре	Suburb
b)							
b)	Postcode	Lot No.		Plan	Type and Nu	ımber (e.g. RP, SP)	Local Government Area(s)
				oropriate	e for developme	nt in remote areas, over part of a	lot or in water not adjoining or adjacent to land
	nnel dredging i lace each set o			separate	e row. Only one	set of coordinates is required fo	r this part.
					e and latitud		
Longitu			-	ude(s)		Datum	Local Government Area(s) (if applicable)
v				. ,		WGS84	
						GDA94	
						Other:	
	ordinates of	premises	s by e	asting	and northing)	
Easting	g(s)	North	ing(s)		Zone Ref.	Datum	Local Government Area(s) (if applicable)
					54	WGS84	
					55	GDA94	
	1 1.0.				56	Other:	
	dditional pre						
	ditional prem ule to this ap			ant to t	inis developr	ment application and their	details have been attached in a
	required	Piloation					
4) Ider	ntify any of th	he follow	in <u>g th</u> a	at appl	y to th <u>e pren</u>	nises and provide any rele	vant 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 <i>Transport Infrastructure Act</i> 1994							
	plan descrip				-		
	of port author		-				
	tidal area	,					
_		ernment	for the	e tidal a	area <i>(if applica</i>	able):	
	of port author					,	
	•	•				cturing and Disposal) Act :	2008
	of airport:		1		,	C (<i>p</i> · · · <i>p</i> · · · · · · · · · · · · · · · · · · ·	

Listed on the Environmental Management Register (EMR) under the Environmental Protection Act 1994				
EMR site identification:				
Listed on the Contaminated Land Register (CLR) under the Environmental Protection Act 1994				
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 <u>DA Forms Guide.</u>

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 the second se	at includes		
		a variation approval			
c) What is the level of assessr	nent?				
Code assessment	Impact assessment (req	uires public notification)			
d) Provide a brief description of <i>lots</i>):	of the proposal (e.g. 6 unit apartmen	t building defined as multi-unit dwellin	g, reconfiguration of 1 lot into 3		
Residential Care Facility (120	beds)				
e) Relevant plans					
Note : Relevant plans are required to <u>Relevant plans.</u>	be submitted for all aspects of this devel	lopment application. For further inforn	nation, see <u>DA Forms guide:</u>		
	osed development are attached	to the development application	n		
6.2) Provide details about the	second development aspect				
a) What is the type of development? (tick only one box)					
a) what is the type of develop	ment? (tick only one box)				
a) what is the type of develop	ment? <i>(tick only one box)</i>	Operational work	Building work		
	Reconfiguring a lot	Operational work	Building work		
Material change of use	Reconfiguring a lot	Operational work Preliminary approval that approval			
Material change of useb) What is the approval type?	 Reconfiguring a lot (tick only one box) Preliminary approval 	Preliminary approval th			
 Material change of use b) What is the approval type? Development permit 	 Reconfiguring a lot (tick only one box) Preliminary approval 	Preliminary approval the approval			
 Material change of use b) What is the approval type? Development permit c) What is the level of assessr Code assessment 	Reconfiguring a lot (tick only one box) Preliminary approval nent?	Preliminary approval th approval approval	nat includes a variation		
 Material change of use What is the approval type? Development permit What is the level of assess Code assessment Provide a brief description of 	Reconfiguring a lot (tick only one box) Preliminary approval nent? Impact assessment (req	Preliminary approval th approval approval	nat includes a variation		
 Material change of use What is the approval type? Development permit What is the level of assess Code assessment Provide a brief description of 	Reconfiguring a lot (tick only one box) Preliminary approval nent? Impact assessment (req	Preliminary approval th approval approval	nat includes a variation		
 Material change of use b) What is the approval type? Development permit c) What is the level of assessr Code assessment d) Provide a brief description of <i>lots</i>): e) Relevant plans 	Reconfiguring a lot (tick only one box) Preliminary approval nent? Impact assessment (req	Preliminary approval th approval uires public notification) t building defined as multi-unit dwellin	nat includes a variation g, reconfiguration of 1 lot into 3		
 Material change of use What is the approval type? Development permit C) What is the level of assess Code assessment A) Provide a brief description of lots): e) Relevant plans Note: Relevant plans are required to the Relevant plans. 	Reconfiguring a lot (tick only one box) Preliminary approval nent? Impact assessment (req of the proposal (e.g. 6 unit apartmen	Preliminary approval th approval uires public notification) t building defined as multi-unit dwellin	nat includes a variation g, reconfiguration of 1 lot into 3 nation, see <u>DA Forms Guide:</u>		

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	$oxed{i}$ Yes – complete division 1 if assessable against a local planning instrument			
Reconfiguring a lot	Yes – complete division 2			
Operational work	Yes – complete division 3			
Building work	Yes – complete DA Form 2 – Building work details			

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 cha	nge of use			
Provide a general description of the proposed use		anning scheme definition	Number of dwelling units <i>(if applicable)</i>	Gross floor area (m ²) (<i>if applicable</i>)
Residential Aged Care Facility	Residential Ca	are Facility		Refer to attached plans
8.2) Does the proposed use involve the	use of existing b	ouildings 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 <i>(complete 12))</i>	Creating or changing an easement giving access to a lot from a construction road <i>(complete 13))</i>				

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

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 (m²)	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?			
Road work	🗌 Stormwa	ter 🗌 Water infrastructure	
Drainage work	Earthwor	rks Sewage infrastructure	
Landscaping	Signage	Clearing vegetation	
Other – please specify:			
14.2) Is the operational work necessary to facilitate the creation of new lots? (e.g. subdivision)			
Yes – specify number of new lots	s:		
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?

Yes – a copy of the decision notice is attached to this development application

Local government is taken to have agreed to the superseded planning scheme request – relevant documents attached

🛛 No

PART 5 - REFERRAL DETAILS

17) Do any aspects of the proposed development require referral for any referral requirements? <i>Note:</i> 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 Regulation 2017:
Clearing native vegetation
Contaminated land (unexploded ordnance)
Environmentally relevant activities (ERA) (only if the ERA have not been devolved to a local government)
Fisheries – aquaculture
Fisheries – declared fish habitat area
Fisheries – marine plants
Fisheries – waterway barrier works
Hazardous chemical facilities
Queensland heritage place (on or near a Queensland heritage place)
 Infrastructure – designated premises Infrastructure – state transport infrastructure
☐ Infrastructure – state transport corridors and future state transport corridors
Infrastructure – state transport controlled transport tunnels and future state transport controlled transport tunnels
Infrastructure – near a state-controlled road intersection
On Brisbane core port land near a State transport corridor or future State transport corridor
On Brisbane core port land – ERA
On Brisbane core port land – tidal works or work in a coastal management district
On Brisbane core port land – hazardous chemical facility
On Brisbane core port land – taking or interfering with water
On Brisbane core port land – referable dams
On Brisbane core port land - fisheries
Land within Port of Brisbane's port limits
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 – release dams Water-related development – construction of new levees or modification of existing levees (category 3 levees only)
Water related development Construction of new levees of modified and of existing levees (<i>ballguy shevees of my)</i>
Matters requiring referral to the local government:
Airport land
Environmentally relevant activities (ERA) (only if the ERA have been devolved to local government)
Local heritage places
Local heritage places

Matters requiring referral to the chief executive of the distribution entity or transmission entity:
Matters requiring referral to:
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
Oil and gas infrastructure
Matters requiring referral to the Brisbane City Council:
Brisbane core port land
Matters requiring referral to the Minister under the Transport Infrastructure Act 1994:
Brisbane core port land (inconsistent with Brisbane port LUP for transport reasons)
Strategic port land
Matters requiring referral to the relevant port operator:
Land within Port of Brisbane's port limits (below high-water mark)
Matters requiring referral to the Chief Executive of the relevant port authority:
Land within limits of another port (below high-water mark)
Matters requiring referral to the Gold Coast Waterways Authority:
☐ Tidal works, or work in a coastal management district in Gold Coast waters
Matters requiring referral to the Queensland Fire and Emergency Service:
Tidal works marina (more than six vessel berths)

18) Has any referral agency provided a referral response for this development application?

☐ Yes – referral response(s) received and listed below are attached to this development application ⊠ 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 the development application the subject of this form, 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

I agree to receive an information request if determined necessary for this development application

I do not agree to accept an information request for this development application

Note: By not agreeing to accept an information request I, the applicant, acknowledge:

 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
 Bott 2 of the DA Rules will still apply if the application is an application listed under section 11.2 of the DA Rules

• Part 3 of the DA Rules will still apply if the application is an application listed under section 11.3 of the DA Rules.

Further advice about information requests is contained in the DA Forms Guide.

PART 7 – FURTHER DETAILS

20) Are there any associated development applications or current approvals? (e.g. a preliminary approval) Yes - provide details below or include details in a schedule to this development application No List of approval/development application references Approval Development application Approval Approval Development application

21) Has the portable long service leave levy been paid? (only applicable to development applications involving building work or operational work)

Yes – a copy of the receipted QLeave form is attached to this development application
 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
 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
\$		

22) Is this development application in response to a show cause notice or required as a result of an enforcement notice?

Yes – show cause or enforcement notice is attached

🛛 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 *Environmental Protection Act* 1994?

 ☐ Yes – the required attachment accompanies this development a ☑ No Note: Application for an environmental a requires an environmental authority to optimize the second seco	application, and details are prov uthority can be found by searching "ES	ided in the table below R/2015/1791" as a search term at <u>www</u>	-
Proposed ERA number:		Proposed ERA threshold:	
Proposed ERA name:			
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?			
Yes – Form 69: Notification of a facility exceeding 10% of schedule 15 threshold is attached to this development application			

Note: See <u>www.business.gld.gov.au</u> for further information about hazardous chemical notifications.

Clearing native vegetation

23.3) Does this development application involve clearing native vegetation that requires written confirmation that the chief executive of the <i>Vegetation Management Act 1999</i> is satisfied the clearing is for a relevant purpose under section 22A of the <i>Vegetation Management Act 1999</i> ?
 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 <u>https://www.qld.gov.au/environment/land/vegetation/applying</u> 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 <i>Environmental Offsets Act 2014</i> ?
 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 <u>www.qld.gov.au</u> for further information on environmental offsets.
Koala conservation
23.5) Does this development application involve a material change of use, reconfiguring a lot or operational work within an assessable development area under Schedule 10, Part 10 of the Planning Regulation 2017?
☐ Yes ⊠ No
Note : See guidance materials at <u>www.des.qld.gov.au</u> 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 <i>Water Act 2000</i> ?
Yes – the relevant template is completed and attached to this development application and I acknowledge that a
relevant authorisation or licence under the <i>Water Act 2000</i> may be required prior to commencing development \boxed{N} No
Note : Contact the Department of Natural Resources, Mines and Energy at <u>www.dnrme.gld.gov.au</u> 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 Form1 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 <u>https://planning.dsdmip.gld.gov.au/</u> . 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 <i>resource</i> allocation authority is attached to this development application, if required under the <i>Fisheries Act 1994</i> No
Note : See guidance materials at <u>www.daf.qld.gov.au</u> 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 <i>Water Act 2000?</i>

 Yes – I acknowledge that a quarry material allocation notice must be obtained p No Note: Contact the Department of Natural Resources, Mines and Energy at <u>www.dnrme.gld.gov.au</u> and 	
information.	a <u>www.business.qia.gov.au</u> ioi fufitier
Quarry materials from land under tidal waters	
23.10) Does this development application involve the removal of quarry material under the <i>Coastal Protection and Management Act</i> 1995?	ls from land under tidal water
\Box Yes – I acknowledge that a quarry material allocation notice must be obtained p \boxtimes No	prior to commencing development
Note: Contact the Department of Environment and Science at <u>www.des.qld.gov.au</u> for further informati	tion.
<u>Referable dams</u>	
23.11) Does this development application involve a referable dam required to be t section 343 of the <i>Water Supply (Safety and Reliability) Act 2008</i> (the Water Supple	
 Yes – the 'Notice Accepting a Failure Impact Assessment' from the chief execu Supply Act is attached to this development application No 	utive administering the Water
Note : See guidance materials at <u>www.dnrme.qld.gov.au</u> 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	a coastal management district?
 Yes – the following is included with this development application: Evidence the proposal meets the code for assessable development that is <i>if application involves prescribed tidal work</i>) A certificate of title 	is prescribed tidal work (only required
No	
Note : See guidance materials at <u>www.des.qld.gov.au</u> for further information.	
Queensland and local heritage places	
23.13) Does this development application propose development on or adjoining a heritage register or on a place entered in a local government's Local Heritage R	
\Box Yes – details of the heritage place are provided in the table below $oxed{$ No	
Note: See guidance materials at <u>www.des.qld.gov.au</u> for information requirements regarding developm	ment of Queensland heritage places.
Name of the heritage place: Place ID:	
<u>Brothels</u> 23.14) Does this development application involve a material change of use for a	a brothel?
\Box Yes – this development application demonstrates how the proposal meets the application for a brothel under Schedule 3 of the <i>Prostitution Regulation 2014</i> \Box No	code for a development
Decision under section 62 of the Transport Infrastructure Act 1994	
23.15) Does this development application involve new or changed access to a stat	ate-controlled road?
 ☑ Yes - this application will be taken to be an application for a decision under sec Infrastructure Act 1994 (subject to the conditions in section 75 of the Transport Infr satisfied) ☑ No 	•

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 <i>Note</i> : See the Planning Regulation 2017 for referral requirements	🛛 Yes
If building work is associated with the proposed development, Parts 4 to 6 of <i>DA Form 2</i> – <i>Building work details</i> have been completed and attached to this development application	☐ Yes ⊠ Not applicable
Supporting information addressing any applicable assessment benchmarks is with 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 <u>DA</u> <u>Forms Guide: Planning Report Template</u> .	⊠ 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 <u>DA Forms Guide: Relevant plans.</u>	🛛 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 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 Note: For completion by assessment manager if applicable	
Description of the work	
QLeave project number	
Amount paid (\$)	
Date paid	
Date receipted form sighted by assessment manager	
Name of officer who sighted the form	

Company owner's consent to the making of a development application under the *Planning Act 2016*

١,

Director of the company mentioned below.

Of Signature Care Land Holdings Pty Ltd (A.C.N 600 935 760)

the company being the owner of the premises identified as follows:

2-18 Haren Street (Lot 1 on SP298397)

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

Croft Developments Pty Ltd

on the premises described above for:

A Material Change of Use for a Residential Care Facility (120Beds)

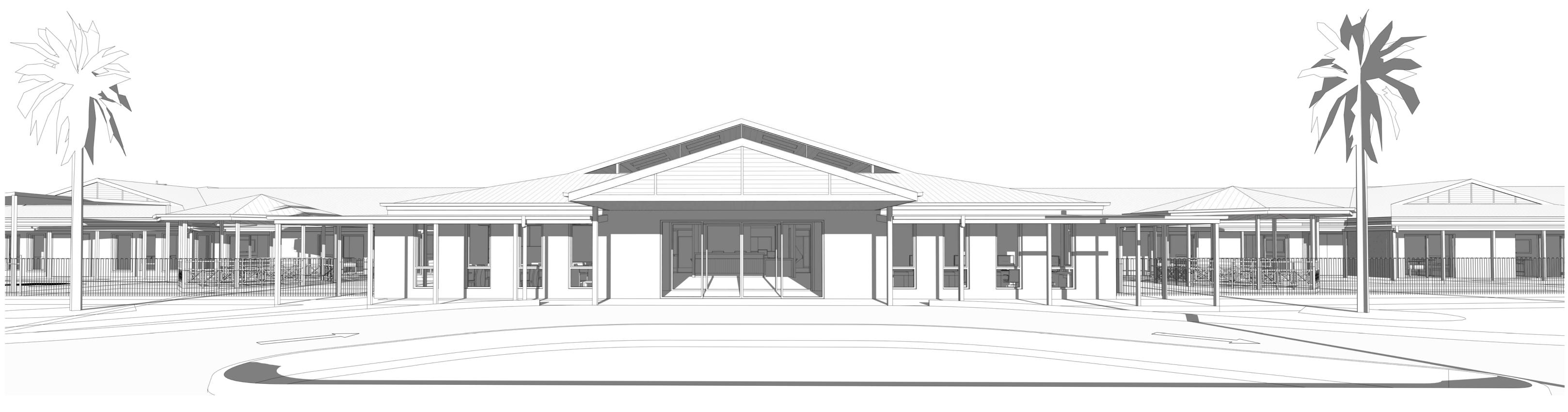
Company seal

Company Name and ACN: Signature Care Land Holdings Pty Ltd (A.C.N 600 935 760) Signature of Director Signature of Director/Secretary Date Date

The Planning Act 2016 is administered by the Department of Local Government, Infrastructure and Planning, Queensland Government.

ATTACHMENT 2:

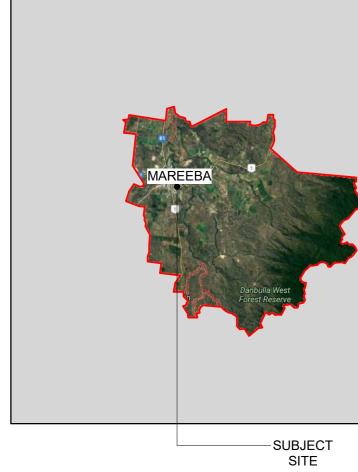
PLANS OF DEVELOPMENT



MAIN ENTRANCE



SUBURB OF MAREEBA



LOCALITY DIAGRAM



2-18 HAREN ST, MAREEBA QLD 4880



SITE AERIAL PHOTO & SUBJECT SITE



*NOTE: THIS IS NOT AN ACCURATE DEPICTION OF THE TITLE BOUNDARY

SHEET LIST

DEVELOPMENT APPLICATION				
DA00	COVER PAGE & DEVELOPMENT SUMMARY	1		
DA01	SITE ANALYSIS	1		
DA02	PROPOSED SITE PLAN	1		
DA03	PROPOSED GROUND FLOOR PLAN	1		
DA04	PROPOSED ELEVATIONS & SECTIONS	1		
DA05	SHADOW DIAGRAMS	1		

DEVELOPMENT SUMMARY				
Subject Site Area		28,935 m²		
AGED CARE FACIL	<u>.ITY</u>			
BUILDING FOOTPRINT		7630 m²		
SITE COVERAGE REMAINING SITE AREA TOTAL SITE AREA	7,631 m ² 21,304 m ² 28,935 m ²	26% 74%		
PERMEABILITY		57.50%		
ACCESSIBLE PARKING SPA STANDARD PARKING TOTAL PARKING: 58	CE	4 54 58		
BUILDING AREA S	CHEDULE			
A WING B WING C WING D WING E WING SERVICE TOWN CENTRE Overall Floor Area		1580 m ² 1687 m ² 1627 m ² 829 m ² 845 m ² 525 m ² 537 m ² 7630 m ²		

			PROJECT: MAREEBA
			CLIENT:
			Croft Developments
			ADDRESS:
			2-18 HAREN STREET, MAREEBA
1	DEVELOPMENT APPLICATION ISSUE	12/12/2019	
Revision	Revision Description	Revision Date	

DEVELOPMENT APPLICATION

SHEET SERIES: DEVELOPMENT APPLICATION

SHEET TITLE: COVER PAGE & DEVELOPMENT SUMMARY

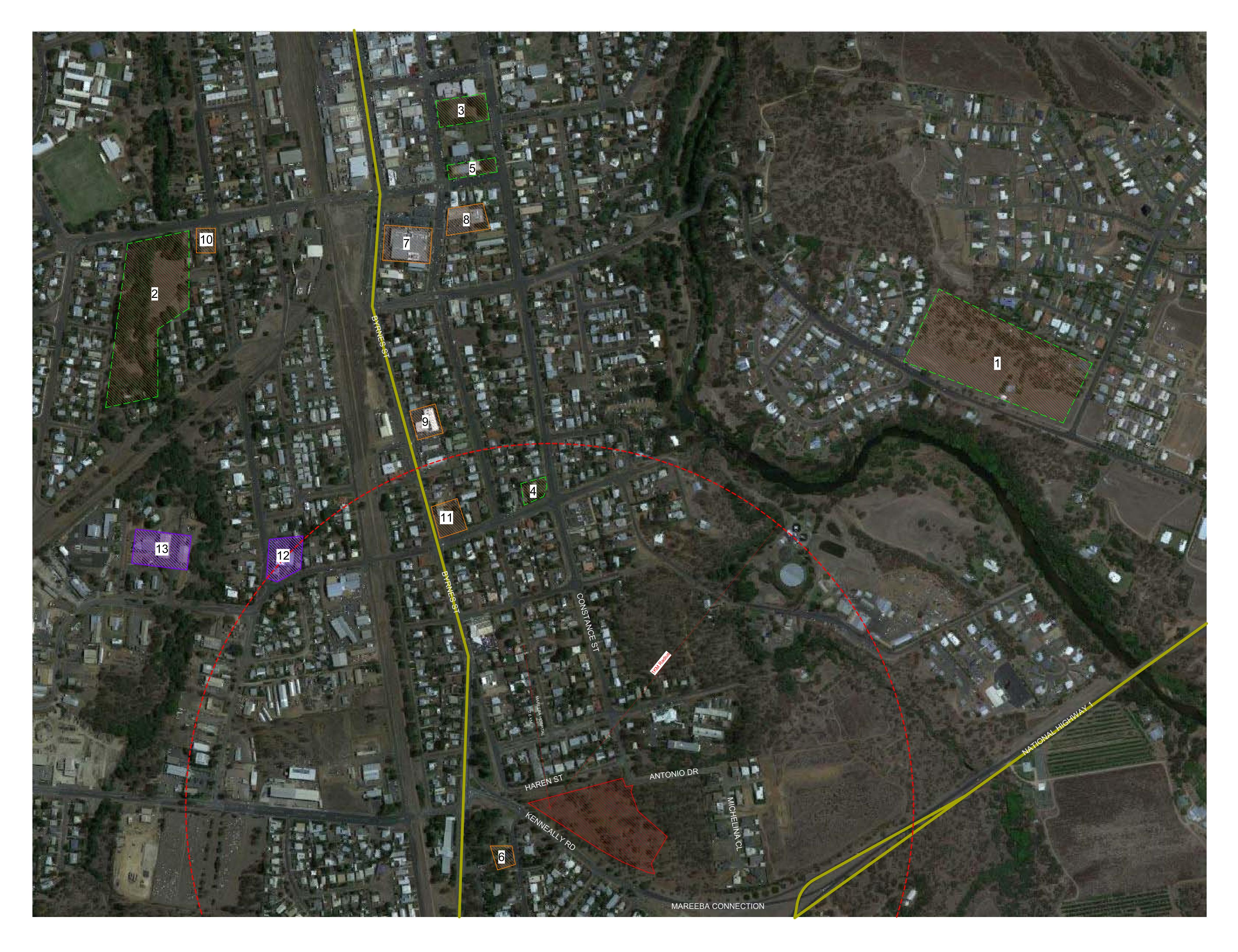






 REVISION:
 1
 59 Wangara Road, Cheltenham VIC 3192 Tel: (03) 9581 0100 | Fax: (03) 9585 6383

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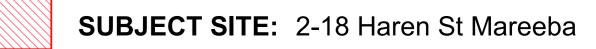




			PROJECT:
			MAREEBA
			CLIENT:
			CLIENT.
			Croft Developments
			ADDRESS:
			2-18 HAREN STREET, MAREEBA
1	DEVELOPMENT APPLICATION ISSUE	12/12/2019	
Revision	Revision Description	Revision Date	

7/17/17/7

LEGEND :



RECREATION RESERVE/PARK

- Ceola Drive Park
 Basalt Gully Park
 Arnold Park
 Alex Lawson Park
 Mareeba Shire Cousil

SHOPPING CENTRE/AREA

- 6. Mareeba Markets
 7. Coles Mareeba
 8. Target
 9. Mareeba Toyota
 10. B&B Secondhand
 11. Essence Wholefood Supermarket

HEALTH CLUB/SPORT CENTRE

12. Essential Fitness 13. Paula's Aerobic & Gym Centre

Major Road Network

DEVELOPMENT APPLICATION

SHEET SERIES: DEVELOPMENT APPLICATION



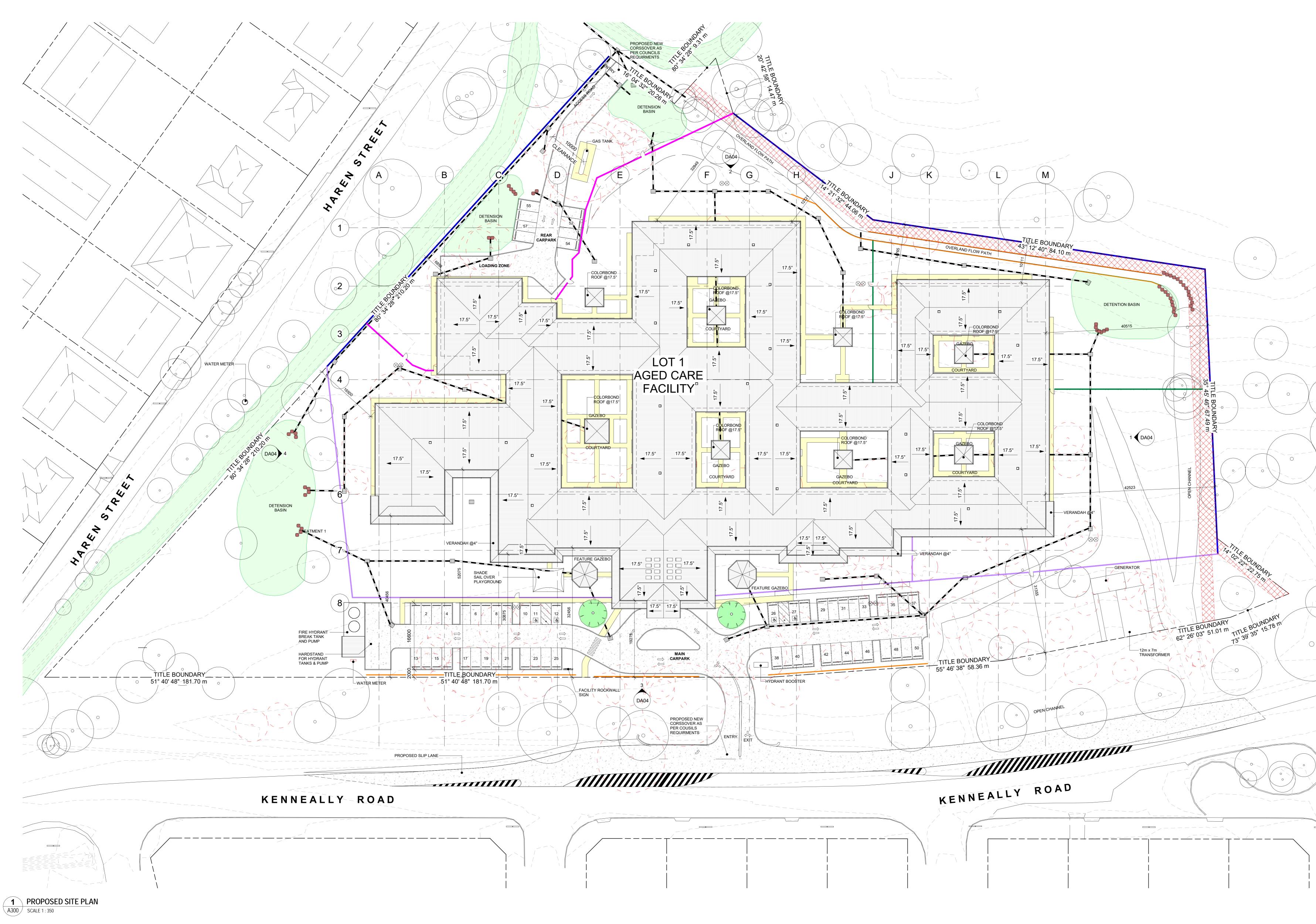
SCALE: As indicated@A0 DATE: 12/12/2019 DRAWN BY: Author



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LEGEND

TREE SYMBOL	FENCING	SITE
EXISTING TREES TO REMAIN (SOLID BLACK LINE)	PROPOSED NEW 1.8m COLORBOND FENCE	ELECTRICAL POWER POLE (PP)
	PROPOSED NEW 1.4m POOL FENCE	SWALE REFER TO CIVIL ENGINEERS DRAWINGS
• EXISTING TREES TO BE REMOVED	PROPOSED NEW 1.4m COLORBOND FENCE	ASHPHALT CARPARK GRATED PIT
PROPOSED FEATURE TREE	PROPOSED NEW 1.2m POOL FENCE RETAINING WALL	FOOTPATH

PROPOSED FENCING





BOUNDARY FENCE

			PROJECT:
			MAREEBA
			CLIENT:
			Croft Developments
			ADDRESS:
			2-18 HAREN STREET, MAREEBA
1	DEVELOPMENT APPLICATION ISSUE	12/12/2019	
Revision	Revision Description	Revision Date	

SHEET TITLE: PROPOSED SITE PLAN



SCALE: As indicated@A0 DATE: 12/12/2019 DRAWN BY: Author

DEVELOPMENT APPLICATION

REVISION: 1





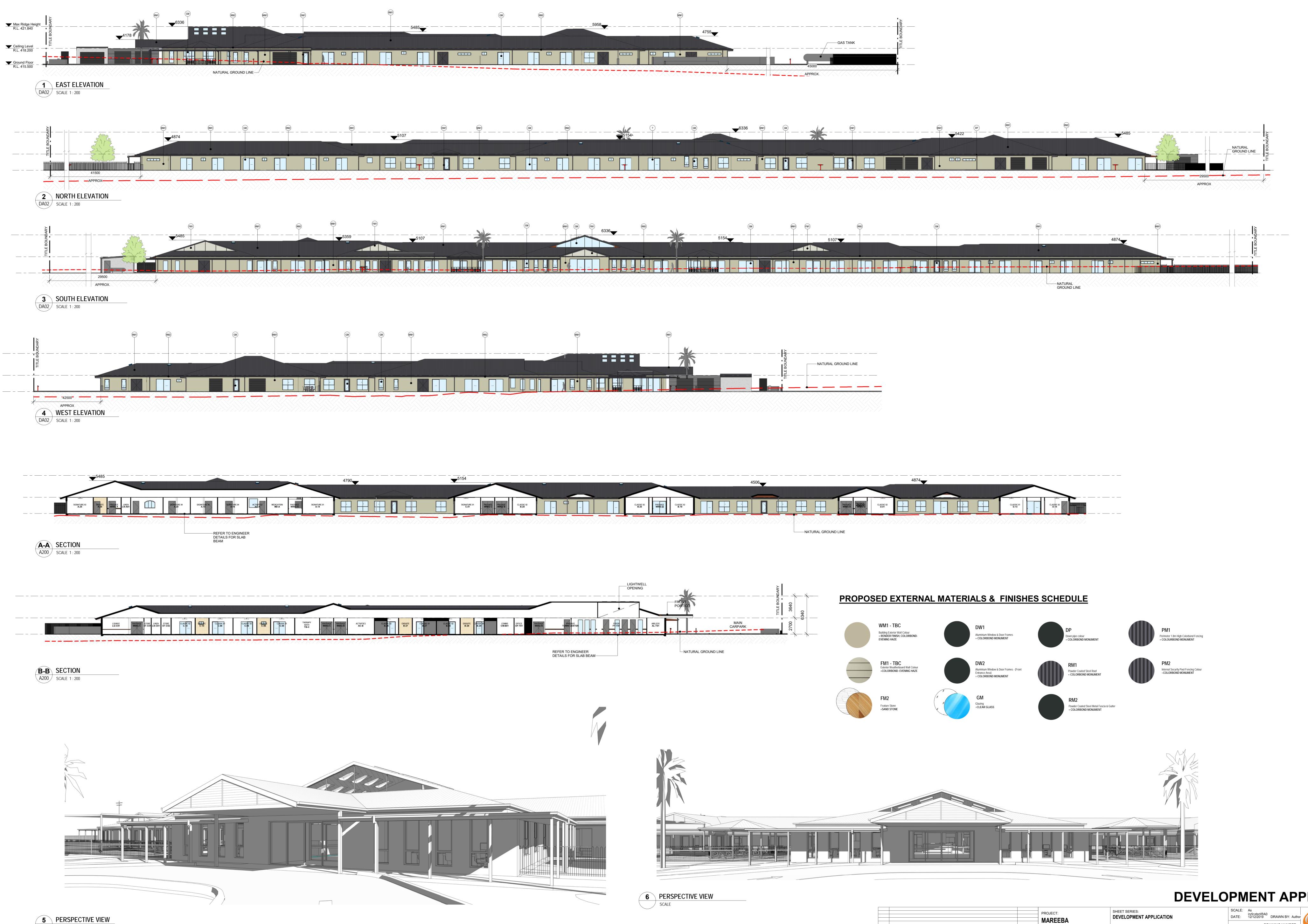


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			PROJECT: MAREEBA
			CLIENT:
			Croft Developments
			ADDRESS: 2-18 HAREN STREET, MAREE
1 Devision	DEVELOPMENT APPLICATION ISSUE	12/12/2019	2-10 HAREN STREET, MAREE

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DEVELOPMENT APPLICATION

CLIENT:

12/12/2019 Revision Date

1 DEVELOPMENT APPLICATION ISSUE Revision

Revision Description

Croft Developments ADDRESS:

2-18 HAREN STREET, MAREEBA

SHEET TITLE: PROPOSED ELEVATIONS & SECTIONS

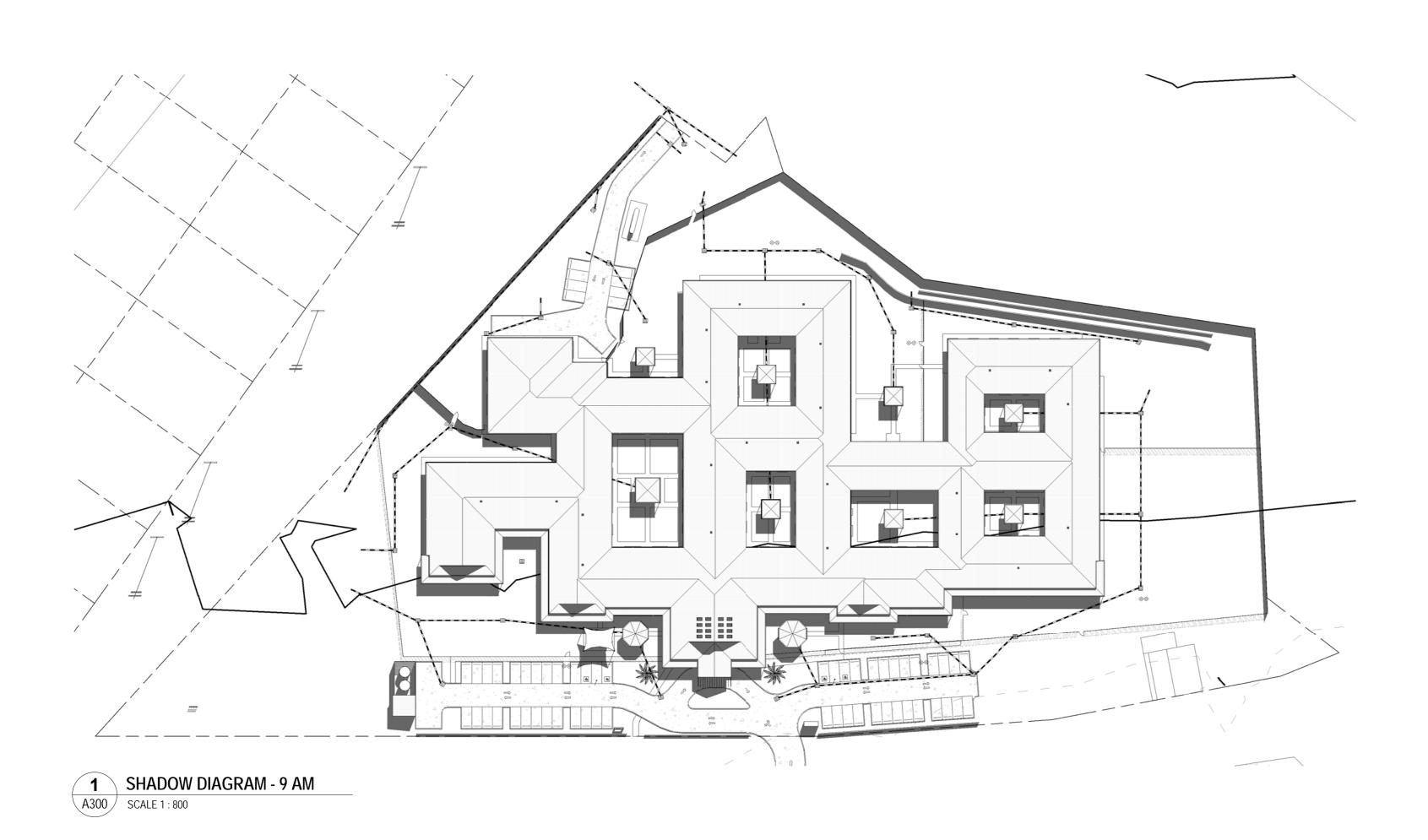
DRAWING NUMBER:

REVISION: 1



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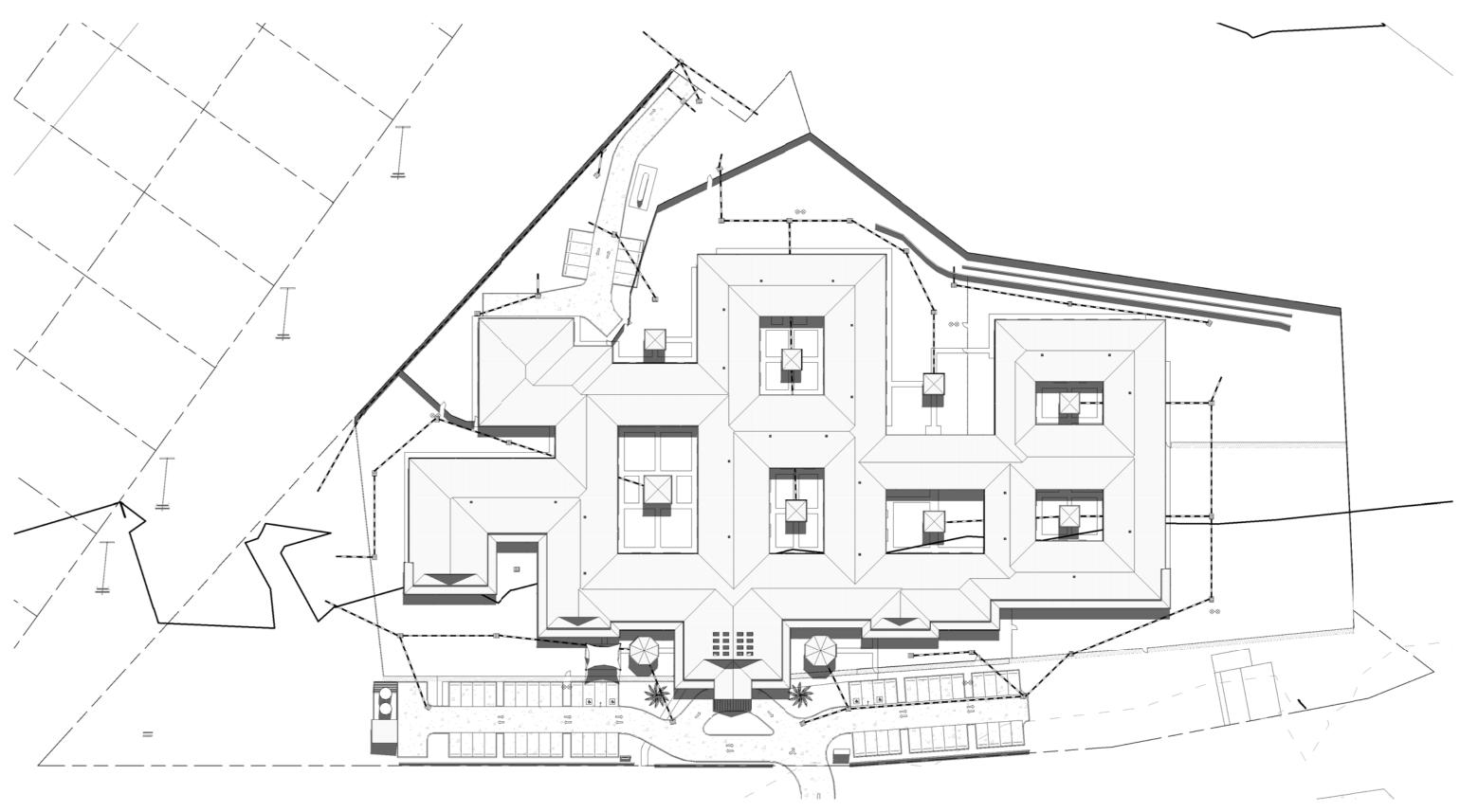
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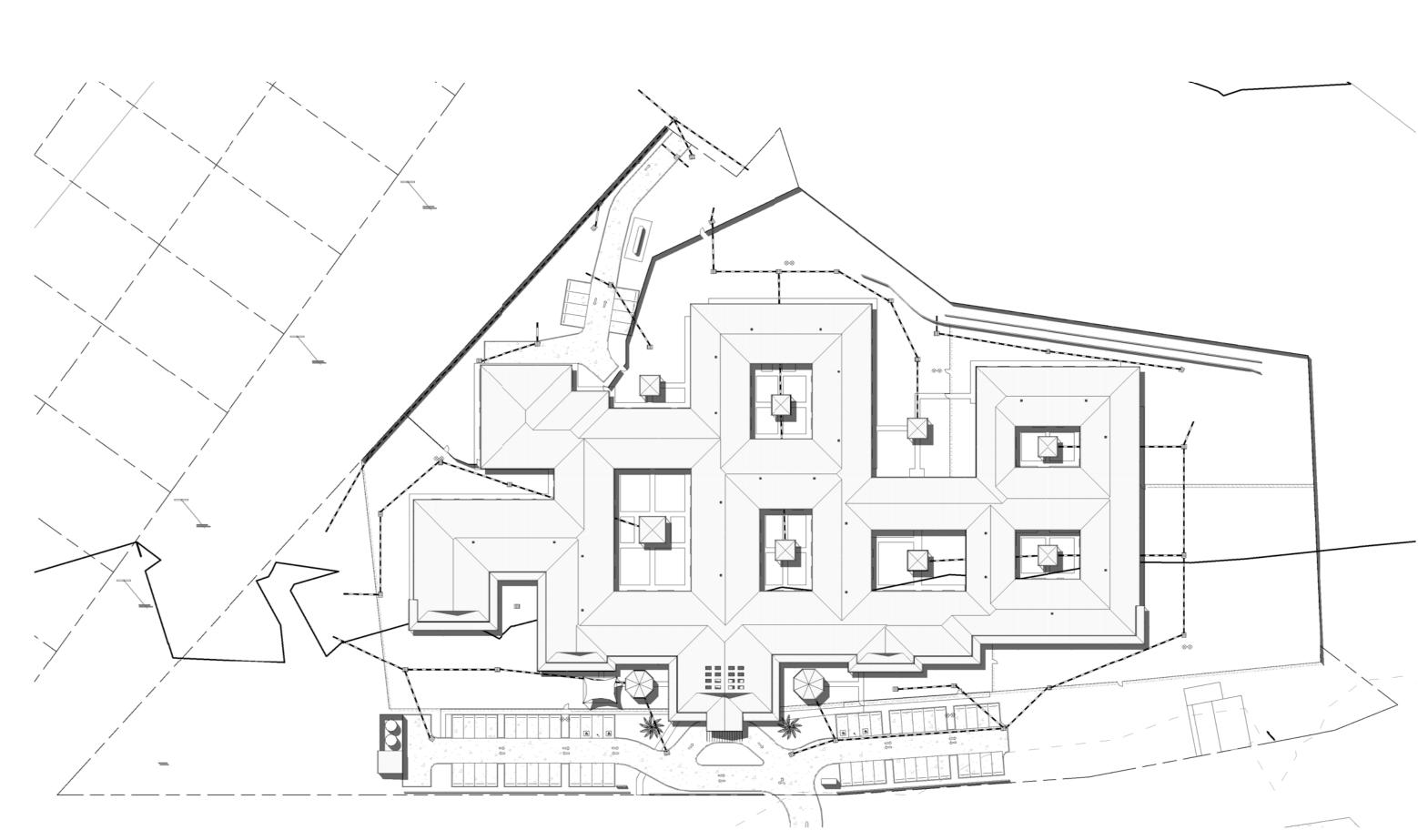








2 SHADOW DIAGRAM - 10 AM A300 SCALE 1 : 800



4 SHADOW DIAGRAM - 12 PM A300 SCALE 1 : 800

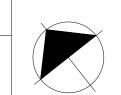
			PROJECT:
			MAREEBA
			CLIENT:
			Croft Developments
			ADDRESS:
			2-18 HAREN STREET, MAREEB
1	DEVELOPMENT APPLICATION ISSUE	12/12/2019	
Revision	Revision Description	Revision Date	





DEVELOPMENT APPLICATION

SHEET SERIES: DEVELOPMENT APPLICATION







SHEET TITLE: SHADOW DIAGRAMS

 REVISION:
 1
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 Printed on: 12/12/2019 12:52:18 PM

ATTACHMENT 3: SITE SEARCHES

CURRENT TITLE SEARCH

NATURAL RESOURCES, MINES AND ENERGY, QUEENSLAND

Request No: 31765566 Search Date: 29/07/2019 15:32

Title Reference: 51121296 Date Created: 09/11/2017

Previous Title: 50927068

REGISTERED OWNER

Dealing No: 719490913 01/07/2019

SIGNATURE CARE LAND HOLDINGS PTY LTD A.C.N. 600 935 760 TRUSTEE UNDER INSTRUMENT 719490913

ESTATE AND LAND

Estate in Fee Simple

LOT 1 SURVEY PLAN 298397 Local Government: MAREEBA

EASEMENTS, ENCUMBRANCES AND INTERESTS

- Rights and interests reserved to the Crown by Deed of Grant No. 40067134 (Lot 157 on CP NR5658)
- 2. EASEMENT IN GROSS No 718335766 17/10/2017 at 09:40 burdening the land COUNCIL OF THE SHIRE OF MAREEBA over EASEMENT A ON SP298397

ADMINISTRATIVE ADVICES - NIL UNREGISTERED DEALINGS - NIL

CERTIFICATE OF TITLE ISSUED - No

Caution - Charges do not necessarily appear in order of priority

** End of Current Title Search **

COPYRIGHT THE STATE OF QUEENSLAND (NATURAL RESOURCES, MINES AND ENERGY) [2019] Requested By: D-ENQ GLOBALX TERRAIN



Department of Environment and Science (DES) ABN 46 640 294 485 400 George St Brisbane, Queensland 4000 GPO Box 2454, Brisbane QLD 4001, AUSTRALIA www.des.qld.gov.au

SEARCH RESPONSE ENVIRONMENTAL MANAGEMENT REGISTER (EMR) CONTAMINATED LAND REGISTER (CLR)

Gloablx Terrain Po Box 2746 Brisbane QLD 4069

Transaction ID: 50545930 EMR Site Id: Cheque Number: Client Reference:

30 July 2019

This response relates to a search request received for the site: Lot: 1 Plan: SP298397 2 HAREN ST MAREEBA

EMR RESULT

The above site is NOT included on the Environmental Management Register.

CLR RESULT

The above site is NOT included on the Contaminated Land Register.

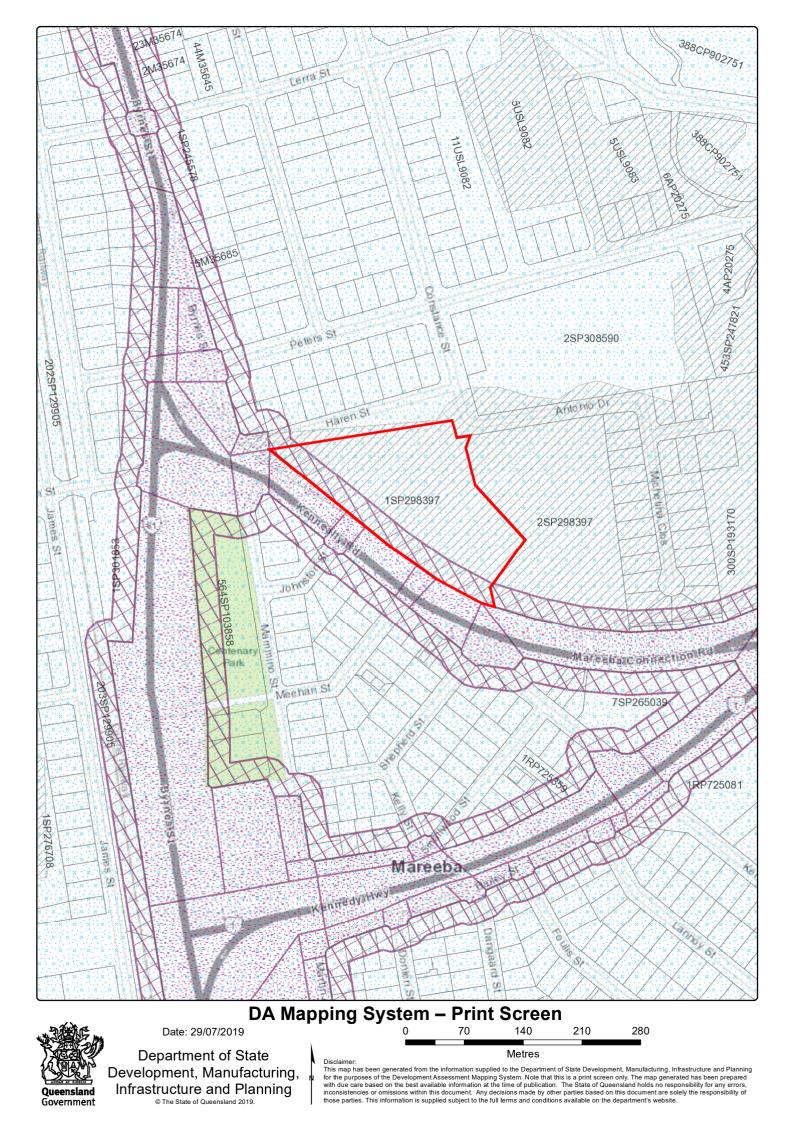
ADDITIONAL ADVICE

All search responses include particulars of land listed in the EMR/CLR when the search was generated. The EMR/CLR does NOT include:-

- 1. land which is contaminated land (or a complete list of contamination) if DES has not been notified
- 2. land on which a notifiable activity is being or has been undertaken (or a complete list of activities) if DES has not been notified

If you have any queries in relation to this search please phone 13QGOV (13 74 68)

Administering Authority



Legend

Drawn Polygon Layer

Override 1

Cadastre (5k)

Cadastre (5k)

Regulated vegetation management map (Category A

and B extract)
Category A on the regulated vegetation
management map

Category B on the regulated vegetation management map

Water resource planning area boundaries

Water resource planning area boundaries

Area within 25m of a State-controlled road

Area within 25m of a State-controlled road

State-controlled road

 \sum

State-controlled road

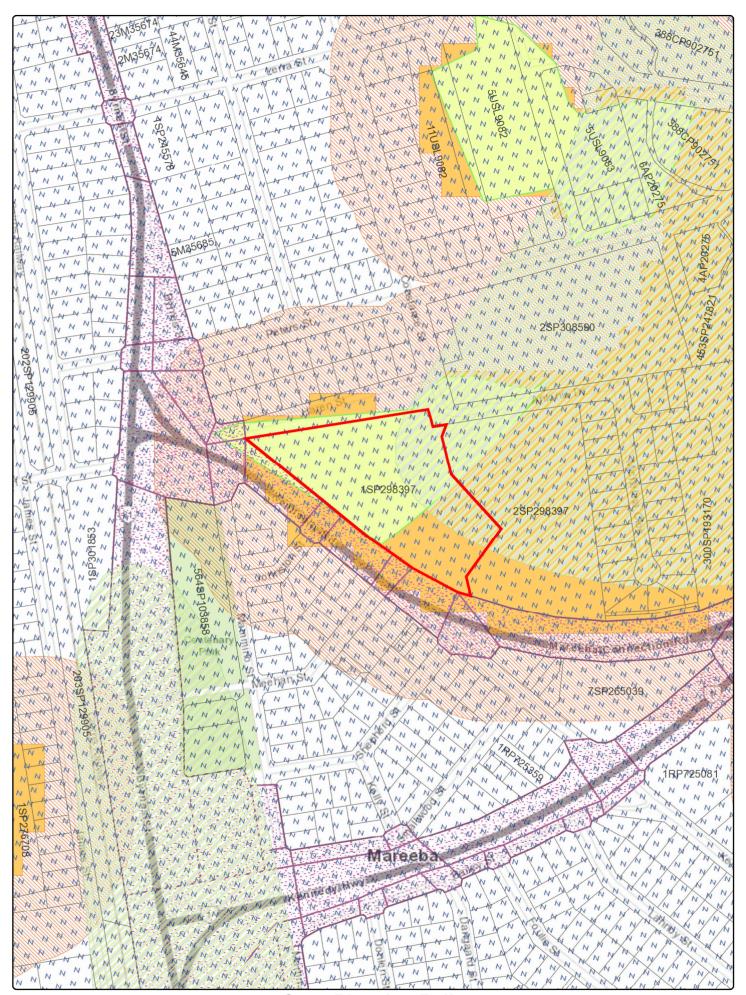
DA Mapping System – Print Screen

Date: 29/07/2019

Queensland Government

Department of State Development, Manufacturing, Infrastructure and Planning © The State of Queensland 2019.

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Department of State Development, Manufacturing, Infrastructure and Planning

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State Planning Policy Making or amending a local planning instrument and designating land for community infrastructure



Legend

Drawn Polygon Layer

Override 1

Cadastre (5k)

Cadastre (5k)

Wildlife hazard buffer zone



13km

Important agricultural areas

Important agricultural areas

State-controlled road

State-controlled road

MSES - Regulated vegetation (essential habitat)

MSES - Regulated vegetation (essential habitat)

Bushfire prone area



Very High Potential Bushfire Intensity

High Potential Bushfire Intensity

Medium Potential Bushfire Intensity

Potential Impact Buffer



Date: 29/07/2019

State Planning Policy

Making or amending a local planning instrument and designating land for community infrastructure

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Date: 29/07/2019 Department of State Development, Manufacturing, Infrastructure and Planning © The State of Queensland 2019.

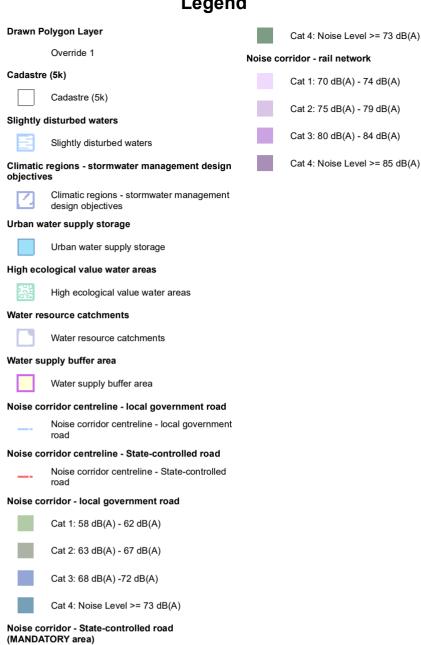
State Planning Policy Making or amending a local planning instrument and designating land for community infrastructure

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140 210 280 Disclaimer: Metres This map has been prepared with due care based on the best available information at the time of publication. However, the State of Queensland (acting through the department) makes no representations, either express or implied, that the map is free from errors, inconsistencies or omissions. Reliance on information contained in this map is the sole responsibility of the user. The State disclaims responsibility for any loss, damage or inconvenience caused as a result of reliance on information or data contained in this map.

Legend



Cat 0: Noise Level <= 57 dB(A)

- Cat 1: 58 dB(A) 62 dB(A)
- Cat 2: 63 dB(A) 67 dB(A)
- Cat 3: 68 dB(A) 72 dB(A) Cat 4: Noise Level >= 73 dB(A)

Noise corridor - State-controlled road (VOLUNTARY area)





Date: 29/07/2019

Department of State

State Planning Policy

Making or amending a local planning instrument and designating land for community infrastructure

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Legend

Drawn Polygon Layer

Override 1

Cadastre (10k)

Cadastre (10k)

SEQRP 2009-2031 development area (superseded)

Local Development Area

Regional Development Area

SEQ regional biodiversity corridor

SEQ regional biodiversity corridor

SEQ regional biodiversity value

SEQ regional biodiversity value

SEQ regional greenspace network

SEQ regional greenspace network

SEQ regionally significant scenic amenity

SEQ regionally significant scenic amenity

Regional land use categories (SEQ, WBB, MIW, FNQ)



Rural Living Area

Regional Landscape and Rural Production Area



DA Mapping System – Print Screen

Date: 29/07/2019

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Department of State



Vegetation management report

For Lot: 1 Plan: SP298397

Current as at 25/07/2019



This publication has been compiled by Operations Support, Department of Natural Resources, Mines and Energy.

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Recent changes

Updated mapping

The Regulated Vegetation Management Map and Supporting Map was updated in June 2019 to reflect the most up to date information available in relation to regional ecosystems, essential habitat and wetland mapping (Version 11).

Overview

Based on the lot on plan details you have supplied, this report provides the following detailed information:

• Vegetation management framework - an explanation of the application of the framework.

• *Property details* - information about the specified Lot on Plan, lot size, local government area, bioregion(s), subregion(s), catchment(s), coastal or non coastal status, and any applicable area management plans associated with your property.

• Vegetation management details for the specified Lot on Plan - specific information about your property including vegetation categories, regional ecosystems, watercourses, wetlands, essential habitat, and protected plants.

- Contact information.
- Maps a series of colour maps to assist in identifying regulated vegetation on your property.
- Other legislation contact information.

This information will assist you to determine your options for managing vegetation under the vegetation management framework, which may include:

- exempt clearing work
- accepted development vegetation clearing code
- an area management plan
- a development approval.

Other laws

The clearing of native vegetation is regulated by both Queensland and Australian legislation, and some local governments also regulate native vegetation clearing. You may need to obtain an approval or permit under another Act, such as Queensland's Protected Plants framework or the Commonwealth Government's *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Section 6 of this guide provides contact details of other agencies you should confirm requirements with, before commencing vegetation clearing.

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1. Vegetation management framework

The Vegetation Management Act 1999 (VMA), the Vegetation Management Regulation 2012, the *Planning Act 2016* and the Planning Regulation 2017, in conjunction with associated policies and codes, form the Vegetation Management Framework.

The VMA does not apply to all land tenures or vegetation types. State forests, national parks, forest reserves and some tenures under the *Forestry Act 1959* and *Nature Conservation Act 1992* are not regulated by the VMA. Managing or clearing vegetation on these tenures may require approvals under these laws.

The following native vegetation is not regulated under the VMA but may require permit(s) under other laws:

- grass or non-woody herbage;
- a plant within a grassland regional ecosystem prescribed under Schedule 5 of the Vegetation Management Regulation 2012; and
- a mangrove.

1.1 Exempt clearing work

Exempt clearing work is an activity for which you do not need to notify DNRME or obtain an approval approval under the vegetation management framework. Exempt clearing work was previously known as exemptions.

In areas that are mapped as Category X (white in colour) on the regulated vegetation management map (see section 5.1), and where the land tenure is freehold, indigenous land and leasehold land for agriculture and grazing purposes, the clearing of vegetation is considered exempt clearing work and does not require notification or development approval approval under the vegetation management framework. For all other land tenures, contact DNRME before commencing clearing to ensure that the proposed activity is exempt clearing work.

A range of routine property management activities are considered exempt clearing work. A list of exempt clearing work is available at

https://www.qld.gov.au/environment/land/vegetation/exemptions/.

Exempt clearing work may be affected if the proposed clearing area is subject to development approval conditions, a covenant, an environmental offset, an exchange area, a restoration notice, or an area mapped as Category A. Exempt clearing work may require approval under other Commonwealth, State or Local Government laws, or local government planning schemes. Contact DNRME prior to clearing in any of these areas.

1.2 Accepted development vegetation clearing codes

Some clearing activities can be undertaken under an accepted development vegetation clearing code. The codes can be downloaded at

https://www.qld.gov.au/environment/land/vegetation/codes/

If you intend to clear vegetation under an accepted development vegetation clearing code, you must notify DNRME before commencing. The information in this report will assist you to complete the online notification form.

You can complete the online form at https://apps.dnrm.gld.gov.au/vegetation/

1.3 Area management plans

Area Management Plans (AMP) provide an alternative approval system for vegetation clearing under the vegetation management framework. They list the purposes and clearing conditions that have been approved for the areas covered by the plan. It is not necessary to use an AMP, even when an AMP applies to your property.

AMPs for fodder harvesting, managing thickened vegetation and managing encroachment will continue until March 2020. New notifications cannot be made for these AMPs.

New notifications can be made for all other AMPs. These will continue to apply until their nominated end date.

If an area management plan applies to your property for which you can make a new notification, it will be listed in Section 2.2 of this report. Before clearing under one of these AMPs, you must first notify the DNRME and then follow the conditions and requirements listed in the AMP.

https://www.qld.gov.au/environment/land/vegetation/area-plans/

1.4 Development approvals

If under the vegetation management framework your proposed clearing is not exempt clearing work, or is not permitted under an accepted development vegetation clearing code, or an AMP, you may be able to apply for a development approval. Information on how to apply for a development approval is available at

https://www.qld.gov.au/environment/land/management/vegetation/development

2. Property details

2.1 Tenure

All of the lot, plan and tenure information associated with property Lot: 1 Plan: SP298397, including links to relevant Smart Maps, are listed in Table 1. The tenure of the property (whether it is freehold, leasehold, or other) may be viewed by clicking on the Smart Map link(s) provided.

Table 1: Lot, plan and tenure information for the property

Lot	Plan	Tenure	Link to property on SmartMap
1	SP298397	Freehold	https://apps.information.qld.gov.au/data/cadastre/GenerateSmartMap?q=1\SP2983 97
A	SP298397	Easement	https://apps.information.qld.gov.au/data/cadastre/GenerateSmartMap?q=A\SP2983 97

The tenure of the land may affect whether clearing is considered exempt clearing work or may be carried out under an accepted development vegetation clearing code.

2.2 Property location

Table 2 provides a summary of the locations for property Lot: 1 Plan: SP298397, in relation to natural and administrative boundaries.

Table 2: Property location details

Local Government(s)		
Mareeba Shire		

Bioregion(s)	Subregion(s)		
Einasleigh Uplands	Hodgkinson Basin		

Catchment(s)

Barron

Area Management Plan(s)

Area Management Plan for the control of pest plants in the Dry Tropics region

For the purposes of the accepted development vegetation clearing codes and the State Development Assessment Provisions (SDAP), this property is regarded as*

Coastal

*See also Map 5.4

The following can be used to identify Agricultural Land Class A or B areas under the "Managing regulated regrowth vegetation" accepted development vegetation clearing code:

Does this lot contain land that is mapped as Agricultural Land Class A or B in the State Planning Interactive Mapping System?

No Class A

No Class B

Note - This confirms Agricultural Land Classes as per the State Planning Interactive Mapping System only. This response does not include Agricultural Land Classes identified under local government planning schemes. For further information, check the Planning Scheme for your local government area.

See section 5 to identify the location and extent of Class A and/or Class B Agricultural land on Lot: 1 Plan: SP298397.

3. Vegetation management details for Lot: 1 Plan: SP298397

3.1 Vegetation categories

Vegetation categories are shown on the regulated vegetation management map in section 5.1 of this report. A summary of vegetation categories on the subject lot are listed in Table 3. Descriptions for these categories are shown in Table 4.

Table 3: Vegetation categories for subject property. Total area: 2.9ha

Vegetation category	Area (ha)
Category B	2.9
Category X	< 0.1

Table 4

l able 4							
Category	Colour on Map	Description	Requirements / options under the vegetation management framework				
A	red	Compliance areas, environmental offset areas and voluntary declaration areas	Special conditions apply to Category A areas. Before clearing, contact DNRME to confirm any requirements in a Category A area.				
В	dark blue	Remnant vegetation areas	Exempt clearing work, or notification and compliance with accepted development vegetation clearing codes, area management plans or development approval.				
С	light blue	High-value regrowth areas	Exempt clearing work, or notification and compliance with managing Category C regrowth vegetation accepted development vegetation clearing code.				
R	yellow	Regrowth within 50m of a watercourse or drainage feature in the Great Barrier Reef catchment areas	Exempt clearing work, or notification and compliance with managing Category R regrowth accepted development vegetation clearing code or area management plans.				
X	white	Clearing on freehold land, indigenous land and leasehold land for agriculture and grazing purposes is considered exempt clearing work under the vegetation management framework. Contact DNRME to clarify whether a development approval is required for other State land tenures.	No permit or notification required on freehold land, indigenous land and leasehold land for agriculture and grazing. A development approval may be required for some State land tenures.				

Property Map of Assessable Vegetation (PMAV)

This report does not confirm if a Property Map of Assessable Vegetation (PMAV) exists on a lot. To confirm whether or not a PMAV exists on a lot, please check the PMAV layer on the Queensland Globe2, or contact DNRME on 135VEG (135 834).

3.2 Regional ecosystems

The endangered, of concern and least concern regional ecosystems on your property are shown on the vegetation management supporting map in section 5.2 and are listed in Table 5.

A description of regional ecosystems can be accessed online at

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

Table 5: Regional ecosystems present on subject property

Regional Ecosystem	VMA Status	Category	Area (Ha)	Short Description	Structure Category
9.8.2	Least concern	В	2.88	Eucalyptus leptophleba +/- Corymbia clarksoniana +/- C. erythrophloia open woodland on basalt plains	Very sparse
non-rem	None	Х	0.02	None	None

Please note:

1. All area and area derived figures included in this table 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.

2. If Table 5 contains a Category 'plant', please be aware that this refers to 'plantations' such as forestry, and these areas are considered non-remnant under the VMA.

The VMA status of the regional ecosystem (whether it is endangered, of concern or least concern) also determines if any of the following are applicable:

- exempt clearing work
- accepted development vegetation clearing codes
- performance outcomes in State Development Assessment Provisions (SDAP).

3.3 Watercourses

Vegetation management watercourses and drainage features for this property are shown on the vegetation management supporting map in section 5.2.

3.4 Wetlands

There are no vegetation management wetlands present on this property.

3.5 Essential habitat

Protected wildlife is native wildlife prescribed under the *Nature Conservation Act 1992* (NCA), and includes endangered, vulnerable or near-threatened wildlife.

Essential habitat for protected wildlife includes suitable habitat on the lot, or where a species has been known to occur up to 1.1 kilometres from a lot on which there is assessable vegetation. These important habitat areas are protected under the VMA.

Any essential habitat on this property will be shown as blue hatching on the vegetation supporting map in section 5.2.

If essential habitat is identified on the lot, information about the protected wildlife species is provided in Table 6 below. The numeric labels on the vegetation management supporting map can be cross referenced with Table 6 to outline the essential habitat factors for that particular species. There may be essential habitat for more than one species on each lot, and areas of Category A, Category B and Category C can be mapped as Essential Habitat.

Essential habitat is compiled from a combination of species habitat models and buffered species records. Regional ecosystem is a mandatory essential habitat factor, unless otherwise stated. Essential habitat, for protected wildlife, means an area of vegetation shown on the Regulated Vegetation Management Map as assessable vegetation -

1) that has at least 3 essential habitat factors for the protected wildlife that must include any essential habitat factors that are stated as mandatory for the protected wildlife in the essential habitat database. Essential habitat factors are comprised of - regional ecosystem (mandatory for most species), vegetation community, altitude, soils, position in landscape; or

2) in which the protected wildlife, at any stage of its life cycle, is located.

If there is no essential habitat mapping shown on the vegetation management supporting map for this lot, and there is no table in the sections below, it confirms that there is no essential habitat on the lot.

Category A and/or Category B and/or Category C

Table 6: Essential habitat in Category A and/or Category B and/or Category C

Label	Scientific Name	Common Name	NCA Status	Vegetation Community	Altitude	Soils	Position in Landscape
257	Ctenotus monticola	Atherton striped skink	V	Open eucalypt woodland over grassy understorey.	400-950m.	None	Upland granite or sandstone outcrops/gorges.

Label	Regional Ecosystem (mandatory unless otherwise specified)
257	7.12.5, 7.12.27, 7.12.28, 7.12.30, 7.12.33, 7.12.34, 7.12.35, 7.12.51, 7.12.52, 7.12.53, 7.12.55, 7.12.57, 7.12.58, 7.12.59, 7.12.60, 7.12.61, 7.12.62, 7.12.63, 7.12.65, 7.12.69, 9.3.3, 9.3.16, 9.4.2, 9.5.1, 9.5.3, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.6, 9.5.7, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4, 9.5.4
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3.6 Protected plants (administered by the Department of Environment and Science (DES))

In Queensland, all plants that are native to Australia are protected plants under the *Nature Conservation Act 1992* (NCA), with clearing of protected plants in the wild regulated by the <u>Nature Conservation (Wildlife Management) Regulation 2006</u>. These requirements apply irrespective of the classification of the vegetation under the *Vegetation Management Act 1999*.

Prior to clearing, if the plants proposed to be cleared are in the wild (see <u>Operational policy: When a protected plant in</u> <u>Queensland is considered to be 'in the wild'</u>) and the exemptions under the <u>Nature Conservation (Wildlife Management)</u> <u>Regulation 2006</u> are not applicable to the proposed clearing, you must check the flora survey trigger map to determine if any part of the area to be cleared is within a high risk area. The trigger map for this property is provided in section 5.6. The exemptions relate to:

- imminent risk of death or serious injury (refer s261A)
- imminent risk of serious damage to a building or other structure on land, or to personal property (refer s261B)
- Fire and Emergency Service Act 1990 (refer 261C)
- previously cleared areas (refer s261ZB)
- maintenance activities (refer s261ZC)
- firebreak or fire management line (refer s261ZD)
- accepted development vegetation clearing code (refer s261ZE)
- conservation purposes (refer s261ZG)
- authorised in particular circumstances (refer s385).

Some exemptions under the NCA are the same as exempt clearing work (formerly known as exemptions) from the Vegetation Management Act 1999 (i.e. listed in the Planning Regulations 2017) while some are different.

If the proposed area to be cleared is shown as high risk on the flora survey trigger map, a flora survey of the clearing impact area must be undertaken in accordance with the flora survey guidelines. The main objective of a flora survey is to locate any endangered, vulnerable or near threatened plants (EVNT plants) that may be present in the clearing impact area.

If a flora survey identifies that EVNT plants are not present within the clearing impact area or clearing within 100m of EVNT plants can be avoided, the clearing activity is exempt from a permit. An <u>exempt clearing notification form</u> must be submitted to the Department of Environment and Science, with a copy of the flora survey report, at least one week prior to clearing. The clearing must be conducted within two years after the flora survey report was submitted.

If a flora survey identifies that EVNT plants are present in, or within 100m of, the area to be cleared, a clearing permit is required before any clearing is undertaken. The flora survey report, as well as an impact management report, must be submitted with the <u>application form clearing permit</u>.

Vegetation management report, Department of Natural Resources, Mines and Energy, 2019

In an area other than a high risk area, a clearing permit is only required where a person is, or becomes aware that EVNT plants are present in, or within 100m of, the area to be cleared. You must keep a copy of the flora survey trigger map for the area subject to clearing for five years from the day the clearing starts. If you do not clear within the 12 month period that the flora survey trigger map was printed, you need to print and check a new flora survey trigger map.

Further information on protected plants is available at http://www.ehp.qld.gov.au/licences-permits/plants-animals/protected-plants/

For assistance on the protected plants flora survey trigger map for this property, please contact the Department of Environment and Science at <u>palm@des.qld.gov.au</u>.

3.7 Emissions Reduction Fund (ERF)

The ERF is an Australian Government scheme which offers incentives for businesses and communities across the economy to reduce emissions.

Under the ERF, landholders can earn money from activities such as planting (and keeping) trees, managing regrowth vegetation and adopting more sustainable agricultural practices.

The purpose of a project is to remove greenhouse gases from the atmosphere. Each project will provide new economic opportunities for farmers, forest growers and land managers.

Further information on ERF is available at https://www.qld.gov.au/environment/land/state/use/carbon-rights/.

4. Contact information for DNRME

For further information on vegetation management: **Phone** 135VEG (135 834) **Email** vegetation@dnrme.qld.gov.au **Visit** <u>https://www.dnrme.qld.gov.au/?contact=vegetation</u> to submit an online enquiry.

For contact details for other State and Commonwealth agencies, please see Section 6.

5. Maps

Maps included in this report may also be requested individually at:

https://www.dnrme.qld.gov.au/qld/environment/land/vegetation/vegetation-map-request-form and

http://www.ehp.qld.gov.au/licences-permits/plants-animals/protected-plants/map-request.php

Regulated vegetation management map

The regulated vegetation management map shows vegetation categories needed to determine clearing requirements. These maps are updated monthly to show new property maps of assessable vegetation (PMAV).

Vegetation management supporting map

The vegetation management supporting map provides information on regional ecosystems, wetlands, watercourses and essential habitat.

Pre-clear map

The vegetation management pre-clear regional ecosystem mapping shows the regional ecosystem, location and extent which is likely to have occurred at that location prior to clearing. This map can be used for identifying exchange areas under the "Managing regulated regrowth vegetation" accepted development vegetation clearing code. It may also be used for for identifying offsets under the vegetation management framework.

Coastal/non coastal map

The coastal/non-coastal map confirms whether the lot, or which parts of the lot, are considered coastal or non-coastal for the purposes of the accepted development vegetation clearing codes and the State Development Assessment Provisions (SDAP).

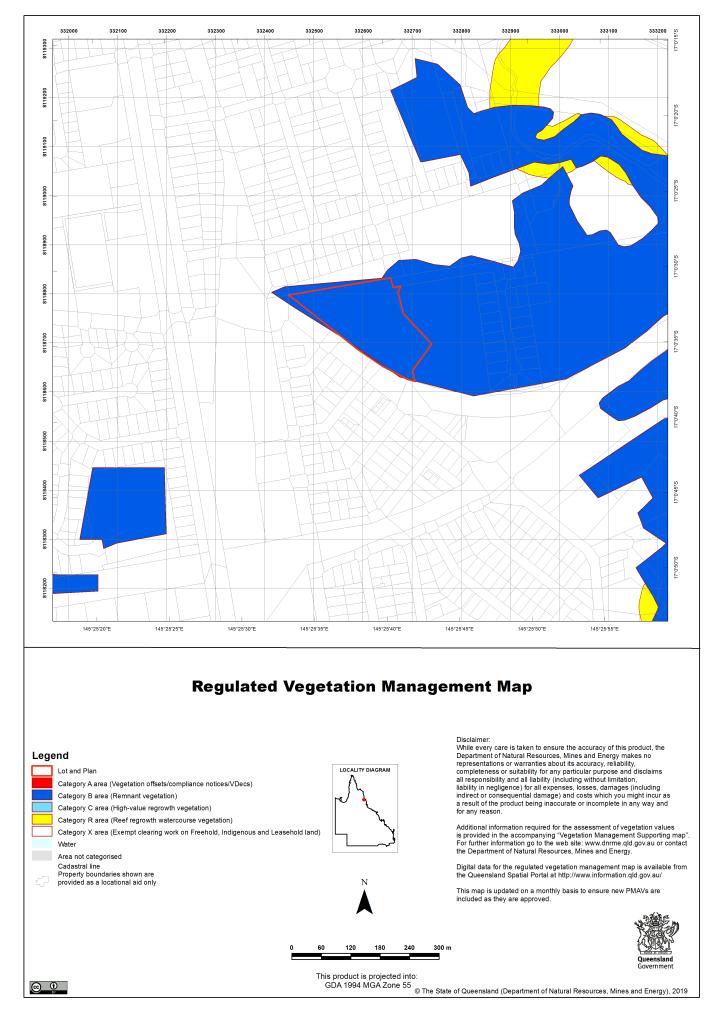
Agricultural Land Class A or B

The Agricultural Land Class map confirms the location and extent of land mapped as Agricultural Land Classes A or B as identified on the State Planning Interactive Mapping System. Please note that this map does not include areas identified as Agricultural Land Class A or B in local government planning schemes. This map can be used to identify Agricultural Land Class A or B areas under the "Managing regulated regrowth vegetation" accepted development vegetation clearing code.

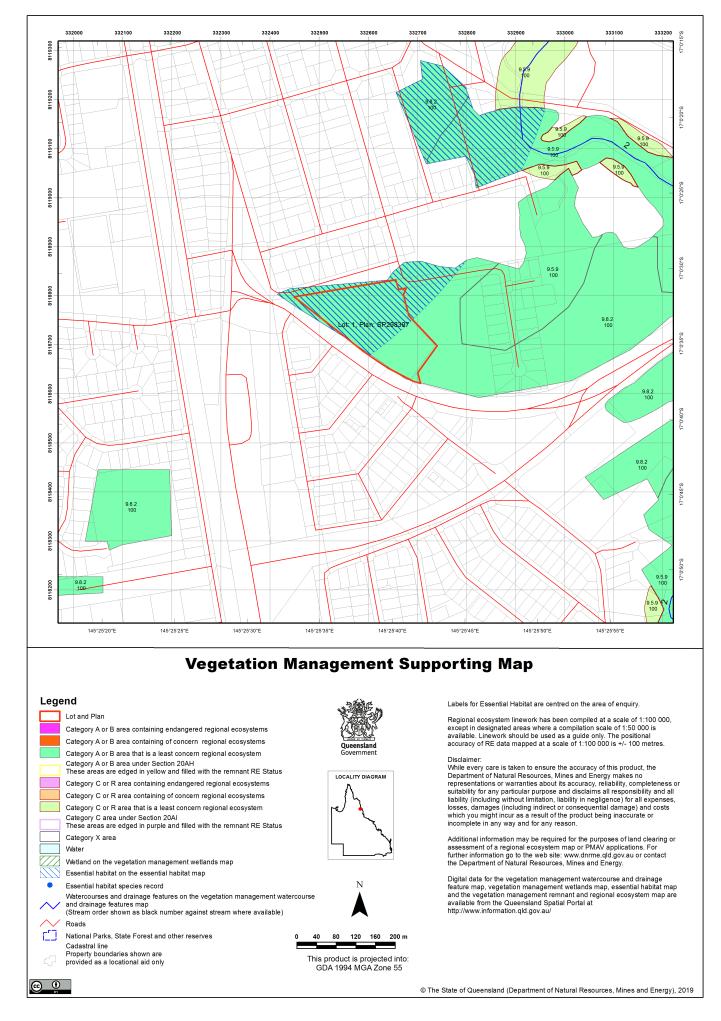
Protected plants map

The protected plants map shows areas where particular provisions of the *Nature Conservation Act 1992* apply to the clearing of protected plants.

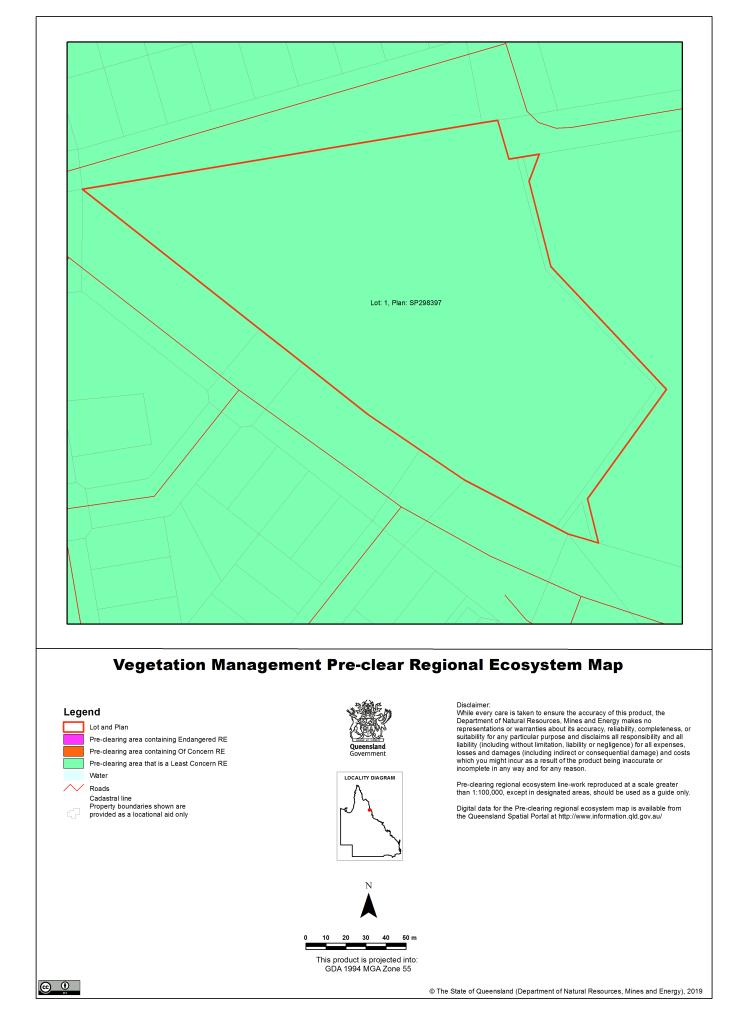
5.1 Regulated vegetation management map



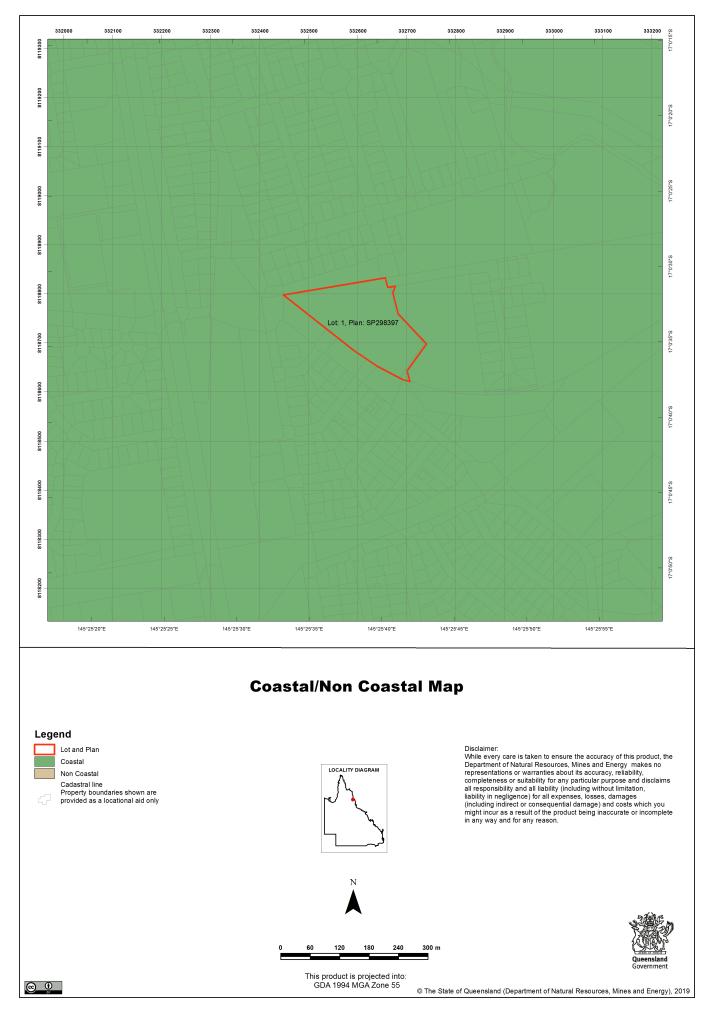
5.2 Vegetation management supporting map

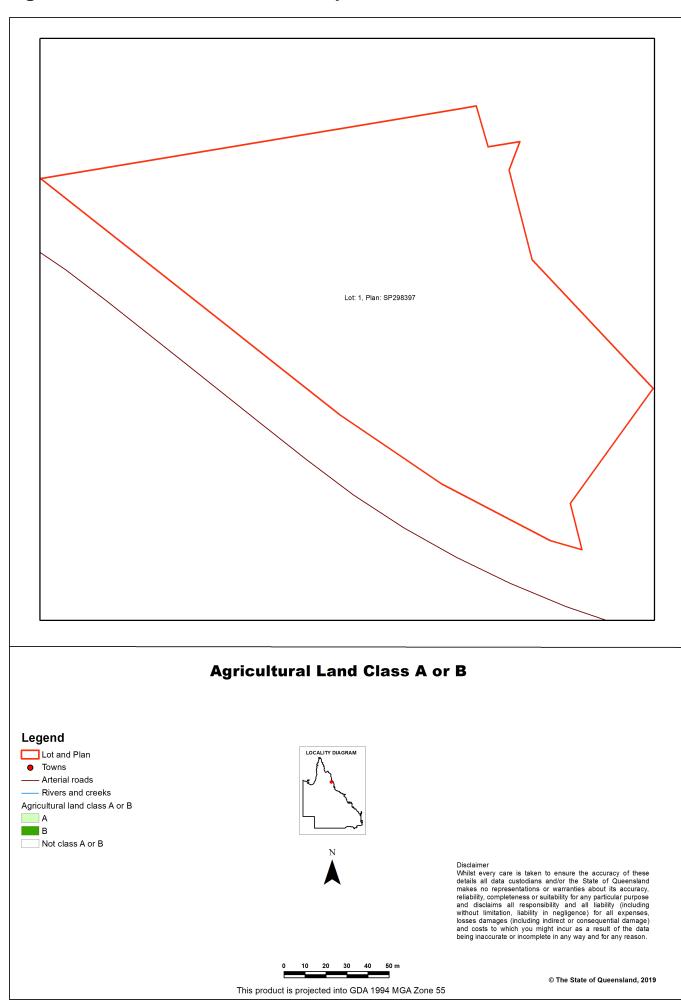


5.3 Pre-clear map



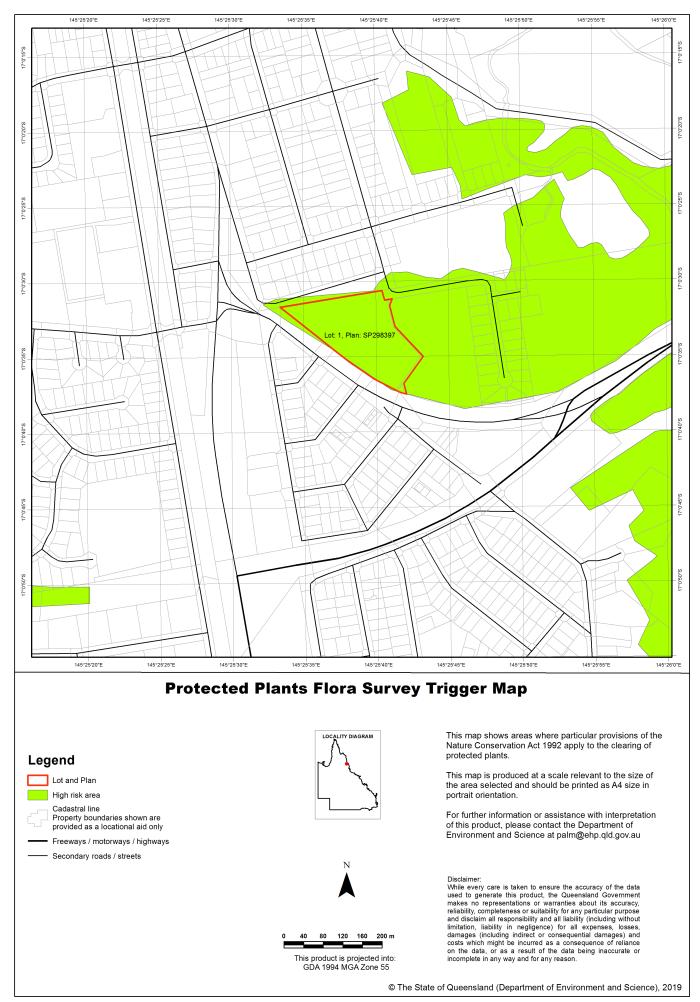
5.4 Coastal/non coastal map





5.5 Agricultural Land Class A or B map

5.6 Protected plants map administered by DES



Protected plants flora survey trigger map

The protected plants flora survey trigger map identifies 'high risk areas' where endangered, vulnerable or near threatened plants are known to exist or are likely to exist. Under the *Nature Conservation Act 1992* (the Act) it is an offence to clear protected plants that are 'in the wild' unless you are authorised or the clearing is exempt, for more information see <u>section 89</u> of the Act.

Please see the Department of Environment and Science webpage on the <u>clearing of protected plants</u> for information on what exemptions may apply in your circumstances, whether you may need to undertake a flora survey, and whether you may need a protected plants clearing permit.

Updates to the data informing the flora survey trigger map

The flora survey trigger map will be reviewed, and updated if necessary, at least every 12 months to ensure the map reflects the most up-to-date and accurate data available.

Species information

Please note that flora survey trigger maps do not identify species associated with 'high risk areas'. While some species information may be publicly available, for example via the <u>Queensland Spatial Catalogue</u>, the Department of Environment and Science does not provide species information on request. Regardless of whether species information is available for a particular high risk area, clearing plants in a high risk area may require a flora survey and/or clearing permit. Please see the Department of Environment and Science webpage on the <u>clearing of protected plants</u> for more information.

6. Other relevant legislation contacts list

Activity	Legislation	Agency	Contact details
 Interference with overland flow Earthworks, significant disturbance 	Water Act 2000 Soil Conservation Act 1986	Department of Natural Resources, Mines and Energy (Queensland Government)	Ph: 13 QGOV (13 74 68) www.dnrme.qld.gov.au
Indigenous Cultural Heritage	Aboriginal Cultural Heritage Act 2003 Torres Strait Islander Cultural Heritage Act 2003	Department of Aboriginal and Torres Strait Islander Partnerships (Queensland Government)	Ph: 13 QGOV (13 74 68) www.datsip.qld.gov.au
 Mining and environmentally relevant activities Infrastructure development (coastal) Heritage issues Protected plants and protected areas¹ 	Environmental Protection Act 1994 Coastal Protection and Management Act 1995 Queensland Heritage Act 1992 Nature Conservation Act 1992	Department of Environment and Science (Queensland Government)	Ph: 13 QGOV (13 74 68) www.des.qld.gov.au
 Interference with fish passage in a watercourse, mangroves Forestry activities² 	Fisheries Act 1994 Forestry Act 1959	Department of Agriculture and Fisheries (Queensland Government)	Ph: 13 QGOV (13 74 68) www.daf.qld.gov.au
• Matters of National Environmental Significance including listed threatened species and ecological communities	Environment Protection and Biodiversity Conservation Act 1999	Department of the Environment (Australian Government)	Ph: 1800 803 772 www.environment.gov.au
Development and planning processes	Planning Act 2016 State Development and Public Works Organisation Act 1971	Department of State Development, Manufacturing, Infrastructure and Planning (Queensland Government)	Ph: 13 QGOV (13 74 68) www.dsdmip.qld.gov.au
Local government requirements	Local Government Act 2009 Planning Act 2016	Department of Local Government, Racing and Multicultural Affairs (Queensland Government)	Ph: 13 QGOV (13 74 68) Your relevant local government office

1. In Queensland, all plants that are native to Australia are protected plants under the <u>Nature Conservation Act 1992</u>, which endeavours to ensure that protected plants (whether whole plants or protected plants parts) are not illegally removed from the wild, or illegally traded. Prior to clearing, you should check the flora survey trigger map to determine if the clearing is within a high-risk area by visiting <u>www.des.qld.gov.au</u>. For further information or assistance on the protected plants flora survey trigger map for your property, please contact the Department of Environment and Science on 13QGOV (13 74 68) or email palm@des.qld.gov.au.

2. Contact the Department of Agriculture and Fisheries before clearing:

- Any sandalwood on state-owned land (including leasehold land)
- On freehold land in a 'forest consent area' or a 'forest entitlement area'

• More than five hectares on state-owned land (including leasehold land) containing commercial timber species listed in parts 2 or 3 of Schedule 6 of the Vegetation Management Regulation 2012 and located within any of the following local government management areas-Banana, Bundaberg Regional, Fraser Coast Regional, Gladstone Regional, Isaac Regional, North Burnett Regional, Somerset Regional, South Burnett Regional, Southern Downs Regional, Tablelands Regional, Toowoomba Regional, Western Downs Regional.

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LEGEND

These standard symbols can be found in the drawing.

	BNDY-ADJOINING
	BNDY-EASEMENT
	BNDY-SUBJECT
	DTM-CONTOUR-MAJOR
	DTM-CONTOUR-MINOR
<u> </u>	POWER-LINE
	POWER-STAY-WIRE
	ROAD-CROWN
	ROAD-EDGE-BITUMEN
-oo	ROAD-GUARD-RAIL
	ROAD-KERB-IL
	ROAD-KERB-LIP
	ROAD-KERB-TOP
	ROAD-MARKING-BROKEN
	ROAD-MARKING-FULL
· ·	SEWER-LINE
	STORM-CULVERT
	STORM-HEADWALL
	STORM-INVERT-LEVEL
	STRUC-DRIVEWAY
***********************	STRUC-EDGE-CONCRETE
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	STRUC-HOARDING-SIGN
	STRUC-MISC
	STRUC-PATH
·····	TOPO-BOTTOM-BANK
	TOPO-BOTTOM-ROCK
	TOPO-CHANGE-GRADE
	TOPO-TOP-BANK
	TOPO-TOP-ROCK
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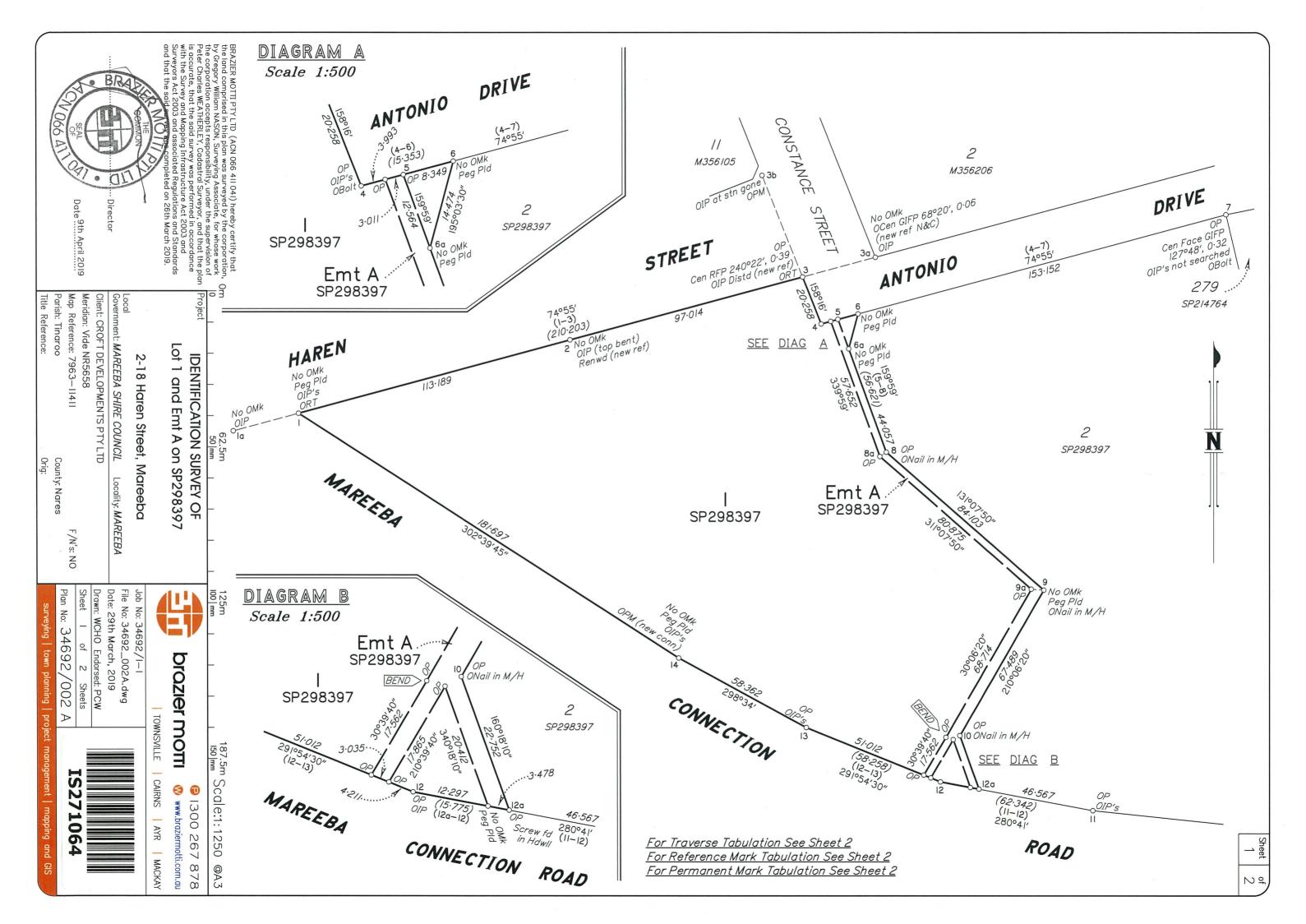
	TOPO-TOP-BANK
	TOPO-TOP-ROCK
	VEG-GARDEN BED
•	VEG-LINE
	POWER-BOX
	POWER-LIGHT-POLE
	POWER-MISC
	POWER-POWER-POLE
	POWER-PYLON
	POWER-STAY-POLE
	POWER-STAY-WIRE
	POWER-TRANSFORMER-POLE
	ROAD-GUIDE-POST
	ROAD-SIGN-POST
	SEWER-INVERT-LEVEL
	SEWER-MISC
	SEWER-OBVERT-LEVEL
	SEWER-SEMH
	STORM-CULVERT
	STORM-GRATED-PIT
	STORM-HEADWALL
	STORM-INVERT-LEVEL
	STRUC-HOARDING-SIGN
	STRUC-MISC
	SURVEY-CONTROL
	SURVEY-STN
	TELE-MISC
	TELE-PIT
	TOPO-MISC
	TOPO-NATURAL-SURFACEMARK
	TOPO-SURFACE-LEVEL
	VEG-PALM
	VEG-TREE
	WATER-FIRE-HYDRANT
	WATER-METER
	WATER-VALVE
	WATER-WATER TAP

CROFT DEVELOPMENTS PTY LTD

DETAIL AND CONTOUR SURVEY OF LOT 1 ON SP298397 2-18 HAREN STREET, MAREEBA







Sheet of 2 2

PERMANENT MARKS

PM	ORIGIN	BEARING	DIST	NO	TYPE]				
36–0PM 14–0PM	6/SP202909	354°23′05″ 247°34′55″		1509 9936	Standard Standard	New Conn				

REFERENCE MARKS

·	STN	ТО	ORIGIN	BEARING	DIST]
	/	OIP	6/NR5658	122°40'	1.006	
	/	OIP	6/NR5658	74°15'	1.006	
	1	ORT (not opened)	6/NR5658	251°05′	9.133	
	1	Screw in kb		<i>332°46′50″</i>	15.437	
	la	0IP (700 deep)	5/NR5658	211°52′	1.006	
	2	OIP Renwd (new ref)		347°52'30″	1.39	N&C
	3	OIP Distd (new ref)	9/NR5658	74°33′	1.022	N&C
	3	ORT (not opened)	9/NR5658	313°24'	2.796	
	3a	OIP	7/NR5658	74°55′	1.006	
	36	OIP gone	142/M356105	at S	tation	
	4	OIP	11/NR5658	254°55'	1.006	
	4	OIP	8/ISI68820	158°16′	1.765	
	4	OBolt in kb	5/SP214764	40°23′20″	13.54	
	7	OIP (not searched)	12/NR5658	166°50′	1.006	
	7	OIP (not searched)	12/NR5658	74°55′	1.016	
	7	OIP (not searched)	9/ISI68820	74°55′	1.453	
	7	OBolt in kb	4/SP214764	321°40′	1.975	
	8	ONail in M/H	4/SP298397	231°29'	1.398	
	9	ONail in M/H	5/SP298397	289°23′	3.68	
	10	ONail in M/H	6/SP298397	250°03′30″	4.3	
	11	OIP (0∙45 deep)	42/NR5658	95°48′	1.006	
	11	OIP (0∙5 deep)	42/NR5658	280°42′	1.006	
	12	OIP	43/NR5658	29/°54′30″	1.006	
	12a	Screw Fd in Hdwll		160°27′	25.758	
	13	OIP	44/NR5658	298°34′	1.006	
	13	OIP	44/NR5658	///°54′30″	1.006	
	13	Screw in culvert		223°22′	23.493	
	14	OIP	45/NR5658	/ <i>18°34′</i>	1.006	
	14	OIP	45/NR5658	<i>302°39′45″</i>	1.006	

LINE	BEARING	DISTANCE
1a-1	74°55′	27.178
3–3a 3–3b	74°55′ 338°/6′	30·376 43·885
8-8a	235°33′40″	3.098
9–9a	274°15′50″	5.0

SURVEY REPORT

- Plans searched NR5658, SP298397, SP214764, SP202909 & IS 168820.
- Line 1-3a fixed by original reference marks at Stns 1 & 3a with an excess of 0.022mm compared to original (vide NR5658). The original reference tree was sighted at Stn 1 with no attempt made to open it.
- Stn 1a fixed by original reference mark at corner adopting deed connection on NR5658. This does not agree with the corresponding connection on SP202909 which shows 0.02mm shortage to original.
- Stn 2 fixed by proportioning distances along line 1-3. The original reference mark was found with the top bent over. This was renewed and a new connection made.
- Stn 3 fixed by deed distance from Stn 3a across Constance St & Stn 4 fixed by deed angle and distance from Stn 3. Good agreement was made with original marks at Stn 4. A small difference was then observed from the reference mark at Stn3. It was determined that this mark had been disturbed and a new connection made. The original reference tree was sighted at Stn 3 with no attempt made to open it.
- Stn 3b fixed by original connection across Haren St as shown on SP214764. The original reference mark at Stn 3b was gone and agrees with the connection shown to OPM1509 on SP202909.
- Line 4-7 fixed by original reference mark at Stn 7 which agrees to deed.
- Stn 6 fixed by deed distance along Line 4-7. Line 6-6a fixed by deed.
- Line 5-8 fixed by deed angle and distance with agreement made with the original reference mark at Stn 8.

TRAVERSES ETC

- Line 8-9 fixed by original reference mark at Stn 9 which differs to deed bearing by -30" and shortage of 0.015mm in distance.
- Line 9-10 fixed by original reference mark at Stn 10 which differs to deed bearing by -20" and no difference in distance.
- Line 11-12 fixed by original reference marks Stns 11 & 12 which differs to deed bearing by -1' and no difference in distance.
- Stn 12a fixed by deed distance along line 12-11 giving Line 10-12a agreement to deed.
- Line 12-13 fixed by original reference marks Stns 12 & 13 which differs to deed bearing by -30" and no difference in distance.
- Line 13-14 fixed by original reference marks Stns 13 & 14 which agrees to deed bearing with a shortage of 0.017mm in distance.
- The closing line 14 -1 differs to deed bearing by +45". However good agreement was made to the closing bearing shown on plan NR5658 giving a difference of +5". An excess of 0.042mm was measured along this line.
- The easement lines were fixed by deed connections at Stns 4, 8, 9, 10 & 12. Agreement was made to the bearings of the reinstated boundary lines as noted above.

																	Plan No: 34692/002 A
																	IS271064
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ATTACHMENT 5:

TRAFFIC & TRANSPORT ASSESSMENT

Traffic & Transport Assessment

Mareeba Residential Aged Care Facility

V181440

Prepared for Croft Developments Pty Ltd

13 December 2019





Cardno[®]

Contact Information

Document Information

Cardno Victoria Pty Ltd	Prepared for	Croft Developments Pty Ltd		
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Version	Effective Date	Description of Revision	Prepared by	Reviewed by
D01	29/11/2019	Draft Traffic Report	Callum Thomas	Eric Kydd
F01	13/12/2019	Final Traffic Report	Callum Thomas	Eric Kydd

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1 Introduction

Cardno has been engaged by Croft Developments Pty Ltd to undertake a traffic and transport assessment of the proposed 120-bed aged care development at Lot 1 Haren Street, Mareeba, QLD.

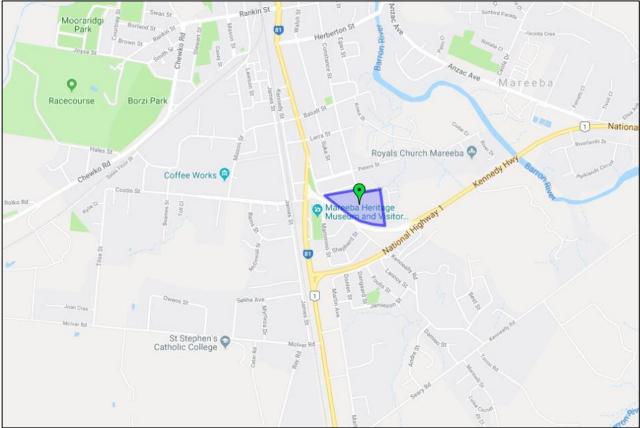
In the course of preparing this assessment, plans of the development have been reviewed as provided by Croft Developments, relevant staffing level data and traffic survey data collected and analysed.

2 Background and Existing Conditions

2.1 Location and Land Use

The subject site is located at Lot 1 Haren Street, Mareeba, as shown in Figure 2-1.

Figure 2-1 Site Location



Copyright @ NearMap

The overall site is approximately 6.1 hectares with no current vehicular access points on the land.

The Keneally Road frontage of the site is approximately 530 metres between the Kennedy Highway and Byrnes Street.

Of note, Keneally Road does serve as an off-ramp from Kennedy Highway to Mareeba town centre. The remainder of land surrounding the subject site is generally residential.

2.2 Road Network

2.2.1 Keneally Road

Keneally Road, also known as Mareeba Connection Road, is a state-controlled road generally running in a northeast-southwest direction between Byrnes Street to the west and Kennedy Highway to the east.

Keneally Road provides for traffic flows in each direction, with unrestricted kerbside parallel parking available on the southern side of the carriageway.

A speed limit of 60 km/h applies along the entirety of Keneally Road until it becomes Kennedy Highway.

Figure 2-2 2008 Image of Keneally Road looking east towards Kennedy Highway



Copyright @ NearMap (2008)

2.2.2 Haren Street

Haren Street is a local road generally running in an east-west direction between Byrnes Street to the west and Antonio Drive to the east. A default local speed limit of 50km/h applies on Haren Street.

Figure 2-3 2005 Image of Haren Street looking east along the site frontage



Copyright @ NearMap (2005)

2.2.3 Antonio Drive

Antonio Drive is a local road running along the rear of the subject site. There is currently no street view available online of this road. A default local speed limit of 50km/h applies on Antonio Drive.

2.3 Sustainable Transport

2.3.1 Public Transport

The site has limited access to public transport services, with no local bus services available.

Trans North Bus & Coach is the only inter-town service that operates through Mareeba. This service is a 'Hail & Ride' service so there is no set boarding location.

Figure 2-4 shows the Trans North Bus & Coach timetable.

Figure 2-4 Trans North Bus & Coach Timetable



Copyright @ Transnorthbus.com

3 Proposed Development

3.1 General

It is proposed to develop the existing site for the purpose of a 120-bed aged care facility.

3.2 Access and Parking

The proposed aged care facility incorporates one main access via Keneally Road.

A total of 60 car parking spaces including four (4) disabled spaces are proposed on-site for both staff and visitors of the aged care development.

A porte cochere is proposed at the main entrance to the building providing access to a short-term drop-off area accessed from the on-site car park.

Of the 60 car parking spaces provided on site, eight (8) are located at the rear of the facility, accessible via Antonio Drive, and are restricted to staff use only.

3.3 Loading and Waste Collection

It is anticipated that delivery vehicles and waste collection will occur at provided bin collection pad located at the rear of the facility accessible via Antonio Drive.

The proposed loading zone has a manoeuvring area capable of servicing up to a 10.7m heavy rigid vehicle, as shown in the swept path analysis in Appendix B.

4 Design Considerations

4.1 Car Parking and Access

The car park and access design has been assessed against the requirements of the Australian Standard for Off-Street Car Parking (AS/NZS 2890.1).

All standard car spaces meet or exceed the minimum dimension requirement of the Australian Standard, being 2.6 metres wide and 5.4 metres long, with an aisle width of not less than 5.8 metres.

Disabled parking spaces (4) are provided in close proximity of the porte cochere entrance, with shared areas provided to the side of all bays in accordance with the Australian Standard for Off-street parking for People with Disabilities (AS/NZS 2890.6).

The porte cochere has been designed to allow for pick-up and drop-off of residents in close proximity to the Kenneally Road entrance. It is proposed that movements in the porte cochere are one way only with sufficient passing area to accommodate a through lane and a pick-up/drop-off lane.

4.2 Bicycle Parking

A total of six (6) bicycle parking spaces have been provided at 1 metre spacing and at least a 1.5 metre aisle in line with the Australian Standards (AS/NZS 2890.3).

4.3 Access Arrangements

The proposed main site entrance is via a vehicle crossing from Kenneally Road. The development proposes Kenneally Road upgrades to accommodate a short auxiliary left-turn lane (AUL(s)) and short channelised right-turn lane (CHR(s)) at the proposed site entrance.

The site entrance will have a minimum trafficable lane width of 3.2 metres in each direction, with a 0.5 metre central splitter island extending 13.0 metres from the entry. The vehicle crossover has been designed to comply with AS2890.1-2004.

At the property boundary the accessway has been widened to allow simultaneous vehicle movements. Swept path diagrams confirm that a 10.7 metre HRV can access the site while passing an opposing B99 vehicle.

A functional layout plan of the proposed site access is attached as Appendix A and swept path diagrams are attached as Appendix B.

4.4 Swept Path Analysis

Swept path assessment was undertaken to determine the accessibility of the proposed off-street car parking facility and the proposed loading area. The following swept path assessment was undertaken:

- > 10.7m heavy rigid design vehicle loading area access via Kenneally Road; and
- > Ambulance access via the park pick-up / drop-off area.

The swept path analysis is attached as an Appendix to this report.

5 Parking Considerations

5.1 Car Parking Requirements

The Mareeba Shire Planning Scheme Table 9.4.3.3B specifies the provision of car parking required for the land use of the proposed development -

Table 5-1 shows the minimum car parking requirements for the proposed aged care development.

Use	No.	Rate	Car Parking Measure	Requirement (spaces)
Residential	120 beds	1	Space per four (4) nursing home beds; plus	30
Care Facility		30% of 30	Visitor parking at 30% of resident parking requirements.	9
		1	Space for SRV	1
	-	1	Emergency vehicle	1
Total				41

Table 5-1 Car Parking Requirements from Mareeba Shire Planning Scheme Table 9.4.3.3B

Considering the above information, the minimum parking requirement is 41 spaces including one ambulance parking space.

Therefore, the proposed on-site parking provision of 60 parking spaces inclusive of four (4) DDA compliant spaces exceeds the Mareeba Planning Scheme requirement by 19 spaces.

It is considered that the one ambulance parking space can be accommodated in the porte cochere as required. The SRV may be accommodated in the site loading area.

5.2 Bicycle Parking and End of Trip Facility Requirements

The Mareeba Shire Planning Scheme Table 9.4.3.3D specifies the provision of bicycle parking and end of trip facilities required for the land use of the proposed development – *health care services*.

5.2.1 Bicycle Parking Requirement

Table 5-2 shows the following requirement from the Planning Scheme: *new or redeveloped healthcare facilities, provide the following amenities:*

Use	Туре	Measure	Bicycle Parking Measure	Requirement (bicycle spaces)
Health care services	Employees	25 staff at shift changeover	Provide secure bicycle storage for 5% of building staff.	1 (secure)
	Visitors	120 beds	Aged care facilities provide one space per each 60 beds; and	5 (visitor)
			In every instance provide a minimum of 5 bicycle parking spaces.	

Table 5-2 Bicycle Parking Requirements from Mareeba Shire Planning Scheme Table 9.4.3.3D

A minimum of five (5) visitor bicycle parking spaces are to be provided by the proposed development, with one (1) secure bicycle parking space for staff.

Visitor bicycle parking should be provided in an accessible location, sign posted, and within 10 metres of an entrance to the building.

Secure bicycle parking involves a bicycle locker or bicycle rail in a locked compound/cage.

It is expected that the above bicycle requirements can be accommodated on-site.

The bicycle parking provision is deemed sufficient to accommodate expected bicycle parking demand generated by the development.

5.2.2 End of Trip Facility Requirements

Table 5-3 shows the following requirement from the Planning Scheme: *new or redeveloped healthcare facilities, provide the following employee facilities, which are continually accessible to employees*:

Use	Туре	Measure	End of Trip Facilities	Requirement (spaces)
Health care services	Showers	5 bicycle spaces	Accessible showers at a rate of one per 10 bicycle spaces provided;	1 accessible shower
	Changing facilities	-	Changing facilities adjacent to showers; and	1 changing facility
	Secure lockers	25 staff at shift changeover	Provide secure lockers in changing facilities for 20% of building staff to cater for cyclists, walkers and other active users.	5 lockers

 Table 5-3
 End of Trip Facility Requirements from Mareeba Shire Planning Scheme Table 9.4.3.3D

A minimum of one accessible shower, and one changing facility with 5 lockers is to be provided under the Mareeba Shire Planning Scheme.

Shower and locker facilities are for employee use and must be continually accessible.

The proposed end of trip facilities are deemed sufficient to accommodate staff requirements.

6 Traffic Considerations

6.1 Existing Traffic Volumes

In order to establish existing traffic characteristics on Keneally Road / Mareeba Connection Road at the subject site location, Cardno commissioned a seven-day traffic tube count on Keneally Road at the frontage of the proposed subject site from Monday 15th to Monday 22nd July, 2019.

Review of the traffic volume data collected indicated that the morning and evening peak hours were identified to occur between 8:00am - 9:00am and 3:00pm - 4:00pm, respectively.

A summary of the AM and PM peak hour volumes for the abovementioned intersection is shown in Figure 6-1.

GPS information	17° 0' 36.08 North	Direction of Travel			
Long 145° 25' 37.41 East			Combined	Northbound	Southbound
Traffic Volume : Weekdays Average		6,561	3,263	3,298	
(Vehicles/Day)		7 Day Average	6,269	3,115	3,154
Weekday	AM	08:00	601	193	427
Peak hour starts PM 15:00		15:00	651	382	294
Speeds :		85th Percentile	62.0	62.9	61.0
(Km/Hr) Avera		Average	55.6	56.1	55.1
Classification % : Light Vehicles up to 5.5m		95.4%	95.4%	95.5%	

Figure 6-1	Tube Count Results Summary
------------	----------------------------

*Northbound volumes are towards Mareeba Township

*Southbound volumes are towards Keneally Highway

6.2 Traffic Generation

The following information is based off previous information gathered for a 144 bed aged care development, and is considered conservative for the proposed 120 bed development.

The peak level of traffic expected to be generated by the proposed aged care development is linked to the staff parking demand levels. Peak traffic generation for aged care facilities occurs during shift changes.

The shift staffing requirements are the same 7 days a week and comprise three (3) main shifts, generally occurring between:

- > 7:00am 3:00pm;
- > 3:00pm 9:00pm; and
- > 9:00pm 7:00am.

The highest staff requirements typically occur during shift changeover between the hours of 7:00am and 3:00pm, with up to 25 staff on site at any one time. Assuming all shift workers drive independently, and that changeovers occur at the hours of 7:00am and 3:00pm, a combined 25 traffic movements would be expected to occur during each of the morning and afternoon peak times.

Note that non-shift staff generally arrive and depart at staggered times throughout the day (generally 8:00am - 5:00pm). Arrivals and departures are scheduled to avoid shift-work changeover periods.

The morning shift changeover typically occurs at 7:00am, which is outside of the commuter peak traffic period of 8:00am – 9:00am. As such, traffic impact from facility staff is expected to be low.

The afternoon shift changeover occurs at 3:00 pm, which coincides with the afternoon commuter peak hour from 3:00 pm - 4:00 pm. It is estimated that 15 vehicles depart and 10 vehicles arrive during the PM commuter peak hour, reflective of staff movements.

In relation to visitors, it is not expected any traffic generation associated with visitors to the aged care facility would occur during the AM commuter peak hour. During the PM peak, a further traffic allowance of approximately 4-5 visitor vehicles is estimated.

6.3 Traffic Distribution

Considering the existing and anticipated future characteristics of the surrounding area, in particular the location of surrounding residential catchments, schools, employment zones and the wider road network, the following assumptions have been adopted with regard to directional distributions:

- > 80% of all inbound and outbound movements during the AM and PM peak periods will be generated from/to the west, towards the town centre;
- > The remaining 20% of all inbound and outbound movements during the AM and PM peak periods will be generated from/to the east along the Kennedy Highway; and

The above assumptions consider the potential for future development, noting that the development is located on the Mareeba Connection Road, it is unlikely traffic flows from the east would increase to a volume greater than 20%.

Figure 6-2 illustrates the traffic proportions observed, which have been assigned to the development traffic.



Figure 6-2 Traffic Distribution

Courtesy of nearmap.com

6.4 SIDRA Intersection Analysis

6.4.1 Assessment Criteria

The performance of the study intersection has been analysed using SIDRA Intersection 8.0 (SIDRA). SIDRA is an industry recognised analysis tool that estimates the capacity and performance of intersections based on input parameters, including geometry and traffic volumes, and provides estimates of an intersection's Degree of Saturation (DOS), queues and delays.

6.4.2 General

The operation of the Kenneally Road and proposed site access intersection has been analysed using SIDRA Analysis. This computer package, originally developed by the Australian Road Research Board, provides information about the capacity of an intersection in terms of parameters, as described below:

Degree of Saturations (D.O.S.) is the ratio of the volume of traffic observed making a particular movement compared to the maximum capacity for that movement. Various values of degree of saturation and their rating are shown in Table 6-1.

Table 6-1 Rating of Degrees of Saturation

D.O.S.	Rating
Up to 0.6	Excellent
0.6 to 0.7	Very Good
0.7 to 0.8	Good
0.8 to 0.9	Fair
0.9 to 1.0	Poor
Above 1.0	Very Poor

It is considered acceptable for some critical movements in an intersection to operate in the range of 0.9 to 1.0 during the high peak periods, reflecting actual conditions in a significant proportion of suburban signalised intersections.

The **95th Percentile (95%ile) Queue** represents the maximum queue length, in metres, that can be expected in 95% of observed queue lengths in the peak hour; and

Average Delay is the delay time, in seconds, which can be expected over all vehicles making a particular movement in the peak hour.

6.4.3 Key assumptions

The following assumptions should be noted, which informed the SIDRA analysis of existing conditions:

- SIDRA Intersection default parameters were typically adopted (lane widths, capacity, gap and headway etc.);
- > A 2% per annum growth rate is applied for the purpose of predicting future traffic conditions;
- > Year of development to be 2021.

6.4.4 SIDRA Results

In order to procure a comprehensive analysis of Keneally Road and surrounding road network postdevelopment, a SIDRA analysis has been conducted and reviewed for the following site access conditions:

- 1. 2021 site access volumes
- 2. 10-year site access volumes year 2031

A summary of the SIDRA results is shown in Table 6-2 below:

Site Access	PM Peak		
	D.o.S	Average Delay (sec)	95th%ile Queue (veh)
2021	0.185	0.5	0.2
2031	0.220	0.6	0.2

Table 6-2 SIDRA Summary -Existing vs Post-Development Conditions

Referencing Table 6-1, the site access intersection will operate under 'Excellent' conditions during the AM and PM peak periods until at least 2031.

The SIDRA analysis has determined that the site access at Keneally Road will only see a minor increase in the degree of saturation for the 10-year post-development period, and no significant impact to Keneally Road or the wider road network is expected.

The future site access will operate at a DoS of 0.185 post-development and therefore hold significant additional capacity for future growth. The site access will have a minimal impact on the operation of the immediate and surrounding road network.

6.5 Turn Lane Warrants

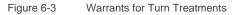
6.5.1 Section 2.3.6 Assessment

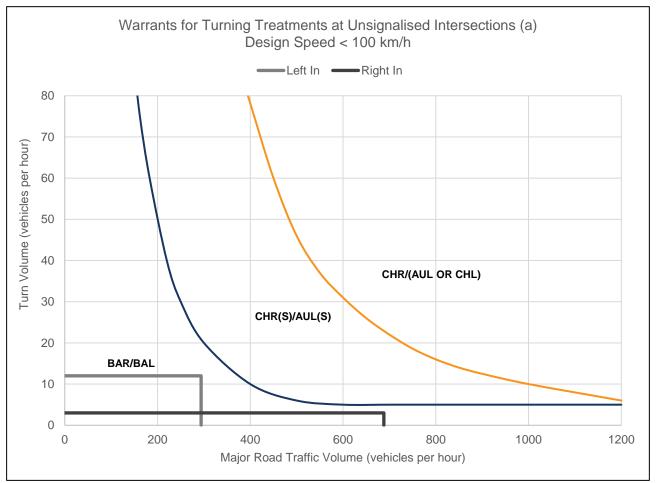
Cardno has reviewed the development's requirement for the provision of a left turn deceleration lane under Section 2.3.6 of *Austroads Guide to Traffic Management – Part 6: Intersections, Interchanges and Crossings.*

Traffic volumes along Keneally Road were sourced over a one-week period.

Based on Figure 2.26(c) of Section 2.3 within the abovementioned document – and assuming $Q_R = 3$, $Q_L = 12$, $Q_{T1} = 382$ and $Q_{T2} = 294$ – the three (3) right-turn and twelve (12) left-turn inbound movements anticipated to be generated by the proposed development within the PM peak hour are able to be facilitated via a Basic Right-Turn Treatment (BAR) and Basic Left (BAL) as shown in Figure 6-3.

Although Figure 6-3 presents that basic left (BAL) and basic right (BAR) turn treatments would be sufficient to service the site from Keneally Road, the proposed development intends to implement an auxiliary left turn treatment (AUL(s)), and a channelised right turn treatment. The upgraded road and vehicle access are provided to minimise any impact and delay along Keneally Road / Mareeba Connection Road, and to improve safety for staff and visitors at the proposed aged care facility.





6.6 Traffic Impact

In traffic engineering terms, the level of traffic expected to be generated by the proposed aged care development is considered to be very low.

Thirty (30) vehicle movements per hour, including both arrivals and departures, is equivalent to an average of 1 vehicle movement per 2-minute interval. This level of traffic generation is low and is not expected to have any discernible effect of the operations of Keneally Road and the surrounding road network.

Proposed accesses and road upgrades are deemed sufficient to maintain safe and effective operation of the site access and adjacent roadway.

7 Conclusions

Based on the foregoing analysis it is concluded that:

- It is proposed to develop the site at Lot 1 Haren Street, Mareeba, for the purposes of a 120 bed aged care facility;
- > The carpark and access design is generally in accordance with the Australian Standards for Off-Street Car Parking (AS/NZS 2890.1);
- > A total of 60 car parking spaces including four (4) accessible bays are proposed on site;
- There is a requirement for 41 car parking spaces (including one ambulance parking space) based on the Mareeba Planning Scheme;
- > The proposed provision of 60 car parking spaces satisfies the car parking requirements associated with the site, assuming the ambulance will utilise the porte cochere when required;
- > Up to thirty (30) traffic movements in each of the AM and PM peak hours are anticipated to be generated by the proposed aged care development, with only traffic movements generated in the PM peak anticipated to coincide with commuter traffic; and
- Review of the warrants for turning treatments under the Austroads GTM Part 6 reveals that a Basic Right (BAR) and Basic Left (BAL) is recommended to sufficiently manage the expected traffic generated by the aged care site. Regardless, the proposal allows for a short channelised right turn and short auxiliary left turn treatment to minimise impact to Kenneally Road / Mareeba Connection Road.

APPENDIX



FUNCTIONAL LAYOUT PLAN



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raffic/Drafting/04 Drawings/01 CADI/V181440-;			KENNE	ALLY ROAD	RIGHT TURN LANE INCLUDING 20.5	MEEHAN STRL	
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APPENDIX

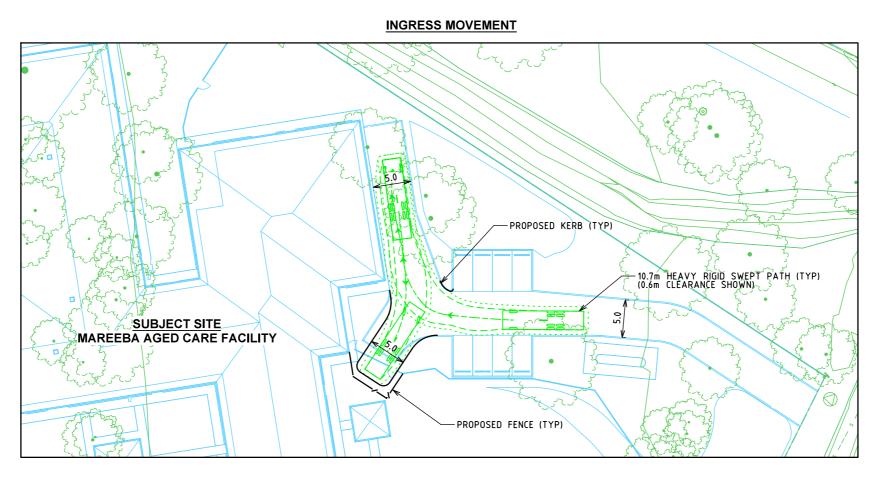


SWEPT PATH ANALYSIS

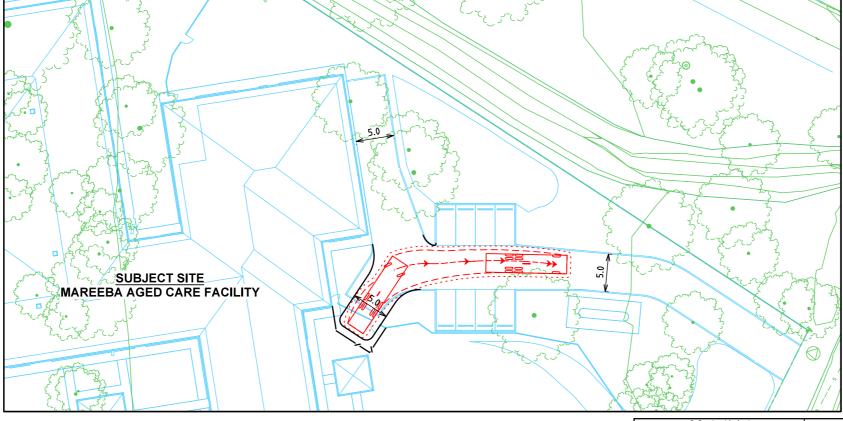


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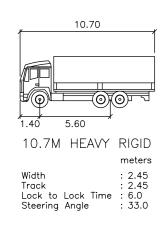


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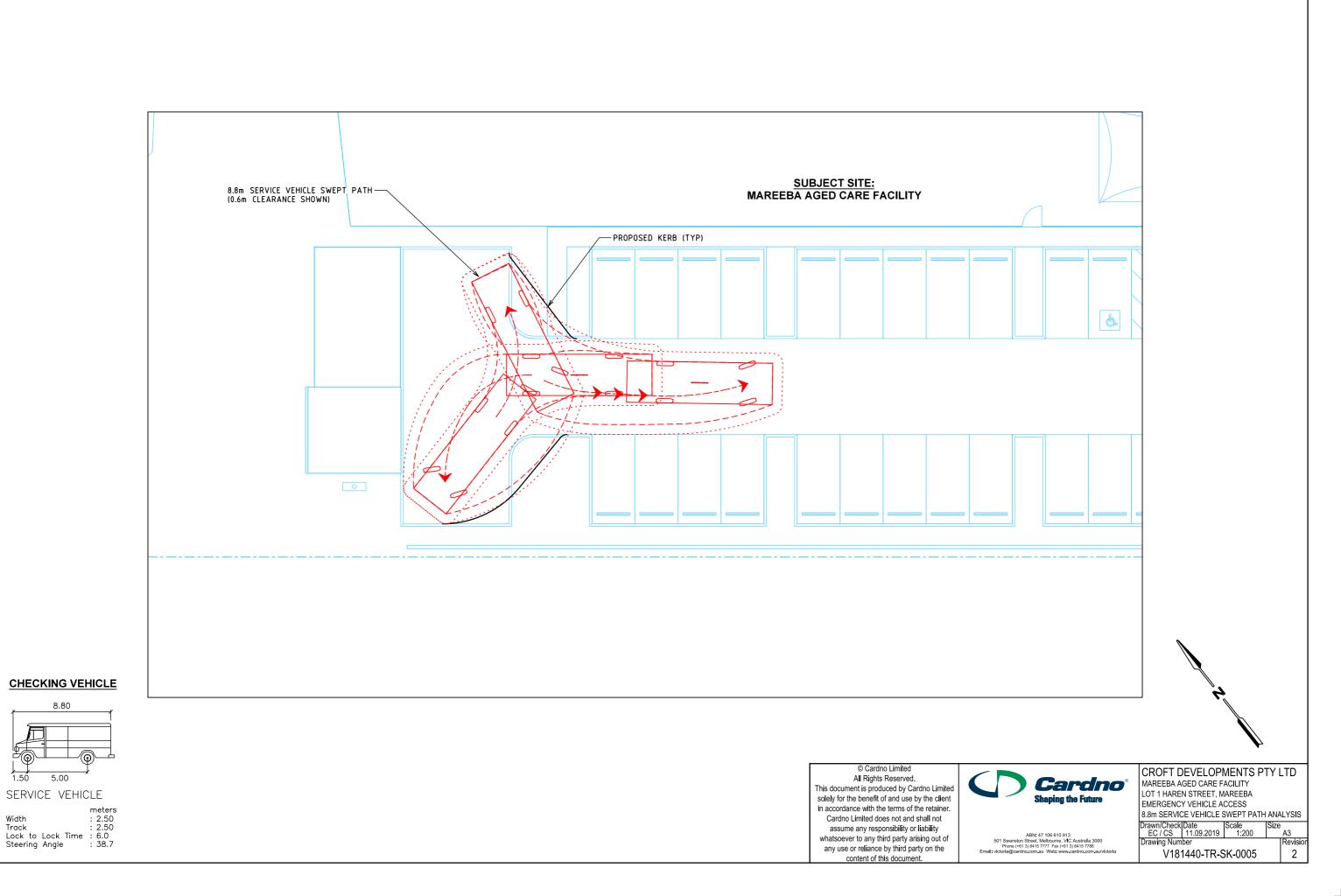
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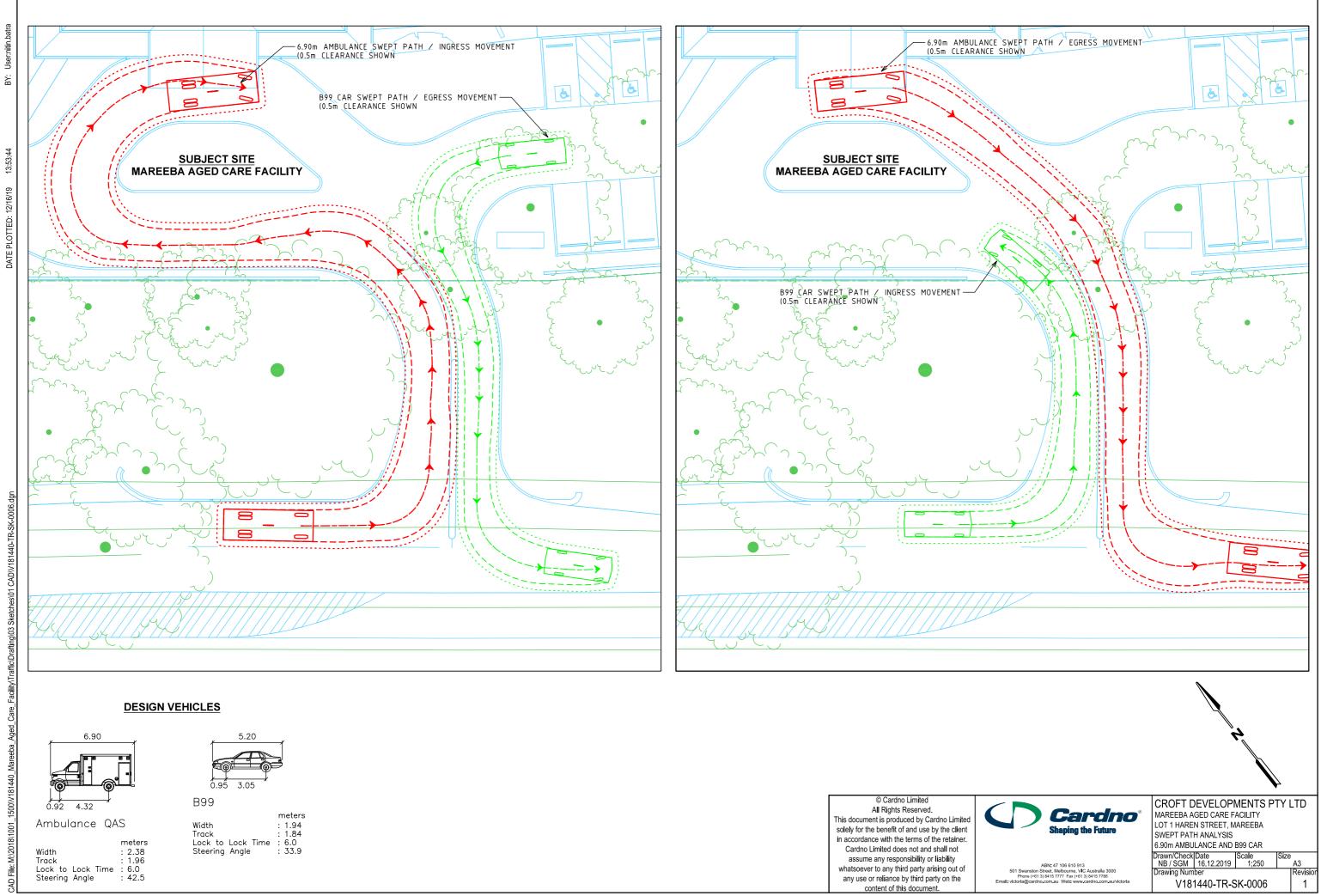


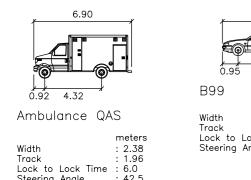


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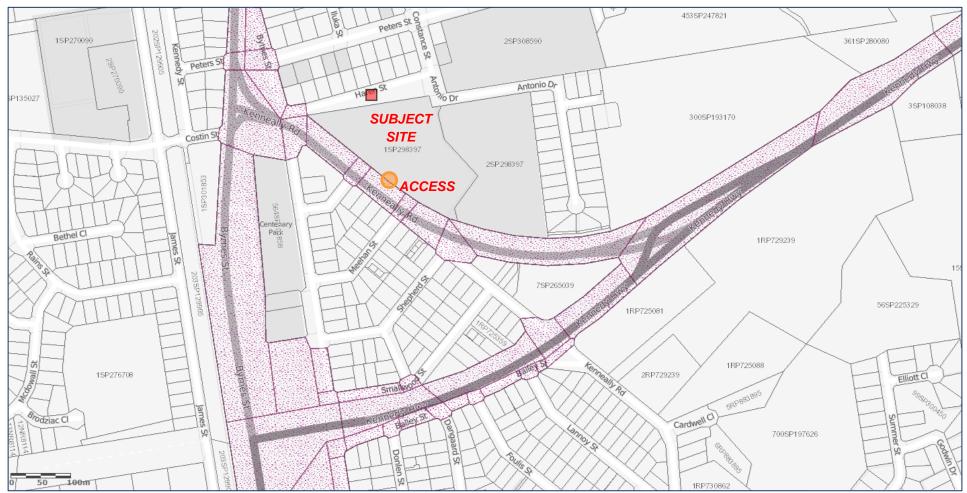


APPENDIX









State Code 1: Development in a state-controlled road environment

Figure 1: Map of State-Controlled Roads, Queensland – Courtesy of Development Assessment Mapping System, Queensland Government

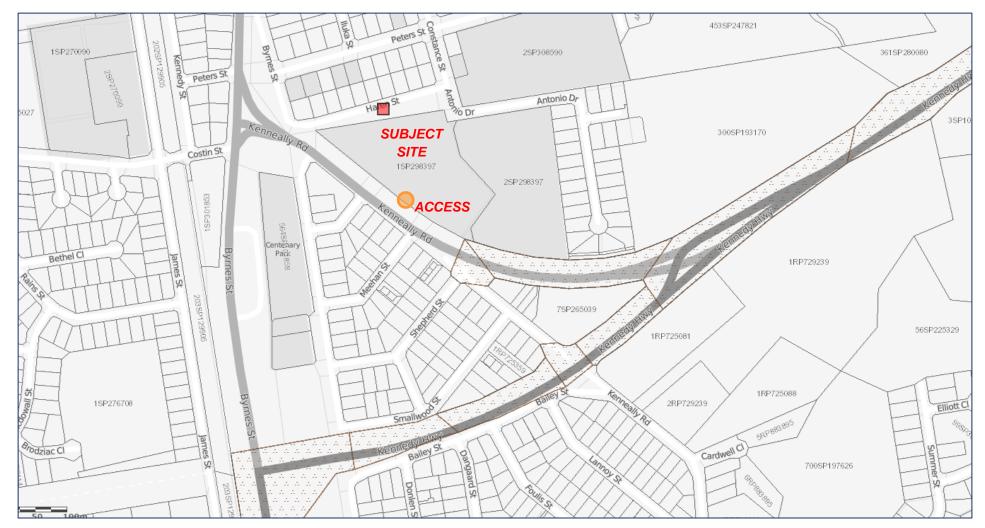


Figure 2: Map of Limited Access Roads, Queensland – Courtesy of Development Assessment Mapping System, Queensland Government

The following table outlines the proposed development response to performance outcomes required by the Department of Infrastructure, Local Government and Planning.

Table 1.2.1: Development in a state-controlled road environment

Performance Outcomes	Acceptable Outcomes	Development Outcome					
Buildings and Structures							
		Not applicable to the Traffic and Transport Assessment.					
tateFilling, excavation and retaining structures							
		Not applicable to the Traffic and Transport Assessment.					
Stormwater and drainage							
		Not applicable to the Traffic and Transport Assessment.					
Vehicular access to state-controlled road							

PO15 Vehicular access to a state-controlled road that is a limited access road is consistent with government policy for the management of limited access roads.	AO15.1 Development does not require new or changed access to a limited access road. Note: Limited access roads are declared by the transport chief executive under section 54 of the Transport Infrastructure Act 1994 and are identified in the DA mapping system.	The proposed development does not require access to a state-controlled road that is a limited access road.
	OR State Development Assessment Provisions – version 2.0	
	State code 1: Development in a state-controlled road environment - $1 - 4 - 4$ Performance outcomes Acceptable outcomes AO15.2 A new or changed access to a limited access road is consistent with the limited access policy for the state-controlled road.	
	Note: Limited access policies for limited access roads declared under the Transport Infrastructure Act 1994 can be obtained by contacting the relevant Department of Transport and Main Roads regional office.	
	AND	
	AO15.3 Where a new or changed access is for a service centre, access is consistent with the Service centre policy, Department of Transport and Main Roads, 2013 and the Access policy for roadside service centre facilities on limited access roads, Department of Transport and Main Roads, 2013, and the Service centre strategy for the state- controlled road.	
	Note: The Service centre policy, Department of Transport and Main Roads, 2013, Access policy for roadside service centre facilities, Department of Transport and Main Roads, 2013 and the relevant Service centre strategy for a state- controlled road can be accessed by contacting the relevant Department of Transport and Main Roads regional office.	
PO16 The location and design of vehicular access to a statecontrolled road (including access to a limited access road) does not create a safety hazard for users of a statecontrolled road or result	AO16.1 Vehicular access is provided from a local government road. OR all of the following acceptable outcomes apply:	AO16.2 Vehicular access for the development is consistent with the function and design of the state-controlled road.

in a worsening of operating conditions on a state- controlled road.	AO16.2 Vehicular access for the development is consistent with the function and design of the state-controlled road.	A new left-in slip lane and right-in auxiliary lane is proposed.
Note: Where a new or changed access between the premises and a state-controlled road is proposed, the Department of Transport and Main Roads will need to assess the proposal to determine if the vehicular access for the development is safe.	AND AO16.3 Development does not require new or changed access between the premises and the state-controlled road.	The design of vehicular access is deemed to provide safe operation for road users and will not result in worsening of operating conditions.
An assessment can be made by Department of Transport and Main Roads as part of the development assessment process and a decision under section 62 of Transport Infrastructure Act 1994 issued where sufficient information is provided.	Note: A decision under section 62 of the Transport Infrastructure Act 1994 outlines the approved conditions for use of an existing vehicular access to a state-controlled road. Current section 62 decisions can be obtained from the relevant Department of Transport and Main Roads regional office.	The design of the vehicular access provided allows for priority of ingress movements at all times to mitigate any possible queuing on Kenneally Road.
	AND	
	AO16.4 Use of any existing vehicular access to the development is consistent with a decision under section 62 of the Transport Infrastructure Act 1994. Note: The development which is the subject of the application must be of an equivalent use and intensity for which the section 62 approval was issued and the section 62 approval must have been granted no more than 5 years prior to the lodgement of the application. AND AO16.5 On-site vehicle circulation is designed to give priority to entering vehicles at all times so vehicles do not queue in a road intersection or on the state-controlled road.	TY ROORINALLI DAGA TY ROORINALLI DAGA TY ROORINALLI DAGA THORANT BOOTER PROPOSED NEW CERSIONER S REGUINMENTS CERSIONER S REGUINMENTS CERSIONER S REGUINMENTS CERSIONER S REGUINMENTS
DO17 Vahiaular access to a state controlled read	AQ17.1 Vahiaular appage and appagiated read appage	The proposed development complice with
PO17 Vehicular access to a state-controlled road or local government road (and associated road access works) are located and designed to not	AO17.1 Vehicular access and associated road access works are not located within 5 metres of existing public passenger transport infrastructure.	The proposed development complies with: AO17.1 Vehicular access and associated road access works are not located within 5 metres of
damage or interfere with public passenger transport infrastructure, public passenger services	AND	existing public passenger transport infrastructure.
or pedestrian or cycle access to public passenger transport infrastructure and public passenger services.	AO17.2 The location and design of vehicular access for a development does not necessitate the relocation of existing public passenger transport infrastructure.	AO17.2 The location and design of vehicular access for a development does not necessitate
	AND	the relocation of existing public passenger transport infrastructure.
	AO17.3 On-site vehicle circulation is designed to give priority to entering vehicles at all times so vehicles using a	AO17.3 On-site vehicle circulation is designed to give priority to entering vehicles at all times

	vehicular access do not obstruct public passenger transport infrastructure and public passenger services or obstruct pedestrian or cycle access to public passenger transport infrastructure and public passenger services. AND AO17.4 The normal operation of public passenger transport infrastructure or public passenger services is not interrupted during construction of the development.	so vehicles using a vehicular access do not obstruct public passenger transport infrastructure and public passenger services or obstruct pedestrian or cycle access to public passenger transport infrastructure and public passenger services. AO17.4 The normal operation of public passenger transport infrastructure or public passenger services is not interrupted during construction of the development.		
Vehicular access to local roads within 100 metre	es of an intersection with a state-controlled road			
PO18 The location and design of vehicular access to a local road within 100 metres of an	AO18.1 Vehicular access is located as far as possible from the state-controlled road intersection.	Not applicable.		
intersection with a state-controlled road does not create a safety hazard for users of a state-	AND			
controlled road.	AO18.2 Vehicular access is in accordance with parts, 3, 4 and 4A of the Road Planning and Design Manual, 2nd Edition: Volume 3, Department of Transport and Main Roads, 2016.			
	AND			
	AO18.3 On-site vehicle circulation is designed to give priority to entering vehicles at all times so vehicles do not queue in the intersection or on the state-controlled road.			
Planned upgrades				
PO19 Development does not impede delivery of planned upgrades of state-controlled roads.	AO19.1 Development is not located on land identified by the Department of Transport and Main Roads as land required for the planned upgrade of a state-controlled road.	AO19.1 Development is not located on land identified by the Department of Transport and Main Roads as land required for the planned		
	Note: Land required for the planned upgrade of a state- controlled road is identified in the DA mapping system.	upgrade of a state-controlled road.		
	OR			
	AO19.2 Development is sited and designed so that permanent buildings, structures, infrastructure, services or utilities are not located on land identified by the Department			

	of Transport and Main Roads as land required for the planned upgrade of a state-controlled road.	
	OR all of the following acceptable outcomes apply:	
	AO19.3 Structures and infrastructure located on land identified by the Department of Transport and Main Roads as land required for the planned upgrade of a state- controlled road are able to be readily relocated or removed without materially affecting the viability or functionality of the development.	
	AND	
	AO19.4 Vehicular access for the development is consistent with the function and design of the planned upgrade of the state-controlled road.	
	AND	
	AO19.5 Development does not involve filling and excavation of, or material changes to, land required for a planned upgrade to a state-controlled road.	
	AND	
	AO19.6 Land is able to be reinstated to the pre- development condition at the completion of the use.	
Network impacts		
PO20 Development does not result in a worsening of operating conditions on the state- controlled road network.	No acceptable outcome is prescribed.	Refer to Section 6: Traffic Considerations of the Traffic and Transport Assessment.
Note: To demonstrate compliance with this performance outcome, it is recommended that an RPEQ certified traffic impact assessment is provided. Further information will be provided in the forthcoming document Guide to Traffic Impact Assessment, Department of Transport and Main Roads, 2017.		The development does not result in a worsening of operating conditions on the state- controlled road network.
PO21 Development does not impose traffic loadings on a state-controlled road which could be accommodated on the local road network	AO21.1 The layout and design of the development directs traffic generated by the development to the local road network.	Refer to Section 6: Traffic Considerations of the Traffic and Transport Assessment.

PO22 Upgrade works on, or associated with, a state-controlled road are built in accordance with Queensland road design standards.	AO22.1 Upgrade works required as a result of the development are designed and constructed in accordance with the Road Planning and Design Manual, 2nd edition, Department of Transport and Main Roads, 2016. Note: Road works in a state-controlled road require approval under section 33 of the Transport Infrastructure Act 1994 before the works commence.	AO22.1 Upgrade works required as a result of the development are designed and constructed in accordance with the Road Planning and Design Manual, 2nd edition, Department of Transport and Main Roads, 2016.
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Table 1.2.2: Environmental emissions

The Environmental emissions table is not applicable to the Traffic and Transport Assessment.

Table 1.2.3: Development in a future state-controlled road environment

Performance Outcomes	Acceptable Solutions	Development Outcome
PO32 Development does not impede delivery of a future state-controlled road.	AO32.1 Development is not located in a future state- controlled road.	AO32.1 Development is not located in a future state-controlled road.
PO33 Vehicular access to a future state- controlled road is located and designed to not create a safety hazard for users of a future state- controlled road or result in a worsening of operating conditions on a future state-controlled road.		Not applicable
Note: Where a new or changed access between the premises and a future state-controlled road is proposed, the Department of Transport and Main Roads will need to assess the proposal to determine if the vehicular access for the development is safe. An assessment can be made by Department of Transport and Main Roads as part of the development assessment process and a decision under section 62 of Transport Infrastructure Act 1994 issued where sufficient information is provided.		

PO34 Filling, excavation, building foundations and retaining structures do not undermine, or cause subsidence of, a future state-controlled road.	Not applicable
Note: To demonstrate compliance with this performance outcome, it is recommended that an RPEQ certified geotechnical assessment is provided, prepared in accordance with the Road Planning and Design Manual, 2nd edition: Volume 3, Department of Transport and Main Roads, 2016.	
PO35 Fill material from a development site does not result in contamination of land for a future state-controlled road.	Not applicable
PO36 Development does not result in an actionable nuisance, or worsening of, stormwater, flooding or drainage impacts in a future state-controlled road.	Not applicable
PO37 Run-off from the development site is not unlawfully discharged to a future state-controlled road.	Not applicable

ATTACHMENT 6: CIVIL LAYOUT PLANS

MAREEBA AGED CARE DEVELOPMENT APPLICATION 2-18 HAREN STREET, MAREEBA, QLD MAREEBA SHIRE COUNCIL



DRAWING	INDEX	
DRAWING No.	REVISION CODE	DRAWING TITLE
19157/SK00	В	BULK EARTHWORKS AND D DRAWING INDEX
19157/SK01	В	EXISTING CONDITIONS PLAN
19157/SK02	В	BULK EARTHWORKS LAYOU
19157/SK03	В	BULK EARTHWORKS CROSS
19157/SK04	А	BULK EARTHWORKS CROSS
19157/SK10	В	SITEWORKS AND DRAINAGE
19157/SK11	В	SITEWORKS AND DRAINAGE
19157/SK20	В	STORMWATER CATCHMENT
19157/SK30	В	EXTERNAL ROADWORKS LA

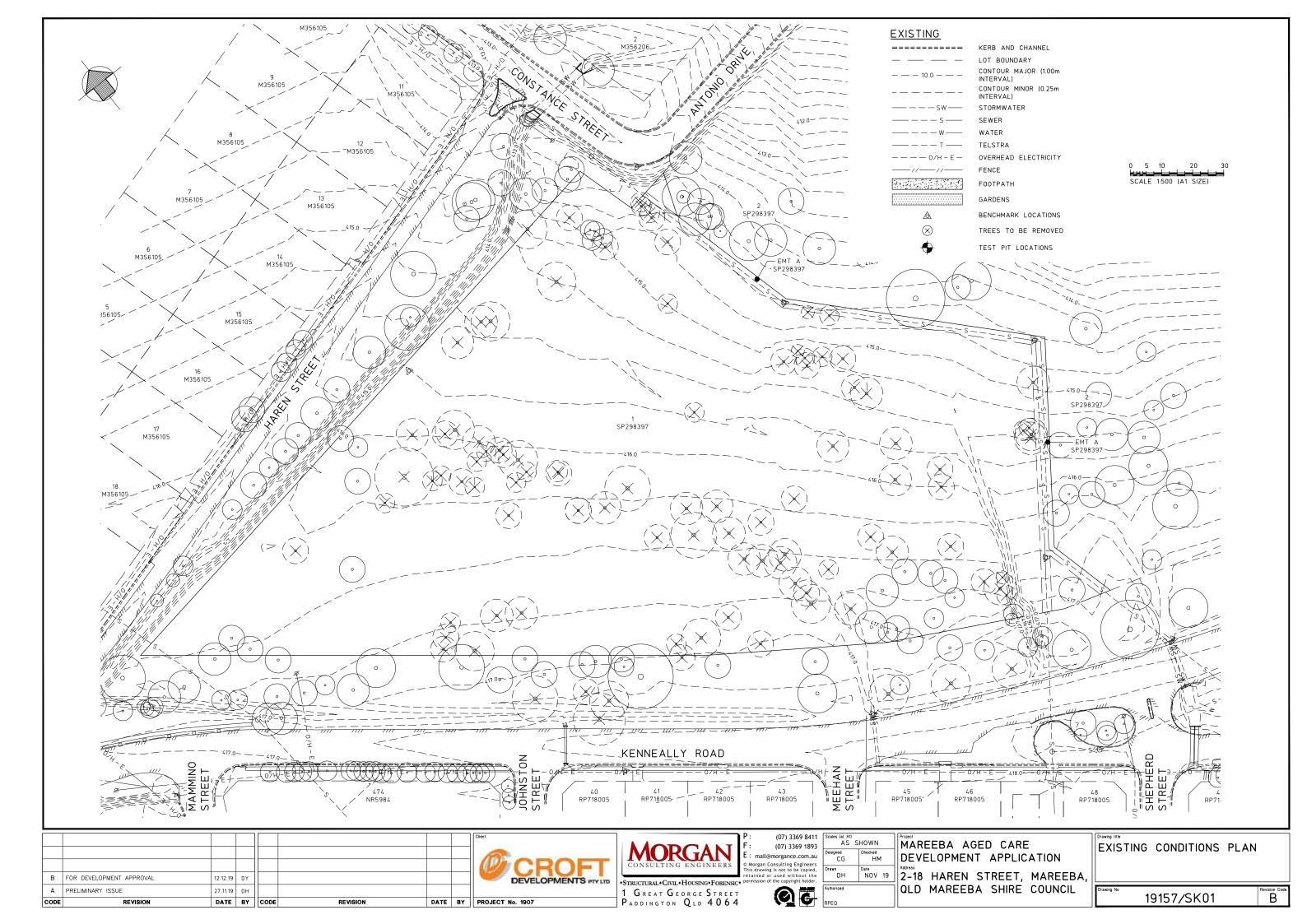
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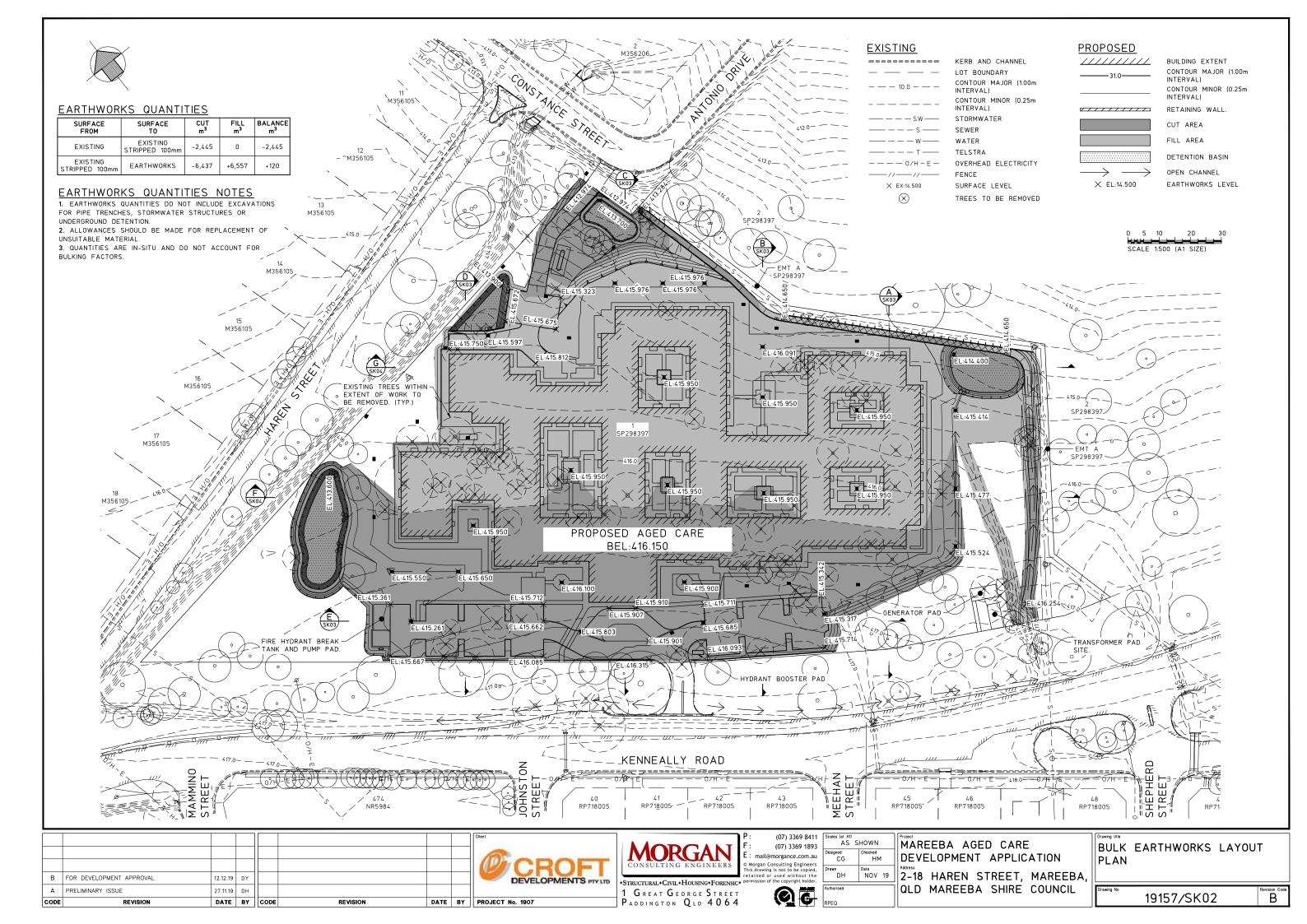
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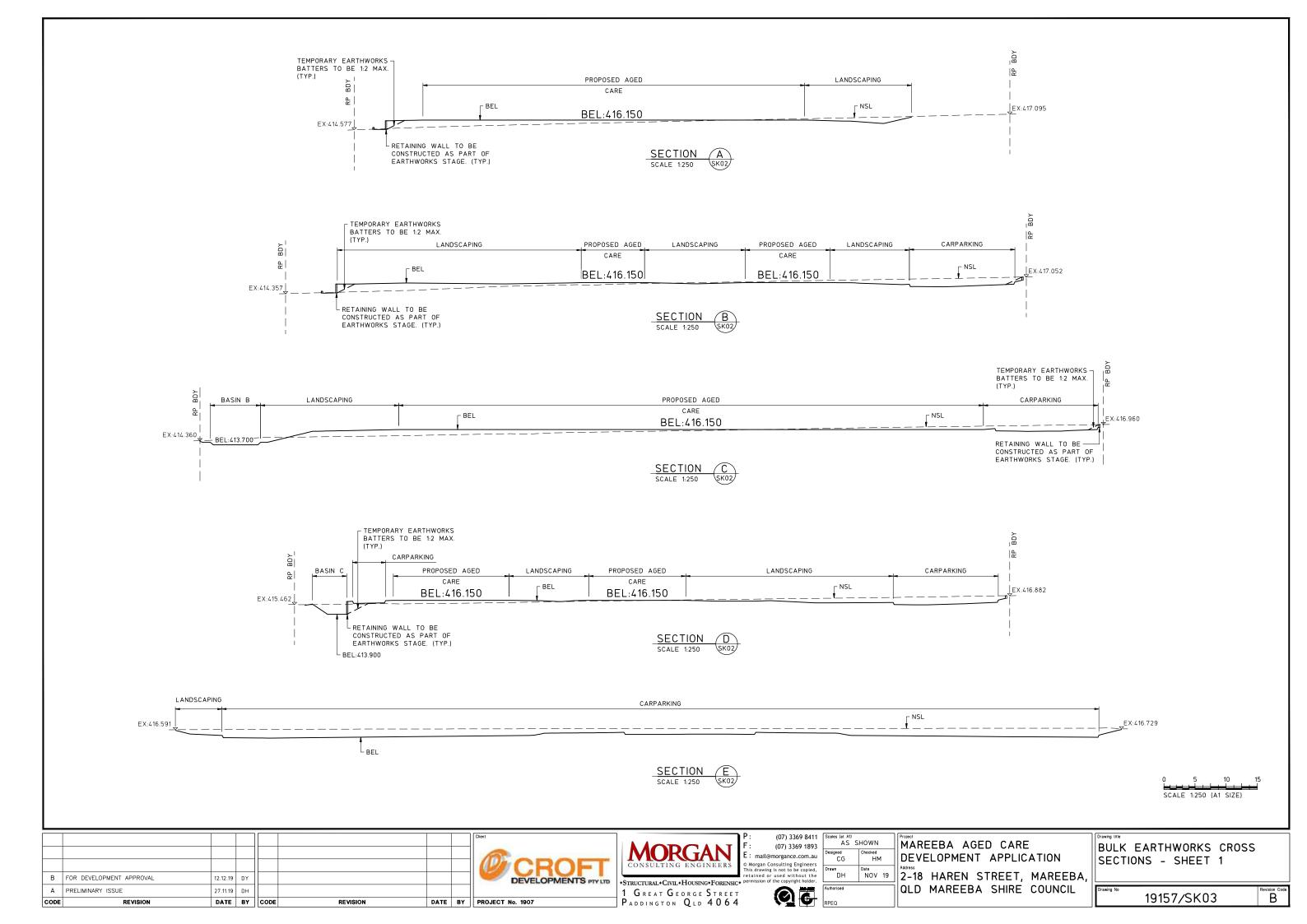
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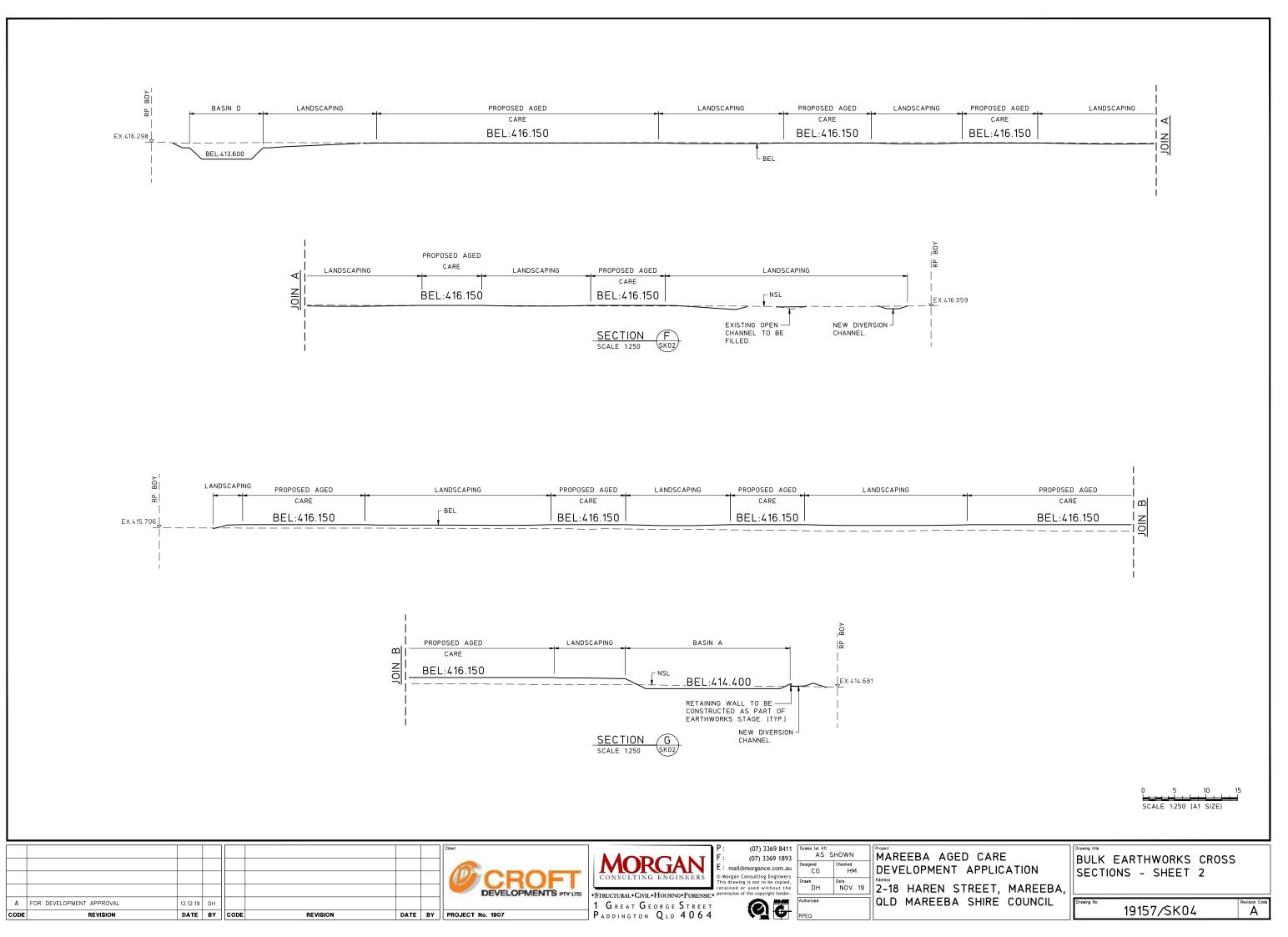
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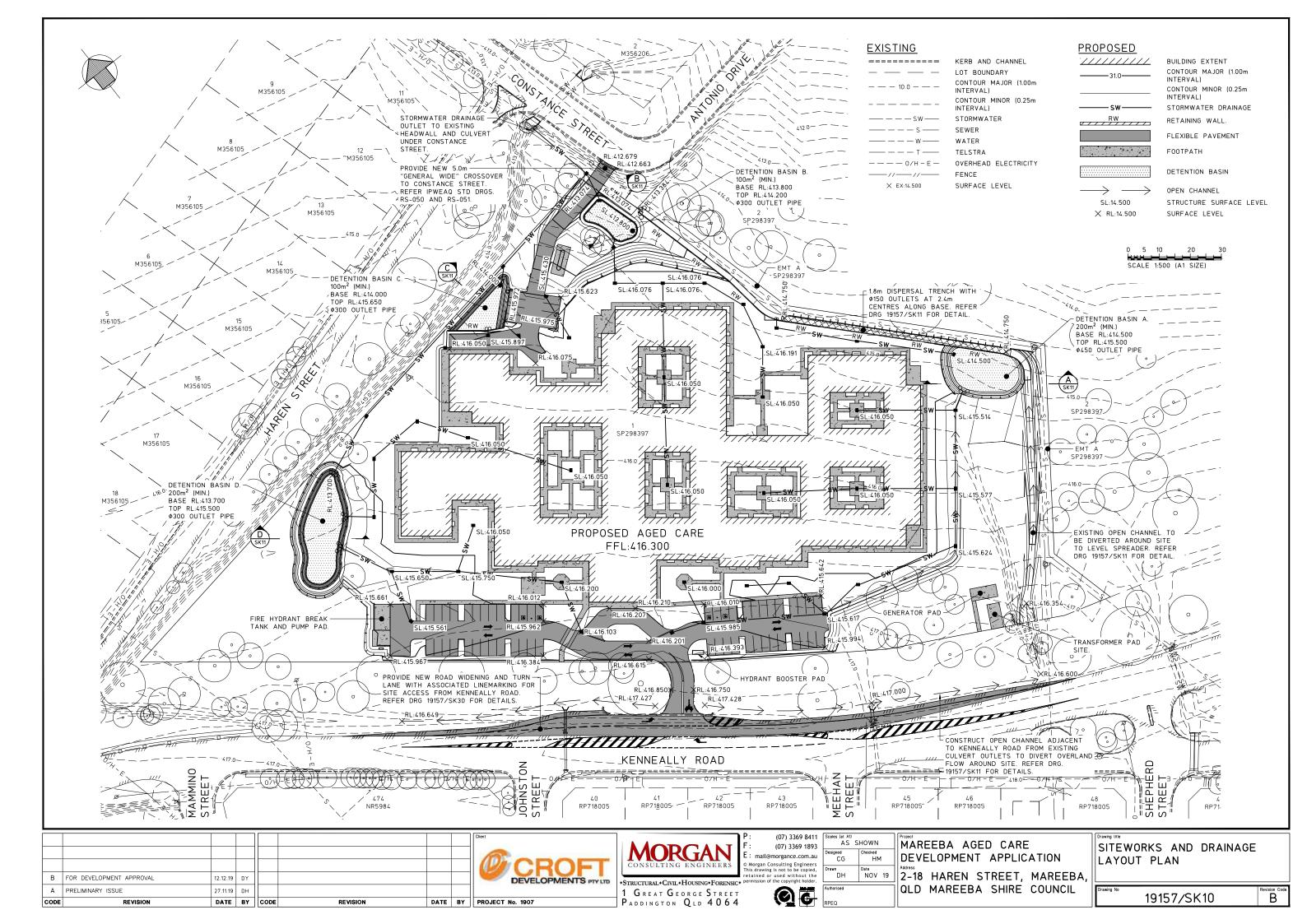
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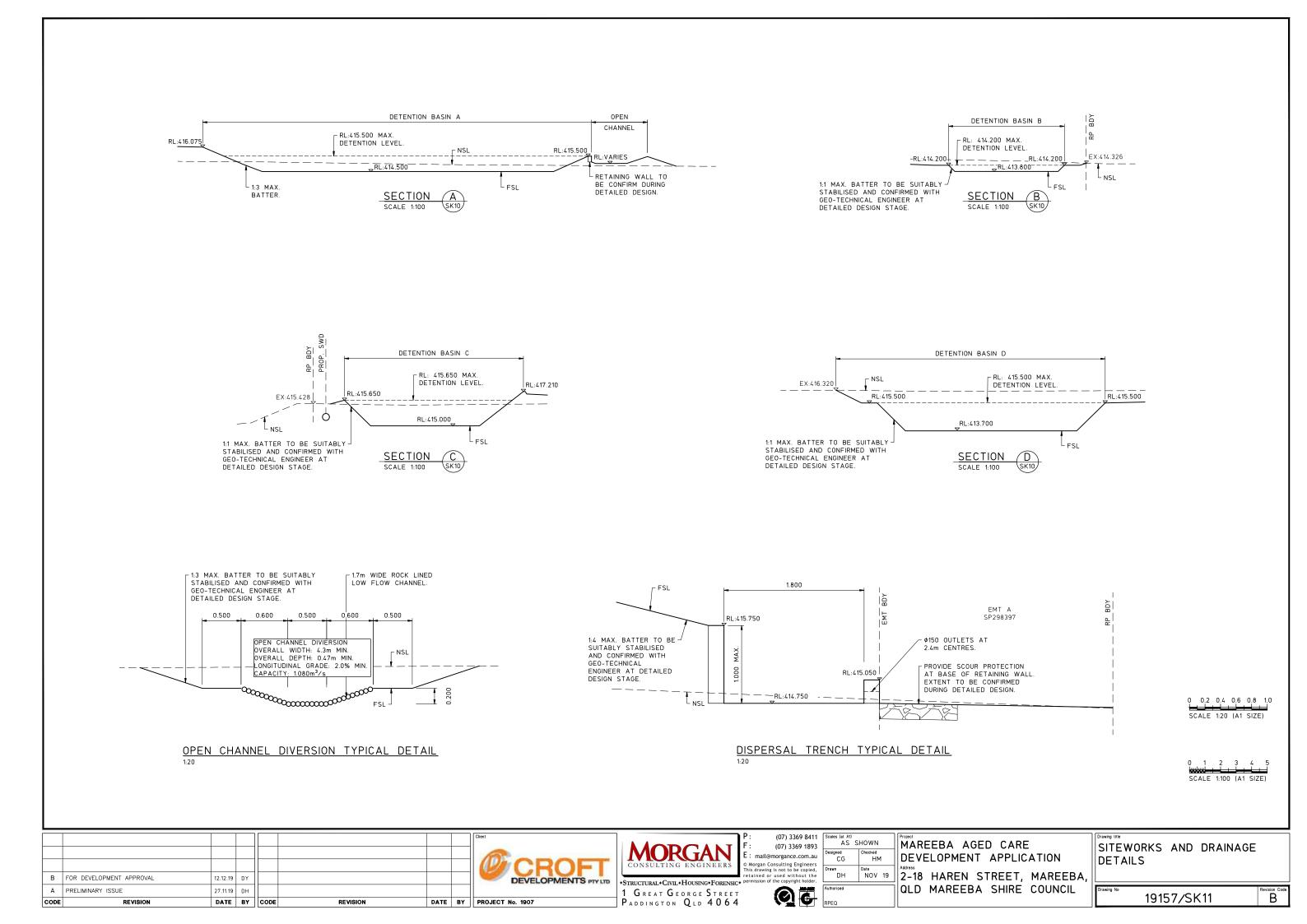












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STORMWATER CATCHMENT DISCHARGE CALCULATIONS

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EXT/A	2.570	22.2	0.60	0.683	70	0.341	0.803	109	0.625	0.843	123	0.740	0.924	141	0.930	0.964	154	1.060
CAT/A	0.960	5.0	0.47	0.657	112	0.196	0.773	174	0.359	0.811	196	0.424	0.888	223	0.528	0.927	243	0.601
CAT/B	0.570	5.0	0.49	0.661	112	0.117	0.777	174	0.214	0.816	196	0.253	0.894	223	0.316	0.933	243	0.359
CAT/C	0.192	5.0	0.58	0.679	112	0.041	0.798	174	0.074	0.838	196	0.088	0.918	223	0.109	0.958	243	0.124
CAT/D	0.999	5.0	0.44	0.651	112	0.202	0.766	174	0.370	0.804	196	0.437	0.880	223	0.544	0.919	243	0.619

(07) 3369 8411 Scales (at A1) AS SHOWN MAREEBA AGED CARE MORGAN CONSULTING ENGINEERS (07) 3369 1893 ^{icked} HM mail@morgance.com.au DEVELOPMENT APPLICATION CG © Morgan Consulting Engineers This drawing is not to be copied, retained or used without the ROFT Date NOV 19 DH 2-18 HAREN STREET, MAREEBA, B FOR DEVELOPMENT APPROVAL 12.12.19 DY DEVELOPMENTS PTY LTD +STRUCTURAL+CIVIL+HOUSING+FORENSIC+ QĒ QLD MAREEBA SHIRE COUNCIL 27.11.19 DY 1 GREAT GEORGE STREET DATE BY CODE REVISION DATE BY PROJECT No. 1907 PADDINGTON QLD 4064

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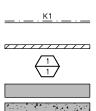
A PRELIMINARY ISSUE

REVISION

CODE

	BUILDING EXTENT
	KERB AND CHANNEL
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	CONTOUR MINOR (0.25m INTERVAL)
SW	STORMWATER
S	SEWER
W	WATER
TT	TELSTRA
— — — — 0/H – E —	OVERHEAD ELECTRICITY
////	FENCE
	FOOTPATH
	LANDSCAPING
X EX:14.500	SURFACE LEVEL

PROPOSED



CONTOUR MAJOR (1.00m INTERVAL) CONTOUR MINOR (0.25m INTERVAL) STORMWATER BARRIER KERB STANDARD TYPE 'E'. REFER BCC STD DRG BSD-2001 FOR DETAILS. RETAINING WALL.

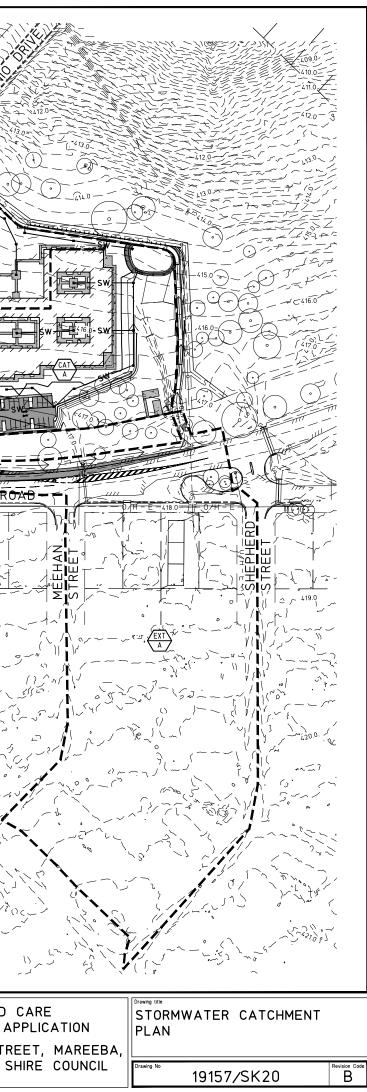
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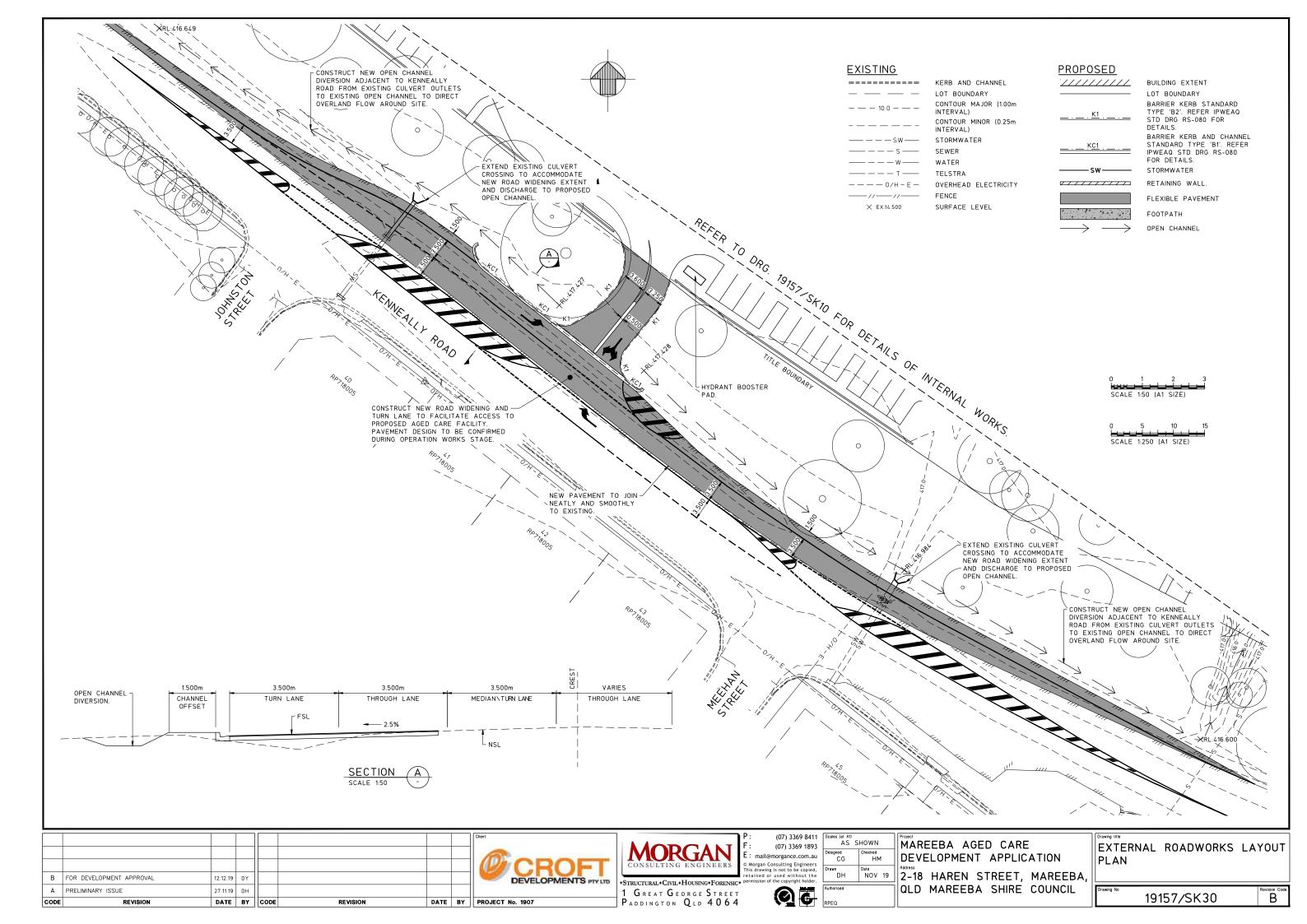
CATCHMENT ID CONCRETE PAVEMENT

FOOTPATH 4 . 4 . 4

LANDSCAPING. REFER TO LANDSCAPE ARCHITECTS DRAWINGS FOR DETAILS. SWALE SL:14.500 STRUCTURE SURFACE LEVEL X RL:14.500

SURFACE LEVEL CREST CREST INVERT INVERT





ATTACHMENT 7:

STORMWATER MANAGEMENT PLAN AND SITE BASED STORMWATER MANAGEMENT PLAN



Mareeba

Stormwater Management Report

Prepared for: Croft Developments

9 October 2019

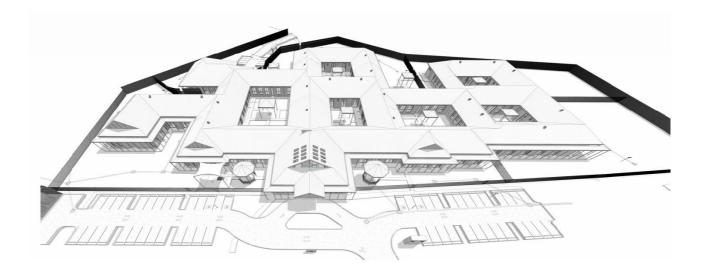




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Document Control

Version	Date	ate Description		Reviewed		
REV 1	9 October 2019	Issue	MN	Peter Perkins		

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1 Introduction

Biofilta Pty Ltd was engaged by Croft Developments Pty to develop a stormwater management plan for a proposed aged care development at 2-18 Haren Street, Mareeba, QLD.

This report details the stormwater quality infrastructure and calculations that demonstrate the proposed solution will manage stormwater such that a no-worsening outcome occurs as a result of the development in line with Council expectations.

2 Site Description

The subject site is bounded by Kenneally Road to the south west, Haren Street to the north and existing bushland to the east as shown in Figure 1 below.



Figure 1: Site

Detailed survey of the site has been undertaken to establish existing levels and proximity to neighbouring properties as shown below in Figure 2.



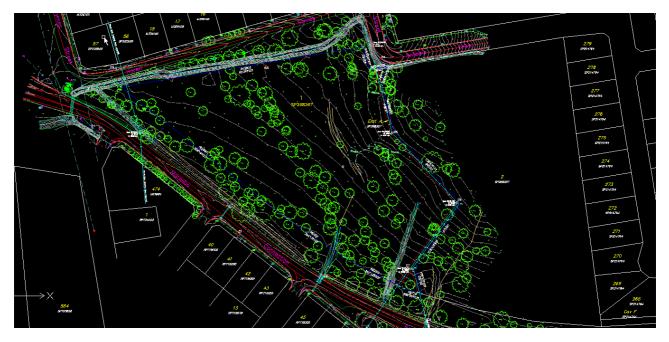


Figure 2: Site Survey

From the site survey, the total site area is approximately 2.89ha.

The site is currently vacant land with sparse vegetation coverage.

The site generally falls from west to east from RL 417.1m AHD opposite Meehan Street to RL414.5m AHD at the eastern boundary.

Swale drains disperse any overland flow from a small external catchment from Meehan Street across the site and towards the bushland to the east.

An existing outfall exists along the northern boundary adjacent to Haren Street where an open channel discharges to the Constance Street culvert crossing. Flows from the Constance Street culvert flow along Antonio Drive to a channel that meanders north and ultimately to the Barron River.



3 **Proposed Development**

An aged care facility is planned for this site which provides for detention basins and diversion of existing external flows around the site and into the adjoining land in the same, if not more dispersed manner.

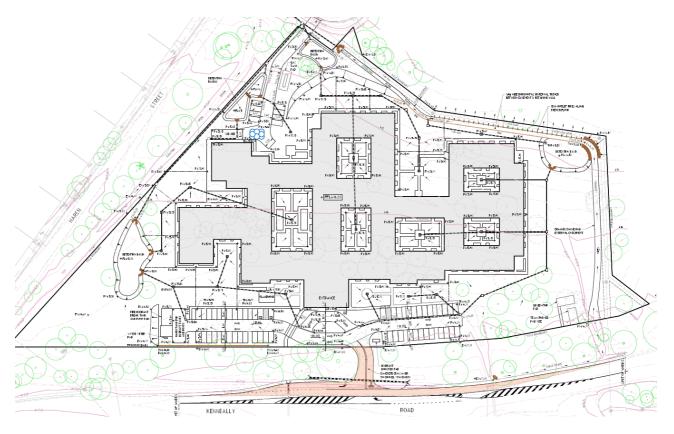


Figure 3: Development Plan

Key features of the proposed development:

- Building floor level RL 416.00m AHD
- Majority of the site is roof area
- Front car park
- Drainage to 4no. retarding basins
- Incorporation of overland flow around the site and dispersal to maintain natural flows as per existing conditions



4 Predevelopment Flows

Flood mapping for the area shows that the subject site is only affected by a small external catchment with major flow paths located to the south east of the site:



Figure 4: Current Flood Mapping

To provide a more accurate analysis of the site and external catchment flows, XPStorm 2019 was used to develop the existing flow estimate for the site using the ARR2016 procedures and lidar data provided by Mareeba Shire Council and a rain on grid analysis.

For the rain on grid analysis, Australian Rainfall and Runoff values for the land were obtained from the Bureau of Meteorology:

ARR values for infiltration and continuing loss were recommended as 48mm initial loss and 3mm continuing loss.

We believe that 48mm initial loss is too high across the full lidar extents and a more realistic 20mm would represent a better value to represent the open space of the subject site and external residential developed catchment.

A rain on grid approach shows the flow paths and provide estimates of flow and velocity across a given surface.

Figure 5 shows the existing flow paths for the site.



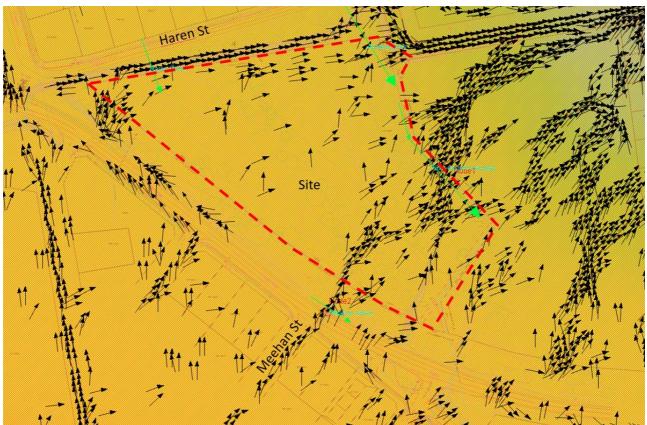


Figure 5: Existing Flow Paths 1.5hr Q100 AEP

From Figure 5, Meehan Street overland flow enters the site with some overland flow from Kennelly Street. Inspection of Kennelly Street shows roadside swales along the road verges that convey minor flows around the site.

The Meehan Street catchment is estimated at 1.74ha:

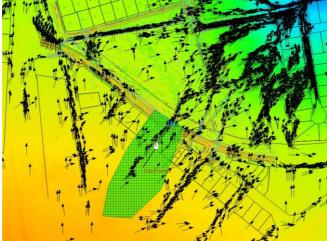


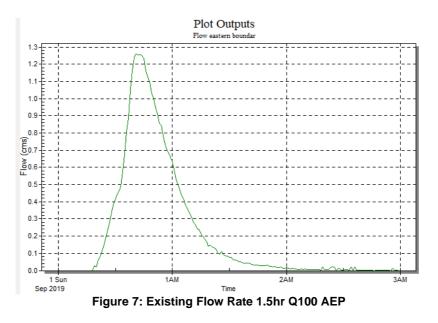
Figure 6: Meehan Street Catchment



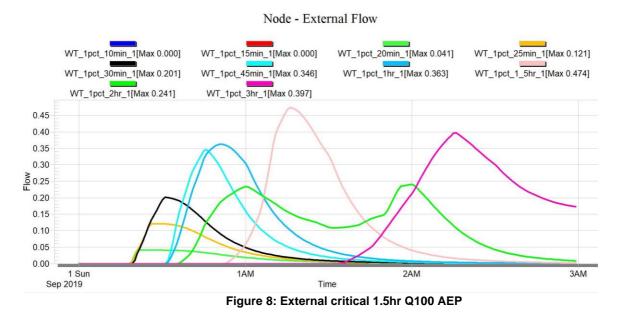
Flows from Johnston Street fall along Kennelly Street to the north and bypass the site into the Haren Street channel which abuts the northern boundary.

Flow lines shown in green in Figure 5 are used to capture the flows across the grid to indicate the existing flows for the Q100 1.5hr AEP event.

Across the eastern boundary, we see overland flow of approximately 1.25m3/s as peak existing flow entering the bushland to the east of the site. Note that this includes the external catchment flows which are not required to be retarded.



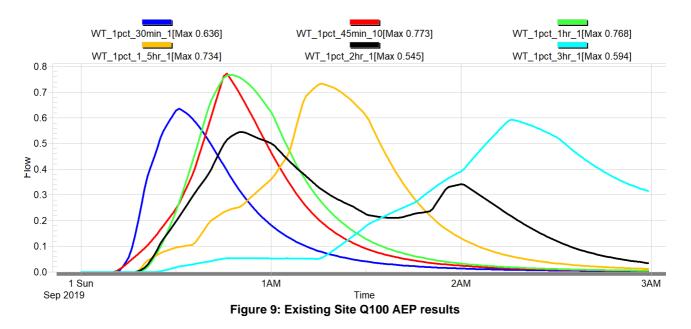
Critical duration flow for the external catchment occurs in the 1.5hr duration:





For the subject site only, the total site's critical storm duration was found by comparing various Q100 hydrograph intensities based on:

- 0% impervious fraction
- 20mm initial loss
- 3mm continuing

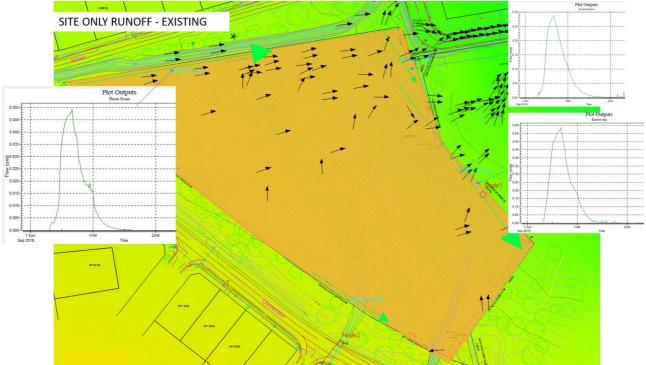


The site produces it's peak Q100 AEP from a 1 in 100year, 45 minute storm which is less than the peak storm duration for the small developed urban catchment.

Similar peak storm hydrographs result from the 45minute to 1.5hr durations for this site.

Maximum discharge from the site is the highest pre-development flow of 0.773m3/s and will form the target combined discharge rate in the developed scenario.





Flow lines indicating the existing site's discharge characteristics are shown in Figure 10.

Figure 10: Existing Site Q100 AEP Flows

Two thirds of the flow exit the site along the eastern boundary and one third of the site runoff is concentrated towards the Antonio drainage channel in the north eastern corner of the site.



5 Developed Scenario

From Figure 3, the development of an Aged Care facility is dominated by the roof area of the building which can be directed to different detention pond locations as required.

Figure 11 shows the proposed detention basins labelled A - D which will receive rood and car park runoff from the site, hold all flows up to the critical 1 in 100 year AEP and then discharge to the existing Constance Street culvert.

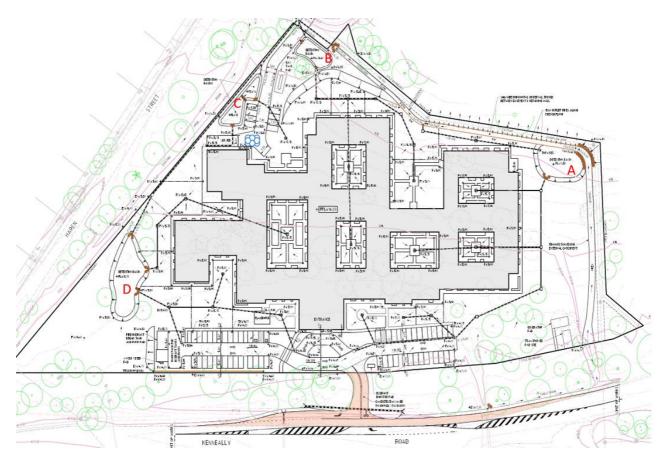


Figure 11: Developed Site and Detention Basin Locations

All basins A, B, C and D drain to the same outlet at the Constance Street culvert.



Contributing Hardstand Catchment Area for each basin:



Figure 12: Hardstand Catchment

Total catchment areas for the respective basins can be found by attributing hardstand and pervious areas to each basin:





Figure 13: Total Basin Catchment Demarcation

Catchment	Hardstand (m2)	Pervious (m2)	Total Area	Total Fraction Imp %
A	5,028	3,540	8,568	59
В	2,963	2,011	4,974	59
С	1,342	530	1,872	72
D	4,950	3,607	8,557	58
Total			2.4ha	

Summary of contributing catchments:

The remaining site area is taken up by the channelised external flow and drainage easement which are not required to be detained to basins and represent existing conditions.



5.1 DEVELOPED BASIN DESIGN

For each basin, the contributing area is modelled as a storage with a controlled outlet. The nominal outlet size is iterated until pre-development discharge rates are obtained and the maximum height in the basin is not exceeded in the peak Q100 AEP event up to 1.5 hr duration.

External flows are conveyed by a channel to a basin node and are dispersed as weir flow into the bushland to the east as per the existing scenario.

The model for the basins, diversion and outfall is:

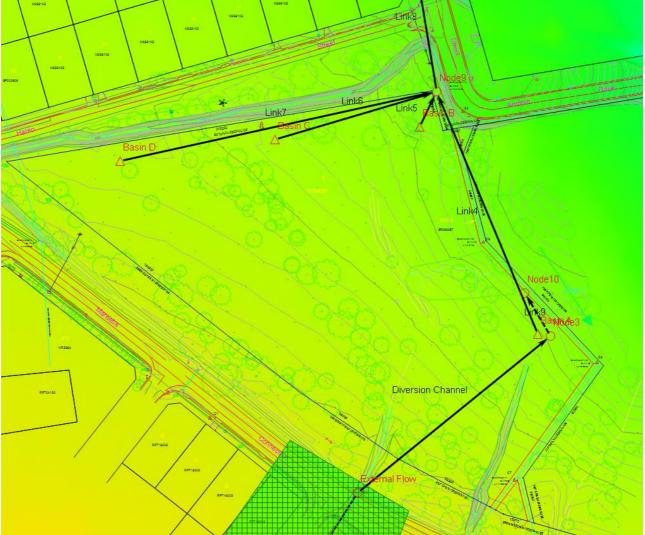


Figure 14: Developed Catchment Model

The within the Runoff model, the Triangle nodes contain the catchment area, routing method (Laurenson), infiltration parameters and also the basin area, depth and spill crests.



All basins flow to Node 9 within the model before flowing to the model's outlet node (8) as a free outfall into the Constance Street culvert.

Basin sizing and configuration preliminary:

Basin A

100m2 Invert RL 414.5 Top RL 415.5 Pipe out: 300mm diameter

Basin B

100m2 Invert RL 413.8 Top RL 414.2 Pipe out: 300mm diameter

Basin C

100m2 Invert RL 414 Top RL 415.6 Pipe out: 300mm diameter

Basin D

200m2 Invert RL 413.7 Top RL 415.5 Pipe out: 300mm diameter



5.2 Retardation Results

Based on the preliminary sizing of basins, a Q100 1.5hr critical storm was run for the model with the following results:

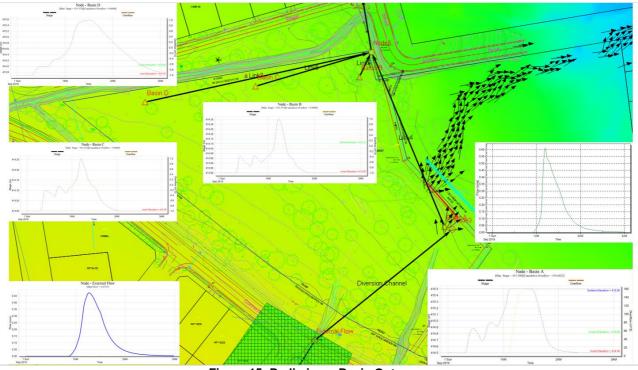


Figure 15: Preliminary Basin Outcomes

From Figure 15, the external flow is conveyed through the site via an open channel with a 1m wide base, 3:1 sides and a depth of 200mm without spilling to the surface.

Outflow from Basin A shows overflow of 160m3 and a combined flow to the eastern boundary of 0.60m3/s compared with the existing flow of 0.58m3/s which indicates an increase of flow rate to the eastern boundary and a resize of the basin is required in the next iteration. Overflow from Basin A represents approximately 0.15m3/s overland.

Outflows from Basins B,C and D show no spilling and are therefore adequately sized.





Conduit Link3 from Node9 to Node8 [Max Flow = 0.4260][Max Velocity = 1.49] ----Upstream Elevation Downstream Elevation Flow Velocity 413.75 (E) 413.75 (E) 413.50 Lot 413.25 (E) 413.00 0.4 1.4 1.2 0.3 1.0 Velocity Flow (cms) 0.2 0.6 m 0.4 0.1 0.2 0.0 0.0 1 Sun 1AM 2AM 3AM Sep 2019 Time Figure 16: Preliminary Piped Total Developed Discharge

From Figure 16, total discharge is 0.426m3/s + 0.15 (overland from basin A) = 0.576m3/s compared with the predevelopment's total flow of 0.773m3/s flow rate.

The result is that although Basin A overflows from the initial estimate, total flow is still retarded to below existing levels.

One final iteration with Basin A's surface area increased to 200m2 and a 450mm outlet pipe from Basin A to Node 9 shows:



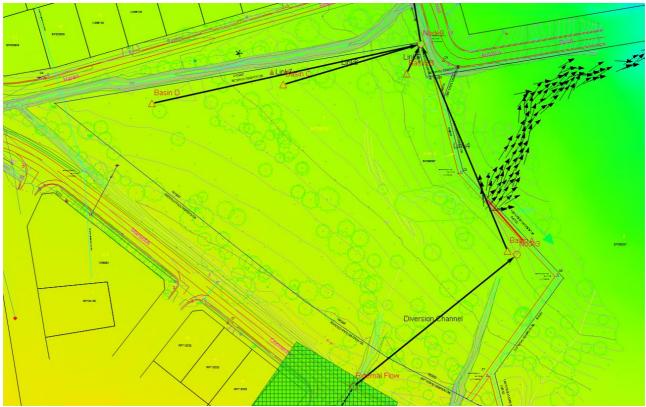


Figure 17: Final Iteration For Piped Total Developed Discharge

All developed flows are now contained within the basins provided.

Peak flow to the eastern boundary has now been decreased to 0.44m3/s which is slightly less than the inflow from the upstream developed catchment from Meehan Street (0.474m3/s):

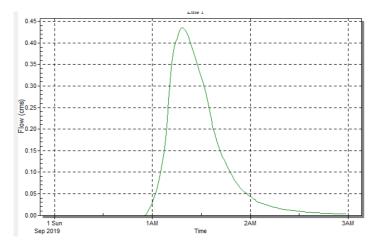
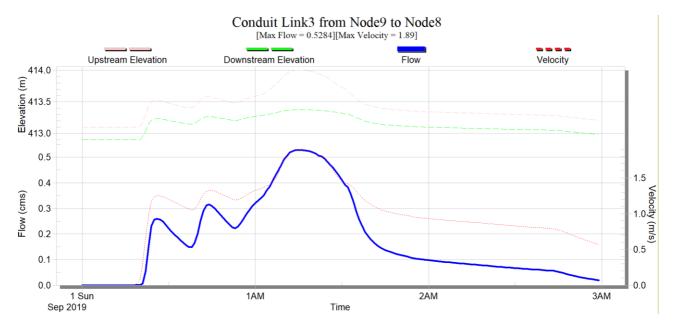


Figure 18: Eastern Boundary Developed Flow



The key impact of the proposed configuration is that the developed site will not impact on the existing properties in terms of flood flow rate for the critical storm duration.



Summary of retarded outflow from the developed site:

Figure 19: Total Developed Flow

Figure 19 shows that the final configuration of detention basins proposed by the civil engineering plans will retarded flow to 0.53m3/s and is less than the existing flow rate from the site of 0.773m3/s.

It is proposed therefore that the LPOD for the site is the north eastern outfall location as shown on the civil plans and in this report which outfall to the Constance Street culvert system.

No flooding of the proposed building is expected up to the 1 in 100 year AEP event and the site is immune from any external flooding impacts.

5.3 Water Quality

In discussion with Council's Manager of Technical Services, Mr Sam Wakeford, it is understood that water quality treatment for the predominately roof water runoff is not required. Council is satisfied that the proposed detention basins will act as sediment ponds for silts and general runoff debris, thus providing adequate treatment in this location.



6 Recommended Actions:

After analysis of the proposed Mareeba Aged Care facility using 1d and 2d hydraulic modelling, we recommend that Council endorse the proposed stormwater treatment facilities shown on the Croft Plan titled: Civil Works Concept Layout TPC-01 Rev 1 dated 08/10/2019 with the following detail:

Basin A:

200m2 base area with invert of RL 414.5m AHD, top level RL414.5m AHD and a 450mm diameter outlet to the LPOD.

Basin B:

100m2 base area with invert of RL 413.8m AHD, top level RL414.2m AHD and a 300mm diameter outlet to the LPOD.

Basin C:

100m2 base area with invert of RL 414m AHD, top level RL415.65m AHD and a 300mm diameter outlet to the LPOD.

Basin D:

200m2 base area with invert of RL 413.7m AHD, top level RL415.5m AHD and a 300mm diameter outlet to the LPOD.

External flows from the Meehan Street catchment to be diverted via an open channel with 1m base and 3:1 sides, 200mm deep to the eastern boundary whereby it is allowed to spill along a constant level dispersal trench to encourage sheet flow into the bushland as currently provided.

As deemed by Council, water quality treatment within the detention basins is adequate for this location.

Adopting the above strategy, the Mareeba Aged Care facility will have a positive effect of retarding peak flows to below existing levels which will provide a positive outcome during peak future flood events.

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+STRUCTURAL+CIVIL+HOUSING+FORENSIC+

SITE BASED STORMWATER MANAGEMENT PLAN

PROPOSED AGED CARE FACILITY AT 2-18 HAREN STREET MAREEBA

Prepared for

Croft Developments Attention: Clinton Witnish

Document Reference

19157 - SBSMP/1

Record of Issue:

Issue	Status	Author	Date	Checked	Date	Authorised	Date
0	For Review	Darren Yuen	26 Nov 2019	Henry Morgan RPEQ 11950	27 Nov 2019	Henry Morgan RPEQ 11950	27 Nov 2019
1	For Approval	Darren Yuen	11 Dec 2019	Henry Morgan RPEQ 11950	12 Dec 2019	Henry Morgan RPEQ 11950	12 Dec 2019

This investigation and report has been authorised by Mr Henry Morgan, a Director of Morgan Consulting Engineers Pty Ltd.

Henry J Morgan RPEQ 11950

Thursday, 12 December 2019



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1 INTRODUCTION

This Site Based Stormwater Management Plan (SBSMP) has been prepared for the proposed Aged Care Facility at 2-18 Haren Street, Mareeba, in order to investigate the effects the development will have on stormwater quantity and quality.

The objective of this SBSMP is to ensure that there is no adverse impact by the development on the environmental value of the receiving waters during the construction and operational phases of the development. This SBSMP will also provide recommendations to ensure that the post-development peak outflow conditions are not greater than the pre-development peak outflow conditions.

In order to achieve this objective, this SBSMP:

- 1. Describes the environmental setting of the development site and precinct;
- 2. Describes the nature of the proposed development as it relates to stormwater quality;
- 3. Calculates the peak flows for both pre and post-development conditions; and
- 4. Identifies potential sources of contaminants and describes the management techniques designed to be employed on the site to achieve the water quality objectives.

The proposed development has been assessed against the following guidelines and planning documents:

- 1. Urban Stormwater Quality Planning Guidelines 2010;
- 2. The Queensland Urban Drainage Manual (QUDM); and
- 3. Mareeba Shire Council's Planning Scheme.



2 EXISTING SITE

2.1 The Site

The subject site, comprising of Lot 1 on SP298397, is approximately 28,935m² (2.894ha) in area. The site is currently vacant with scattered trees and vegetation.

The subject site currently slopes generally from the southwest (with an approximate elevation of 417.11m AHD) to the northeast (with an approximate elevation of 414.20m AHD). The site currently has frontages to Haren Street and Kenneally Road, north and southwest of the site, respectively.

Refer to Figure 2.1 for a Locality Plan and Appendix A for the Detailed Site Survey.



Figure 2.1 - Locality Plan of Site and Surrounding Area

2.2 Surrounding Area

The site is located within the limits of the Mareeba Centre under the Mareeba Local Plan, and is classified as a Low Density Residential zone. The site is bounded by residential properties to the north, south and east and commercial properties to the west.



3 PROPOSED DEVELOPMENT

The proposed Aged Care Facility primarily involves:

- 1. A new building with aged care suites;
- 2. Courtyard areas;
- 3. Dedicated landscaping areas; and
- 4. Vehicular manoeuvring and carpark hardstand areas.

Refer to Appendix B for the Proposed Development Plans.



4 EXISTING DRAINAGE PATTERNS

4.1 Existing Infrastructure

Data obtained from the detailed site survey indicates the following existing drainage infrastructure:

- 1. Two stormwater culvert crossings across Kenneally Road fronting the site;
- 2. A swale drain along the northern verge of Kenneally Road, southwest of the site; and
- 3. A swale drain along the southern verge of Haren Street, north of the site, falling to a culvert crossing across Constance Street.

Refer to Figure 4.1 for the existing stormwater infrastructure and drainage patterns, Appendix A for the Detailed Site Survey.



Figure 4.1 - Existing Drainage Paths & Infrastructure



4.2 Existing Drainage Patterns

Data obtained from a detailed site survey indicates that the site has the following drainage patterns:

Surface Runoff

Surface runoff from the western portion of the site sheet flows east across the existing bushland on Lot 2 on SP298397. Surface runoff from the rest of the site sheet flows northeast to the swale drain along Haren Street and is then conveyed to the Constance Street stormwater culvert crossing.

External Catchment

A localised external catchment of approximately 2.6ha contributes runoff to the site via the Keneally Road stormwater culvert located at the intersection of Meehan Street and a swale drain located along the northern verge of Kenneally Road.

Refer to Figure 4.1 for a drainage schematic, Appendix A for the detailed site survey plan.

4.3 Lawful Point of Discharge

If the proposed development maintains pre-development flow conditions, the lawful point of discharge (LPD) is the Haren Street swale drain and Constance Street stormwater culvert crossing, north of the site.

In consideration of the site characteristics, surrounding topology and stormwater drainage infrastructure, the aforementioned proposed lawful point of discharge is considered to be compliant with the criteria for lawful point of discharge outlined in Section 3.9.1. of QUDM 2017 as per below:

- i) The location of the proposed discharge point is under the lawful control of the local government or other statutory authority from whom permission to discharge has been received.
- ii) The post development discharge will not cause an actionable nuisance, nor environmental or property damage, as it is intended to implement mitigation measures to account for any change to the existing flow characteristics.
- iii) Authority to discharge over affected properties will not be required as the proposed drainage patterns will maintain or improve existing drainage patterns, which will not adversely impact surrounding properties.

Refer to Section 5 outlining the Stormwater Quantity aspects of this site.



5 STORMWATER QUANTITY

A roof and allotment drainage system is to be designed to comply with:

- 1. AS/NZS 3500.3:2015 Plumbing and Drainage Part 3: Stormwater Drainage;
- 2. The Queensland Urban Drainage Manual (QUDM), and;
- 3. The Mareeba Shire Council Planning Scheme.

5.1 Stormwater Quantity Assessment

As defined in the QUDM, the following design storms were adopted as part of the assessment:

- 1. Minor Drainage System: 10 year ARI statistical flood (Q10 storm);
- 2. Major Drainage System: 100 year ARI statistical flood (Q100 storm).

As the site is currently vacant, the proposed development will result in peak flows greater than pre development flows. Therefore, due to the increase in peak flows as a result of the proposed development, it is expected that stormwater detention will be required to mitigate post development peak flows from the site to pre development flow rates.

Biofilta Pty Ltd (Biofilta) used XP-STORM software to assess the detention requirements for the proposed development by preparing models of the pre and post development mitigated scenarios. The pre development model used the existing site characteristics to determine the current peak flows from the site. The post development mitigated model used the proposed development characteristics and detention basins to determine the post development mitigated flows from the site.

The proposed development will utilise four detention basins within the site to detain the 100 Year ARI post development flow. The basins have been designed with suitable volume and a low flow pipe for discharge. Refer to Table 5.1 for the detention basin details.

Basin	Base Area (m2)	Invert RL (mAHD)	Crest RL (mAHD)	Basin Depth (m)	Outlet Pipe Dia. (mm)
А	200	414.5	415.5	1.0	450
В	100	413.8	414.2	0.4	300
С	100	414.0	415.6	1.6	300
D	200	413.7	415.5	1.8	300

Morgan Consulting Engineers (MCE) **have reviewed Biofilta's** 100 Year ARI detention modelling assessment of the site outlined in this report and can confirm that the recommended mitigation measures are satisfactory in meeting the 100 Year ARI pre development flow condition.

Refer to Appendix C for the Biofilta Stormwater Management Plan, Appendix D for the Concept Drainage Plans and Section 6 for the Stormwater Quality Management assessment.



5.2 Proposed Drainage Patterns

The proposed drainage patterns are as follows (refer to Appendix D):

Roof Catchment:

1. Runoff from the roof catchment of the proposed development will flow via downpipes to an internal drainage network, where it will be directed to the detention basins prior to discharging to the Lawful Point of Discharge.

Ground Catchment:

1. Surface runoff in the proposed development will be collected by various stormwater pits connected to the internal drainage network, where it will be directed to the detention basins prior to discharging to the Lawful Point of Discharge.



6 STORMWATER QUALITY

The following section of the report will outline the potential contaminants and proposed solutions to be incorporated during the construction and operational phases of the proposed development.

6.1 Construction Phase

Sediment generated during the construction phase shall be dealt with in accordance with best practice and sediment control.

Erosion and Sediment Control (ESC) Measures such as silt fences, diversion drains, drainage structure protection and dust control (clearing) will be implemented. Silt fences are to be erected along the boundary of the site and around the construction area. These fences are to be cleaned by the contractor when the capacity is reduced by 25%. Where possible, disturbance to the existing surface is to be limited to the immediate work area. The existing ground cover is not to be stripped until the contractor is ready for earthworks to begin.

Stockpiles and construction materials are not permitted to be stored within the road reserve and should be contained using silt fences. Diversion drains are to be provided at upstream catchments to reduce flows to earthworks areas. In any areas where flows could enter adjacent properties temporary stabilisation is to be provided.

All ESC measures are to be provided as soon as earthworks have commenced and staged to suit construction. The contractor is responsible for this action. A temporary construction exit is to be located at each entry point to the site and will be determined based on the stage of works being completed. The contractor is to ensure all dust tracked onto surrounding roads is immediately swept to remove silt/dust.

All new stormwater pits are to be protected from sediment infiltration by wrapping new pits and grates in geofabric or covering appropriately with timber board. Silt fences are to remain in place until the site is established (80% ground cover) and practical completion is confirmed.

Potential sources of contaminants identified for the construction phase of the development are outlined in Table 6.1 together with proposed stormwater quality improvement devices (SQIDs), management and maintenance procedures.



Table 6.1 - Potential Contaminants and Proposed Treatments

Pollutant	Potential Source	Management / Maintenance Procedures	Proposed Treatment Device and Maintenance Procedure
Sediment & Eroded material	Excavated material, fill material, exposed ground, stockpiles of material.	Provision of sediment and silt barriers to the site drainage entry and exit points.	Sand filled filter socks. Removal of excess sand/silt build-up at regular intervals and after every storm.
Dust	Stockpiles of material, exposed ground.	Covering the material or wetting it down at regular intervals.	Coverage of material with plastic, geotextile, surface binding agents or regular watering.
Litter	Refuse generated by staff.	Construction waste is to be cleaned off the site area and disposed of into an industrial bin then removed by a refuse collection contractor.	Industrial bin is to be provided within the construction area - to be emptied on at least a weekly basis.
Concrete	Washing of concrete trucks/tools to remove wet/unused concrete.	Provision of a closed area onsite for washing off of concrete slurries.	Liquids to be removed by a waste collection contractor. Solids to be placed into a refuse bin.
Surfactants (detergents)	Washing down operations on hardstand area using detergents.	No cleaning of vehicles will be permitted on site.	Monitoring & prevention
Chemical (Paints, thinners etc.)	Typically this may occur due to spillage of product.	Where spills occur, the containment area is to stop escape. The material is to be treated (as required) and removed and cleaned by a licensed contractor. Minor spillage outside this area shall be cleaned up with cloths and disposed of to waste via the industrial bin.	A temporary containment area. This is to be impermeable and of a size to permit mixing/transfer, and with a storage volume of twice the largest container used. Treatment of spills is to occur on site. No discharge of treated water to the stormwater system is to occur without council approval. Incidents are to be reported to the EPA.
Wastewater	Spillage from the relocation of the existing sewerage reticulation.	A licensed contractor shall remove any residue sewage from unused pipes and contaminated soils are to be disposed of via the industrial bin.	No leakage is to be permitted to enter the groundwater or discharge to the stormwater system.



6.2 Operational Phase

As per Biofilta's discussions with Council's Manager of Technical Services, Sam Wakeford, it is understood that Council does not expect stormwater quality treatment will be required for the subject site which is predominantly roof catchment, and it has been deemed satisfactory that the proposed detention basins will provide adequate treatment in regards to silts and general runoff debris.



7 FLOODING

Information obtained from **Council's Flood Hazard Overla**y mapping confirms that the site is not affected by creek/waterway flooding. However, the site appears to have a localised catchment contributing flows across the site.

The Stormwater Management Plan report prepared by Biofilta has outlined that the surface runoff from the localised external catchment will be collected by a swale drain along the Kenneally Road frontage. The runoff will then be directed along the south eastern property boundary via an open channel to a dispersal trench, prior to discharging to the existing bushland, east of the site.

Refer to Appendix C for the Stormwater Management Plan report prepared by Biofilta and Appendix E for Council's Flood Hazard Overlay.

7.1 External Catchment Assessment

MCE has assessed the extent of the external catchment area entering the subject site based on Lidar data of the surrounding area and determined that approximately 2.6ha will be contributing runoff to the site. Refer to Appendix D for the Stormwater Catchment Plan.

The Rational Method has been used to calculate the peak discharges from the external catchment under the existing conditions.

7.1.1 Design Storms

As defined in the QUDM, the following design storms were adopted as part of the assessment:

- 1. Minor Drainage System: 10 year ARI statistical flood (Q10 storm);
- 2. Major Drainage System: 100 year ARI statistical flood (Q100 storm).

7.1.2 Rainfall Intensity

Rainfall intensities for this study were obtained from the Australian Bureau of Meteorology.

7.1.3 Times of Concentration

Times of concentration (t_c) were calculated as defined in the QUDM. Refer to Table 7-1 for the adopted t_c 's and Appendix F for t_c calculations.

Pre development t _c (mins)	
22.2	

Table 7-1 - Adopted $t_{\rm c}\xspace$ values

7.1.4 Runoff Coefficients

The fraction impervious value and 10 year runoff coefficient (C_{10}) was determined as defined in the QUDM. Refer to Table 7-2 below for the adopted fraction impervious and C_{10} values.



Table 7-2 - Add	nted Fraction	Impervious	and C ₁₀ Values
Table 7-2 - Auc		impervious	

Property State	fi	C ₁₀
Pre-development	0.60	0.80

7.1.5 Peak Flows

Refer to Table 7-3 for a summary of the predicted minor and major discharge rates for the external catchment and Appendix F for the Rational Method calculations.

		<u> </u>	
Table 7-3 -	External	Catchment	Peak Flows
	Entornar	outorniont	1 0011 10113

Catchment	Q ₂ (m ³ /s)	Q ₅ (m³/s)	Q ₁₀ (m ³ /s)	Q ₂₀ (m³/s)	Q ₅₀ (m³/s)	Q ₁₀₀ (m ³ /s)
External Catchment	0.342	0.513	0.625	0.741	0.931	1.058

7.1.6 Channel Capacity Assessment

Based on the catchment analysis above, it has been determined that the proposed open channel will need to be a minimum of 0.47m deep and 4.3m wide overall, with a low flow channel consisting of a 0.5m wide and 0.2m wide base, in order to adequately convey the external runoff up to Q100 peak flow. This is based on the assumption of a minimum longitudinal slope of 2% and 1:3 side slopes.

Refer to Appendix F for the Channel Capacity calculations.



8 CONCLUSION

The proposed Aged Care Facility at 2-18 Haren Street, Mareeba has been assessed for its impact on the quantity and quality of stormwater drainage.

If the proposed development maintains pre-development drainage patterns, the lawful point of discharge is the Haren Street swale drain and Constance Street stormwater culvert crossing, north of the site.

On-site detention (OSD) is warranted for the proposed development due to the increase in impervious area, resulting in an increase in stormwater runoff when compared to pre development conditions. XP-STORM modelling software was used by Biofilta to determine the pre and post development flow from site as well as the detention requirement to mitigate the post development flow. Four detention basins will be used to mitigate post development peak flows to less than pre development peak flows at the Lawful Point of Discharge.

Sediment generated during the construction phase shall be dealt with in accordance with an Erosion and Sediment Control Plan to be kept on site during the construction phase.

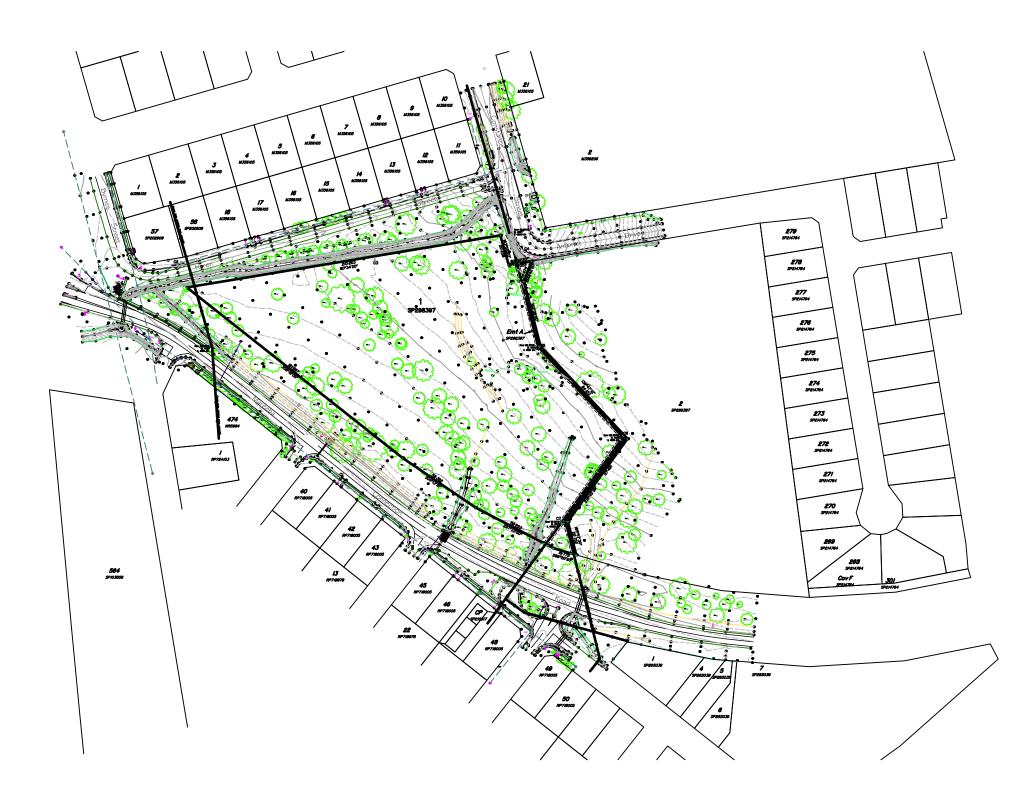
The proposed development does not warrant tertiary stormwater quality treatment as discussed with Council's Manager of Technical Services.

The subject site is unaffected by creek/waterway flooding. However, a localised external catchment area of approximately 2.6ha contributes flows across the site. An open channel will be utilised to collect the flows and divert it around the proposed development.



APPENDIX A

DETAILED SITE SURVEY PLAN





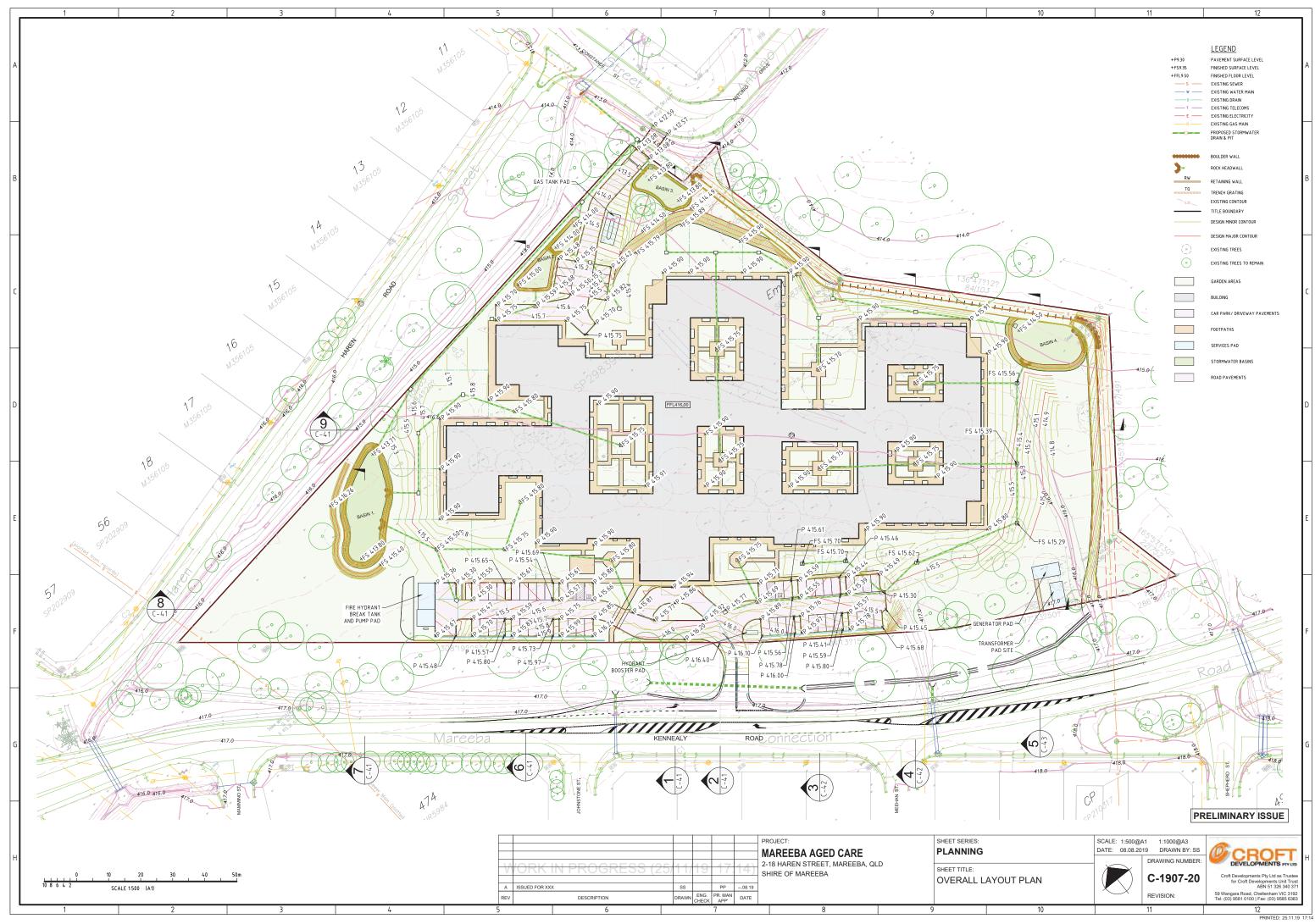
Point No.	Easting	Northing	Elevation	Mark Type
C1	332548.103	8118672.310	417.492	OPSM/9936
C2	332443.195	8118812.372	416.509	Screw in Kerb
C3	332573.299	8118816.332	415.627	Star Picket in Conc. Collar
C4	332671.587	8118822.383	412.610	Bolt in Kerb
C5	332681.626	8118758.531	414.514	Nail in MH
C6	332737.049	8118699.540	414.593	Nail in MH
C7	332696.777	8118642.156	416.532	Nail in MH
C8	332712.647	8118596.140	417.463	Screw in HW
C9	332621.946	8118637.132	417.435	Screw in Culvert

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	-		
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1 9936			
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GPS Control.dwg			
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APPENDIX B

PROPOSED DEVELOPMENT PLANS





APPENDIX C

BIOFILTA STORMWATER MANAGEMENT PLAN REPORT

Site Based Stormwater Management Plan Aged Care Facility at 2-18 Haren Street, Mareeba



Mareeba

Stormwater Management Report

Prepared for: Croft Developments

9 October 2019

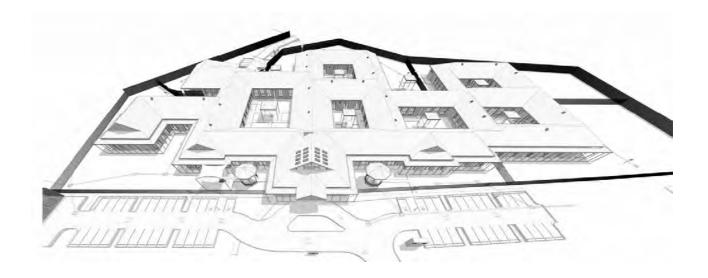




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Document Control

Version	Date	Description	Prepared	Reviewed
REV 1	9 October 2019	Issue	MN	Peter Perkins

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1 Introduction

Biofilta Pty Ltd was engaged by Croft Developments Pty to develop a stormwater management plan for a proposed aged care development at 2-18 Haren Street, Mareeba, QLD.

This report details the stormwater quality infrastructure and calculations that demonstrate the proposed solution will manage stormwater such that a no-worsening outcome occurs as a result of the development in line with Council expectations.

2 Site Description

The subject site is bounded by Kenneally Road to the south west, Haren Street to the north and existing bushland to the east as shown in Figure 1 below.



Figure 1: Site

Detailed survey of the site has been undertaken to establish existing levels and proximity to neighbouring properties as shown below in Figure 2.





Figure 2: Site Survey

From the site survey, the total site area is approximately 2.89ha.

The site is currently vacant land with sparse vegetation coverage.

The site generally falls from west to east from RL 417.1m AHD opposite Meehan Street to RL414.5m AHD at the eastern boundary.

Swale drains disperse any overland flow from a small external catchment from Meehan Street across the site and towards the bushland to the east.

An existing outfall exists along the northern boundary adjacent to Haren Street where an open channel discharges to the Constance Street culvert crossing. Flows from the Constance Street culvert flow along Antonio Drive to a channel that meanders north and ultimately to the Barron River.



3 Proposed Development

An aged care facility is planned for this site which provides for detention basins and diversion of existing external flows around the site and into the adjoining land in the same, if not more dispersed manner.

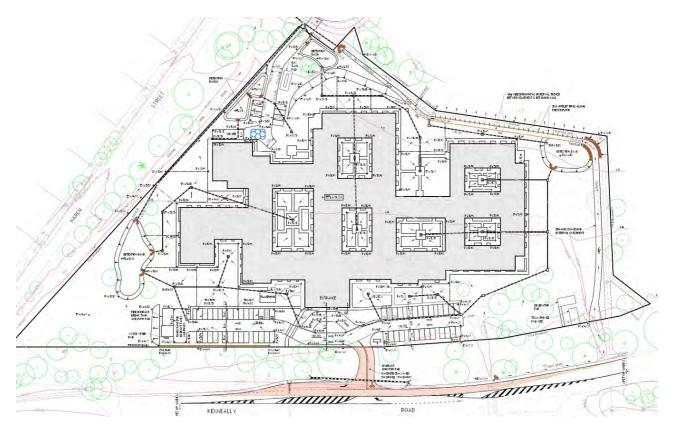


Figure 3: Development Plan

Key features of the proposed development:

- Building floor level RL 416.00m AHD
- Majority of the site is roof area
- Front car park
- Drainage to 4no. retarding basins
- Incorporation of overland flow around the site and dispersal to maintain natural flows as per existing conditions



4 **Predevelopment Flows**

Flood mapping for the area shows that the subject site is only affected by a small external catchment with major flow paths located to the south east of the site:



Figure 4: Current Flood Mapping

To provide a more accurate analysis of the site and external catchment flows, XPStorm 2019 was used to develop the existing flow estimate for the site using the ARR2016 procedures and lidar data provided by Mareeba Shire Council and a rain on grid analysis.

For the rain on grid analysis, Australian Rainfall and Runoff values for the land were obtained from the Bureau of Meteorology:

ARR values for infiltration and continuing loss were recommended as 48mm initial loss and 3mm continuing loss.

We believe that 48mm initial loss is too high across the full lidar extents and a more realistic 20mm would represent a better value to represent the open space of the subject site and external residential developed catchment.

A rain on grid approach shows the flow paths and provide estimates of flow and velocity across a given surface.

Figure 5 shows the existing flow paths for the site.



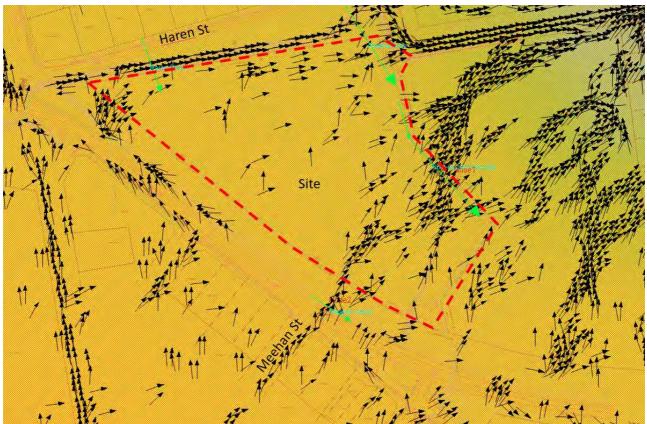


Figure 5: Existing Flow Paths 1.5hr Q100 AEP

From Figure 5, Meehan Street overland flow enters the site with some overland flow from Kennelly Street. Inspection of Kennelly Street shows roadside swales along the road verges that convey minor flows around the site.

The Meehan Street catchment is estimated at 1.74ha:

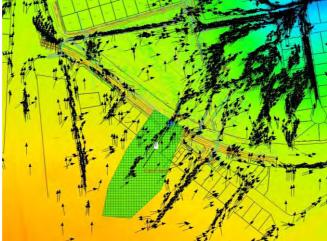


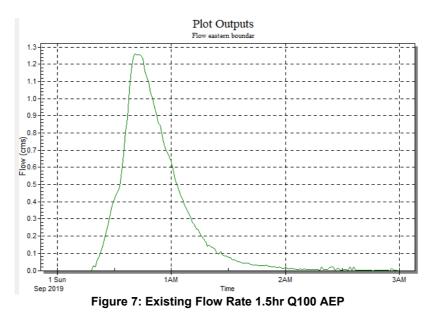
Figure 6: Meehan Street Catchment



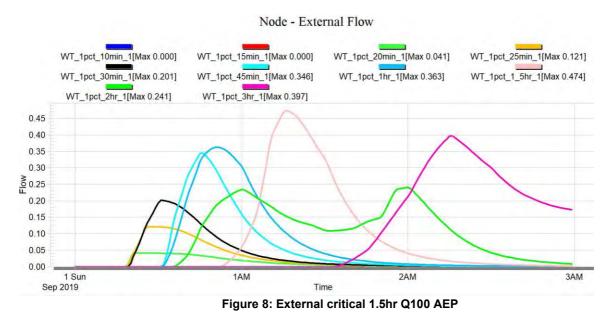
Flows from Johnston Street fall along Kennelly Street to the north and bypass the site into the Haren Street channel which abuts the northern boundary.

Flow lines shown in green in Figure 5 are used to capture the flows across the grid to indicate the existing flows for the Q100 1.5hr AEP event.

Across the eastern boundary, we see overland flow of approximately 1.25m3/s as peak existing flow entering the bushland to the east of the site. Note that this includes the external catchment flows which are not required to be retarded.



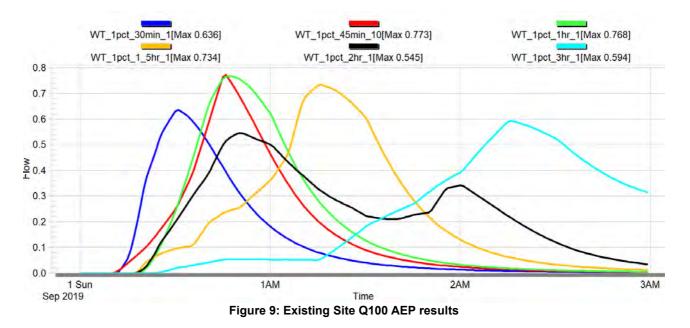
Critical duration flow for the external catchment occurs in the 1.5hr duration:





For the subject site only, the total site's critical storm duration was found by comparing various Q100 hydrograph intensities based on:

- 0% impervious fraction
- 20mm initial loss
- 3mm continuing

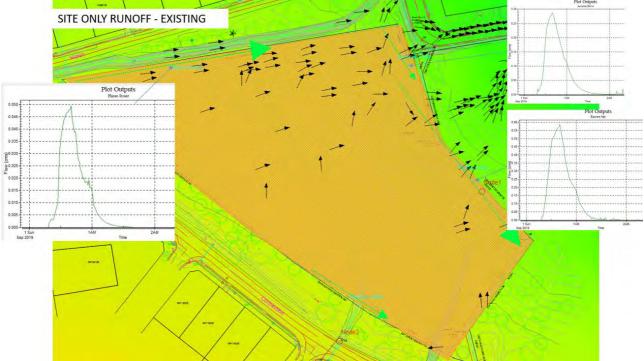


The site produces it's peak Q100 AEP from a 1 in 100year, 45 minute storm which is less than the peak storm duration for the small developed urban catchment.

Similar peak storm hydrographs result from the 45minute to 1.5hr durations for this site.

Maximum discharge from the site is the highest pre-development flow of 0.773m3/s and will form the target combined discharge rate in the developed scenario.





Flow lines indicating the existing site's discharge characteristics are shown in Figure 10.

Figure 10: Existing Site Q100 AEP Flows

Two thirds of the flow exit the site along the eastern boundary and one third of the site runoff is concentrated towards the Antonio drainage channel in the north eastern corner of the site.



5 Developed Scenario

From Figure 3, the development of an Aged Care facility is dominated by the roof area of the building which can be directed to different detention pond locations as required.

Figure 11 shows the proposed detention basins labelled A - D which will receive rood and car park runoff from the site, hold all flows up to the critical 1 in 100 year AEP and then discharge to the existing Constance Street culvert.

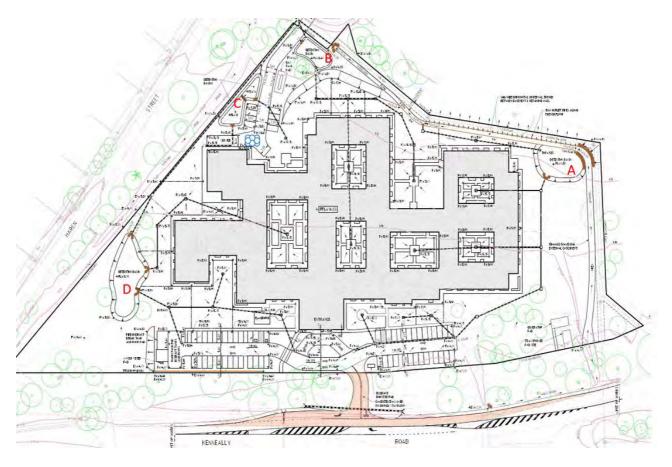


Figure 11: Developed Site and Detention Basin Locations

All basins A, B, C and D drain to the same outlet at the Constance Street culvert.



Contributing Hardstand Catchment Area for each basin:



Figure 12: Hardstand Catchment

Total catchment areas for the respective basins can be found by attributing hardstand and pervious areas to each basin:





Figure 13: Total Basin Catchment Demarcation

Summary of co	ontributing catch	iments:	
Catchment	Hardstand	Pervious	Т

Catchment	Hardstand	Pervious	Total Area	Total Fraction
	(m2)	(m2)		Imp %
А	5,028	3,540	8,568	59
В	2,963	2,011	4,974	59
С	1,342	530	1,872	72
D	4,950	3,607	8,557	58
Total			2.4ha	

The remaining site area is taken up by the channelised external flow and drainage easement which are not required to be detained to basins and represent existing conditions.



5.1 DEVELOPED BASIN DESIGN

For each basin, the contributing area is modelled as a storage with a controlled outlet. The nominal outlet size is iterated until pre-development discharge rates are obtained and the maximum height in the basin is not exceeded in the peak Q100 AEP event up to 1.5 hr duration.

External flows are conveyed by a channel to a basin node and are dispersed as weir flow into the bushland to the east as per the existing scenario.

The model for the basins, diversion and outfall is:

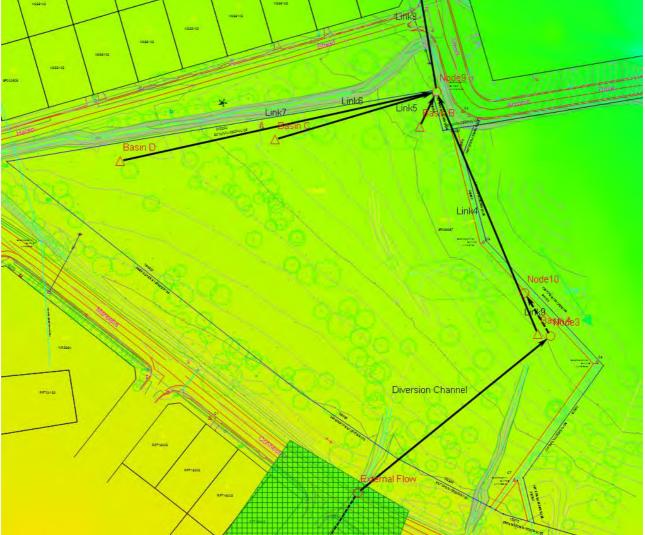


Figure 14: Developed Catchment Model

The within the Runoff model, the Triangle nodes contain the catchment area, routing method (Laurenson), infiltration parameters and also the basin area, depth and spill crests.



All basins flow to Node 9 within the model before flowing to the model's outlet node (8) as a free outfall into the Constance Street culvert.

Basin sizing and configuration preliminary:

Basin A

100m2 Invert RL 414.5 Top RL 415.5 Pipe out: 300mm diameter

Basin B

100m2 Invert RL 413.8 Top RL 414.2 Pipe out: 300mm diameter

Basin C

100m2 Invert RL 414 Top RL 415.6 Pipe out: 300mm diameter

Basin D

200m2 Invert RL 413.7 Top RL 415.5 Pipe out: 300mm diameter



5.2 Retardation Results

Based on the preliminary sizing of basins, a Q100 1.5hr critical storm was run for the model with the following results:

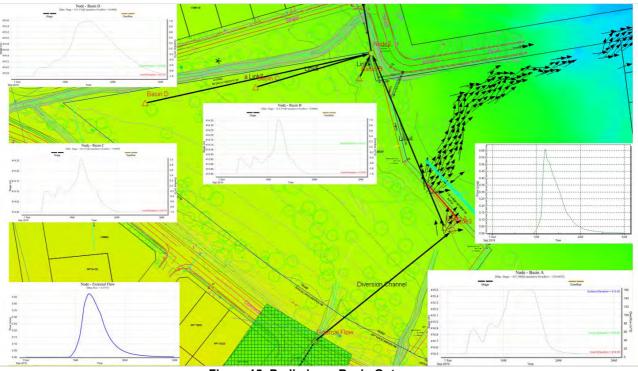


Figure 15: Preliminary Basin Outcomes

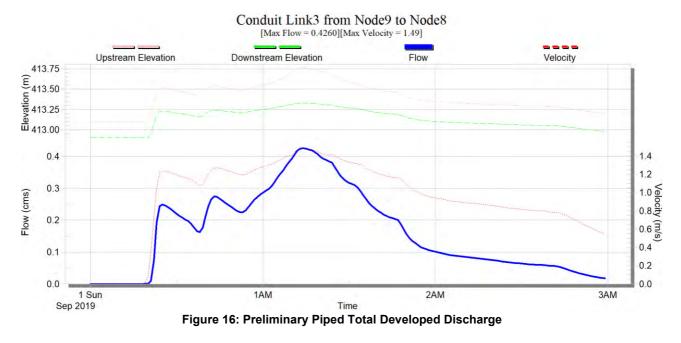
From Figure 15, the external flow is conveyed through the site via an open channel with a 1m wide base, 3:1 sides and a depth of 200mm without spilling to the surface.

Outflow from Basin A shows overflow of 160m3 and a combined flow to the eastern boundary of 0.60m3/s compared with the existing flow of 0.58m3/s which indicates an increase of flow rate to the eastern boundary and a resize of the basin is required in the next iteration. Overflow from Basin A represents approximately 0.15m3/s overland.

Outflows from Basins B,C and D show no spilling and are therefore adequately sized.







From Figure 16, total discharge is 0.426m3/s + 0.15 (overland from basin A) = 0.576m3/s compared with the predevelopment's total flow of 0.773m3/s flow rate.

The result is that although Basin A overflows from the initial estimate, total flow is still retarded to below existing levels.

One final iteration with Basin A's surface area increased to 200m2 and a 450mm outlet pipe from Basin A to Node 9 shows:



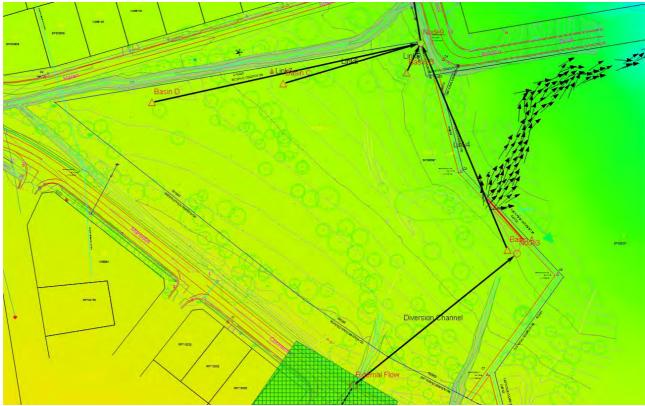


Figure 17: Final Iteration For Piped Total Developed Discharge

All developed flows are now contained within the basins provided.

Peak flow to the eastern boundary has now been decreased to 0.44m3/s which is slightly less than the inflow from the upstream developed catchment from Meehan Street (0.474m3/s):

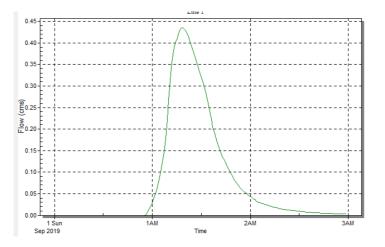
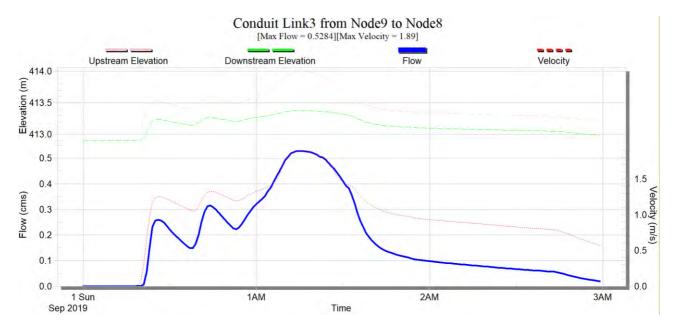


Figure 18: Eastern Boundary Developed Flow



The key impact of the proposed configuration is that the developed site will not impact on the existing properties in terms of flood flow rate for the critical storm duration.



Summary of retarded outflow from the developed site:

Figure 19: Total Developed Flow

Figure 19 shows that the final configuration of detention basins proposed by the civil engineering plans will retarded flow to 0.53m3/s and is less than the existing flow rate from the site of 0.773m3/s.

It is proposed therefore that the LPOD for the site is the north eastern outfall location as shown on the civil plans and in this report which outfall to the Constance Street culvert system.

No flooding of the proposed building is expected up to the 1 in 100 year AEP event and the site is immune from any external flooding impacts.

5.3 Water Quality

In discussion with Council's Manager of Technical Services, Mr Sam Wakeford, it is understood that water quality treatment for the predominately roof water runoff is not required. Council is satisfied that the proposed detention basins will act as sediment ponds for silts and general runoff debris, thus providing adequate treatment in this location.



6 Recommended Actions:

After analysis of the proposed Mareeba Aged Care facility using 1d and 2d hydraulic modelling, we recommend that Council endorse the proposed stormwater treatment facilities shown on the Croft Plan titled: Civil Works Concept Layout TPC-01 Rev 1 dated 08/10/2019 with the following detail:

Basin A:

200m2 base area with invert of RL 414.5m AHD, top level RL414.5m AHD and a 450mm diameter outlet to the LPOD.

Basin B:

100m2 base area with invert of RL 413.8m AHD, top level RL414.2m AHD and a 300mm diameter outlet to the LPOD.

Basin C:

100m2 base area with invert of RL 414m AHD, top level RL415.65m AHD and a 300mm diameter outlet to the LPOD.

Basin D:

200m2 base area with invert of RL 413.7m AHD, top level RL415.5m AHD and a 300mm diameter outlet to the LPOD.

External flows from the Meehan Street catchment to be diverted via an open channel with 1m base and 3:1 sides, 200mm deep to the eastern boundary whereby it is allowed to spill along a constant level dispersal trench to encourage sheet flow into the bushland as currently provided.

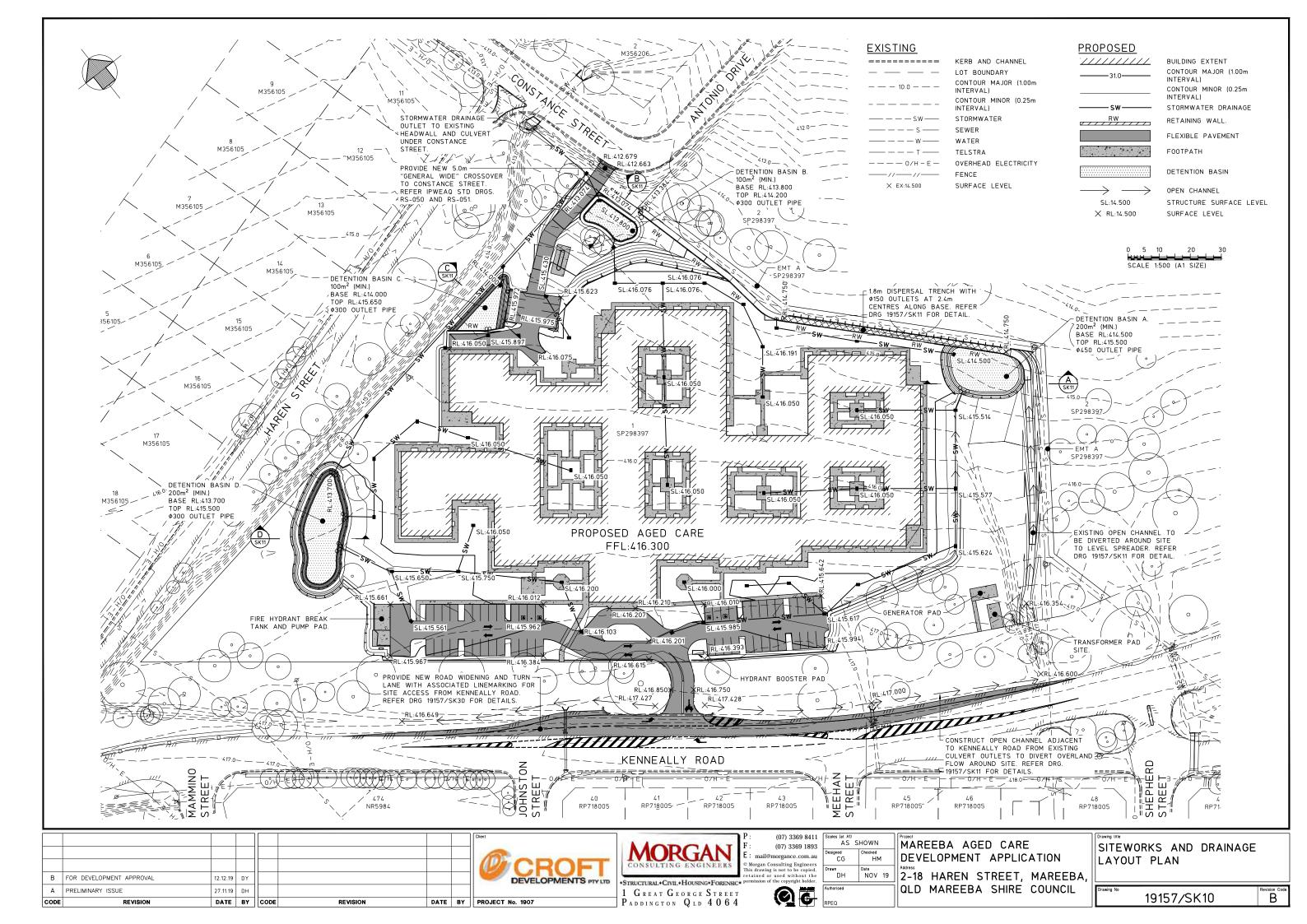
As deemed by Council, water quality treatment within the detention basins is adequate for this location.

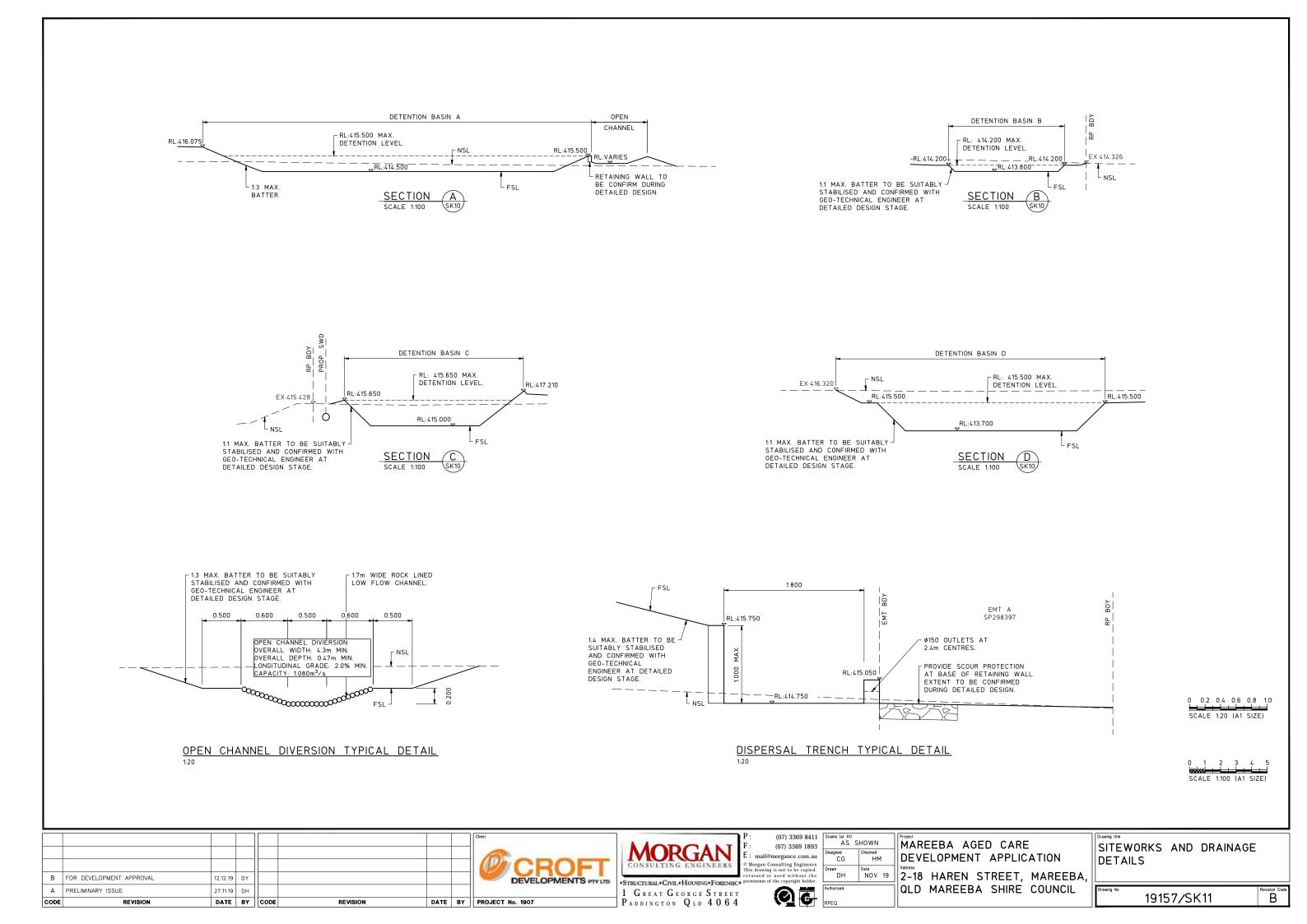
Adopting the above strategy, the Mareeba Aged Care facility will have a positive effect of retarding peak flows to below existing levels which will provide a positive outcome during peak future flood events.



APPENDIX D

CONCEPT DRAINAGE PLANS





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STORMWATER CATCHMENT DISCHARGE CALCULATIONS

<u>EXIST</u>ING

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× EX:14.500

A PRELIMINARY ISSUE

CODE

BUILDING EXTENT

LOT BOUNDARY

INTERVAL)

INTERVAL) STORMWATER SEWER

WATER

FENCE

FOOTPATH

10 20 30 40 50

SCALE 1:1000 (A1 SIZE)

LANDSCAPING SURFACE LEVEL

TELSTRA

KERB AND CHANNEL

CONTOUR MAJOR (1.00m

CONTOUR MINOR (0.25m

OVERHEAD ELECTRICITY

CATCHMENT NAME	CATCHMENT AREA (ha)	tc (MINS)	FRACTION IMPERVIOUS (f _i)	C2 VALUE	INTENSITY ^{⊤d₂yr} (mm∕hr)	DISCHARGE Q₂ (m³∕s)	Cı₀ VALUE	INTENSITY ⊺d _{∞r} (mm∕hr)	DISCHARGE Q10 (m³∕s)	C20 VALUE	INTENSITY ™d₂₀ℊ, (mm∕hr)	DISCHARGE Q ₂₀ (m ³ /s)	C₅o VALUE	INTENSITY [⊤] d‱r (mm∕hr)	DISCHARGE Q₅₀ (m³∕s)	C100 VALUE	INTENSITY ™d‱, (mm∕hr)	DISCHARGE Q100 (m³∕s)
EXT/A	2.570	22.2	0.60	0.683	70	0.341	0.803	109	0.625	0.843	123	0.740	0.924	141	0.930	0.964	154	1.060
CAT/A	0.960	5.0	0.47	0.657	112	0.196	0.773	174	0.359	0.811	196	0.424	0.888	223	0.528	0.927	243	0.601
CAT/B	0.570	5.0	0.49	0.661	112	0.117	0.777	174	0.214	0.816	196	0.253	0.894	223	0.316	0.933	243	0.359
CAT/C	0.192	5.0	0.58	0.679	112	0.041	0.798	174	0.074	0.838	196	0.088	0.918	223	0.109	0.958	243	0.124
CAT/D	0.999	5.0	0.44	0.651	112	0.202	0.766	174	0.370	0.804	196	0.437	0.880	223	0.544	0.919	243	0.619

PROPOSED

 $\begin{pmatrix} 1 \\ 1 \end{pmatrix}$

SL:14.500

X RL:14.500

4 4 4

CREST CREST INVERT

BUILDING EXTENT

INTERVAL)

INTERVAL)

STORMWATER

RETAINING WALL.

CATCHMENT ID

FOOTPATH

SWALE

INVERT

SURFACE LEVEL

CONCRETE PAVEMENT

LANDSCAPING. REFER TO LANDSCAPE ARCHITECTS DRAWINGS FOR DETAILS.

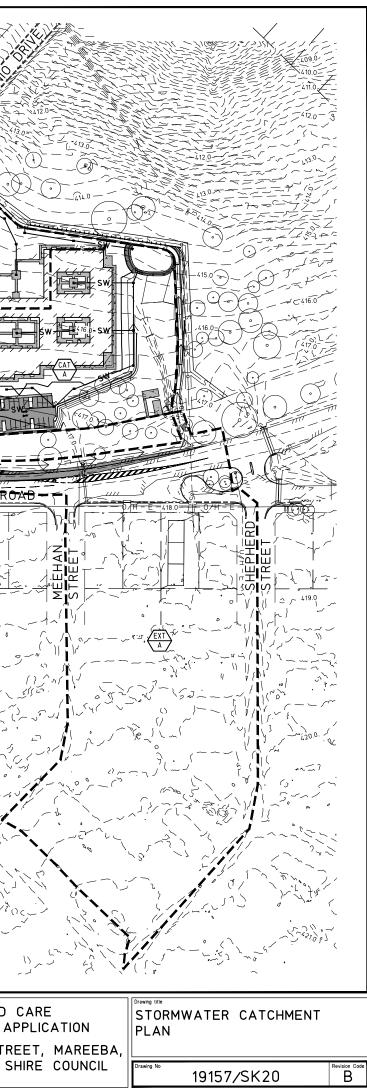
STRUCTURE SURFACE LEVEL

CONTOUR MAJOR (1.00m

CONTOUR MINOR (0.25m

BARRIER KERB STANDARD TYPE 'E'. REFER BCC STD DRG BSD-2001 FOR DETAILS.

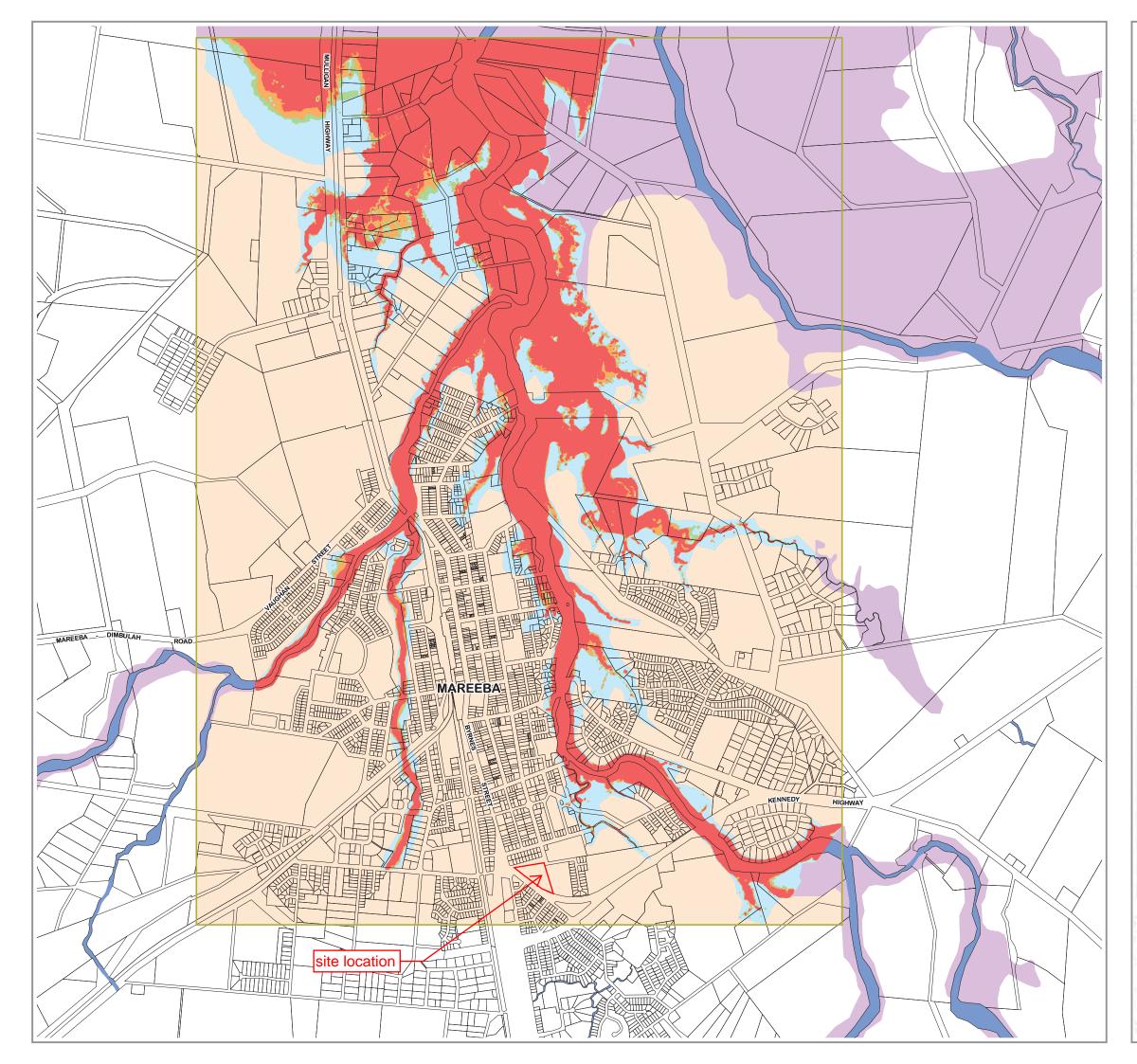
(07) 3369 8411 Scales (at A1) AS SHOWN MAREEBA AGED CARE MORGAN (07) 3369 1893 HM norgance.com.au DEVELOPMENT APPLICATION CG Morgan Consulting Engineers his drawing is not to be copied, etained or used without the ROFT ONSULTING ENGINEERS Date NOV 19 DH 2-18 HAREN STREET, MAREEBA, B FOR DEVELOPMENT APPROVAL 12.12.19 DY DEVELOPMENTS PTY LTD +STRUCTURAL+CIVIL+HOUSING+FORENSIC QLD MAREEBA SHIRE COUNCIL Qē 27.11.19 DY 1 GREAT GEORGE STREET REVISION DATE BY CODE REVISION DATE BY PROJECT No. 1907 P addington Q LD 4 0 6 4





APPENDIX E

MAREEBA SHIRE COUNCIL FLOOD HAZARD OVERLAY





LEGEND

Modelled Flood Hazard Levels⁽¹⁾

1% AEP Defined Flood Event (DFE):

- Extreme Flood Hazard
- High Flood Hazard

Significant Flood Hazard

Low Flood Hazard

General Extent of Modelled Flood Hazard Levels

Queensland Floodplain Assessment Overlay Mapping⁽²⁾

Potential Flood Hazard Area

Other

Cadastre

Watercourse

- (1) The Modelled Flood Hazard Levels are sourced from the Queensland Reconstruction Authority - Flood Hazard Mapping - Mareeba, Kuranda, Biboohra, Bilwon and Koah, 12 April 2013 which models the predicted flood impact of the Defined Flood Event (DFE).
- (2) In areas outside the limits of the specific flood modelling undertaken in (1) above Flood Hazard Areas are sourced from the State Wide Queensland Floodplain Overlay mapping. These maps have been derived from various state-wide datasets and the result is a spatial extent of where flooding has previously or has the potential to occur. These maps are not based on any flood model and do not represent a particular flood event.

Information

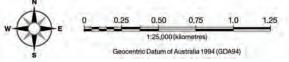
Information Whilst every care is taken to ensure the accuracy of this product, neither the Mareeba Shire Council or the State of Queensland make any representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and disclaims all responsibility and all liability (including without limitation, liability in negligence) for all expenses, losses, damages (including indirect or consequential damage) and costs that may occur as a result of the product being inaccurate or incomplete in any way or for any reason.

All data depicted on this map has been sourced from either the Mareeba Shire Council or the State of Queensland from the latest datasets available at the time of map compilation. Map compilation date: August 2015.

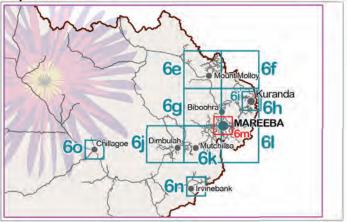
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Note

Where information on the map is obscured by text or other map elements contact Council for a determinati



Map Index



Overlay Map Flood Hazard-Mareeba **OVERLAY MAP - OM006m**



APPENDIX F

EXTERNAL CATCHMENT RATIONAL METHOD CALCULATIONS

Rational Method Peak Flow Calculations

Job No:19157Job Type:Proposed Aged Care FacilityAddress:2-18 Haren Street, MareebaCouncil:Mareeba Shire

Morgan Consulting Engineers Pty Ltd 1 Great George Street Paddington Qld 4064

IFD Data: ¹ I ₁₀	17.0125 (S),1 63mm/hr	145.4375 (E)				۸inor Storm: Q1 ۸ajor Storm: Q10
Pre-Develop	ment - Extern	al Catchment	t			
Time of Con	centration					
Standard Inle Standa	et Time ard Inlet Time		mins			
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Job Type:	19157																MORGAN	CONSULT
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Council:	Mareeba Shire															Р	ADDINGT	fon Qld 4
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	3 bottom channel		59.733	0.025	-33.3%	0.13	0.63	0.003	0.60	0.21	0.05	1.81	1.810	1.811	0.192	0.26	1.97	ŧ
	4 low flow channel		59.533	0.025	0.0%	0.16	0.50	0.002	0.50	0.32	0.07	2.93	2.926	2.927	0.310	0.41	2.62	5
	5 low flow channel6 bottom channel		59.533 59.733	0.025 0.025	33.3% 0.0%	0.13 0.06	0.63 0.50	0.003 0.002	0.60 0.50	0.21 0.12	0.05 0.01	1.81 0.55	1.810 0.549	1.811 0.549	0.192 0.058	0.26 0.08	1.97 1.34	5
	7 bottom channel		59.733	0.035	33.3%	0.02	0.37	0.002	0.35	0.06	0.00	0.08	0.085	0.085	0.009	0.01	0.59	5
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ATTACHMENT 8:

GEOTECHNICAL INVESTIGATION

ATTACHMENT 9:

BUSHFIRE HAZARD ASSESSMENT AND MANAGEMENT PLAN



Bushfire Hazard Assessment and Management Plan

2-18 Haren Street, Mareeba

Prepared for Croft Developments

Prepared by:



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In preparing this report we have assumed that all information and documents provided to us by the Client, or as a result of a specific request or enquiry, were complete, accurate and up-to-date. Where we have obtained information from a government register or database, we have assumed that the information is accurate. Where an assumption has been made, we have not made any independent investigations with respect to the matters the subject of that assumption. We are not aware of any reason why any of the assumptions are incorrect.

In this note, a reference to loss and damage includes past and prospective economic loss, loss of profits, damage to property, injury to any person (including death) costs and expenses incurred in taking measures to prevent, mitigate or rectify any harm, loss of opportunity, legal costs, compensation, interest and any other direct, indirect, consequential or financial or other loss.

TITLE	Bushfire Hazard Assessment and Management Plan – 2-18 Haren St, Mareeba
FILED AS	PR19164_BMP_Haren St, Mareeba

Document Records - Quality

Revision	Date	Prepared by (name/title)	Reviewed by (name/ title)	Approved by (name/title)	
Version A	30/8/2019	Jasmine Vink, Ecologist	Carla Perkins, Senior Ecologist	Client	
Version B	13/12/2019	Carla Perkins, Senior Ecologist	Kelly Matthews, Director/Principal Ecologist	Client	



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I. Introduction

I.I Proposed Development

This Bushfire Hazard Assessment and Management Plan (BHAMP) has been prepared for Croft Developments for a proposed development located at 2-18 Haren Street, Mareeba (Lot 1 on SP298397), hereinafter referred to as the 'Site'.

The proposal is for the construction of an aged care facility. The proposed development consists of one large interconnected building with associated ancillary infrastructure (**Figure 2**).

The proposed development will require the removal of the majority of vegetation on site with the retention of some sparse canopy vegetation.

I.2 Site Description

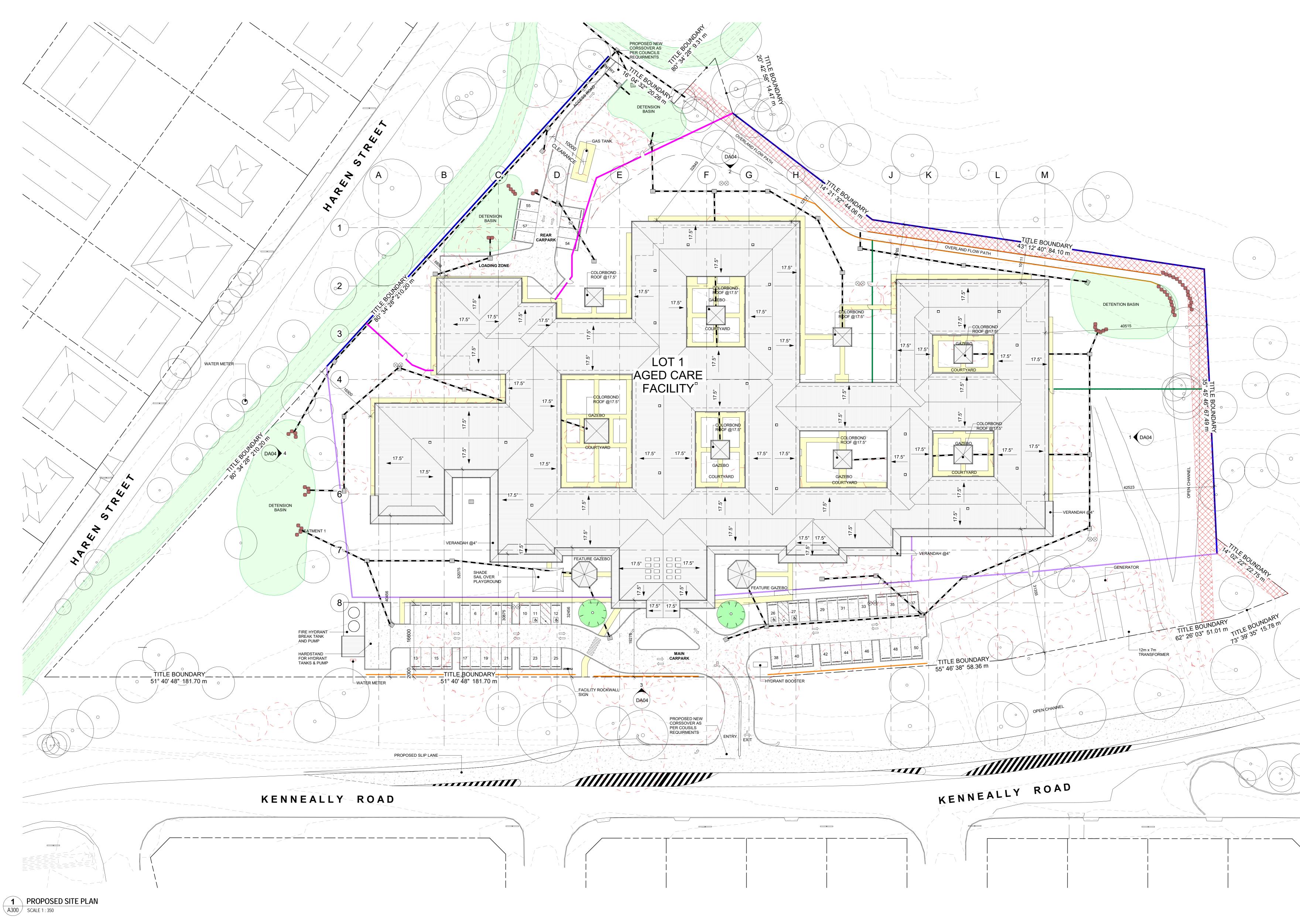
The subject site of the proposed development consists of a single parcel within the Mareeba Shire Council local government area. The site comprises a total area of approximately 28.930 m² (**Figure 1**) and is bounded by Haren Street to the north west, Antonia Drive to the north east and Kenneally Road to the south west. A similar undeveloped lot is located directly east while there are medium density residential lots located north and south. There is currently no infrastructure on site.



Figure 1: Site location (Source: Google Earth).

I.3 Scope of Work

The purpose of this BHAMP is to assess compliance of the proposed development with the outcomes sought by the Mareeba Regional Council planning scheme, in particular the Bushfire Hazard Overlay Code. It also provides a plan for bushfire risk management including building construction requirements, asset protection zones, fuel management, access requirements and emergency responses measures.



LEGEND

TREE SY	MBOL	FENCING	;	SITE			
	EXISTING TREES TO REMAIN (SOLID BLACK LINE)		PROPOSED NEW 1.8m COLORBOND FENCE		ELECTRICAL POWER POLE (PP)		EASMENT
			PROPOSED NEW 1.4m POOL FENCE		SWALE REFER TO CIVIL ENGINEERS DRAWINGS	$\bigotimes \!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!$	HYDRANTS
	EXISTING TREES TO BE REMOVED		PROPOSED NEW 1.4m COLORBOND FENCE		ASHPHALT CARPARK		GRATED PIT
	PROPOSED FEATURE		PROPOSED NEW 1.2m POOL FENCE		FOOTPATH		
	TREE		RETAINING WALL				

PROPOSED FENCING





BOUNDARY FENCE



			PROJECT: MAREEBA
			CLIENT:
			Croft Developments
			ADDRESS:
			2-18 HAREN STREET, MAREEBA
1	DEVELOPMENT APPLICATION ISSUE	12/12/2019	2-10 HARLIN STREET, MARLEDA
Revision	Revision Description	Revision Date	

SHEET TITLE: PROPOSED SITE PLAN





SCALE: As indicated@A0 DATE: 12/12/2019 DRAWN BY: Author









REVISION:

DEVELOPMENT APPLICATION





Croft Developments Pty Ltd as Trustee for Croft Developments Unit Trust ABN 51 326 340 371

59 Wangara Road, Cheltenham VIC 3192 Tel: (03) 9581 0100 | Fax: (03) 9585 6383

Printed on: 12/12/2019 12:35:20 PM



2. Bushfire Regulatory Framework

Given that bushfire hazard can cause harm to people and social wellbeing, damage to property and impacts to the economy and environment, the management of bushfire hazard in Queensland is considered to be an integral component of land use planning and development decisions.

There are three regulatory mechanisms/instruments considered as part of this site that regulate development to avoid and mitigate potential impacts associated with bushfire hazard:

- The State Planning Policy (SPP) developed by the Department of Infrastructure Local Government and Planning (DILGP) – July 2017 (DILGP, July 2017);
- Mareeba Shire Council Planning Scheme (MSC 2004); and
- AS 3959-2009 Construction of Buildings in Bushfire-prone areas (Standards Australia, 2009).

2.1 State Planning Policy (SPP)

The SPP identifies the Queensland Government's policies about matters of state interest in land use planning and development (DILGP, July 2017). The SPP is a broad and comprehensive statutory planning instrument. It sits above regional plans, standard planning scheme provisions and local government planning schemes within the hierarchy of planning instruments outlined in the *Planning Act 2016*.

Depending on the development type, the SPP sets out development assessment requirements for certain applications where a local planning scheme has not yet appropriately integrated the SPP. The SPP includes a state-wide map of bushfire prone areas (bushfire hazard areas) that was developed based on the CSIRO modelling of potential fire-line intensity in accordance with the methodology described by Leonard *et al.* The following guidelines support the previous SPP (April 2016) and are progressively being superseded by new guidance material for the SPP 2017:

- SPP state interest guideline Natural hazards, risk and resilience (SPP Guideline) (DILGP, 2016), which provides further context to the SPP and explains how the SPP policies can be applied.
- SPP state interest technical manual A 'fit for purpose' approach in undertaking natural hazard studies and risk assessments (SPP Technical Manual) (DSDIP, 2014), which provides an overview the method for undertaking bushfire hazard assessment as per Leonard et al. (2014).

As of September 2019, guidance material has not yet been publicly released for the *Natural hazards, risk and resilience - Bushfire* state interest under the SPP 2017. In lieu of guidance material having been endorsed, assessment against the relevant local planning instrument (in this instance, the Bushfire hazard overlay code under the Mareeba Planning Scheme) is considered to be a suitable approach for the assessment of bushfire hazard and statutory compliance. Where compliance with the local planning instrument is achieved, the planning requirements of the SPP assessment benchmarks are considered to be met.

Figure 3 illustrates the SPP Bushfire Hazard area (Bushfire Prone area) mapping developed by DILGP. The site is completely covered by an area of Medium Hazard with a very small area of Potential Impact Buffer in the north.



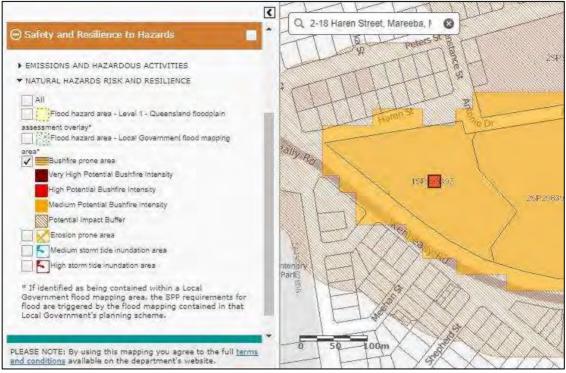


Figure 3: State Planning Policy 2017 (SPP) Bushfire Mapping (Extract from DSDMIP Development Assessment Mapping System).

2.2 Mareeba Shire Council Planning Scheme

The site is located within the Mareeba Shire Council local government area and is subject to the provisions of the Mareeba Shire Planning Scheme 2004. Under the Mareeba Shire Planning Scheme Bushfire overlay, the site is mapped as Medium hazard area with a very small area of Potential Impact Buffer (**Figure 4**). The Bushfire Overlay Code is an applicable code for the development as the site is mapped as within the bushfire hazard overlay.



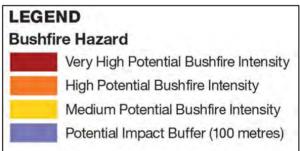


Figure 4: Council Bushfire Overlay Mapping (Extract from MSC Bushfire Overlay Map).



2.3 Australian Standard 3959-2009 Construction of Buildings in Bushfire-prone areas

AS 3959-2009 - Construction of buildings in bushfire-prone areas (Standards Australia, 2009) specifies the requirements for the construction of buildings in bushfire-prone areas in order to improve their resistance to bushfire attack. AS 3959-2009 applies to those areas where a regulated map identifies an area as a bushfire prone area (or similar), requiring calculation of Bushfire Attack Level (BAL) in accordance with the methodology outlined in the standard.

AS 3959-2009 thus prescribes the particular construction details for buildings depending on the calculated BAL. The detailed requirements relating to construction methods and materials are typically dealt with as part of building design and enabled via private certification in accordance with the Building Code of Australia. The BAL assessment is provided in **Section 3**.



3. Bushfire Assessment

3.1 Bushfire Attack Level

The BAL is a means of measuring the severity of a building's potential exposure to ember attack, radiant heat and direct flame contact, using increments of radiant heat expressed in kilowatts per m². This forms the basis for establishing the requirements for construction to improve protection of building elements from attack by bushfire.

BAL is calculated in accordance with either Method 1 or 2 outlined in Australian Standard – Construction of Buildings in Bushfire-prone Area - 3959-2009 (Australian Standards, 2009). Method 1 is a simplified procedure that involves five steps to determine the BAL and is subject to limitations on the circumstances in which it can be used (i.e. effective slope beneath classified vegetation is no more than 20 degrees downslope). Method 2 is a detailed procedure using calculations to determine the BAL where a more specific result is sought or where the site conditions are outside of the scope of Method 1.

To determine the BAL for this site, the simplified procedure in Method 1 was used. The following steps undertaken:

- Step 1: Determination of the relevant Fire Danger Index (FDI);
- Step 2: Assessment and classification of vegetation communities within and surrounding the proposed development;
- Step 3: Assessment of the effective slope beneath classified vegetation; and
- Step 4: Determination of Bushfire Attack Level (BAL).

3.1.1 Step I – Determination of the relevant Fire Danger Index (FDI)

In accordance with Table 2.1 of AS 3959-2009, the relevant Fire Danger Index (FDI) value for Queensland is 40.

3.1.2 Step 2 - Assessment of Vegetation Communities

The different types of vegetation communities determine the rate at which dry fuel accumulates. Some vegetation communities protect fuel from drying out in all but extreme bushfire seasons and can then be susceptible to very destructive bushfires. Alternatively, vegetation communities may expose fuels to drying and therefore be frequently available for burning. Frequent bushfires can result in the development of bushfire-tolerant grassy woodlands or grasslands and these present less destructive bushfire behaviour.

The site is mapped as having regional ecosystem 9.8.2a described as Woodland to open woodland of *Eucalyptus leptophleba* (Molloy red box) +/- *Corymbia clarksoniana* (Clarkson's bloodwood) +/- *C. dallachiana* (Dallachy's gum) +/- *C. erythrophloia* (red bloodwood) +/- *E. cullenii* (Cullen's ironbark) +/- *E. platyphylla* (poplar gum) occurring on basalt plains and undulating rises of the Tertiary MacLean Basalt group. However, the structural element of the vegetation has been extensively modified through thinning of the canopy layer. The current vegetation structure is described as very sparse open woodland (15-18m height). Regular slashing since thinning has been undertaken, resulting in the understorey being mostly absent.



The ground layer is largely comprised of exotic grass such as *Themeda quadrivalvis* (Grader grass), *Hyparrhenia rufa* (Thatch grass), *Megathyrsus maximus* (Guinea Grass) and *Stylosanthes humilis* (Towsville stylo). This ground layer is very low (<0.1m height) occurring as a derived pasture across much of the site due to the recent slashing.

In accordance with Table 2.3 and Figures 2.3- 2.4 of AS 3959-2009, the hazardous vegetation is classed as 'Woodland'. The majority of the vegetation on site will be removed to facilitate the development. Some trees will be retained around the boundary of the development. Vegetated areas that have a canopy cover of less than 30% and a maintained grassy ground cover are not considered hazardous vegetation and it is not necessary to include them in the bushfire buffer distances. The majority of the hazardous vegetation is located on the vacant lot directly east of the site.

3.1.3 Step 3 - Assessment of the Effective Slope

Studies have shown that fires burn more quickly and with greater intensity up slopes, generally doubling every 10 degrees of slope. Also, the steeper the slope the more difficult it is to construct ring roads, firebreaks and provide access for emergency crews. Trees situated downhill from structures will have their crowns close to the structures. This presents bushfire hazards particularly for exposed structures such as timber decks.

Effective slope is the slope beneath classified vegetation which most influences the bushfire attack. In this case, the site was found to have a slope of less than one degree.

3.1.4 Step 4 - Determination of Bushfire Attack Level (BAL)

The majority of the vegetation on site will be removed to facilitate the development. Some trees will be retained around the boundary of the development. Vegetated areas that have a canopy cover of less than 30% and a maintained grassy ground cover are not considered hazardous vegetation and it is not necessary to include them in the bushfire buffer distances. The majority of the hazardous vegetation is located on the vacant lot directly east of the site.

Flamesol calculator results are presented in **Appendix 1**. Buffer distances are presented below in **Table 1and Figure 5**. Given the current layout of the development, a BAL of 12.5 is achievable for the across the development.

Bushfire Attack Level	12.5	19	29	40	Flame Zone
Minimum Distance between the building and the vegetation	19.2m -100m	13m – 19.2m	8.8m – 13m	6.5m - 8.8m	<6.5m

Table 1: Minimum required bushfire buffers

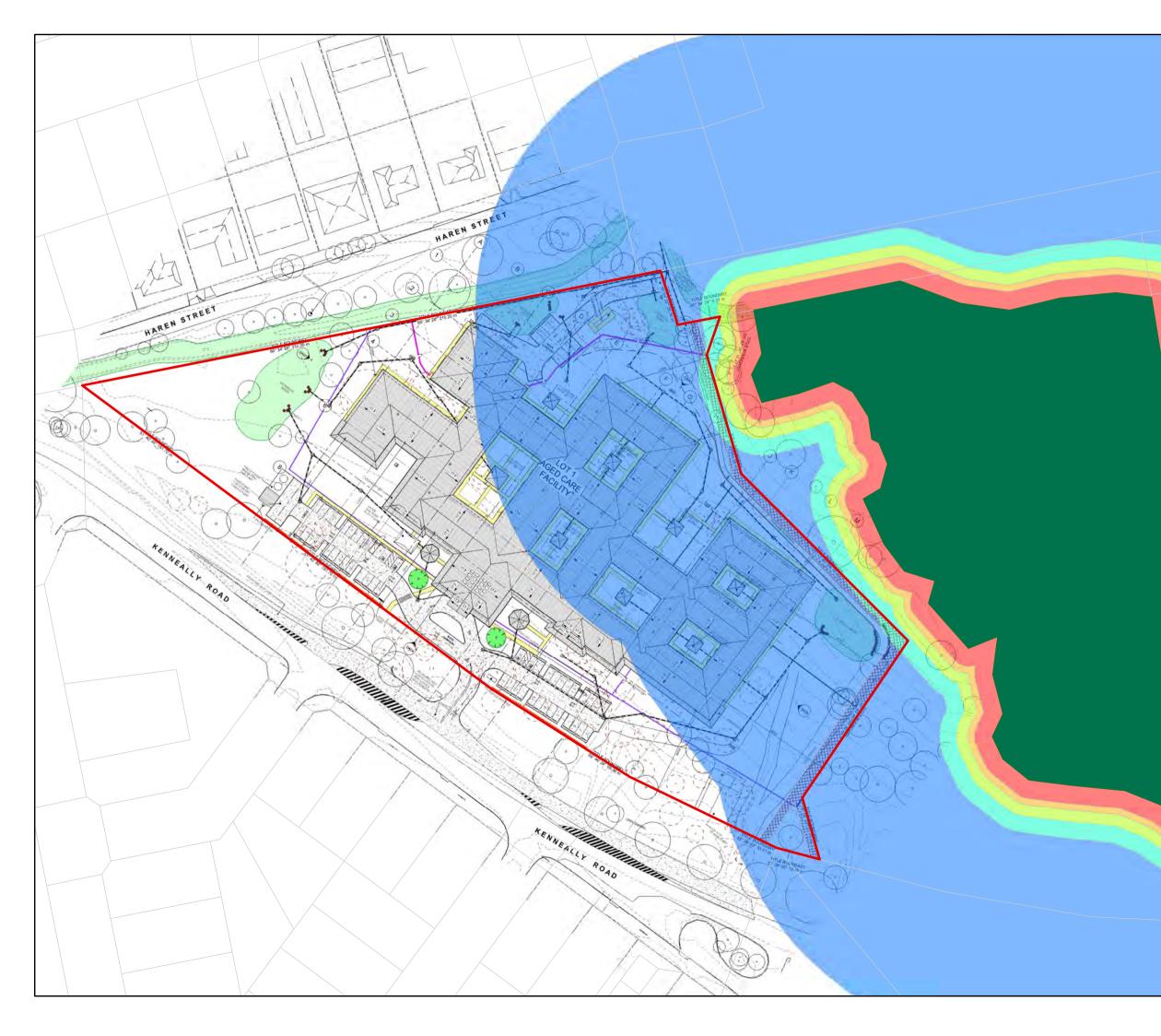


Figure 5: Bushfire Attack level

Project: Haren Street, Mareeba

Legend

- Bushfire-prone vegetation
- Site Boundary
 - Cadastral Boundaries

Bushfire Attack Level

- Flame Zone
- BAL 40
- BAL 29
- BAL 19 BAL 12.5
- DAL 12.



Notes:

-Site Infrastructure and Impact Areas from Client 2019 -Base map Copyright (c) Esri and its data suppliers.



N N

Author: JV

Document History:

Rev	Reason for Issue	Reviewer	Approver	Date
-				



4. Bushfire Management Plan

The SPP requires that hazard reduction practices and emergency mitigation measures be implemented for any buildings bordering potentially bushfire-susceptible vegetation. These practices and measures include fuel reduction and management, road infrastructure to provide safe access and egress, appropriate building design and construction standards, procedures for fighting bushfires and fire intensity reduction management measures.

4.1 Agencies / Persons Responsible

It is the responsibility of the proponent to ensure that the relevant measures required by this hazard report are in place prior to inspection by the Council and the building certifier, and to ensure that the measures are in place prior to enacting the approval. Furthermore, it is the responsibility of the proponent to ensure that a copy of this report is always on hand at the site.

The responsible Fire Authority is the Queensland Fire and Emergency Service (QFES).

4.2 Owner / Occupier Responsibilities

It is the responsibility of the owner of the proposed development to maintain the property in accordance with the conditions outlined in this report. The owner / occupier responsibilities include:

- Specified Asset Protection Zones (APZs) are to be maintained between buildings and the hazardous vegetation adjacent to the site. Details of the APZs are provided in **Section 4.4**.
- Low fuel loads are to be maintained surrounding built elements within the APZ by slashing where practical and mowing;
- All access routes are to remain clear of obstacles to enable effective emergency vehicle access and egress; and
- No burning is to be undertaken on-site without a Permit to Burn as issued by the local Fire Warden (and approval if required, in writing, from Council).

4.3 Reporting and Auditing

This bushfire report is a controlled working document that is to be updated and revised to reflect adaptive management and constructive feedback. Some sections of the plan may be modified, new procedures may be implemented and responsibilities altered, depending on feedback and application.

This bushfire report will only ever be modified with the agreement of the Qld Fire and Emergency Services (QFES), a qualified bushfire consultant or Council. This agreement allows for changes to the plan scope, as determined through consultation and the acceptance of the proponent. That is, where further actions are deemed necessary or where actions can be reduced in scope.



4.4 Asset Protection Zones

The construction of the new retirement facility within the site will be subject to this bushfire management plan and will require approval under section 12 of the *Building Regulation 2006* (Qld) and compliance with AS 3959-2009.

AS 3959-2009 relates to the construction of buildings located in designated bushfire-prone areas and gives a measure of protection to the building occupants (until the fire front passes) as well as to the building itself. The building must be constructed to meet the BAL 12.5 and low fuel level must be maintain within an asset protection zone (APZ) of 10m form the building. The APZ is to be cleared of large trees and maintained as cleared area that is free of flammable material. Garden beds of flammable shrubs are not to be located under trees and should be no closer than 20 metres from an exposed window or door. Other trees should have lower limbs removed up to a height of 2 metres above the ground.

4.5 Access Roads

Access roads have been designed in a manner that provides safe and effective access and egress for emergency vehicles in the event of a bushfire. The proposed development will have multiple access points, a short access in the north and a connected access in the south. These accessways will be suitable for emergency services vehicles.

4.6 Electricity, Water and Services Supply

The proposed development will have access to electricity supply. The proposed facilities include an adequate water supply to ensure that any bushfire emergency can be dealt with quickly by emergency services. The proposed development will have access to reticulated water supply.

4.7 Climate Change and Fire Weather – Projections for 2020 and 2050

Climate change can act in two ways to affect fire behaviour. First, it might exacerbate the fire-weather risk of any given day, leading to increased frequency or intensity of extreme and very extreme fire-weather days. Second, an increase in the accumulated fire risk over a year might represent a longer fire season and a reduction in the number of days suitable for prescribed burning.

It is recommended to review this document and associated bushfire procedures at the site over the coming decades in response to any potential increases of bushfire risk from climate change.

4.8 Emergency Response Procedures

An onsite fire management and evacuation strategy should be developed and available to implement in the event of an emergency. In the event of a pending fire emergency, assistance is to be obtained by contacting dialling 000.



5. Assessment against the Bushfire Hazard Overlay Code

The site is mapped within the Mareeba Shire Bushfire overlay, which triggers a response to the Bushfire hazard overlay code. An assessment against the code is provided in **Table 3**.



Table 2: Assessment against the Bushfire Overlay Code (applicable outcomes only)

Performance Outcomes		Acceptable Outcomes		Compliance		
Water	Water supply for fire-fighting purposes					
P01	Development where within a bushfire hazard area and potential impact buffer (100m) identified on the bushfire hazard overlay maps (OM-003-o) maintains the safety of people and property by providing an adequate, accessible and reliable water supply for fire-fighting purposes which is safely located and has sufficient flow and pressure characteristics. Note – a bushfire hazard management plan must be prepared by suitably qualified persons in seeking to demonstrate compliance with the performance outcome.		 Where in a reticulated water service area, the on-site water supply has flow and pressure characteristics of 10 litres a second at 200 kPa. Where access to the reticulated water network is not available, a minimum on site water storage of 5,000 litres is provided that must comprise: a) A separate tank; or b) A reserve section in the bottom part of the main water supply tank; or c) A dam; or d) A swimming pool. Note – where a water tank is provided for fire-fighting purposes it is fitted with standard rural fire brigade fittings and the tank is provided with a hardstand area. 	Complies with AO1 The development will be connected to a reticulated water supply. A fire hydrant with sufficient capabilities and fittings will be located in the south-western portion of the site. This bushfire management report is site specific and contains a bushfire assessment and bushfire mitigation measures to reduce risks to the development.		
Land	Land use					



Performance Outcomes			able Outcomes	Compliance
PO2	 Development within a bushfire hazard area and potential impact buffer (100m) identified on the bushfire hazard overlay maps (OM-003-o_ is appropriate to the bushfire hazard risk having regard to the: a) The bushfire risk compatibility of the development; b) The vulnerability of and safety risk to persons associated with the land use; and, c) Consequences of bushfire in regard to impacts on essential infrastructure, buildings and structures. Note – A bushfire hazard management plan must be prepared by a suitably qualified persons in seeking to demonstrate compliance with the performance outcome. 	AO2	All buildings, structures, infrastructures and facilities associated with the following uses are located outside any area of the site located within a bushfire hazard area and a potential impact buffer area identified on the bushfire hazard overlay map. a) Childcare centre b) Community care centre c) Correctional facility d) Educational establishment e) Emergency services f) Hospital g) Residential care facility h) Retirement facility i) Rooming accommodation j) Shopping centre k) Tourist park l) Tourist attraction	Complies with PO2 As the whole site is overlaid under a bushfire overlay, locating infrastructure outside of these areas is not possible. The majority of the vegetation will be removed off site which will decrease the sites bushfire hazard. There is no hazardous vegetation located to the north, west or south of the site. The hazardous vegetation located to the east is on a single site which has a vegetated area of less than 3ha. This vegetation is heavily degraded and present limited bushfire risk due to the low fuel level (open woodland and no shrub and limited ground cover). This lot is also surrounded by roads to the north, east and south which act as bushfire buffers. The construction of a retirement facility in this area is consistent with the surrounding land use which is predominantly medium density residential. With bushfire buffers in place and all mitigation measures observed, it is considered that the development has a low bushfire risk.
Firebr	eaks and access			
PO4	 Vehicular access is designed to mitigate against bushfire hazard by: a) Ensuring adequate access for fire-fighting and other emergency vehicles b) Ensuring adequate access for the evacuation of residents and emergency personnel in an emergency situation, include alternative safe access routes should access in one direction be blocked in the event of a fire c) Providing for the separation of developed areas and adjacent bushland Note – where it is not practicable to provide firebreaks in accordance with AO4.2 fire maintenance trails are provided in accordance with the following: 	AO4.1 AO4.2	 In a bushfire hazard area, roads are designed and constructed: a) With a maximum gradient of 12.5% b) Do not use cul-de-sacs; and c) A constructed road width and weather standard complying with Planning Scheme Policy 4. In a bushfire hazard area, firebreaks are provided: a) Consisting of a perimeter road that separated lots from areas of bushfire hazard b) A minimum cleared width of 20 metres c) A maximum gradient of 12.5%; and 	Complies with AO4.1 The site and all access roads have a slope of 0%. The main access road in the south has through way access onto Keneally Road in the south. The alternate access in the north is not a through way as this is not the main access point for the development. All access points are located away from hazardous vegetation and would be operational in the event of a fire. These roads will all be constructed to an all-weather standard and be suitable for use by emergency services. A passing area is located outside of the front entrance with carparks acting as additional passing areas.



				Quality, Experience, Integrity	
Performance Outcomes		Acceptable Outcomes		Compliance	
	 i. Located as close as possible to the boundaries of the lot and the adjoining hazardous vegetation ii. The minimum cleared width is not less than 6 metres iii. The formed width is not less than 2.5 metres iv. The formed gradient is not greater than 15% v. Vehicular access is provided at both ends vi. Passing bays and turning areas are provided for fire-fighting appliances located on public land 		d) A constructed road width and weather standard complying with Planning Scheme Policy 4		
Hazaro PO5	dous vegetation Public safety and the environment are not adversely affected by the detrimental impacts of bushfire of hazardous materials manufactured or stored in bulk.	AO5	The processing or storage of dangerous goods or hazardous materials is not undertaken in a bushfire hazard area and a potential impact buffer.	Not Applicable The development will not involve the storage or processing of large quantities of hazardous materials.	
Lands	caping				
PO6	Landscaping within a bushfire hazard area does not result in a material increase in the extent, duration or severity of bushfire hazard having regard to: a) Fire ecology b) Slope of the site; and c) Height and mix of plant species Note – frost hollows and the associated grass kill facilitates a rapid curing of fuel and exacerbates bushfire hazard.	AO6	No acceptable outcome is provided.	Complies with PO6 Landscaping design and species will be chosen with consideration to bushfire hazard. Landscaping will not take place within fire breaks or asset protection zones.	
Infrast	ructure				



Perfo	Performance Outcomes		able Outcomes	Compliance
PO7	Infrastructure services located in a bushfire hazard area are protected from damage or destruction in the event of a bushfire.	AO7	The following infrastructure services are located below ground: a) Water supply b) Sewer c) Electricity d) Gas; and e) telecommunications	Complies with AO7 All listed services will be located below ground.
Privat	e driveways		c) tolocommunicatione	
PO8	All premises located in a bushfire hazard area are provided with vehicular access that enables safe evacuation for occupants and easy access for fire-fighting appliances.	AO8	 Private driveways: a) do not exceed a length of 60m from the street frontage b) do not exceed a gradient of 12.5% c) have a minimum cleared width of 3.5 metres d) have a minimum vertical clearance of 4.8 metres e) accommodate turning areas for fire-fighting appliances in accordance with the Queensland fire and emergency services fire hydrant and vehicle access guidelines; and f) serve no more than 3 dwellings or buildings 	



6. Conclusion

The site is mapped as containing a medium bushfire hazard under the SPP and Mareeba Shire Council Planning Scheme. A bushfire management plan was therefore developed to reduce the bushfire risk to new premises. In particular, asset protections zones will be implemented, and an internal access road suitable for use by emergency services will be constructed.

A Bushfire Attack Level (BAL) assessment has also been undertaken for the site. BAL is a means of measuring the severity of a building's potential exposure to ember attack, radiant heat and direct flame contact, using increments of radiant heat expressed in kilowatts per meter squared. This forms the basis for establishing the requirements for construction to improve protection of building elements from attack by bushfire. The BAL is 12.5 and is the lowest of the category.

Based on the bushfire hazard assessment provided in this report, we confirm that the proposed development complies with the requirements of the Mareeba Shire Council Planning Scheme 2005, in particular the Bushfire Overlay Code.



7. References

- AUSTRALIAN STANDARDS 2009. AS 3959-2009 Construction of Buildings in Bushfire-prone Area. *Construction of Buildings in Bushfire-prone Area.* Sydney: Council of Standards Australia.
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Appendix 1

Flamesol Assessment



			Non-series Anno 1981
	Minim	um Distance Calculator - AS3959-2	2009 (Method 2)
Input	e la		Outputs
Fire Danger Index	40	Rate of spread	0.71 km/h
/egetation classification	Woodland	Flame length	7.67 m
Surface fuel load	15 t/ha	Flame angle	54 °, 64 °, 73 °, 78 °, 80 ° & 85 °
Overall fuel load	25 t/ha	Elevation of receiver	3.1 m, 3.45 m, 3.67 m, 3.75 m, 3.78 m & 3.82 m
Vegetation height	n/a	Fire intensity	9,299 kW/m
Effective slope	0 °	Transmissivity	0.886, 0.874, 0.856, 0.835, 0.823 & 0.75
Site slope	0.0	Viewfactor	0.5905, 0.4357, 0.2914, 0.1962, 0.1595 & 0.0437
Flame width	100 m	Minimum distance to < 40 kW/m ²	6,499999999999993 m
Windspeed	n/a	Minimum distance to < 29 kW/m ²	8.7999999999999985 m
Heat of combustion	18,600 kJ/kg	Minimum distance to < 19 kW/m ²	13.09999999999999 m
Flame temperature	1,090 K	Minimum distance to $<$ 12.5 kW/m^{2}	19.2 m
		Minimum distance to < 10 kW/m ²	.23,3000000000006 m

Rate of Spread - Mcarthur, 1973 & Noble et al., 1980

Flame length - NSW Rural Fire Service, 2081 & Noble et al., 1980

ATTACHMENT 10:

ENVIRONMENTAL NOISE IMPACT ASSESSMENT

Office 4, 2454 Gold Coast Highway Mermaid Beach Qld 4218

Postal PO Box 441 Mermaid Beach Qld 4218

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CRG Acoustics Pty Ltd ACN 151 847 255 ABN 11 708 556 182

CRGACOUSTICS

Proposed Aged Care Facility 2 to 18 Haren Street, Mareeba (Lot 1 on SP298397)

ENVIRONMENTAL NOISE IMPACT ASSESSMENT

Prepared For:

Croft Developments Pty Ltd

12 December 2019 crgref: 19091 report rev.1

1.0 INTRODUCTION

This report is in response to a request by Croft Developments Pty Ltd for an environmental noise assessment of a proposed aged care facility along Haren Street in Mareeba.

In undertaking the above, unattended noise measurements were undertaken, and through modelling predictions of future road traffic noise immissions were produced. Based upon the predicted noise impact levels, recommendations regarding acoustic treatment to the development have been provided.

2.0 SITE & DEVELOPMENT DESCRIPTION

The proposal relates Lot 1 on SP298397, Nos 2 to 18 Haren Street, Mareeba. The site is bounded by Mareeba Connection Road (Kenneally Road) to the south and west, Haren Street and Antonio Drive to the north and residential properties to the east. For site location refer to Figure 1 in Appendix A.

The proposal is to construct a single-storey aged care facility. The main carpark is proposed along the southwestern perimeter of the onsite building, with the main driveway crossover to Kenneally Road. A driveway crossover is also proposed at the northern end of the site to Antonio Drive for access to a small rear carpark and the loading zone. For development plans refer to Appendix B.

As the proposal is constructing a noise sensitive development in close proximity to both Mareeba Connection Road and Mareeba Dimbulah Road; the development is required to be assessed under the State Development Assessment Provisions (SDAP) Queensland State Code 1: "Development in a State-controlled Road Environment" Version 2.5 (effective 1st July 2019).

It is noted that as the building is classed as 9c under the Building Code of Australia, the Queensland Development Code "*MP 4.4 – Buildings in a Transport Noise Corridor*" does not apply.

3.0 AMBIENT NOISE SURVEY

3.1 Instrumentation

The following equipment was used to record ambient noise levels at the subject site locale.

- Rion NC 73 Calibrator;
- BSWA Environmental Noise Logger.

All instrumentation used in this assessment hold current calibration certificate from a certified NATA calibration laboratory.

3.2 Unattended Background Noise Measurement Methodology and Results

A logger was located centrally along the southern site boundary. The microphone was in a free-field location, approximately 1.4m above ground level and 21m of the nearest lane of Mareeba Connection Road and approximately 350m from the nearest lane of Mareeba Dimbulah Road. Refer to Figure 2 in Appendix A for logger location.

The logger was set to record noise statistics in 15-minute blocks continually between Monday 15/07/2019 and Monday 22/07/2019.

Measurements were conducted generally in accordance with Australian Standard AS 1055 "Acoustics-Description and measurement of environmental noise". The operation of the sound level equipment was field calibrated before and after the measurement session, with no significant drift from the reference signal recorded.

Daily weather observations were obtained from the Bureau of Meteorology's website at the Mareeba weather station. Weather conditions during the noise monitoring period were generally fine, a temperature range between 8 to 24°C and relative humidity between 35 and 80%.

Table 1 below presents the measured ambient noise levels from the unattended logger location. Graphical presentation of the measured noise levels is presented in the Appendix C.

Dood Troffic Noise Descripton	Time Period	Measured Level dB(A)			
Road Traffic Noise Descriptor		16/07/19	17/07/19	18/07/19	Average
L _{10 18hr} 6am to Midnight		58	58	59	58
L _{10 12hr} 6am to 6pm		61	61	61	61
L _{eq 1hr} Daytime 6am to 10pm		61	60	60	60
L _{eq 1hr} Night-time 10pm to 6am		57	57	57	57
L90 18hr	6am to Midnight	41	44	42	42
L _{90 8hr} 10pm to 6am		34	36	35	35

 Table 1: Measured ambient noise levels at the noise logger location.

4.0 NOISE CRITERIA

The Queensland Governments State Code 1 "Development in a state-controlled road environment", Table 1.2.2: "Environmental emissions" sets the following road traffic noise criterion:

Performance outcomes	Acceptable outcomes
Performance outcomes Noise Accommodation activities PO23 Development involving an accommodation activity or land for a future accommodation activity minimises noise intrusion from a state- controlled road or type 1 multi-modal corridor in habitable rooms.	 AO23.1 A noise barrier or earth mound is provided which is designed, sited and constructed: 1. to meet the following external noise criteria at all facades of the building envelope: a. ≤60 dB(A) L₁₀ (18 hour) free field between 10pm and 6am ≤40 dB(A)) b. ≤63 dB(A) L₁₀ (18 hour) free field between 10pm and 6am ≥40 dB(A)) 2. in accordance with chapter 7 integrated noise barrier design of the Transport Noise Management Code of Practice: Volume 1 (Road Traffic Noise), Department of Transport and Main Roads, 2013. Note: To demonstrate compliance with the acceptable outcome, it is recommended that a RPEQ certified noise assessment report is provided, prepared in accordance with the SDAP Supporting Information: Environmental emissions in a state-controlled road environment, Department of Transport and Main Roads, 2017. If the building stipulated by the local planning instrument or relevant building regulations should be used. In some instances, the design of noise barriers and mounds to achieve the noise criteria above the ground floor may not be reasonable or practicable. In these instances, any relaxation of the criteria is at the discretion of the Department of Transport and Main Roads. OR all of the following acceptable outcomes apply: AO23.2 Buildings which include a habitable room are setback the maximum distance possible from a state-controlled road or type 1 multi-modal corridor. AND AO23.4 Buildings (other than a relevant residential building or relocated building) are designed and constructed so that habitable rooms are located furthest from a state-controlled road or type 1 multi-modal corridor. AND AO23.4 Buildings (other than a relevant residential building or relocated building) are designed and constructed using materials which ensure that habitable rooms meet the following internal noise criteria: 1. ≤35 dB(A) Leq (1 hour) (maximum hour over 24 hours).<
	Note: Noise levels from a state-controlled road or type 1 multi- modal corridor are to be measured in accordance with AS1055.1– 1997 Acoustics – Description and measurement of environmental noise.
	To demonstrate compliance with the acceptable outcome, it is recommended that a RPEQ certified noise assessment report is provided, prepared in accordance with the SDAP Supporting Information: Environmental emissions in a state-controlled road environment, Department of Transport and Main Roads 2017.
	Habitable rooms of relevant residential buildings located within a transport noise corridor must comply with the Queensland Development Code MP4.4 Buildings in a transport noise corridor, Queensland Government, 2015. Transport noise corridors are mapped on the State Planning Policy interactive mapping system.



Performance outcomes	Acceptable outcomes
PO24 Development involving an accommodation activity or land for a future accommodation activity minimises noise intrusion from a state- controlled road or type 1 multi-modal corridor in outdoor spaces for passive recreation.	 AO24.1 A noise barrier or earth mound is provided which is designed, sited and constructed: 1. to meet the following external noise criteria in outdoor spaces for passive recreation: a. ≤57 dB(A) L₁₀ (18 hour) free field (measured L₉₀ (18 hour) free field between 6am and 12 midnight ≤45 dB(A)) b. ≤60 dB(A) L₁₀ (18 hour) free field (measured L₉₀ (18 hour) free field between 6am and 12 midnight >45 dB(A)) 2. in accordance with chapter 7 integrated noise barrier design of the Transport Noise Management Code of Practice – Volume 1 Road Traffic Noise, Department of Transport and Main Roads, 2013. Note: To demonstrate compliance with the acceptable outcome, it is provided, prepared in accordance with the SDAP Supporting Information: Environmental emissions in a state-controlled road
	environment, Department of Transport and Main Roads 2017 OR
	AO24.2 Each dwelling has access to an outdoor space for passive recreation which is shielded from a state-controlled road or type 1 multi-modal corridor by a building, solid gap-free fence, or other solid gap-free structure.
	AND
	AO24.3 Each dwelling with a balcony directly exposed to noise from a state-controlled road or type 1 multi-modal corridor has a continuous solid gap-free balustrade (other than gaps required for drainage purposes to comply with the Building Code of Australia).

5.0 PREDICTED NOISE IMPACTS

5.1 Predicted Road Traffic Noise Immissions

5.1.1 Road Traffic Volumes

The current traffic volumes for both Mareeba Connection Road and Mareeba Dimbulah Road, including the percentage of heavy vehicles, was obtained from the Queensland Government's 2018 Traffic Census Data Google Overlay. The predicted volumes for year 2019 and 2030 assume a 1% compound growth per annum from the year 2018 survey data as detailed on the Queensland Government's SPP Interactive Mapping System. For modelling purposes, the 18 hour traffic volumes are assumed to be equal to 95% of the 24 hour traffic volumes.

Mareeba Connection Road	
2018 Traffic Volume:	2,774 vehicles per 24 hour, 17.07% heavy vehicles
Predicted 2019 Traffic Volume:	2,802 vehicles per 24 hour, 17.07% heavy vehicles
Predicted 2030 Traffic Volume:	3,126 vehicles per 24 hour, 17.07% heavy vehicles
Mareeba Dimbulah Road 2018 Traffic Volume:	12,923 vehicles per 24 hour, 6.96% heavy vehicles
Predicted 2019 Traffic Volume:	13,052 vehicles per 24 hour, 6.96% heavy vehicles
Predicted 2019 Traffic Volume:	14,562 vehicles per 24 hour, 6.96% heavy vehicles

5.1.2 Modelled Road Traffic Noise Levels – Existing Situation

Road traffic noise predictions were conducted using PEN3D, a CoRTN based model acceptable under the Environmental Protection (Noise) Policy. To verify the road traffic noise prediction model, the existing $L_{A10\ 18hr}$ traffic noise level was calculated for the logger location and compared to the measured noise level. For PEN3D point calculation sheets refer to Appendix C.

The calculated existing $L_{A10,18hr}$ noise level, approximately 21m of the nearest lane of Mareeba Connection Road and approximately 350m from the nearest lane of Mareeba Dimbulah Road is 58.8 dB(A). Compared with the measured $L_{10 \ 18hr}$ level of 58.5 dB(A) is within the allowable 2 dB(A) deviation from measured levels.

5.1.3 Modelled Road Traffic Noise Levels – Year 2030 Ultimate Situation

Based upon year 2030 traffic volumes and the development layout, the PEN3D model predicts the following road traffic noise levels as detailed in Table 2 and Figure 5.1.

The following parameters were used in developing the PEN3D model for the development site:

- 2.5 dB façade correction.
- 60 km/hr posted speed limit on both Mareeba Connection Road and Mareeba Dimbulah Road.
- Year 2030 traffic volumes presented in Section 5.1.1.
- Existing ground levels sourced from the NSW ELVIS website (Elevation and Depth Foundation Spatial Data).
- Development Plans provided in Appendix B.
- Receiver heights taken at 1.5m above finished floor level of R.L. 416.0m.
- L_{Aeq} levels based on the measured differences between the $L_{A10 \ 18hr}$ level (refer to Table 1).

For PEN3D point calculations results refer to Appendix C.



	n	Predicted Year 2030 L _{10 18hr}	Predicted Year 2030 Day Leq 11
Building Wing	Room	dB(A)	dB(A)
	1	51	53
	2	48	50
	3	55	57
	4	49	51
	5	56	58
	6	56	58
	7	48	50
	8	55	57
	9	54	56
	10	54	56
	11	54	56
	12	53	55
	12	50	52
	13	51	53
		48	50
A	15		
	16	54	56
_	17	48	50
_	18	54	56
	19	48	50
	20	53	55
	21	48	50
	22	48	50
	23	48	50
	24	53	55
	25	53	55
	26	54	56
	27	52	54
	28	54	56
	29	52	54
	30	56	58
	1	48	50
	2	54	56
	3	48	50
	4	55	57
	5	48	50
	6	55	57
	7	55	57
	8	56	58
	9	48	50
	10	56	58
	11	56	58
_	11	56	58
	12	56	58
	13	48	50
В	14	48 48	50
D			
	16	56	58
_	17	50	52
_	18	51	53
	19	51	53
	20	52	54
	21	51	53
	22	52	54
	23	52	54
	24	53	55
	25	52	54
	26	51	53
	27	51	53
	28	51	53
	29	50	52

Table 2: Predicted road traffic noise impact levels at the proposed development.



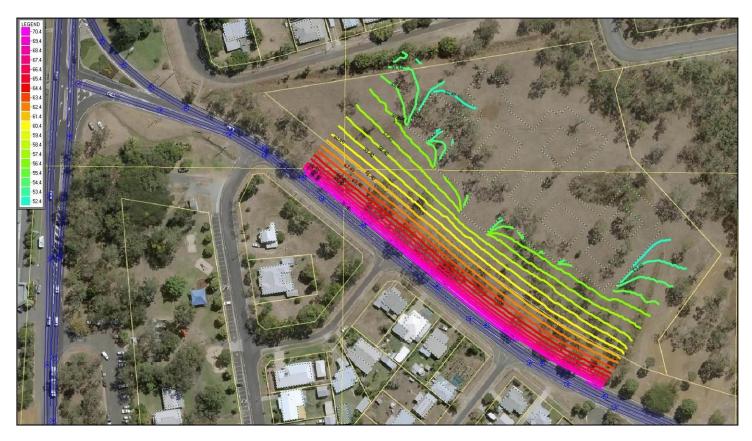
	ÇADE CORRECTE	Predicted Year 2030 L _{10 18hr}	Predicted Year 2030 Day Leq1
Building Wing	Room		
	1	dB (A) 52	dB (A) 54
		52	54
	2		
	3	52	54
	4	52	54
	5	48	50
	6	49	51
	7	49	51
	8	50	52
	9	51	53
	10	50	52
	11	51	53
	12	51	53
	13	46	48
	14	52	54
	15	46	48
С	16	52	54
	17	46	48
	18	46	48
_	19	46	48
	20	50	52
	20	51	53
	21	50	52
	22		
		51	53
	24	50	52
	25	50	52
	26	49	51
	27	50	52
	28	49	51
	29	46	48
	30	47	49
	31	47	49
	1	51	53
	2	50	52
	3	55	57
	4	48	50
	5	56	58
	6	56	58
	7	56	58
D	8	48	50
	9	56	58
	10	54	56
	11	53	55
	11	50	52
-	12	50	52
	13	53	53
	15	52	54
	1	49	51
	2	50	52
	3	51	53
	4	47	49
	5	51	53
	6	47	49
	7	46	48
Е	8	52	54
	9	47	49
	10	50	52
	11	51	53
	12	51	53
	13	51	53
-	13	50	52
	15	52	54

 Table 2 (Cont.):
 Predicted road traffic noise impact levels at the proposed development.

BUILDING FAÇADES:	FAÇADE CORRECTED	NOISE IMPACT LEVELS	
Building Wing	Room	Predicted Year 2030 L _{10 18hr}	Predicted Year 2030 Day L _{eq 1hr}
Dunling wing	Room	dB(A)	dB(A)
	Lounge A01	56	58
А	Lounge A02	56	58
	Cinema CN-A	57	59
	Lounge B01	52	54
В	Lounge B02	48	50
	Lounge B03	54	56
С	Lounge C01	50	52
C	Lounge C02	51	53
D	Lounge D01	48	50
Е	Lounge E01	52	54
OUTDOOR RECREATI	ON AREAS: FREE-FIEL	D NOISE IMPACT LEVELS	
Building Wing	Area	Predicted Year 2030 L _{10 18hr}	Predicted Year 2030 Day Leq 1hr
Duntaing wing	Alta	dB(A)	dB(A)
С	Courty ard 1	49	N/A
A and C	Courty ard 2	51	N/A
В	Courty ard 3	50	N/A
В	Courty ard 4	50	N/A
D	Courty ard 5	50	N/A
Е	Courty ard 6	49	N/A

 Table 2 (Cont.): Predicted road traffic noise impact levels at the proposed development.

Figure 5.1: $L_{A10 \ 18 \ hour}$ noise contours (facade corrected, receiver height 1.5m).



6.0 DISCUSSION and CONCLUSIONS

This report is in response to a request by Croft Developments Pty Ltd for an environmental noise assessment of a proposed aged care facility along Haren Street in Mareeba.

As the proposal is constructing a noise sensitive development in close proximity to both Mareeba Connection Road and Mareeba Dimbulah Road; the development is required to be assessed under the State Development Assessment Provisions (SDAP) Queensland State Code 1: "Development in a State-controlled Road Environment" Version 2.5 (effective 1st July 2019). It is noted that as the building is classed as 9c under the Building Code of Australia, "MP 4.4 – Buildings in a Transport Noise Corridor" does not apply.

In relation to Performance Outcome PO23 of SDAP, road traffic noise impacts at the façades of the proposed building are predicted to be below the external façade corrected noise criterion (Acceptable Outcome for AO23.1) of 60 dB(A) $L_{10 \ 18hr}$ (highest predicted impact at 57 dB(A) at the Cinema – refer to Table 2) due to a minimum separation distance of 40m from Mareeba Connection Road (50m to the nearest resident room) and 210m from Mareeba Dimbulah Road. Therefore, acoustical barriers / earthmounds are not required. Given that Acceptable Outcome AO23.1 is achieved consideration of acoustic building shell treatments (AO23.2, AO23.3 and AO23.4) is not required.

Further, the external noise criterion of Performance Outcome PO24 of 57 dB(A) $L_{10 \ 18hr}$ free-field (AO24.1) is also predicted to be achieved at the external building façades (highest predicted impact at 57 dB(A) at the Cinema minus 2.5 dB for a free-field level) and the central communal recreation courtyard areas (refer to Table 2). Given that Acceptable Outcome AO24.1 is achieved consideration of acoustical barriers / earthmounds / screens are not required.

Overall, given the buffer separation distances from both Mareeba Connection Road and Mareeba Dimbulah Road the external noise criterion is predicted to be achieved; therefore, acoustical treatments are not required at the proposed development.

Report Reviewed By:

JAY CARTER BSc Director

Report Compiled by:

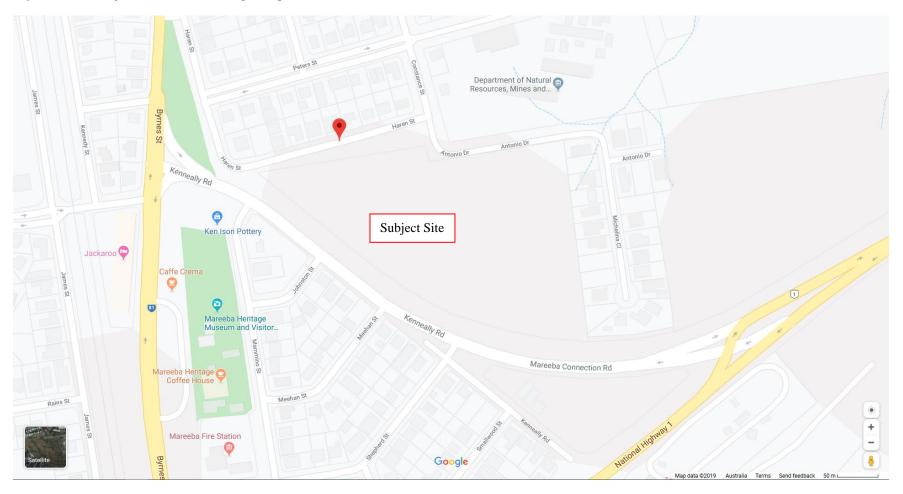
Matthew Lopez BEng Consultant



APPENDIX A

Subject Site and Logger Location

Figure No. 1: Subject Site Location (Google Maps).



Subject Site Logger Location 2D 360 3D

Figure No. 2: Subject Site and Noise Monitoring Locations (QLD Globe).



APPENDIX B

Development Plans

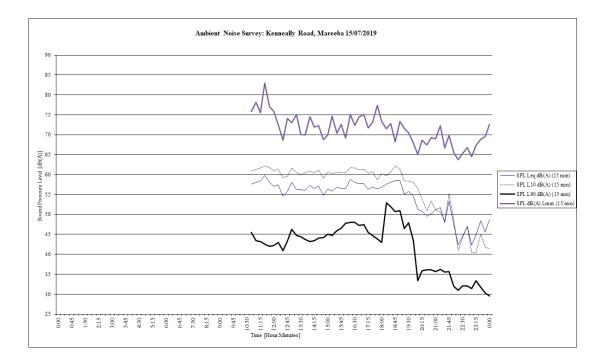


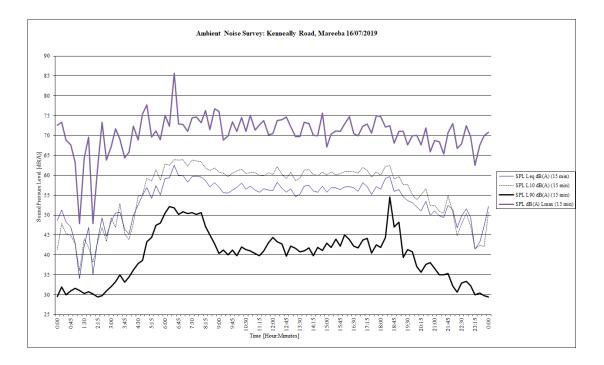


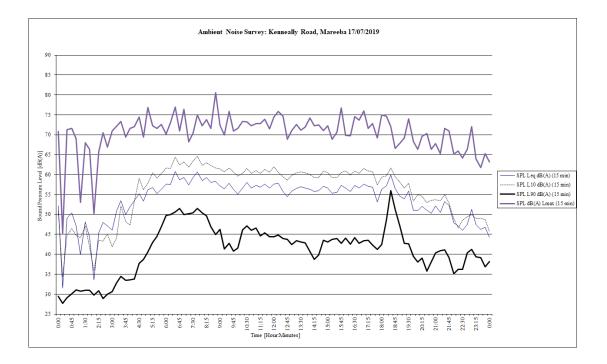


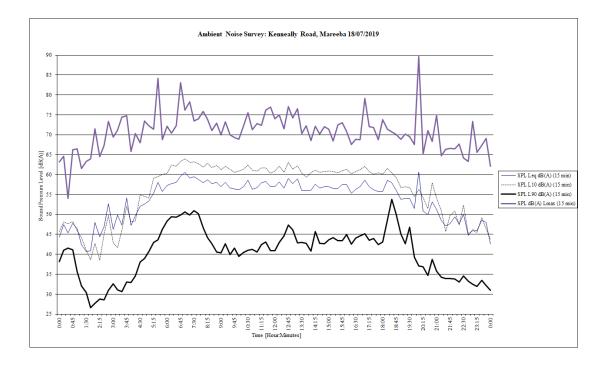
APPENDIX C

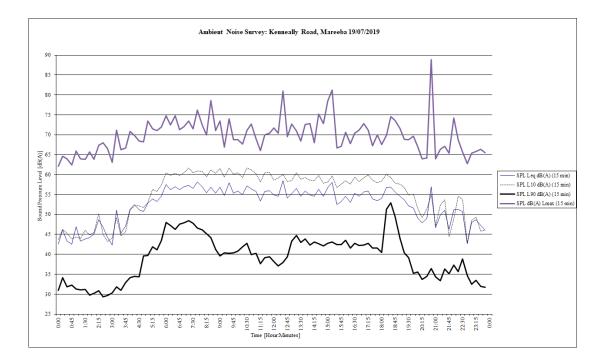
Measurement Results and Model Calculations / Predictions

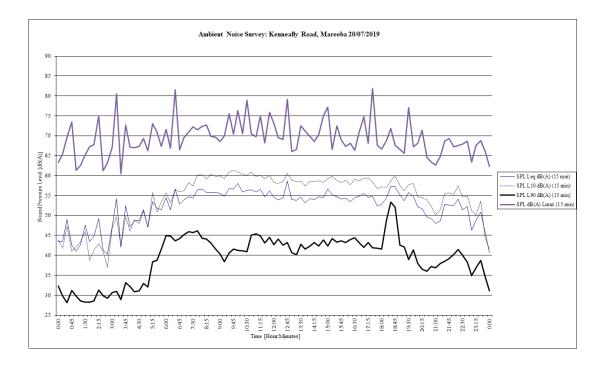


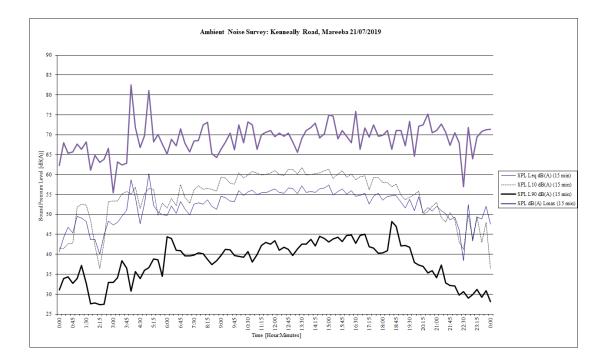


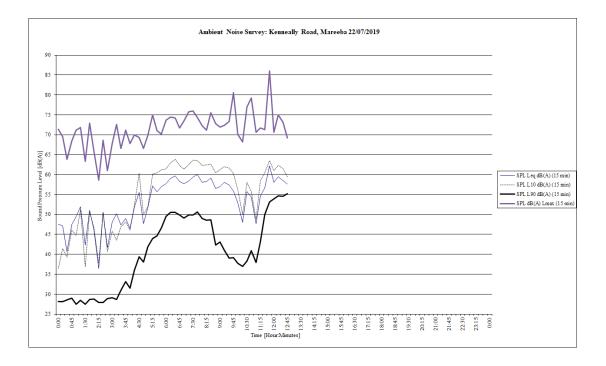












CRGACOUSTICS

POINT CALCULATIONS Pen3D2000 V 1.10.0 Project Code:19091a Project Description:Noise assessment of Mareeba File:D:\Users\Matty\CRGNAS\2019\19091 Aged Care Mareeba\19091a_existing.PEN

Tuesday 26 Nov, 2019 at 16:39:45

 CoRTN Calculations
 All road segments included. Segmentation angle: 1degrees. Road elevations apply.

 Receptor
 X Posn
 Y Posn
 Height
 L10(18hour)

 (m)
 (m)
 (dB(A))

 MONITOR
 332674.1
 8118631.7
 1.4
 58.8
 free-field

 $File: D: \label{eq:scalar} Watty \label{eq:scalar} CRGNAS \label{eq:scalar} 2019 \label{eq:scalar} 19091 \mbox{ Aged Care Mareeba} \label{eq:scalar} 19091 \mbox{ a_ultimate}. PEN$

Tuesday 26 Nov, 2019 at 16:40:51 CoRTN Calculations

All road segments included. Segmentation angle: 1degrees. Road elevations apply.

Deserves	V D	V D	TT-:-14	I 10/10h
Receptor	X Posn	Y Posn	Height	L10(18hour)
A 1	(m)	(m)	(m)	(dB(A))
A1		8118745.1		50.9
A2		8118744.5		47.9
A3		8118734.7		54.9
A4		8118749.3		48.5
A5		8118737.4		55.5
A6		8118739.7		55.8
A7		8118753.3		48.2
A8		8118742.8		55.3
A9		8118756.9		54.4
A10	332563.2	8118760.1	1.5	54.1
A11	332566.6	8118764.4	1.5	53.8
A12	332568.5	8118766.9	1.5	53.3
A13	332580.1	8118756.5	1.5	49.9
A14	332583.6	8118761.1	1.5	50.7
A15	332579.5	8118781.3	1.5	47.6
A16	332568.2	8118769.4	1.5	53.6
A17	332576.3	8118783.7	1.5	47.5
A18	332565			53.8
A19	332572.7			47.7
A20		8118775.4		52.9
A21		8118789.1		47.7
A22		8118792.5		47.8
A23		8118795.1		48
A24		8118796.6		53
A25		8118791.1		53.3
A26	332546.1			53.6
A27		8118775.4		51.9
A27 A28		8118773.4		53.8
A28 A29		8118783.0		52.1
A29 A30				52.1 55.7
		8118767.9		
B1		8118732.6		48 54.2
B2		8118719.4		
B3	332611.2			48.2
B4	332604.9			55.1
B5	332615	8118726.3		48.2
B6	332607.9			55.3
B7	332611.7			55.3
B8	332615	8118705.1		55.9
B9		8118716.4		48.1
B10		8118701.9		56
B11		8118699.5		56
B12	332627.1		1.5	55.5
B13	332630.2			55.9
B14		8118707.8		48.1
B15		8118704.5		48.1
B16	332634.2	8118692.5		56.1
B17	332627.3	8118719.4		49.8
B18	332617.6	8118727.3	1.5	50.6
B19	332630.5	8118723.5	1.5	50.7
B20	332620.9	8118731.5	1.5	51.7
B21	332633.3	8118727.1	1.5	50.8
B22	332627.6	8118740	1.5	51.9
B23	332627.5	8118742.2	1.5	52.3
B24	332623.5	8118745.5	1.5	52.6
B25	332619.3	8118748.7	1.5	51.8
B26	332616.8	8118748.4	1.5	50.7
B27	332613.5	8118744.1		50.8

CRGACOUSTICS

B28	332610.6	8118740.6 1.5	50.7
B29	332607.2	8118736.2 1.5	50.1
C1	332598.9	8118749.4 1.5	51.9
C2	332602.7	8118754.1 1.5	52.2
C3	332607.2	8118759.9 1.5	52.1
C4	332610.8	8118764.4 1.5	52
C5	332626.4	8118764.2 1.5	48
C6	332629.9	8118768.6 1.5	49.3
C7	332621.4	8118778.1 1.5	49.2
C8	332632.7	8118772.2 1.5	49.5
C9	332624.5	8118782.1 1.5	50.6
C10	332636.1	8118776.6 1.5	49.5
C11	332628.6	8118787.2 1.5	51
C12	332638.5	8118776.9 1.5	50.7
C13	332648.8	8118784.7 1.5	45.9
C14	332642.8	8118773.5 1.5	51.6
C15	332652.8	8118781.7 1.5	46.1
C16	332647.2	8118770 1.5	51.6
C17	332656.9	8118778.5 1.5	46.3
C18	332660.8	8118775.3 1.5	46
C19	332665.1	8118772 1.5	46.3
C20	332661.2	8118762.4 1.5	49.8
C21	332649.1	8118767 1.5	50.9
C22	332657.2	8118757.4 1.5	49.9
C23	332645.8	8118763 1.5	50.9
C24	332653.8	8118753.1 1.5	49.9
C25	332650.9	8118749.4 1.5	49.9
C26	332639.1	8118754.5 1.5	48.9
C27	332647.5	8118745.1 1.5	49.7
C28	332644.6	8118741.5 1.5	49.1
C29	332636.5	8118754.2 1.5	46.4
C30	332632.2	8118757.6 1.5	46.5
C31	332627.9	8118761 1.5	46.6
D1	332658.3	8118704.9 1.5	50.7
D2	332654.9	8118700.7 1.5	49.6
D3	332644.5	8118690.5 1.5	55.4
D4	332656.5	8118697.1 1.5	48.2
D5	332648.4	8118687.4 1.5	55.6
D6	332652.4	8118684.2 1.5	55.8
D7	332656.4	8118681.1 1.5	55.9
D8	332665.3	8118690.1 1.5	47.9
D9	332660.5	8118677.9 1.5	55.9
D10	332671.2	8118678 1.5	54.4
D11	332678.1	8118683.1 1.5	52.8
D12	332668.1	8118690.4 1.5	49.9
D13	332671.2	8118694.3 1.5	51.2
D14	332680.8	8118686.5 1.5	52.5
D15 E1	332685	8118691.7 1.5	52.2
E1 E2	332672.2	8118722.4 1.5	49.1
E2 E3	332675.5 332676.8		49.6 51
E3 E4	332685	8118737.5 1.5	46.5
E4 E5	332679.4	8118726.1 1.5	40.3 51.2
E5 E6	332688.9	8118734.5 1.5	46.7
E7	332693	8118731.2 1.5	46.4
E8	332687.1	8118720 1.5	51.5
E9	332697	8118728.2 1.5	46.6
E10	332702	8118720.9 1.5	50.1
E11	332689	8118716.9 1.5	50.6
E12	332699.4		51.1
E13	332696.2		51.3
E14	332685.5	8118712.3 1.5	49.8
E15	332693.1	8118702.1 1.5	51.5
LA1	332539.1	8118777.8 1.5	55.9
LA2	332566.1	8118744.1 1.5	56.3
Cinema	332557.3	8118750.6 1.5	56.5
LB1	332624.3	8118735.8 1.5	51.8
LB2	332633.5		47.9
LB3	332640.3	8118693.8 1.5	54.4
LC1	332640	8118790.1 1.5	49.8
LC2	332643	8118759.2 1.5	50.5
LD1	332660.5	8118693.8 1.5	48.1
LE1	332683.6	8118722.7 1.5	51.7
CY1	332637.1	8118764.8 1.5	51.5
CY2	332595.5	8118760.5 1.5	53.1
CY3	332617.1	8118737.7 1.5	52.6
CY4		8118716.8 1.5	52.8
CY5	332664.2		52.3
CY6	332679.9	8118718.7 1.5	51.3
		ח	22

ATTACHMENT 11: LANDSCAPE DESIGN



MAREEBA AGED CARE - Design Developmentscale 1:1000 @A31907-038-SD-L1.01_Rev2 - 13/12/2019

LEGEND



Existing Tree to be retained

Existing Tree to be removed

Shade Trees

Turf

Ground Cover

SHADE TREES Small shade trees providing additional softening the building facade

SMALL ENTRY TREES Smallfeaturetreescomplimenting the main feature tree and providing shade and scale to the entry carpark.

SMALL SHADE TREES Nativetree panting to carpark area at minumum 1 tree per 5 bays



PLANT PALETTE

Groundcovers





Liriope muscari

Dianella Silver Streak



Gardenia radicans









Gardenia augusta

Shrubs (Large)



hilodendron selloum





Calathea lutea



Flindersia brayleana

Trees



Brachvchiton acerifolius - Feature tree



Atractocarpus fitzalani

PRELIMINARY LANDSCAPE SPECIFICATION NOTES

1. GENERAL

Scope of works as shown on drawings. All work to be carried out by suitably qualified tradesmen with experience in Landscape Construction works. All planting works are to be carried out by a QALI registered landscape contractor. A flush durable edge is to be provided between all garden beds and turfed areas, areas of other loose material and under all fences on common boundaries and road frontages.

2. MULCH

Standards: To AS4454-2003 'Compost, soil conditioners and mulches'. Mulch type: Hoop Pine bark - 75mm deep.

3. CULTIVATION

All garden and turfed areas cultivated to a depth of 150mm prior to the spreading of topsoil.

4. TOPSOIL

Standards: To AS 4419-2003 'Soils for landscaping and garden use'.

- Minimum depths -
 - To garden beds 300mm depth.
 - To turfed areas 100mm depth.
 - To tree holes and pits 1.5 x rootball diameter and 2 x rootball depth.

5. PLANTING

All beds to be prepared over decompacted subgrade and suitably drained with perforated PVC pipe or similar to site stormwater network. All trees in turf shall have 600mm diameter mulch collar. Staking: all trees shall be staked to future detail. All trees marked within/adjacent to vehicle sightlines are to be set out on site prior to installation and approved by the superintendent and traffic engineer.

6. SHRUBS AND GROUNDCOVERS

Shrubs and groundcovers shall provide complete coverage of planting areas at maturity. Minimum sizes:

Shrubs - 200mm stock

Groundcovers - 140mm stock

7. TREES TO BE RETAINED

Trees noted as 'Trees to be Retained' shall be protected from damage. Install temporary fencing to prohibit the storage of materials or equipment within the drip line. Do not remove topsoil from, or add topsoil to the area within the dripline of the tree. If it is necessary to excavate within the dripline, use hand methods such that root systems are preserved intact and undamaged. Do not cut tree roots exceeding 50mm diameter, however where deemed necessary, use means that do not unduly disturb the remaining root system and apply a bituminous fungicidal sealant to the cut surface. Backfill to excavations around tree roots with a mixture consisting of three parts by volume of topsoil and one part of well rotted compost with a neutral pH value, free from weed growth and harmful materials. Compact to a dry density similar to that the original surrounding soil. Do not compact the existing ground under trees. Prevent windblown materials such as cement from harming trees and plants. Remedial pruning to hazard reduction including the removal of dead and hazardous wood shall be undertaken where necessary in accordance with AS4373-1996 'Pruning of Amenity Trees'.

8. TURFING

Turf Type: Cyndon dactylon (Green Couch), 'A' Grade.

9. DRAINAGE

All garden beds and planting beds shall be drained with sub-surface drains connected to stormwater. Surface runoff shall be directed towards garden beds, turf or other permeable surfaces where water quality is conductive to plant growth.

10. IRRIGATION

Irrigated garden beds shall be irrigated by an automatic irrigation system connected to a metered water supply. Hose cocks shall be provided in landscaped areas.

Irrigation to be provided on a design and construct system of installation.

12. ESTABLISHMENT AND DEFECTS LIABILITY

An establishment period of 12 weeks from the date of practical completion shall apply to landscape softworks. A defects liability period of 12 months from the date of practical completion shall apply to all landscaped works.

MAREEBA AGED CARE - Design Development



scale N.T.S. 1907-038-SD-L2.01 Rev2 - 13/12/2019

Raphis excelsa

Curculigo recurvata



ATTACHMENT 12:

WASTE MANAGEMENT PLAN

LEIGH DESIGN

waste management plans for all urban developments

Leigh Design Pty Ltd ABN 37 139 522 437 PO Box 115 Carnegie VIC 3163 P +61 3 8516 5399 E <u>leo@leighdesign.com.au</u> I <u>www.leighdesign.com.au</u>

WASTE MANAGEMENT PLAN

Proposed Development: 1-18 Haren Street, Mareeba, Queensland

> Prepared for: Croft Developments Pty Ltd

	Document Control		
Report Date:	17 July 2019		
Prepared By:	Leonardo Russi, BEng (Mech), MEng (Env)		
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WASTE MANAGEMENT SUMMARY

- The operator, as defined below, shall be responsible for managing the waste system and for developing and implementing adequate safe operating procedures.
- Waste shall be stored within the development (hidden from external view).
- Site staff shall sort their waste and dispose garbage and recyclables into collection bins.
- Waste shall be collected within the development. The collection contractor shall transfer bins between the waste area and the truck.
- A private contractor shall provide waste collection services.

GLOSSARY

Operator: refers to the Facility Management, who shall manage site operations (via cleaners, staff and contractors, if required).

User: refers to residents and site staff, who shall utilise the waste system.

1 SPACE AND SYSTEM FOR WASTE MANAGEMENT

1.1 Development Description and Use

This development shall consist of an Aged Care Facility (the number of beds is stated in Table 1, below).

1.2 Estimated Garbage and Recycling Generation

The following table summarises the waste estimate (m³/week):

Table 1: Waste Estimate

Waste Source	Base Qty (est.)	Garbage	Commingled Recycling	
Aged Care (incl meals/amenities)	No. of beds = 120	10.80	4.80	
TOTAL (m³/wk)		10.80	4.80	

Note: Waste figures are based on information from similar facilities and on discretionary rates.

1.3 Collection Services

Based on the anticipated waste volume, a private contractor shall be required to collect waste. The operator shall choose a waste collection provider, negotiate a service agreement, and pay for these services.

<u>Note</u>: Every rateable tenement is liable to pay for municipal charges irrespective of the level of collection services provided by Council.

1.4 Location, Equipment, and System Used for Managing Waste

The waste management system is summarised as follows:

- Internal receptacles in rooms/work/amenity areas.
- Bin Store located at Ground Level.
- Collection bins (kept within the Bin Store refer to Table 2).

The various collection waste-streams are summarised as follows:

Garbage: General waste shall be placed in tied plastic bags and stored within bins.

<u>Recycling</u>: All recyclables shall be commingled into a single type of collection bin (for loose paper, cardboard, glass, aluminium, steel, and plastics).

<u>Green Waste</u>: Garden organics shall be collected and disposed by the future landscape maintenance contractor.

<u>Compost</u>: At this development, composting is considered impractical, as there would be minimal onsite demand for compost.

<u>Clinical Waste</u>: Clinical waste (medical, infectious, cytotoxic, sharps, chemical, pharmaceutical, radioactive, etc) shall be managed in accordance with the Industry Code of Practice for the Management of Biohazardous Waste (including Clinical & Related wastes, 7th edition, 2014). A specialist clinical waste contractor shall be engaged to implement the code, provide facility design and operational details (incl. a Clinical WMP) for the safe handling and disposal of clinical waste, and for waste collection and treatment (refer to suggested contacts in Sect. 6).

A suitable Clinical Waste Store shall be provided (store size/design and all clinical waste streams/bins shall be specified by a specialist consultant).

<u>Other Waste Streams</u>: The disposal of hard/electronic/liquid and other wastes (polystyrene, batteries, paint, chemicals and detox items, etc) shall be organised with the assistance of the operator.

The operator shall arrange the storage of used cooking oil and its collection by a recycler and shall organise Grease Interceptor Trap servicing, if any.

The following table summarises bin quantity/capacity, collection frequency, and area requirements (based on Table 1):

Waste Source	Waste Stream	Bin Qty	Bin Litres	Collections per Week	Net Area m ²
Whole development (shared bins)	Garbage	4	1,100	3	6.4
	Comm. Recycling	2	1,100	3	3.2
	Hard Waste	-	-	ТВА	3.0
Net Waste Storage Area (excludes circulation), m ² :					

Table 2: Bin Schedule and Collection Frequency

Notes:

- The operator shall organise hard waste collections (as required).
- Private bins shall be sourced by the operator (either purchased from a supplier or leased from the collection contractor).
- Subject to stakeholders' preference/capability (and as built constraints), bin sizes and quantities can be changed. Also, recyclables can be either commingled or split into bins for separate recycling streams.

1.5 Planning Drawings, Waste Areas, and Management of the Waste System

The plans shall illustrate sufficient space for onsite bin storage, as required by the above schedule.

Notwithstanding the above, collection days shall be staged appropriately and the operator shall stipulate procedures for effective management of the available space.

1.6 Collection Bin Information

The following bins shall be utilised (see Sect. 4.4 for signage requirements):

Capacity (litres)	Height (mm)	Width (across front, mm)	Depth (side on, mm)	Empty Weight (kg)	Average* Gross Weight (kg)
1100	1330	1240	1070	65	210

Table 3: Bin Details

Notes:

- * = Average Gross Weight is based on domestic waste studies (which vary subject to locality and waste-type). Expect greater weight for wet or compacted waste.
- Use the above details as a guide only variations will occur. The above is based on Sulo plastic (HDPE) flat-lid bins.
- For 1100L bins, flat lids are recommended (instead of dome lids). However, the operator shall consult with the waste collection contractor to specify and select the appropriate lid.

Bin	Garbage	Recyclables	Green Waste
Lid	Red	Yellow	Lime Green
Body	Dark Green / Black	Dark Green / Black	Dark Green / Black

Table 4: AS 4123.7-2006 Plastic Bin Colour Coding

Note: Private bins shall be labelled to identify the waste generator and site address.

2 ACCESS FOR USERS, COLLECTORS, AND COLLECTION VEHICLES

2.1 User Access to Waste Facilities

Users shall place sorted waste into internal waste receptacles. Staff shall sort and transfer waste from the rooms, amenity, and work areas to the collection bins (if required, using a suitable trolley).

<u>Note</u>: If required, the operator shall have access to the Bin Store to rotate the bins, ensuring that empty bins are available along the circulation area so that staff are able to reach them.

2.2 Collection Arrangements and Access to Waste Facilities

- A private contractor shall collect waste in the onsite driveway.
- Collection staff (driver and assistant) shall have access to the Bin Store and transfer bins to the truck and back to the store.
- The waste collection shall be carried-out by rear-lift vehicles (nom. 8.8m long, 4m operational height, and 24 tonnes gross vehicle mass).

3 AMENITY, LOCAL ENVIRONMENT, AND FACILITY DESIGN

3.1 Noise Minimisation Initiatives

- Collection bins shall feature rubber wheels for quiet rolling during transfers.
- Waste areas shall meet BCA and AS2107 acoustic requirements.
- Local laws shall be observed for all operations in public and private areas.
- The waste collector shall protect the acoustic amenity by minimising noise during the collection.

3.2 Litter Reduction and Prevention of Stormwater Pollution

The operator shall be responsible for:

- Promoting adequate waste disposal into the bins (to avoid waste-dumping).
- Securing the waste areas (whilst affording access to users/staff/contractors).
- Preventing overfilled bins, keeping lids closed and bungs leak-free.
- Abating any site litter and taking action to prevent dumping and/or unauthorised use of waste areas.
- Requiring the collection contractor to clean-up any spillage that might occur when clearing bins.

The above will minimise the dispersion of site litter and prevent stormwater pollution (thus avoiding impact to the local amenity and environment).

3.3 Ventilation, Washing, and Vermin-Prevention Arrangements

Waste areas shall feature:

- Ventilation in accordance with Australian Standard AS1668.
- Tight-fitting doors (all other openings shall have vermin-proof mesh or similar).
- Impervious flooring (also, smooth, slip-resistant, and appropriately drained).
- A graded bin wash area, hot and cold mixing hosecocks, hose, and a suitable floorwaste connected in accordance with relevant authority requirements (alternatively, the operator shall engage a contractor to conduct off-site bin washing). The bin and wash areas may overlap, as stored bins can be moved so that a bin can be washed.

The operator shall regularly clean waste areas/equipment. Also, access doors and bin-lids shall be kept closed.

3.4 Design and Aesthetics of Waste Storage Areas and Equipment

Waste shall be placed within collection bins and stored in designated onsite areas (hidden from external view). Following waste collection activities, bins shall be returned to the storage areas as soon as practicable.

Waste facilities shall be constructed of durable materials and finishes, and maintained to ensure that the aesthetics of the development are not compromised. These facilities and associated passages shall be suitably illuminated (this provides comfort, safety, and security to users, staff, and contractors). Access doors shall feature keyless opening from within.

The design and construction of waste facilities and equipment shall conform to the Building Code of Australia, Australian Standards, and local laws.

4 MANAGEMENT AND SUSTAINABILITY

4.1 Waste Sorting, Transfer, and Collection Responsibilities

Garbage shall be placed within tied plastic bags prior to transferring into collection bins. Cardboard shall be flattened and recycling containers un-capped, drained, and rinsed prior to disposal into the appropriate bin. Bagged recycling is not permitted.

Refer to Section 2 for waste transfer requirements and collection arrangements.

4.2 Facility Management Provisions to Maintain & Improve the Waste System

The operator shall manage site operations (refer to the glossary in page 2).

It shall be the responsibility of the operator to maintain all waste areas and components, to the satisfaction of users, staff, and the relevant authority (users shall maintain their internal waste receptacles).

The operator shall ensure that maintenance and upgrades are carried-out on the facility and components of the waste system. When required, the operator shall engage an appropriate contractor to conduct services, replacements, or upgrades.

4.3 Arrangements for Protecting Waste Equipment from Theft and Vandalism

It shall be the responsibility of the operator to protect the equipment from theft and vandalism. This shall include the following initiatives:

- Secure the waste areas.
- Label the bins according to property address.
- Waste shall be collected within the subject site.

4.4 Arrangements for Bins/Equipment Labelling and Ensuring Users and Staff are Aware of How to Use the Waste System Correctly

- The operator shall provide appropriate signage for the bins. Signage is available at the following internet address: <u>http://www.ehp.qld.gov.au/waste/recycling/awareness_raising_materials_for_public_place_recycling.html</u>.
- The operator shall publish/distribute "house rules" and educational material to:
 - Inform users/staff about the waste management system and the use/location of the associated equipment (provide the summary in page 2 of this report).
 - Improve facility management results (lessen equipment damage and chute blockages, reduce littering, and achieve cleanliness).
 - Advise users/staff to sort and recycle waste with care to reduce contamination of recyclables. Also, the operator shall place instructions on each chute-intake requiring residents to take their recyclables directly to the Ground Level recycling bins.

4.5 Sustainability and Waste Avoidance/Reuse/Reduction Initiatives

Queensland's Waste Reduction and Recycling Act 2011 promotes waste avoidance and contains a suite of measures to reduce waste generation and landfill disposal and encourage recycling.

The operator shall promote the observance of the above legislation and encourage users and staff to participate in minimising the impact of waste on the environment. For improved sustainability, the operator shall consider the following:

- Perusal of the Queensland Environment and Heritage Protection Website: <u>http://www.ehp.gld.gov.au/</u>.
- Consideration of state's Waste Hierarchy (in order of preference): 1) waste avoidance, 2) resource recovery (reuse/recycle), and 3) waste disposal.
- Participation in council and in-house programs for waste minimisation.
- Establishment of waste reduction and recycling targets; including periodic waste audits, keeping records, and monitoring of the quantity of recyclables found in landfill-bound bins (sharing results with users/staff).

4.6 Waste Management Plan Revisions

For any future appropriate Council request, changes in legal requirements, changes in the development's needs and/or waste patterns (waste composition, volume, or distribution), or to address unforeseen operational issues, the operator shall be responsible for coordinating the necessary Waste Management Plan revisions, including (if required):

- A waste audit and new waste strategy.
- Revision of the waste system (bin size/quantity/streams/collection frequency).
- Re-education of users/staff.
- Revision of the services provided by the waste collector(s).
- Any necessary statutory approval(s).

5 SUPPLEMENTARY INFORMATION

- The operator shall ensure that bins are not overfilled or overloaded.
- Waste incineration devices are not permitted, and offsite waste treatment and disposal shall be carried-out in accordance with regulatory requirements.
- For bin traffic areas, either level surfaces (smooth and without steps) or gentle ramps are recommended, including a roll-over kerb or ramp. Should ramp gradients, bin weight, and/or distance affect the ease/safety of bin transfers, the operator shall consider the use of a suitable tug.
- The operator and waste collector shall observe all relevant OH&S legislation, regulations, and guidelines. The relevant entity shall define their tasks and:
 - Comply with Worksafe Queensland's Occupational Health and Safety Guidelines for the Collection, Transport and Unloading of Non-hazardous Waste and Recyclable Materials.
 - Assess the Manual Handling Risk and prepare a Manual Handling Control Plan for waste and bin transfers (as per regulatory requirements).
 - Obtain and provide to staff/contractors equipment manuals, training, health and safety procedures, risk assessments, and adequate personal protective equipment (PPE) to control/minimise risks/hazards associated with all waste management activities. As a starting point, these documents and procedures shall address the following:

Task (to be confirmed)	Hazard (TBC)	Control Measures (TBC)
Sorting waste and cleaning the waste system	Bodily puncture. Biological & electrical hazards	Personal protective equipment (PPE). Develop a waste-sorting procedure
Bin manual handling	Sprain, strain, crush	PPE. Maintain bin wheel-hubs. Limit bin weight. Provide mechanical assistance to transfer bins
Bin transfers and emptying into truck	Vehicular strike, run- over	PPE. Develop a Hazard Control Plan for transfers and collections. Maintain visibility. Use a mechanical bin-tipper
Truck access (reversing & manoeuvring)	Vehicular incident, strike, run-over	PPE. Use a trained spotter. Develop a truck-manoeuvring and traffic-control procedure

Note: The above shall be confirmed by a qualified OH&S professional who shall also prepare site-specific assessments, procedures, and controls (refer to Section 6).

6 CONTACT INFORMATION

Mareeba Shire Council (local Council), ph 1300 308 461

SUEZ/SITA (private waste collector), ph 131335

Veolia (private waste collector), ph 132955

FJP Safety Advisors Pty Ltd (OH&S consultant), ph 03 9255 3660

Electrodrive Pty Ltd (tug & trailer supplier – for bin transfers), ph 1800 033 002

Sabco Commercial (supplier of cleaner's trolleys), ph 1800 066 522

Sulo MGB Australia (bin supplier), ph 1300 364 388

One Stop Garbage Shop (bin supplier), ph 03 9338 1411

<u>Note</u>: The above includes a complimentary listing of contractors and equipment suppliers. The stakeholders shall not be obligated to procure goods/services from these companies. Leigh Design does not warrant (or make representations for) the goods/services provided by these suppliers.

<u>7</u> <u>LIMITATIONS</u>

The purpose of this report is to document a Waste Management Plan, as part of a Planning Permit Application.

This report is based on the following conditions:

- Operational use of the development (excludes demolition/construction stages).
- Drawings and information supplied by the project architect.
- The figures presented in this report are estimates only. The actual amount of waste will depend on the development's occupancy rate and waste generation intensity, the user's disposition toward waste and recycling, and the operator's approach to waste management. The operator shall make adjustments, as required, based on actual waste volumes (if the actual waste volume is greater than estimated, then the number of bins and/or the number of collections per week shall be increased, STCA).
- This report shall not be used to determine/forecast operational costs, or to prepare feasibility studies, or to document operational/safety procedures.

ATTACHMENT 13:

MAREEBA SHIRE COUNCIL CODE ASSESSMENT

Application

(1) This code applies to assessing development where:

- (a) Located in the Low density residential 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.

Criteria for assessment

Table 6.2.6.3A – Low density residential zone code – For accepted development subject to requirements and assessable development

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT				
FOR ACCEPTED DEVELOPMENT SUBJECT TO REQUIREMENTS AND ASSESSABLE DEVELOPMENT							
HEIGHT							
 PO1 Building height takes into consideration and respects the following: (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 has a maximum building height of: a) 8.5 metres; and b) 2 storeys above ground level. 	YES	The proposed development will have a maximum building height of approximately 6.34m above ground level.				



6.2.6 - Low density residential zone code

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT				
OUTBUILDINGS AND RESIDENTIAL SCALE	OUTBUILDINGS AND RESIDENTIAL SCALE						
 PO2 Domestic outbuildings: a) Do not dominate the lot on which they are located; and b) Are consistent with the scale and character of development in the low-density residential zone 	 AO2 Domestic outbuildings do not exceed: a) 100m2 in gross floor area; and b) 5.5 metres in height above natural ground level. 	N/A	The proposed development does not involve any domestic outbuildings.				
SITING							
 PO3 Development is sited in a manner that considers and respects: a) The siting and use of adjoining premises b) Access to sunlight and daylight for the site and adjoining sites; c) Privacy and overlooking; d) Opportunities for casual surveillance of adjoining public spaces; e) Air circulation and access to natural breezes; and f) Appearance of building bulk; and g) Relationship with road corridors 	 AO3.1 Buildings and structures include a minimum of setback of: a) 6 metres from the primary road frontage; and b) 3 metres from any secondary road frontage 	YES	The outer most projection of the proposed development will have a minimum setback of approximately 14.5 to the primary road frontage being Kenneally Road and minimum setbacks of approximately 3m and 30m to Haren Street and Constance Street/Antonio Drive respectively, being the secondary road frontages. Note: Other 'structures' i.e., break tanks, hydrants, transformers etc., will be located within the nominated setback areas. However, this is due to the fact these structures are required by Ergon, QFES etc., to be located adjacent to the road and hence, within the nominated setback areas. It is as a result, not uncommon for these 'structures' to be located within the nominated setback areas and for this reason, no further commentary is considered necessary.				
	AO3.2 Buildings and structures include a minimum setback of 2 metres from side and rear boundaries.	YES	The proposed development will have a minimum setback of approximately 8m to the side and rear boundaries.				
ACCOMMODATION DENSITY	1	<u> </u>	1				

6.2.6 - Low density residential zone code

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
 PO4 The density of Accommodation activities: a) Contributes to housing choice and affordability; b) Respects the nature and density of surrounding land use; c) Does not cause amenity impacts beyond the reasonable expectation of accommodation density for the zone; and d) Is commensurate to the scale and frontage of the site. 	AO4 Development provides a maximum density for Accommodation activities in compliance with Table 6.2.6.3B .	YES	Please refer to section 7.1 of the Planning Scheme for a full assessment against the Performance Outcome.
GROSS FLOOR AREA			
 PO5 Buildings and structures occupy the site in a manner that: a) Makes efficient use of land; b) Is consistent with the bulk and scale of surrounding buildings; and c) Appropriately balances built and natural features. 	AO5 Gross floor area does not exceed 600m2.	YES	Please refer to section 7.2 of the Planning Scheme for a full assessment against the Performance Outcome.
FOR ASSESSABLE DEVELOPMENT			
BUILDING DESIGN			
 PO6 Building facades are appropriately designed to: (a) Include visual interest and architectural variation; (b) Maintain and enhance the character of the surrounds; (c) Provide opportunities for casual surveillance; (d) Include a human scale; and (e) Encourage occupation of outdoor space. 	AO6 Buildings include habitable space, pedestrian entrances and recreation space facing the primary road frontage.	YES	The proposed development provides all the features listed in the Acceptable Outcomes facing Kenneally Road (see Attachment 2). We welcome further discussions with Council on compliance with this Acceptable Outcome (if required).



6.2.6 - Low density residential zone code

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
 PO7 Development complements and integrates with the established built character of the low density residential zone, having a regard to: a) Roof form and pitch; b) Eaves and awnings; c) Building materials, colours and textures; and d) Windows and door size and location. 	AO7 No acceptable outcome is provided.	YES	Given the age of the surrounding residential premises, it is difficult for a new, modern style development to fully 'integrate' into the existing, surrounding locality. Notwithstanding this, we are of the view the proposed development has provided high levels of articulation, fenestration and other features (i.e., roof pitch, windows, building colours, suitable fencing and landscaping) to ensure it will compliment and not be out of place with the character of the locality. Note: the specific requirements of the Performance Outcome are highly subjective. Hence, we welcome further discussions with Council on this matter if required.
NON – RESIDENTIAL DEVELOPMENT			
 PO8 Non-residential development is only located in new residential areas and: (a) Is consistent with the scale of existing development; (b) Does not detract from the amenity of nearby residential uses; (c) Directly supports the day to day needs of the immediate residential community; and (d) Does not impact on the orderly provision of non-residential development in other locations in the shire. 	AO8 No acceptable outcome is provided.	N/A	The proposed development does not involve non- residential development.



PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT			
AMENITY						
 PO9 Development must not detract from the amenity of the local area, having regard to: a) Noise; b) Hours of operation; c) Traffic; d) Advertising devices; e) Visual amenity; f) Privacy; g) Lighting h) Odour; and i) Emissions. 	AO9 No acceptable outcome is provided.	YES	Please refer to section 7.3 of the Planning Scheme for a full assessment against the Performance Outcome.			
 PO10 Development must take into account and seek to ameliorate any existing negative environmental impacts, having regard to a) Noise; b) Hours of operation; c) Traffic; d) Advertising devices; e) Visual amenity; f) Privacy; g) Lighting h) Odour; and i) Emissions. 	AO10 No acceptable outcome is provided.	N/A	There are no existing negative environmental impacts on the site requiring amelioration.			

Application

- (1) This code applies to assessing development where:
 - (a) Land the subject of development is affected by a constraint category identified on the Airport Environs Overlay Maps (OM-002a-f); 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: Strategic airports and aviation facilities are appropriately reflected in Overlay Map 2 and is required to be mapped by State Government in response to Infrastructure State Interests.

Criteria for assessment

Table 8.2.2.3 – Airport Environs Overlay Code – for Acceptable Development Subject to Requirements and Assessable Development

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT				
FOR ACCEPTED DEVELOPMENT SUBJECT TO REQUIREMENTS AND ASSESSABLE DEVELOPMENT							
 PO1 Development does not interfere with movement of aircraft or the safe operation of an airport or aerodrome where within the: (a) Airport environs: OLS area of Mareeba Airport identified on Airport environs overlay map (OM-002c); or (b) Airport environs: OLS area of Cairns Airport identified on Airport environs overlay map (OM-002c); or 	 AO1.1 Development does not exceed the height of the Obstacle Limitation Surface (OLS) where located within the Airport environs: OLS area of: (a) Mareeba Airport identified on Airport environs overlay map (OM-002c); or (b) Cairns Airport identified on Airport environs overlay map (OM-002c.1). 	YES	The proposed development will not encroach into the OLS of either the Cairns or Mareeba Airports.				
 identified on Airport environs overlay map (OM-002c.1); or (c) 'Airport environs: Airport buffer - 1 kilometre' of an aerodrome identified on Airport environs overlay map (OM-002f); or 	AO1.2 Development has a maximum height of 10 metres where within the 'Airport environs: Airport buffer - 1 kilometre' of an aerodrome identified on Airport environs overlay map (OM-002f).	N/A	The site is not located within the 'Airport Environs: Airport Buffer'.				



8.2.2 Airport Environs Overlay Code

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
(d) 'Airport environs: Airport buffer - 3 kilometres' of an aerodrome identified on Airport environs overlay map (OM-002f).	AO1.3 Development has a maximum height of 15 metres where within the 'Airport environs: Airport buffer - 3 kilometres' of an aerodrome identified on Airport environs overlay map (OM-002f).	N/A	As above.
LIGHTING			
 PO2 Development does not include lighting that: (a) has the potential to impact on the efficient and safe operation of Mareeba Airport or an aerodrome; or (b) could distract or confuse pilots. NOISE EXPOSURE 	 AO2.1 Development within the 'Airport environs: Distance from airport - 6 kilometres' area for Mareeba Airport identified on Airport environs overlay map (OM-002b) or the 'Airport environs: Airport buffer - 3 kilometres' of an aerodrome identified on Airport environs overlay map (OM-002f) does not: (a) involve external lighting, including street lighting, that creates straight parallel lines of lighting that are more than 500 metres long; and (b) does not contain reflective cladding upwards shining lights, flashing lights or sodium lights. 	N/A	The site is not located within the 'Airport Environs: Airport Buffer'.
PO3	A03.1	N/A	The site is not located within the 20-25 ANEF area.
Development not directly associated with Mareeba Airport is protected from aircraft noise levels that may cause harm or undue interference.	Sensitive land uses are acoustically insulated to at least the minimum standards specified by AS2021 Acoustics - Aircraft Noise Intrusion - Building Siting and Construction where located within the 'Airport environs: 20-25 ANEF' area identified on Airport environs overlay map (OM-002d) .		



PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
PUBLIC SAFETY			
PO4 Development does not compromise public safety or risk to property.	AO4.1 Development is not located within the 'Airport environs: Mareeba Airport public safety area' identified on Airport environs overlay map (OM-002e).	N/A	The site is not located within the 'Airport Environs: Mareeba Airport Public Safety Area'.
STATE SIGNIFICANT AVIATION FACILITIES ASSOCIATED	D WITH MAREEBA AIRPORT		
 PO5 Development does not impair the function of state significant aviation facilities by creating: (a) physical obstructions; or (b) electrical or electro-magnetic interference; or (c) deflection of signals. 	AO5.1 Development within 'Airport environs: Zone B (600 metre buffer)' for the 'Saddle Mountain VHF' facility identified on Airport environs overlay map (OM-002a.1) does not exceed a height of 640 metres AHD.	N/A	The site is not located within the 'Airport Environs: Zone B for the Saddle Mountain VHF Facility'.
	AO5.2 Development within 'Airport environs: Zone B (4,000 metre buffer)' for the 'Hahn Tableland Radar (RSR)' facility identified on Airport environs overlay map (OM-002a) does not exceed a height of 950 metres AHD, unless associated with Hann Tableland Radar facility.	N/A	As above.
	AO5.3 Building work does not occur within 'Airport environs: Zone A (200 metre buffer)' of the 'Biboohra CVOR' facility identified on Airport environs overlay map (OM-002a) unless associated with the Biboohra CVOR facility.	N/A	The site is not located within the 'Airport Environs: Zone A for the Biboohra CVOR Facility'.
	AO5.4 Development within 'Airport environs: Zone B (1,500 metre buffer)' of the 'Biboohra CVOR' facility identified on Airport	N/A	The site is not located within the 'Airport Environs: Zone B for the Biboohra CVOR Facility'.



PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT			
environs overlay map (OM-002a), but outside 'Zone A (200 metre buffer)' identified on Airport environs overlay map (OM-002a), does not include: (a) the creation of a permanent or temporary physical line of sight obstruction above 13 metres in height; or (b) overhead power lines exceeding 5 metres in height; or (c) metallic structures exceeding 7.5 metres in height; or (d) trees and open lattice towers exceeding 10 metres in height; or (e) wooden structures exceeding 13 metres in height. 						
PROTECTION OF OPERATIONAL AIRSPACE						
 PO6 Development within the vicinity of Mareeba Airport or an aerodrome does not interfere with the: (a) movement of aircraft; or (b) safe operation of the airport or facility 	 AO6.1 Development involving sporting and recreational aviation activities such as parachuting, hot air ballooning or hang gliding, does not occur within the Airport environs: OLS area of: (a) Mareeba Airport identified on Airport environs overlay map (OM-002c); or (b) Cairns Airport identified on Airport environs overlay map (OM-002c.1). 	N/A	The proposed development does not involve sporting or recreational aviation facilities.			
	AO6.2 Development involving temporary or permanent aviation activities does not occur within the 'Airport environs: Airport	N/A	The proposed development does not involve any aviation facilities.			

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
	buffer - 3 kilometres' of an aerodrome identified on Airport environs overlay map (OM-002f).		
PO7 Development does not affect air turbulence, visibility or engine operation in the operational airspace of Mareeba Airport or regional aerodromes.	 A07.1 Development does not result in the emission of a gaseous plume, at a velocity exceeding 4.3 metres per second, or smoke, dust, ash or steam within: (a) the Airport environs: OLS area of Mareeba Airport identified on Airport environs overlay map (OM-002c); or (b) the Airport environs: OLS area of Cairns Airport identified on Airport environs overlay map (OM-002c.1); or (c) the 'Airport environs: Airport buffer - 1 kilometre' of a regional aerodrome identified on Airport environs overlay map (OM-002c1). 	YES	The proposed development will not emit any of the mentioned elements into the operational airspace of the airport. Compliance can also be conditioned.
MANAGING BIRD AND BAT STRIKE HAZARD TO AIRCR	AFT		
PO8 Development in the environs of Mareeba Airport or an aerodrome does not contribute to the potentially serious hazard from wildlife (bird or bat) strike.	AO8.1 Development within the 'Airport environs: Distance from airport - 8 kilometres' Bird and bat strike zone of Mareeba Airport identified on Airport environs overlay map (OM- 002b) or the 'Airport environs: Airport buffer - 3 kilometres' of an aerodrome identified on Airport environs overlay map (OM-002f) provides that potential food and waste sources are covered and collected so that they are not accessible to wildlife.	YES	Compliance can also be conditioned as required and as deemed reasonable and relevant.



8.2.2 Airport Environs Overlay Code

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
	AO8.2 Development within the 'Airport environs: Distance from airport - 3 kilometres' Bird and bat strike zone of Mareeba Airport identified on Airport environs overlay map (OM- 002b) or the 'Airport environs: Airport buffer - 1 kilometre' of an aerodrome identified on Airport environs overlay map (OM-002f) does not include: (a) food processing; or (b) abattoir; or (c) intensive horticulture; or (d) intensive animal husbandry; or (e) garden centre; or (f) aquaculture.	N/A	The site is not located within the 3km bird and bat strike zone.
	 AO8.3 Putrescible waste disposal sites do not occur within the 'Airport environs: Distance from airport - 13 kilometres' Bird and bat strike zone of: (a) Mareeba Airport identified on Airport environs overlay map (OM-002b); or (b) Cairns Airport identified on Airport environs overlay map (OM-002b.1). 	YES	The proposed development does not involve a putrescible waste disposal site.

Application

- (1) This code applies to assessing development where:
 - (a) Land the subject of development is located within a 'Residential dwelling house and outbuilding area' identified on the **Residential dwelling house and outbuilding overlay maps** (OM-010a-o); 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.

Criteria for assessment

Table 8.2.10.3A – Residential dwelling house and outbuilding overlay code – For accepted development subject to requirements and assessable development

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
FOR ACCEPTED DEVELOPMENT SUBJECT TO REQUIREM	IENTS AND ASSESSABLE DEVELOPMENT		
HEIGHT			
 PO1 Building height takes into consideration and respects the following: (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 has a maximum building height of: a) 8.5 metres; and b) 2 storeys above ground level. 	YES	The proposed development will have a maximum building height of approximately 6.34m above ground level.



PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
OUTBUILDINGS AND RESIDENTIAL SCALE			
 PO2 Domestic outbuildings: a) Do not dominate the lot on which they are located; and b) Are consistent with the scale and character of development in the zone in which the land is located. 	 AO2.1 Where located in the Low density residential zone or the Medium density residential zone, domestic outbuildings do not exceed: a) 100m2 in gross floor area; and b) 5.5 metres in height above natural ground level. 	N/A	The proposed development does not involve any domestic outbuildings.
	 AO2.2 Where located in the Rural residential zone and on lots equal to or less than 2 hectares, domestic outbuildings do not exceed: a) 150m2 in gross floor area; and b) 5.5 metres in height above natural ground level. 	N/A	The site is not located in the Rural Residential Zone.
	 AO2.3 Where located in the Rural residential zone and located on lots greater than 2 hectares, domestic outbuildings do not exceed: a) 200m2 in gross floor area; and b) 8.5 metres in height above natural ground level. 	N/A	As above.
GROSS FLOOR AREA			
 PO3 Buildings and structures occupy the site in a manner that: a) Makes efficient use of land; b) Is consistent with the bulk and scale of surrounding buildings; and c) Appropriately balances built and natural features. 	AO3 Gross floor area does not exceed 600m2.	YES	Please refer to section 7.2 of the Planning Scheme for a full assessment against the Performance Outcome.



PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
SECONDARY DWELLING			
 PO4 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 	volves a secondary dwelling, itThe secondary dwelling located within:a)10 metres of the primary dwelling where on a lote site;10 metres of the primary dwelling where on a lotnt to the primary dwelling; and20 metres of the primary dwelling where on a lot	N/A	The proposed development does not involve any secondary dwellings.
surrounding area	AO4.2 A secondary dwelling has a maximum gross floor area of 100m ² .	N/A	As above.
CAR PARKING			
 PO5 Development provides sufficient car parking to accommodate the demand likely to be generated by the use, having regard to the: a) Nature of the use; b) Location of the site; c) Proximity of use to public transport services; d) Availability of active transport infrastructure; and e) Accessibility of the use to all members of the community. 	 AO5 Car parking spaces are provided in accordance with the following minimum rates: a) One covered space per dwelling house; and b) One space per secondary dwelling. 	N/A	The proposed development does not involve a dwelling house or a secondary dwelling.
VEHICLE CROSSOVERS			
 PO6 Vehicle crossovers are provided to: a) Ensure safe and efficient access between the road and premises; 	AO6.1 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.	YES	The proposed access to Constance Street/Antonio Drive will be constructed in accordance with the FNQROC Development Manual. Compliance can also be conditioned.



8.2.10 – Residential dwelling house and outbuilding overlay code

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
 b) Minimise interference with the function and operation of roads; and c) Minimise pedestrian to vehicle conflict. 	AO6.2 Development on a site with two or more road frontages provides vehicular access from the lowest order road.	YES	The proposed development involves access from Kenneally Road, a State-controlled Road. Please refer to the Traffic and Transport Assessment in Attachment 5 which demonstrates that this access will not affect the safe or efficient operation of Kenneally Road. This ensures the proposed access complies with the Performance Outcome.
	AO6.3 A secondary dwelling shares a vehicle crossover with the primary dwelling.	N/A	The proposed development does not involve a dwelling house or a secondary dwelling.
 PO7 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. 	AO7 Access, manoeuvring and car parking areas include pavements that are constructed in accordance with Table 8.2.10.3B.	YES	The proposed development will have pavements that are constructed to be suitable for the types of vehicles needing to access the site/proposed development. This will ensure compliance with the performance outcome.
WATER SUPPLY	1		1
 PO8 Each lot has an adequate volume and supply of water that: a) Meets the needs of users; b) Is adequate for fire-fighting purposes; c) Ensures the health, safety and convenient of the community; and d) Minimises adverse impacts on the receiving environment. 	AO8.1 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 in the Rural residential zone and outside a reticulated water supply service area.	YES	The proposed development will connect to Council's reticulated water supply system in accordance with the requirements of the FNQROC Development Manual. Compliance can also be conditioned.



PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
WASTEWATER DISPOSAL	 AO8.2 Development, where located outside a reticulated water supply service area and in the Rural residential zone is provided with: 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: (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. 	N/A	As above.
PO9 Each lot provides for the treatment and disposal of	AO9.1 Development is connected to a reticulated sewerage system	YES	The proposed development will connect to Council's reticulated sewerage supply system in accordance with
 effluent and other wastewater that: (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 	in accordance with the Design Guidelines and Specifications set out in the Planning Scheme Policy 4 – FNQROC Regional Development Manual other than where located in the Rural residential zone and outside a reticulated sewerage service area.		the requirements of the FNQROC Development Manual. Compliance can also be conditioned.
environment.	AO9.2 An effluent disposal system is provided in accordance with ASNZ 1547 On-Site Domestic Wastewater Management (as amended) where development is located in the Rural residential zone and outside a reticulated sewerage service area.	N/A	As above.



PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
STORMWATER INFRASTRUCTURE			
PO10 Stormwater infrastructure is design and constructed to collect and convey the design storm even to a lawful point of discharge in a manner that mitigates impacts on life and property.	AO10.1 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.	YES	The proposed development will connect to Council's stormwater network in accordance with the requirements of the FNQROC Development Manual (see Attachments 6 & 7) . Compliance can also be conditioned.
	 AO10.2 On-site drainage systems are constructed: (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. 	YES	All stormwater will be directed to a lawful point of discharge in accordance with the requirements of the FNQROC Development Manual (see Attachment 6). Compliance can also be conditioned.
ELECTRICY SUPPLY			
PO11 Each lot is provided with an adequate supply of electricity	 AO11 The premises: (a) Is connected to the electricity supply network; or (b) Has arrange 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: (i) It is approved by the relevant regulatory authority; and 	YES	The proposed development will be connected to the electricity network in accordance with Ergons' requirements.



PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
	(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.		
TELECOMMUNICATIONS INFRASTRUCTURE			
PO12 Each lot is provided with an adequate supply of telecommunication infrastructure.	AO12 Development is provided with a connection to the national broadband network or telecommunication services.	YES	The proposed development will be connected to the telecommunications network in accordance with the requirements of the telecommunications provider.
EXISTING PUBLIC UTILITY SERVICES			
PO13 Development and associated works do not affect the efficient functioning of public utility mains, services or installations.	AO13 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.	N/A	The proposed development will not require the removal or relocation of any public utility mains.
EXCAVATION AND FILLING			
 PO14 Excavation or filling must not have an adverse impact on the: a) Streetscape; b) Visual amenity; c) Environmental values; d) Slope stability; e) Accessibility; or f) Privacy of adjoining premises. 	AO14.1 Excavation or filling does not occur within 1.5 metres of any site boundary.	YES	The proposed development will involve some excavation and fill within 1.5m of site boundaries (see Attachment 6). These earthworks are, however, minor in nature AND will be solely for the creation of drainage channels, detention basins and to ensure the site and proposed development can drain to all infrastructure networks efficiently. As a result, none of the earthworks will have negative impacts on the matters outlined in the Performance Outcome. Further compliance can also be, reasonably, conditioned accordingly.



8.2.10 – Residential dwelling house and outbuilding overlay code

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
	AO14.2 Excavation or filling at any point on a lot is to be no greater than 1.5 metres above or below natural ground level.	YES	The proposed development will not require excavation or fill that exceed 1.5m in height (see Attachment 6).
	 AO14.3 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 lope no greater than 1 in 4; and e) Are retained. 	N/A	The proposed development will not require any earthworks batters.
	 AO14.4 Soil used for filling or spoil from excavation is not stockpiled in locations that can be viewed from: a) Adjoining premises; or b) A road frontage, for a period exceeding 12 month from the commencement of the filling or excavation. 	YES	Compliance with Acceptable Outcome (b) can be conditioned.
	AO14.5 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.	N/A	The proposed development will not require any batters or berms.
	AO14.6 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.	N/A	The proposed development will not require any retaining walls.



PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
	AO14.7 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.		All trees able to be retained have been identified on the plans of development.

Application

- (1) This code applies to assessing development where:
 - (a) Land the subject of development adjoins a rail corridor identified on the **Transport Infrastructure Overlay Maps (OM-012a-j)**; 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: State transport infrastructure is appropriately reflected in Overlay Map 12 and is required to be mapped by State Government in response to Infrastructure State Interests.

Note: The Transport infrastructure overlay includes mapped Transport Noise Corridors in accordance with section 246ZA of the Building Act. These corridors are mapped on **Transport infrastructure overlay maps** (**OM-012i-s**) for information purposes only. Development on land within a mapped corridor is not subject to any specific provisions under this planning scheme. The Queensland Development Code should be consulted in this respect.

Criteria for assessment

Table 8.2.12.3 – Transport infrastructure overlay code – For accepted development subject to requirements and assessable development

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
FOR ACCEPTED DEVELOPMENT SUBJECT TO REQUIREM	ENTS AND ASSESSABLE DEVELOPMENT		
 PO1 Development does prejudice the: (a) ongoing operation of an active 'Rail corridor' identified on the Transport infrastructure overlay maps (OM012a-j); or (b) the potential future use of an inactive 'Rail corridor' identified on the Transport infrastructure overlay maps (OM-012a-j). 	AO1 Buildings and structures are setback from a boundary with an active or inactive 'Rail corridor' identified on the Transport infrastructure overlay maps (OM-012a-j) a minimum of: (a) 40 metres where: (i) in the Rural zone; and (ii) on a site with an area of 2 hectares or greater; or (b) 5 metres otherwise.	N/A	The site does not abut an active or inactive 'Rail Corridor'.



8.2.12 Transport Infrastructure Overlay Code

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT	
FOR ASSESSABLE DEVELOPMENT				
PO2 Non-residential development adjoining a rail corridor identified on the Transport infrastructure overlay maps (OM-012a-j) is designed to allow for the future use of the 'Rail corridor' by the land use.	AO2 No acceptable outcome is provided	N/A	The site does not abut an active or inactive 'Rail Corridor'.	
 PO3 Development adjoining a 'Rail corridor' identified on the Transport infrastructure overlay maps (OM-012a-j) used for the transportation of tourists is designed to: (a) provide visual interest; (b) screen or enhance areas of limited visual interest; and (c) complement and enhance the character of the shire. 	AO3 No acceptable outcome is provided	N/A	As above.	

Application

(1) This code applies to assessing development where:

- (a) Involving Accommodation activities; and
- (b) It is identified in the assessment criteria column of an assessment table in Part 5 of the planning scheme.

Criteria for assessment

Table 9.3.1.3A – Accommodation Activities Code – for Self-Assessable and Assessable Development

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
FOR SELF-ASSESSABLE AND ASSESSABLE DEVELOPMENT			
ALL ACCOMMODATION ACTIVITIES, APART FROM DWELLING HOUSE			
 PO1 Accommodation activities are located on a site that includes sufficient area: (a) to accommodate all buildings, structures, open space and infrastructure associated with the use; and (b) to avoid adverse impacts on the amenity or privacy of nearby land uses. 	AO1.1 Development is located on a site which provides the applicable minimum site area and minimum road frontage specified in Table 9.3.1.3B .	YES	The site is in excess of 2,000m ² and has a frontage to Kenneally Road of greater than 30m.
ALL ACCOMMODATION ACTIVITIES, APART FROM TOURIST PARK AND DWELLING HOUSE			
 PO2 Accommodation activities are provided with on-site refuse storage areas that are: (a) sufficient to meet the anticipated demand for refuse storage; and 	(a) includes a water connection;	YES	The proposed development will be connected to Council reticulated water supply and a refuse area will be provided at the rear of the site containing bulk refuse bins of a suitable size and number to adequality service the proposed development.



PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
(b) appropriately located on the site having regard to potential odour and noise impacts on uses on the site and adjoining sites.	(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.		
ALL ACCOMMODATION ACTIVITIES, EXCEPT FOR DWE	ELLING HOUSE		
PO3 Accommodation activities are designed to avoid overlooking or loss of privacy for adjoining uses. Note—These provisions apply to any adjoining use, both on an adjoining site and on the same site.	 AO3.1 The windows of habitable rooms: (a) do not overlook the windows of a habitable room in an adjoining dwelling or accommodation unit; or (b) are separated from the windows of a habitable room in an adjoining dwelling or accommodation unit by a distance greater than: (i) 2 metres at ground level; and (ii) 8 metres above ground level; or (c) are treated with: (i) a minimum sill height of 1.5 metres above floor level; or (ii) fixed opaque glassed installed below 1.5 metres; or (iii) fixed external screens; or (d) a 1.5-metre-high screen fence along the common boundary. 	N/A	All windows of habitable rooms within the proposed development that overlook other habitable rooms are separated by more than 2m. The site does not abut any other accommodation buildings on adjoining lots.
 PO4 Accommodation activities are provided with sufficient private and communal open space areas which: (a) accommodate a range of landscape treatments, including soft and hard landscaping; 	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 .	YES	Please refer to section 7.4 of the Planning Scheme for a full assessment against the Performance Outcome.

9.3.1 Accommodation Activities Code

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
 (b) provide a range of opportunities for passive and active recreation; (c) provide a positive outlook and high quality of amenity to residents; (d) is conveniently located and easily accessible to all residents; and 	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 .	YES	As above, compliance with the Performance Outcome has been demonstrated.
(e) contribute to an active and attractive streetscape.	AO4.3 Clothes drying areas are provided at the side or rear of the site so that they are not visible from the street.	YES	As above.
	 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: (a) is located to facilitate loading and unloading from a motor vehicle; (b) is separate to, and does not obstruct, on-site vehicle parking or manoeuvring areas; (c) has a minimum space of 2.4m² per dwelling or accommodation unit; (d) has a minimum height of 2.1 metres; (e) has minimum dimensions to enable secure bicycle storage; (f) is weather proof; and (g) is lockable. 	YES	As above.
IF FOR CARETAKER'S ACCOMMODATION			
PO5	AO5.1	N/A	The proposed development does not involve Caretakers Accommodation.



PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
Caretaker's accommodation is of a scale and intensity which is consistent with that of the surrounding area.	Only one caretaker's accommodation is established on the title of the non-residential use.		
Note—Where Caretaker's Accommodation is assessable development additional assessment criteria are provided under "for assessable development".	AO5.2 In the Rural zone, Caretaker's accommodation has a maximum gross floor area of 200m ² .	N/A	As above.
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. 	N/A	The proposed development does not involve a Dwelling House.
	AO6.2 A secondary dwelling has a maximum gross floor area of 100m ² .	N/A	As above.
IF FOR A 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.	N/A	The proposed development does not involve a Dual Occupancy.
	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.	N/A	As above.



PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
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 criteria are provided under "for assessable development". 	AO8.1 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.	N/A	The site is located approximately 200m (as the crow flies) from Lot 15 on M35685 which is included in the Centre Zone.
 PO9 Buildings associated with more intensive Accommodation activities are designed to: (a) reduce the appearance of building bulk; (b) provide visual interest through articulation and variation; (c) be compatible with the embedded, historical character for the locality; and (d) be compatible with the scale of surrounding buildings 	 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: (a) a change in roof profile; or (b) a change in parapet coping; or (c) a change in awning design; or (d) a horizontal or vertical change in the wall plane; or (e) a change in the exterior finishes and exterior colours of the development. 	YES	Please refer to the elevations included in Attachment 2 which demonstrate a suitable level of compliance with the matters outlined in the Acceptable Outcome. We welcome further discussions with Council on compliance with this Acceptable Outcome (if required)).
Note—Where Residential care facility or Retirement facility is assessable development additional assessment criteria are provided under "for assessable development".	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.	N/A	The proposed development does not include a garage or carport.



PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
	AO9.3 For a Multiple dwelling, Residential care facility or Retirement facility, the building(s) include awnings with a minimum overhang of 600mm.	YES	Large eaves are provided to the entire building and a large awning provided to the front entrance of the proposed development.
	AO9.4 For a Multiple dwelling, Residential care facility or Retirement facility, roof forms include one or more of the following types: (a) pyramidal; (b) hip or hipped; (c) gable; (d) skillion.	YES	The proposed development includes both hip and gable roof forms.
IF FOR RESIDENTIAL CARE FACILITY OR RETIREMENT			
 PO10 The layout and design of the site: (a) promotes safe and easy pedestrian, cycle and mobility device movement; (b) defines areas of pedestrian movement; and 	AO10.1 The development incorporates covered walkways and ramps on site for weather protection between all buildings.	YES	All walkways have a suitable level of cover to provide for weather protection.
c) assists in navigation and way finding. Note—Where Residential care facility or Retirement facility is Issessable development additional assessment criteria are provided under "for assessable development".	AO10.2 Pedestrian paths include navigational signage at intersections.	YES	Suitable signage will be provided. Compliance can also be conditioned.
	AO10.3 Buildings, dwellings and accommodation units include identification signage at entrances.	YES	As above.

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
	AO10.4 An illuminated sign and site map is provided at the main site entry.	YES	As above.
	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%.	YES	With the exception of the rear access road, no parts of the proposed development will be located on land that exceeds 8% slope. The rear access will be constructed in accordance with the FNQROC Development Manual to ensure its suitability and compliance with this statement can be conditioned.
IF FOR HOME BASED BUSINESS			
PO11 Home based businesses are compatible with the built form, character and amenity of the surrounding area, having regard to:	AO11.1 The Home based business is located within a dwelling house or outbuilding associated with a dwelling house.	N/A	The proposed development does not involve a Home- Based Business.
 (a) size and scale; (b) intensity and nature of use; (c) number of employees; and (d) hours of operation. 	AO11.2 The Home based business does not occupy a gross floor area of more than 50m ² .	N/A	As above.
	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.	N/A	As above.
	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.	N/A	As above.



PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
	AO11.5 The Home based business does not involve the public display of goods external to the building.	N/A	As above.
	AO11.6 The Home-based business does not involve the repair, cleaning or servicing of any motors, vehicles or other machinery.	N/A	As above.
	AO11.7 Any equipment or materials associated with the Home- based business are screened from public view and adjacent properties by fencing or landscaping.	N/A	As above.
	AO11.8 The business does not involve the use of power tools or similar noise generating devices.	N/A	As above.
PO12 Home based businesses involving accommodation activities are appropriately scaled and designed to avoid detrimental impacts on the amenity and privacy of	AO12.1 Home based businesses involving accommodation activities are limited to the scale specified in Table 9.3.1.3E .	N/A	As above.
surrounding residences.	AO12.2 A farm stay dwelling or accommodation unit is located within 20 metres of the primary dwelling house.	N/A	As above.



PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
	AO12.3 A farm stay is setback 100 metres from any property boundary.	N/A	As above.
	 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. 	N/A	As above.
IF FOR RURAL WORKERS' ACCOMMODATION			
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.	 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. 	N/A	The proposed development does not involve Rural Workers Accommodation.
	AO13.2 The agricultural based rural activity is a minimum of 50 hectares in area.	N/A	As above.
PO14 Rural workers' accommodation is provided with amenities commensurate with the: (a) needs of the employees; and	AO14.1 The Rural workers' accommodation is: (a) for permanent occupation; and (b) fully self-contained.	N/A	As above.



PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT	
(b) permanent or seasonal nature of the employment.	OR			
	A014.2	N/A	As above.	
	The Rural workers' accommodation:			
	 (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. 			
FOR ASSESSABLE DEVELOPMENT	FOR ASSESSABLE DEVELOPMENT			
IF FOR CARETAKER'S ACCOMMODATION				
PO15	AO15.1	N/A	The proposed development does not involve	
 The inclusion of Caretaker's accommodation on the site is necessary for the operation of the primary use, having regard to: (a) hours of operation; (b) nature of the use; (c) security requirements; (d) site location and access; and (e) proximity to other land uses. 	No acceptable outcome is provided.		Caretakers Accommodation.	
IF FOR RESIDENTIAL CARE FACILITY OR RETIREMENT	FACILITY			
PO16	AO16.1	ALTERNATIVE	- Follows	
Retirement facilities include a range of housing designs and types that: (a) meet the needs of residents;	No acceptable outcome is provided.	SOLUTION SOUGHT	complex for a specific demographic, person who need a specific level of care and akin to various other examples of similar development undertaken by the Applicant across Australia. Based on previous	
(b) allow for 'ageing in place';			examples, the Applicant is aware of the key elements	

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
 (c) consider differing mobility needs; (d) accommodate differing financial situations; and (e) cater for different household types. 			that need to be included to ensure a successful and functional operation. Accordingly, the proposed development will be designed to suitably accommodate all resident's needs. With this in mind, it is not considered the matters outlined in the Performance Outcome are applicable in this instance.
IF FOR TOURIST PARK			
PO17 The Tourist park is appropriately located to provide park users with convenient access to tourist attractions, community facilities and infrastructure.	AO17.1 No acceptable outcome is provided.	N/A	The proposed development does not involve a Tourist Park.
PO18	AO18.1	N/A	As above.
 The density of accommodation provided within the Tourist park: (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 	 Where park areas are proposed to exclusively accommodate caravans, motor homes, tents or cabins, accommodation site densities do not exceed: (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). 		
 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. 	AO18.2 Where park areas are proposed to be used for any combination of caravans, motor homes, tents or cabins,	N/A	As above.



then the lowest applicable density identified by AO18.1 shall be applied to the nominated area(s).		
be applied to the horninated area(s).		
AO19.1	N/A	As above.
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.		
 AO19.2 Caravan, motor home, tent and cabin accommodation sites are set back a minimum of: (a) 2 metres from an internal road; and (b) 1.5 metres from the side and rear boundaries of the site. 	N/A	As above.
AO20.1	N/A	As above.
A central refuse collection area is provided to service all accommodation sites.		
AO20.2	N/A	As above.
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.		
AO20.3	N/A	As above.
The refuse collection area is constructed on an impervious surface such as a concrete slab.		
AO20.4	N/A	As above.
	 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. AO19.2 Caravan, motor home, tent and cabin accommodation sites are set back a minimum of: (a) 2 metres from an internal road; and (b) 1.5 metres from the side and rear boundaries of the site. AO20.1 A central refuse collection area is provided to service all accommodation sites. 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. AO20.3 The refuse collection area is constructed on an impervious surface such as a concrete slab. 	AO19.1 N/A 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. N/A AO19.2 N/A Caravan, motor home, tent and cabin accommodation sites are set back a minimum of: N/A (a) 2 metres from an internal road; and N/A (b) 1.5 metres from the side and rear boundaries of the site. N/A AO20.1 N/A A central refuse collection area is provided to service all accommodation sites. N/A AO20.2 N/A 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. N/A AO20.3 N/A



PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
	A water connection is provided within the refuse collection area to facilitate cleaning of receptacles and the collection area.		
	AO20.5 Refuse collection areas are located a minimum of 10 metres from any recreational areas, communal cooking facilities	N/A	As above.
	and accommodation sites.		

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.

Criteria for assessment

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
FOR ACCEPTED DEVELOPMENT SUBJECT TO REQUIREN	IENTS AND ASSESSMENT DEVELOPMENT		
 PO1 Development, other than in the Rural zone, includes landscaping that: (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. 	 AO1.1 Development, other than in the Rural zone, provides: (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. 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. 	YES	The landscaping to be included as part of the proposed development will ensure compliance with the Performance Outcome (see Attachment 11). We welcome further discussions with Council on compliance with the Performance Outcome (if required). Compliance with the relevant Council standards can be conditioned where required.

9.4.2 Landscaping Code

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
 PO2 Development, other than in the Rural zone, includes landscaping along site frontages that: (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. 	 AO2 Development, other than in the Rural zone, includes a landscape strip along any site frontage: (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. Note—Where development is setback from a frontage less than 1.5 metres, the setback area is provided as a landscape strip. 	YES	As above.
PO3 Development includes landscaping and fencing alongside and rear boundaries that: (a) screens and buffer land uses;	AO3.1 Development provides landscape treatments alongside and rear boundaries in accordance with Table 9.4.2.3B .	YES	As above.
 (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. 	 AO3.2 Shrubs and trees provided in landscape strips alongside and rear boundaries: (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. 	YES	Compliance can be conditioned.

9.4.2 Landscaping Code

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
	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.	YES	As above.
 PO4 Car parking areas are improved with a variety of landscaping that: (a) provides visual interest; (b) provides a source of shade for pedestrians; (c) assists to break up and soften elements; and (d) improves legibility. 	 AO4.1 Landscaping is provided in car parking areas which provides: (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: (i) shade structures are provided for 50% of parking spaces; and (ii) a minimum of 10% of the parking area as landscaping. Note—Where a shade structure is provided over part of a car parking area. 	YES	Given the low number of vehicle trips the proposed development will generate and in turn, limited use of the car parking area, the landscaping to be included as part of the car parking area will ensure compliance with the Performance Outcome (see Attachment 11). We welcome further discussions with Council on compliance with the Performance Outcome (if required). Compliance with the relevant Council standards can be conditioned where required.
	AO4.2 Landscaping in car parking areas is designed in accordance with Planning Scheme Policy 6 - Landscaping and preferred plant species.	YES	Compliance can be conditioned.

9.4.2 Landscaping Code

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
 PO5 Landscaping areas include a range and variety of planting that: (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	YES	Compliance with the Performance Outcome can be conditioned.
	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.	N/A	As above (compliance with the Performance Outcome has been demonstrated).
PO6 Landscaping does not impact on the ongoing provision of infrastructure and services to the Shire.	 AO6.1 Tree planting is a minimum of (a) 2 metres from any underground water, sewer, gas, electricity or telecommunications infrastructure; and (b) 4 metres from any inspection chamber. 	YES	Compliance can be conditioned.
	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.	YES	As above.
	 AO6.3 Vegetation adjoining an electricity substation boundary, at maturity, will have: (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. 	N/A	The site does not adjoin a substation.

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
FOR ASSESSABLE DEVELOPMENT			
 PO7 Landscaping areas are designed to: (a) be easily maintained throughout the o of the site; (b) allow sufficient area and access to sum water for plant growth; (c) not cause a nuisance to occupants of t members of the public; and (d) maintain or enhance the safety of peder through the use of Crime Prevention T Environmental Design principles. 	light and the site or estrians	YES	The landscaping to be included as part of the proposed development will ensure compliance with the Performance Outcome (see Attachment 11). We welcome further discussions with Council on compliance with the Performance Outcome (if required). Compliance with the relevant Council standards can be conditioned where required.

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.

Criteria for assessment

Table 9.4.3.3A – Parking and Access Code – For accepted development subject to requirements and assessable development

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT		
FOR ACCEPTED DEVELOPMENT SUBJECT TO REQUIREMENTS AND ASSESSABLE DEVELOPMENT					
CAR PARKING SPACES					
 PO1 Development provides sufficient car parking to accommodate the demand likely to be generated by the use, having regard to the: (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. 	AO1 The number of car parking spaces provided for the use is in accordance with Table 9.4.3.3B. Note—Car parking spaces provided for persons with a disability are to be considered in determining compliance with AO1.	YES	In accordance with Table 9.4.3.3B, the proposed development triggers the need for a total of 40 spaces (120 rooms/1 space per 4 rooms = 30 spaces + 30% of 30 (10 spaces) for visitors. The proposed development has provided 60 car parking spaces and hence, complies with the Acceptable Outcome.		
VEHICLE CROSSOVERS					
PO2	A02.1	YES	Compliance can be conditioned.		
Vehicle crossovers are provided to: (a) ensure safe and efficient access between the road and premises;	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.				

9.4.3 Parking and Access Code

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
(b) minimize interference with the function and operation of roads; and(c) minimise pedestrian to vehicle conflict.	 AO2.2 Development on a site with two or more road frontages provides vehicular access from: (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. 	YES	The proposed development involves access from Kenneally Road, a State-controlled Road. Please refer to the Traffic and Transport Assessment in Attachment 5 which demonstrates that this access will not affect the safe or efficient operation of Kenneally Road. This ensures the proposed access complies with the Performance Outcome.
	AO2.3 Vehicular access for particular uses is provided in accordance with Table 9.4.3.3E .	N/A	The proposed development is not a use listed in Table 9.4.3.3.E.
 PO3 Access, maneuvering 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. 	AO3.1 Access, maneuvering and car parking areas include pavements that are constructed in accordance with Table 9.4.3.3C .	YES	The proposed development will have pavements that are constructed to be suitable for the types of vehicles needing to access the site/proposed development. This will ensure compliance with the performance outcome.
FOR ASSESSABLE DEVELOPMENT			
PARKING AREA LOCATION AND DESIGN			
PO4Car parking areas are located and designed to:(a) ensure safety and efficiency in operation; and	AO4.1 Car parking spaces, access and circulation areas have dimensions in accordance with AS/NZS 2890.1 Off-street car parking.	YES	All car parking and manoeuvring areas comply with AS/NZS 2890. Traffic and Transport Assessment in Attachment 5). Compliance can also be conditioned.

9.4.3 Parking and Access Code

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
(b) be consistent with the character of the surrounding locality.	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.	YES	As above.
	AO4.3 The car parking area includes designated pedestrian routes that provide connections to building entrances.	YES	Footpaths are provided from all car parking areas to the entrance to the proposed development.
	 AO4.4 Parking and any set down areas are: (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. 	YES	The proposed development involves car parking and loading areas which are wholly contained on the site, although located at the front of the building. Due to the location, type and extent of landscaping proposed, the car parking layout/location will not have any unacceptable impacts on the charter/amenity of the area. This ensures compliance with the Performance Outcome.
SITE ACCESS AND MANOEUVRING			
 PO5 Access to, and manoeuvring within, the site is designed and located to: (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 	 AO5.1 Access and manoeuvrability is in accordance with : (a) AS28901 – Car Parking Facilities (Off Street Parking); and (b) AS2890.2 – Parking Facilities (Off-street Parking) Commercial Vehicle Facilities. 	YES	All car parking and manoeuvring areas comply with AS/NZS 2890. Traffic and Transport Assessment in Attachment 5). Compliance can also be conditioned.

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
(d) accommodate all vehicles intended to use the site.	Note—Proposal plans should include turning circles designed in accordance with AP34/95 (Austroads 1995) Design Vehicles and Turning Path Templates.		
	AO5.2 Vehicular access has a minimum sight distance in accordance with Part 5 of AUSTROADS.	YES	Please refer to the Traffic and Transport Assessment in Attachment 5 .
	AO5.3 Vehicular access is located and designed so that all vehicles enter and exit the site in a forward gear.	YES	All vehicles will be able to enter and exit the site in a forward gear.
	 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). 	YES	Access to the site will be clearly defined and easily identifiable (likely via signage). Compliance can also be conditioned.
 PO6 Development that involves an internal road network ensures that it's design: (a) ensure safety and efficiency in operation; 	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.	N/A	The proposed development does not involve a Tourist Park.
 (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 	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:	N/A	As above.

9.4.3 Parking and Access Code

PERF	ORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
(c) (d)	(iv) odour; accommodates the nature and volume of vehicle movements anticipated to be generated by the use; allows for convenient access to key on-site	 (a) a minimum approach and departure curve radius of 12 metres; and (b) a minimum turning circle radius of 8 metres. 		
(e)	features by pedestrians, cyclists and motor vehicles; and	AO6.3 Internal roads are imperviously sealed and drained, apart from those for an Energy and infrastructure activity or Rural activity.	YES	All Internal roads will be sealed and drained. Compliance can also be conditioned.
		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.	YES	Compliance can be conditioned as required and as deemed reasonable and relevant.
		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.	YES	As above.
		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.	YES	The internal access road facilitates access to the accommodation building.



9.4.3 Parking and Access Code

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
SERVICING	 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. 	N/A	The proposed development does not involve either of the listed uses.
 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 	 A07.1 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. 	YES	All such facilities are located at the rear of the site and separated from any sensitive uses by roads, open space and a drainage gully.
 of the road network; (d) 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. 	A07.2 Unloading, loading, service and waste disposal areas allow service vehicles to enter and exit the site in a forward gear.	YES	All service vehicles will be able to enter and exit the site in a forward gear (see the swept paths in Appendix B of the Traffic and Transport Assessment in Attachment 5).
	A07.3 Development provides a servicing area, site access and maneuvering areas to accommodate the applicable minimum servicing vehicle specified in Table 9.4.3.3B .	YES	There is sufficient manoeuvring area and space for both an SRV and emergency vehicle to access and maneuverer as required on the site (see the swept paths in Appendix B of the Traffic and Transport Assessment in Attachment 5).



PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
MAINTENANCE			
PO8	A08.1	YES	Compliance can be conditioned.
Parking areas are used and maintained for their intended purpose.	Parking areas are kept and used exclusively for parking and are maintained in a suitable condition for parking and circulation of vehicles.		
	A08.2	YES	As above.
	All parking areas will be compacted, sealed, drained, line marked and maintained until such time as the development ceases.		
END OF TRIP FACILITIES		<u></u>	
	AO9.1 The number of bicycle parking spaces provided for the use is in accordance with Table 9.4.3.3D .	N/A	The proposed development (Residential Care Facility is not required to provide end of trip facilities or bicycl parking spaces in accordance with Table 9.4.3.3D (som will however, be provided)
 (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. 	AO9.2 End of trip facilities are provided in accordance with Table 9.4.3.3D.	N/A	As above.

AND RECREATION ACTIVITIES, OR TOURIST PARK.

Urban&Sync

9.4.3 Parking and Access Code

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
P10 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.		N/A	The proposed development does not include any of the above-mentioned uses.

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.

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 MEASURES	COMPLIES	COMMENT			
FOR ACCEPTED DEVELOPMENT SUBJECT TO REQUI	FOR ACCEPTED DEVELOPMENT SUBJECT TO REQUIREMENTS AND ASSESSABLE DEVELOPMENT					
WATER SUPPLY						
 PO1 Each lot has an adequate volume and supply of water that: (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. 	 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: (a) in the Conservation zone, Rural zone or Rural residential zone; and (b) outside a reticulated water supply service area. 	YES	The proposed development will connect to Council's reticulated water supply system in accordance with the requirements of the FNQROC Development Manual. Compliance can also be conditioned.			



PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
	 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: (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: (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. 	N/A	As above.
WASTEWATER DISPOSAL			
 PO2 Each lot provides for the treatment and disposal of effluent and other waste water that: (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. 	 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: (a) in the Conservation zone, Rural zone or Rural residential zone; and (b) outside a reticulated sewerage service area. 	YES	The proposed development will connect to Council's reticulated sewerage supply system in accordance with the requirements of the FNQROC Development Manual. Compliance can also be conditioned.
	AO2.2 An effluent disposal system is provided in accordance with ASNZ 1547 On-Site Domestic Wastewater	N/A	As above.



PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
	Management (as amended) where development is located: (a) in the Conservation zone, Rural zone or Rural residential zone; and (b) outside a reticulated sewerage service area.		
STORMWATER INFRASTRUCTURE			
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.	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.	YES	The proposed development will connect to Council's stormwater network in accordance with the requirements of the FNQROC Development Manual (see Attachments 6 & 7) . Compliance can also be conditioned.
	 AO3.2 On-site drainage systems are constructed: (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. 	YES	All stormwater will be directed to a lawful point of discharge in accordance with the requirements of the FNQROC Development Manual (see Attachment 6). Compliance can also be conditioned.
ELECTRICITY SUPPLY			
PO4 Each lot is provided with an adequate supply of electricity	AO4 The premises: (a) is connected to the electricity supply network; or	YES	The proposed development will be connected to the electricity network in accordance with Ergons' requirements.

PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
TELECOMMUNICATIONS INFRASTRUCTURE	 (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: (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. 		
PO5 Each lot is provided with an adequate supply of telecommunication infrastructure	AO5 Development is provided with a connection to the national broadband network or telecommunication services.	YES	The proposed development will be connected to the telecommunications network in accordance with the requirements of the telecommunications provider.
EXISTING PUBLIC UTILITY SERVICES		<u> </u>	
PO6 Development and associated works do not affect the efficient functioning of public utility mains, services or installations.	AO6 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.	N/A	The proposed development will not require the removal or relocation of any public utility mains.



PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
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. 	AO7.1 Excavation or filling does not occur within 1.5 metres of any site boundary.	YES	The proposed development will involve some excavation and fill within 1.5m of site boundaries (see Attachment 6). These earthworks are, however, minor in nature AND will be solely for the creation of drainage channels, detention basins and to ensure the site and proposed development can drain to all infrastructure networks efficiently. As a result, none of the earthworks will have negative impacts on the matters outlined in the Performance Outcome. Further compliance can also be, reasonably, conditioned accordingly.
	AO7.2 Excavation or filling at any point on a lot is to be no greater than 1.5 metres above or below natural ground level.	YES	The proposed development will not require excavation or fill that exceed 1.5m in height (see Attachment 6).
	 AO7.3 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. 	N/A	The proposed development will not require any earthworks batters.



PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
	 A07.4 Soil used for filling or spoil from excavation is not stockpiled in locations that can be viewed from: (a) adjoining premises; or (b) a road frontage, for a period exceeding 1 month from the commencement of the filling or excavation. 	YES	Compliance with Acceptable Outcome (b) can be conditioned.
	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.	N/A	The proposed development will not require any batters or berms.
	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.	N/A	The proposed development will not require any retaining walls.
	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.	YES	All trees able to be retained have been identified on the plans of development.
FOR ASSESSABLE DEVELOPMENT		1	1



PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT	
TRANSPORT NETWORK				
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.	AO8.1 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.	YES	The proposed access to Constance Street/Antonio Drive will be constructed in accordance with the FNQROC Development Manual. Compliance can also be conditioned.	
	AO8.2 Development provides footpath pavement treatments in accordance with Planning Scheme Policy 9 – Footpath Paving.	YES	Compliance can be conditioned for any footpath extension required along Kenneally Road.	
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.		N/A	The proposed development will not involve public infrastructure.	
STORMWATER QUALITY				
PO10 Development has a non-worsening effect on the site and surrounding land and is designed to:	 AO10.1 The following reporting is prepared for all Material change of use or Reconfiguring a lot proposals: (a) a Stormwater Management Plan and Report that meets or exceeds the standards of design and 	YES	Please see the Stormwater Management Report and SBSMP in Attachment 7 .	

PERF	ORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
 (a) (b) (c) (d) (e) (f) (g) 	optimise the interception, retention and removal of waterborne pollutants, prior to the discharge to receiving waters; protect the environmental values of waterbodies affected by the development, including upstream, on-site and downstream waterbodies; achieve specified water quality objectives; minimise flooding; maximise the use of natural channel design principles; maximise community benefit; and minimise risk to public safety.	 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: (i) drainage control; (ii) erosion control; (iii) sediment control; and (iv) water quality outcomes. 		
		 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: (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 	YES	As above.



PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
	landform), nutrient hazardous areas, acid sulfate soil and rainfall erosivity.		
P011	A011	YES	As above.
Storage areas for stormwater detention and retention:	No acceptable outcome is provided.		
 (a) protect or enhance the environmental values of receiving waters; (b) achieve specified water quality objectives; (c) where possible, provide for recreational use; (d) maximise community benefit; and (e) minimise risk to public safety. 			
EXCAVATION OR FILLING			
PO12 Traffic generated by filling or excavation does not impact on the amenity of the surrounding area.	AO12.1 Haul routes used for transportation of fill to or from the site only use major roads and avoid residential areas.	YES	Compliance with the Performance Outcome can be conditioned.
	 AO12.2 Transportation of fill to or from the site does not occur: (a) within peak traffic times; and (b) before 7am or after 6pm Monday to Friday; (c) before 7am or after 1pm Saturdays; and (d) on Sundays or Public Holidays. 	YES	As above.
PO13	A013.1	YES	As above.
Air pollutants, dust and sediment particles from excavation or filling, do not cause significant environmental harm or nuisance impacts.	Dust emissions do not extend beyond the boundary of the site.		



PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT	
	AO13.2 No other air pollutants, including odours, are detectable at the boundary of the site.	YES	As above.	
	AO13.3 A management plan for control of dust and air pollutants is prepared and implemented.	YES	As above.	
 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. 	YES	As above.	
	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.	YES	Compliance can be conditioned.	



PERFORMANCE OUTCOMES	ACCEPTABLE MEASURES	COMPLIES	COMMENT
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. 	N/A	The site is not contaminated (see Attachment 3).
FIRE SERVICES IN DEVELOPMENTS ACCESSED BY CO	OMMON PRIVATE TITLE	1	
PO17 Fire hydrants are located in positions that will enable fire services to access water safely, effectively and efficiently.	 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. 	N/A	The proposed development will not involve common private title.
	AO17.2 Fire hydrants are located at all intersections of accessways or private roads held in common private title.	N/A	As above.

ATTACHMENT 14:

STATE DEVELOPMENT ASSESSMENT PROVISIONS – STATE CODE 1 ASSESSMENT

State code 1: Development in a state-controlled road environment

Table 1.2.1: Development in a state-controlled road environment

Performance outcomes	Acceptable outcomes	Response
Buildings and structures		
PO1 The location of buildings, structures, infrastructure, services and utilities does not create a safety hazard in a state-controlled road, or cause damage to, or obstruct road transport infrastructure.	AO1.1 Buildings, structures, infrastructure, services and utilities are not located in a state-controlled road. AND	Complies with AO1.1 The proposed development will not have any buildings, structures, infrastructure, services or utilities located in a State-controlled Road.
	AO1.2 Buildings, structures, infrastructure, services and utilities can be maintained without requiring access to a state-controlled road.	Complies with AO1.2 Any buildings, structures, infrastructure, services or utilities associated with the development are able to be maintained without requiring access to a State- controlled Road.
PO2 The design and construction of buildings and structures does not create a safety hazard by distracting users of a state-controlled road.	AO2.1 Facades of buildings and structures facing a state-controlled road are made of non-reflective materials. OR	Complies with AO1.2 Compliance can be conditioned.
	AO2.2 Facades of buildings and structures do not reflect point light sources into the face of oncoming traffic on a state-controlled road. AND	Not Applicable See AO2.1 above.
	AO2.3 External lighting of buildings and structures is not directed into the face of oncoming traffic on a state-controlled road and does not involve flashing or laser lights. AND	Not Applicable See AO2.1 above.

Performance outcomes	Acceptable outcomes	Response
	AO2.4 Advertising devices visible from a state- controlled road are located and designed in accordance with the Roadside Advertising Guide, 2 nd Edition, Department of Transport and Main Roads, 2017.	Not Applicable See AO2.1 above.
PO3 Road, pedestrian and bikeway bridges over a state-controlled road are designed and constructed to prevent projectiles from being thrown onto a state-controlled road.	AO3.1 Road, pedestrian and bikeway bridges over a state-controlled road include throw protection screens in accordance with section 4.9.3 of the Design Criteria for Bridges and Other Structures Manual, Department of Transport and Main Roads, 2018.	Not Applicable The proposed development does not involve a road, pedestrian or bikeway bridge.
Filling, excavation and retaining structures		
 PO4 Filling and excavation does not interfere with, or result in damage to, infrastructure or services in a state-controlled road. Note: Information on the location of services and public utility plants in a state-controlled road can be obtained from the Dial Before You Dig service. Where development will impact on an existing or future service or public utility plant in a state-controlled road such that the service or public utility plant will need to be relocated, the alternative alignment must comply with the standards and design specifications of the relevant service or public utility provider, and any costs of relocation are to be borne by the developer. Refer to the SDAP Supporting Information: Filling, excavation and retaining structures in a state-controlled road environment, Department of Transport and Main Roads, 2017, for further guidance on how to comply with this performance outcome. 	No acceptable outcome is prescribed.	Complies with PO4 Compliance can be conditioned.
PO5 Filling, excavation, building foundations and retaining structures do not undermine, or cause subsidence of, a state-controlled road. Note: To demonstrate compliance with this performance outcome, it is recommended an RPEQ certified geotechnical assessment, prepared in accordance with the Road Planning and Design	No acceptable outcome is prescribed.	Complies with PO5 Compliance can be conditioned.

State Development Assessment Provisions – version 2.5 State code 1: Development in a state-controlled road environment

Performance outcomes	Acceptable outcomes	Response
Manual 2 nd Edition: Volume 3, Department of Transport and Main Roads, 2016, is provided.		
Refer to the SDAP Supporting Information: Filling, excavation and retaining structures in a state-controlled road environment, Department of Transport and Main Roads, 2017, for further guidance on how to comply with this performance outcome and prepare a geotechnical assessment.		
PO6 Filling, excavation, building foundations and retaining structures do not cause ground water disturbance in a state-controlled road.	No acceptable outcome is prescribed.	Complies with PO6 Compliance can be conditioned.
Note: To demonstrate compliance with this performance outcome, it is recommended an RPEQ certified geotechnical assessment, prepared in accordance with the Road Planning and Design manual 2 nd Edition: Volume 3, Department of Transport and Main Roads, 2016, is provided.		
Refer to the SDAP Supporting Information: Filling, excavation and retaining structures in a state-controlled road environment, Department of Transport and Main Roads, 2017, for further guidance on how to comply with this performance outcome and prepare a geotechnical assessment.		
PO7 Excavation, boring, piling, blasting or fill compaction during construction of a development does not result in ground movement or vibration impacts that would cause damage or nuisance to a state-controlled road, road transport infrastructure or road works.	No acceptable outcome is prescribed.	Complies with PO7 Compliance can be conditioned.
Note: To demonstrate compliance with this performance outcome, it is recommended an RPEQ certified geotechnical assessment, prepared in accordance with Road Planning and Design Manual 2 nd Edition: Volume 3, Department of Transport and Main Roads, 2016, is provided.		
Refer to the SDAP Supporting Information: Filling, excavation and retaining structures in a state-controlled road environment, Department of Transport and Main Roads, 2017, for further guidance on how to comply with this performance outcome and prepare a geotechnical assessment.		

Performance outcomes	Acceptable outcomes	Response
PO8 Development involving the haulage of fill, extracted material or excavated spoil material exceeding 10,000 tonnes per year does not damage the pavement of a state-controlled road.	A08.1 Fill, extracted material and spoil material is not transported to or from the development site on a state-controlled road.	Complies with PO8 No more than 10,000 tonnes of cut and/or fill will be required for the proposed development (see Attachment 6).
Note: It is recommended a pavement impact assessment is provided.		
Refer to the SDAP Supporting Information: Filling, excavation and retaining structures in a state-controlled road environment, Department of Transport and Main Roads, 2017, and the Guide to Traffic Impact Assessment, Department of Transport and Main Roads, 2017, for further guidance on how to comply with this performance outcome and prepare a pavement impact assessment.		
PO9 Filling and excavation associated with the construction of vehicular access to a development does not compromise the operation or capacity of existing drainage infrastructure for a state-controlled road. Note: Refer to the SDAP Supporting Information: Filling, excavation and retaining structures in a state-controlled road environment, Department of Transport and Main Roads, 2017, for further guidance on how to comply with this performance outcome.	No acceptable outcome is prescribed.	Complies with PO9 Compliance can be conditioned.
PO10 Fill material used on a development site does not result in contamination of a state-controlled road.	AO10.1 Fill material is free of contaminants including acid sulfate content.	Complies with AO10.1 Compliance can be conditioned.
Note: Refer to the SDAP Supporting Information: Filling, excavation and retaining structures in a state-controlled road environment, Department of Transport and Main Roads, 2017, for further guidance on how to comply with this performance outcome.	Note: Soils and rocks should be tested in accordance with AS 1289.0 – Methods of testing soils for engineering purposes and AS 4133.0-2005 – Methods of testing rocks for engineering purposes. AND	
	AO10.2 Compaction of fill is carried out in accordance with the requirements of AS 1289.0 2000 – Methods of testing soils for engineering purposes.	Complies with AO10.2 Compliance can be conditioned.

Performance outcomes	Acceptable outcomes	Response
PO11 Filling and excavation does not cause wind- blown dust nuisance in a state-controlled road. Note: Refer to the SDAP Supporting Information: Filling, excavation and retaining structures in a state-controlled road environment, Department of Transport and Main Roads, 2017, for further guidance on how to comply with this performance	AO11.1 Compaction of fill is carried out in accordance with the requirements of AS 1289.0 2000 – Methods of testing soils for engineering purposes. AND	Complies with AO11.1 Compliance can be conditioned.
outcome.	AO11.2 Dust suppression measures are used during filling and excavation activities such as wind breaks or barriers and dampening of ground surfaces.	Complies with AO11.1 Compliance can be conditioned.
Stormwater and drainage		
PO12 Development does not result in an actionable nuisance, or worsening of, stormwater, flooding or drainage impacts in a state-controlled road. Note: Refer to the SDAP Supporting Information: Stormwater and drainage in a state-controlled road environment, Department of Transport and Main Roads, 2017, for further guidance on how to comply with this performance outcome.	No acceptable outcome is prescribed.	Complies with PO12 Compliance can be conditioned. Please also refer to the Stormwater Management Plan and SBSMP in Attachment 7 for further information.
PO13 Run-off from the development site is not unlawfully discharged to a state-controlled road. Note: Refer to the SDAP Supporting Information: Stormwater and drainage in a state-controlled road environment, Department of Transport and Main Roads, 2017, for further guidance on how to	AO13.1 Development does not create any new points of discharge to a state-controlled road. AND	Complies with PO13 Compliance with the Performance Outcome can be conditioned. Please also refer to the Stormwater Management Plan and SBSMP in Attachment 7 for further information.
comply with this performance outcome.	 AO13.2 Stormwater run-off is discharged to a lawful point of discharge. Note: Section 3.9 of the Queensland Urban Drainage Manual, Institute of Public Works Engineering Australasia (Queensland Division) Fourth Edition, 2016, provides further information on lawful points of discharge. AND AO13.3 Development does not worsen the condition of an existing lawful point of discharge to the state-controlled road. 	Complies with PO13 As above. Complies with PO13 As above.
PO14 Run-off from the development site during construction does not cause siltation of stormwater infrastructure affecting a state-controlled road.	AO14.1 Run-off from the development site during construction is not discharged to stormwater infrastructure for a state-controlled road.	Complies with PO14 Compliance can be conditioned.

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Performance outcomes	Acceptable outcomes	Response
Note: Refer to the SDAP Supporting Information: Stormwater and drainage in a state-controlled road environment, Department of Transport and Main Roads, 2017, for further guidance on how to comply with this performance outcome.		
Vehicular access to a state-controlled road		
venicular access to a state-controlled road	1	
PO15 Vehicular access to a state-controlled road that is a limited access road is consistent with government policy for the management of limited access roads. Note: Refer to the SDAP Supporting Information: Vehicular access to a state-controlled road, Department of Transport and Main Roads, 2017, for further guidance on how to comply with this performance outcome.	AO15.1 Development does not require new or changed access to a limited access road. Note: Limited access roads are declared by the transport chief executive under section 54 of the <i>Transport Infrastructure</i> <i>Act 1994</i> and are identified in the DA mapping system. OR	Complies with AO15.1 Please refer to Appendix C of the Traffic and Transport Assessment in Attachment 5 for demonstration of compliance.
	AO15.2 A new or changed access to a limited access road is consistent with the limited access policy for the state-controlled road. Note: Limited access policies for limited access roads declared under the <i>Transport Infrastructure Act 1994</i> can be obtained by contacting the relevant Department of Transport and Main Roads regional office. AND	Not Applicable As above.
	AO15.3 Where a new or changed access is for a service centre, access is consistent with the Service centre policy, Department of Transport and Main Roads, 2013 and the Access policy for roadside service centre facilities on limited access roads, Department of Transport and Main Roads, 2013, and the Service centre strategy for the state-controlled road.	Not Applicable As above.
	Note: The Service centre policy, Department of Transport and Main Roads, 2013, Access policy for roadside service centre facilities, Department of Transport and Main Roads, 2013 and the relevant Service centre strategy for a state-controlled road can be accessed by contacting the relevant Department of Transport and Main Roads regional office.	

Performance outcomes	Acceptable outcomes	Response
PO16 The location and design of vehicular access to a state-controlled road (including access to a limited access road) does not create a safety hazard for users of a state-controlled road or result in a worsening of operating conditions on a state- controlled road. Note: Where a new or changed access between the premises and a state-controlled road is proposed, the Department of Transport and Main Roads will need to assess the proposal to determine if the vehicular access for the development is safe. An	AO16.1 Vehicular access is provided from a local road.	Not Applicable See below.
	OR all of the following acceptable outcomes apply: AO16.2 Vehicular access for the development is consistent with the function and design of the state- controlled road. AND	Complies with PO16 Please refer to Appendix C of the Traffic and Transport Assessment in Attachment 5 for demonstration of compliance with the Performance Outcome.
assessment can be made by Department of Transport and Main Roads as part of the development assessment process and a decision under section 62 of <i>Transport Infrastructure Act 1994</i> issued.	AO16.3 Development does not require new or changed access between the premises and the state-controlled road.	Complies with PO16 As above.
Refer to the SDAP Supporting Information: Vehicular access to a state-controlled road, Department of Transport and Main Roads, 2017, for further guidance on how to comply with this performance outcome.	Note: A decision under section 62 of the <i>Transport Infrastructure Act 1994</i> outlines the approved conditions for use of an existing vehicular access to a state-controlled road . Current section 62 decisions can be obtained from the relevant Department of Transport and Main Roads regional office.	
	AND	
	AO16.4 Use of any existing vehicular access to the development is consistent with a decision under section 62 of the <i>Transport Infrastructure Act</i> 1994.	Not Applicable The site does not include an existing vehicular access to a State-controlled road.
	Note: The development which is the subject of the application must be of an equivalent use and intensity for which the section 62 approval was issued and the section 62 approval must have been granted no more than 5 years prior to the lodgement of the application.	
	AND	
	AO16.5 On-site vehicle circulation is designed to give priority to entering vehicles at all times so vehicles do not queue in a road intersection or on the state-controlled road.	Complies with PO16 As above.
Vehicular access to local roads within 100 metres of a	n intersection with a state-controlled road	

Performance outcomes	Acceptable outcomes	Response
PO17 The location and design of vehicular access to a local road within 100 metres of an intersection with a state-controlled road does not create a safety hazard for users of a state-controlled road.	AO17.1 Vehicular access is located as far as possible from the state-controlled road intersection. AND	Not Applicable The proposed development does not involve an access to a local road within 100m of the State-controlled Road.
Note: Refer to the SDAP Supporting Information: Vehicular access to a state-controlled road, Department of Transport and Main Roads, 2017, for further guidance on how to comply with this performance outcome.	AO17.2 Vehicular access is in accordance with parts, 3, 4 and 4A of the Road Planning and Design Manual, 2 nd Edition: Volume 3, Department of Transport and Main Roads, 2016. AND	Not Applicable As above.
	AO17.3 On-site vehicle circulation is designed to give priority to entering vehicles at all times so vehicles do not queue in the intersection or on the state-controlled road.	Not Applicable As above.
Public passenger transport infrastructure on state-con	trolled roads	
PO18 Development does not damage or interfere with public passenger transport infrastructure, public passenger services or pedestrian or cycle access to public passenger transport infrastructure and public	AO18.1 Vehicular access and associated road access works are not located within 5 metres of existing public passenger transport infrastructure. AND	Not Applicable There is no existing public passenger transport infrastructure adjacent to the site.
passenger services. Note: Refer to the SDAP Supporting Information: Vehicular access to a state-controlled road, Department of Transport and Main Roads, 2017, for further guidance on how to comply with	AO18.2 Development does not necessitate the relocation of existing public passenger transport infrastructure. AND	Not Applicable As above.
this performance outcome.	AO18.3 On-site vehicle circulation is designed to give priority to entering vehicles at all times so vehicles using a vehicular access do not obstruct public passenger transport infrastructure and public passenger services or obstruct pedestrian or cycle access to public passenger transport infrastructure and public passenger services. AND	Not Applicable As above.

Performance outcomes	Acceptable outcomes	Response
	AO18.4 The normal operation of public passenger transport infrastructure or public passenger services is not interrupted during construction of the development.	Not Applicable As above.
Planned upgrades		
PO19 Development does not impede delivery of planned upgrades of state-controlled roads.	AO19.1 Development is not located on land identified by the Department of Transport and Main Roads as land required for the planned upgrade of a state-controlled road.	Not Applicable There are no planned upgrades (as mapped on the DA Mapping) to the State-controlled Road adjacent to the site.
	Note: Land required for the planned upgrade of a state-controlled road is identified in the <u>DA mapping system</u> . OR	
	AO19.2 Development is sited and designed so that permanent buildings, structures, infrastructure, services or utilities are not located on land identified by the Department of Transport and Main Roads as land required for the planned upgrade of a state- controlled road.	Not Applicable As above.
	OR all of the following acceptable outcomes apply: AO19.3 Structures and infrastructure located on land identified by the Department of Transport and Main Roads as land required for the planned upgrade of a state-controlled road are able to be readily relocated or removed without materially affecting the viability or functionality of the development.	Not Applicable As above.
	AND	

Performance outcomes	Acceptable outcomes	Response
	AO19.4 Vehicular access for the development is consistent with the function and design of the planned upgrade of the state-controlled road. AND	Not Applicable As above.
	AO19.5 Development does not involve filling and excavation of, or material changes to, land required for a planned upgrade to a state-controlled road. AND	Not Applicable As above.
	AO19.6 Land is able to be reinstated to the pre- development condition at the completion of the use.	Not Applicable As above.
Network impacts		
 PO20 Development does not result in a worsening of operating conditions on the state-controlled road network. Note: To demonstrate compliance with this performance outcome, it is recommended that an RPEQ certified traffic impact assessment is provided. Please refer to the Guide to Traffic Impact Assessment, Department of Transport and Main Roads, 2017, for further guidance on how to comply with this performance outcome. 	No acceptable outcome is prescribed.	Complies with PO20 Please refer to Appendix C of the Traffic and Transport Assessment in Attachment 5 for demonstration of compliance with the Performance Outcome.
PO21 Development does not impose traffic loadings on a state-controlled road which could be accommodated on the local road network.	AO21.1 The layout and design of the development directs traffic generated by the development to the local road network.	Complies with PO21 Please refer to Appendix C of the Traffic and Transport Assessment in Attachment 5 for demonstration of compliance with the Performance Outcome.
PO22 Upgrade works on, or associated with, a state-controlled road are built in accordance with Queensland road design standards.	AO22.1 Upgrade works required as a result of the development are designed and constructed in accordance with the <i>Road Planning and Design Manual</i> , 2 nd edition, Department of Transport and Main Roads, 2016. Note: Road works in a state-controlled road require approval under section 33 of the <i>Transport Infrastructure Act 1994</i> before the works commence.	Complies with AO22.1 Compliance can be conditioned.

Table 1.2.2: Environmental emissions

Statutory note: Where a **state-controlled road** is co-located in the same transport corridor as a railway, the development should instead comply with table 2.2.2: Environmental emissions in State code 2: Development in a railway environment.

Refer to the SDAP Supporting Information: Environmental emissions in a state-controlled road environment, Department of Transport and Main Roads, 2017, for further guidance on how to comply with the performance outcomes in Table 1.2.2.

Performance outcomes	Acceptable outcomes	
Noise		
Accommodation activities		
PO23 Development involving an accommodation activity or land for a future accommodation activity minimises noise intrusion from a state-controlled road or type 1 multi-modal corridor in habitable rooms.	 AO23.1 A noise barrier or earth mound is provided which is designed, sited and constructed: to meet the following external noise criteria at all facades of the building envelope: ≤60 dB(A) L₁₀ (18 hour) façade corrected (measured L₉₀ (8 hour) free field between 10pm and 6am ≤40 dB(A)) ≤63 dB(A) L₁₀ (18 hour) façade corrected (measured L₉₀ (8 hour) free field between 10pm and 6am >40 dB(A)) 2. in accordance with chapter 7 integrated noise barrier design of the Transport Noise Management Code of Practice: Volume 1 (Road Traffic Noise), Department of Transport and Main Roads, 2013. Note: To demonstrate compliance with the acceptable outcome, it is recommended that a RPEQ certified noise assessment report is provided, prepared in accordance with the SDAP Supporting Information: Environmental emissions in a state-controlled road environment, Department of Transport and Main Roads, 2017. If the building envelope is unknown, the deemed-to-comply setback distances for buildings stipulated by the local planning instrument or relevant building regulations should be used. 	Complies with PO23 Please refer to the Environmental Noise Impact Assessment in Attachment 10 for demonstration of compliance with the Performance Outcome.

Performance outcomes	Acceptable outcomes	
	criteria is at the discretion of the Department of Transport and Main	
	Roads.	
	OR all of the following acceptable outcomes apply:	
	AO23.2 Buildings which include a habitable room are	Not Applicable
	setback the maximum distance possible from a state-	As above.
	controlled road or type 1 multi-modal corridor.	
	AND	
	AO23.3 Buildings are designed and oriented so that	Not Applicable
	habitable rooms are located furthest from a state-	As above.
	controlled road or type 1 multi-modal corridor.	
	AND	
	AO23.4 Buildings (other than a relevant residential	Not Applicable
	building or relocated building) are designed and	As above.
	constructed using materials which ensure that	
	habitable rooms meet the following internal noise	
	criteria:	
	1. ≤35 dB(A) L_{eq} (1 hour) (maximum hour over 24	
	hours).	
	Note: Noise levels from a state-controlled road or type 1 multi-	
	modal corridor are to be measured in accordance with AS1055.1– 1997 Acoustics – Description and measurement of environmental	
	noise.	
	To demonstrate compliance with the acceptable outcome, it is	
	recommended that a RPEQ certified noise assessment report is provided, prepared in accordance with the SDAP Supporting	
	Information: Environmental emissions in a state controlled road	
	environment, Department of Transport and Main Roads 2017.	
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Performance outcomes	Acceptable outcomes	
	Habitable rooms of relevant residential buildings located within a transport noise corridor must comply with the Queensland Development Code MP4.4 Buildings in a transport noise corridor, Queensland Government, 2015. Transport noise corridors are mapped on the State Planning Policy interactive mapping system.	
PO24 Development involving an accommodation activity or land for a future accommodation activity minimises noise intrusion from a state-controlled road or type 1 multi-modal corridor in outdoor spaces for passive recreation.	 AO24.1 A noise barrier or earth mound is provided which is designed, sited and constructed: 1. to meet the following external noise criteria in outdoor spaces for passive recreation: a. ≤57 dB(A) L₁₀ (18 hour) free field (measured L₉₀ (18 hour) free field between 6am and 12 midnight ≤45 dB(A)) b. ≤60 dB(A) L₁₀ (18 hour) free field (measured L₉₀ (18 hour) free field between 6am and 12 midnight ≤45 dB(A)) 2. in accordance with chapter 7 integrated noise barrier design of the Transport Noise Management Code of Practice – Volume 1 Road Traffic Noise, Department of Transport and Main Roads, 2013. Note: To demonstrate compliance with the acceptable outcome, it is recommended that a RPEQ certified noise assessment report is provided, prepared in accordance with the SDAP Supporting 	Complies with PO23 Please refer to the Environmental Noise Impact Assessment in Attachment 10 for demonstration of compliance with the Performance Outcome.

Performance outcomes	Acceptable outcomes	
	Information: Environmental emissions in a state controlled road environment, Department of Transport and Main Roads 2017 OR	
	AO24.2 Each dwelling has access to an outdoor space for passive recreation which is shielded from a state-controlled road or type 1 multi-modal corridor by a building, solid gap-free fence, or other solid gap-free structure. AND	Not Applicable As above.
	AO24.3 Each dwelling with a balcony directly exposed to noise from a state-controlled road or type 1 multi-modal corridor has a continuous solid gap-free balustrade (other than gaps required for drainage purposes to comply with the Building Code of Australia).	Not Applicable As above.
Childcare centres and educational establishments		
 PO25 Development involving a: 1. childcare centre; or 2. educational establishment minimises noise intrusion from a state-controlled road or type 1 multi-modal corridor in indoor education areas and indoor play areas. 	 AO25.1 A noise barrier or earth mound is provided which is designed, sited and constructed: 1. to meet the following external noise criteria at all facades of the building envelope: a. ≤58 dB(A) L₁₀ (1 hour) façade corrected (maximum hour during normal opening hours) 2. in accordance with chapter 7 – Integrated noise barrier design of the Transport Noise Management Code of Practice: Volume 1 (Road Traffic Noise), Department of Transport and Main Roads, 2013. 	Not Applicable The proposed development does not involve a childcare centre or educational establishment.
	Note: To demonstrate compliance with the acceptable outcome, it is recommended that a RPEQ certified noise assessment report is provided, prepared in accordance with the SDAP Supporting Information: Environmental emissions in a state controlled road environment, Department of Transport and Main Roads 2017.	

Performance outcomes	Acceptable outcomes	
	If the building envelope is unknown, the deemed-to-comply setback distances for buildings stipulated by the local planning instrument or relevant building regulations should be used.	
	OR all of the following acceptable outcomes apply:	Not Applicable As above.
	AO25.2 Buildings which include indoor education areas and indoor play areas are setback the maximum distance possible from a state-controlled road or type 1 multi-modal corridor.	
	AND AO25.3 Buildings are designed and oriented so that indoor education areas and indoor play areas are located furthest from the state-controlled road or type 1 multi-modal corridor. AND	Not Applicable As above.
	 AO25.4 Buildings are designed and constructed using materials which ensure indoor education areas and indoor play areas meet the following internal noise criteria: 1. ≤35 dB(A) L_{eq} (1 hour) (maximum hour during opening hours). 	Not Applicable As above.
	Note: Noise levels from a state-controlled road or type 1 multi- modal corridor are to be measured in accordance with AS1055.1– 1997 Acoustics – Description and measurement of environmental noise. To demonstrate compliance with the acceptable outcome, it is recommended that a RPEQ certified noise assessment report is provided, prepared in accordance with the SDAP Supporting Information: Environmental emissions in a state controlled road environment, Department of Transport and Main Roads 2017.	

Performance outcomes	Acceptable outcomes	
 Performance outcomes PO26 Development involving a: childcare centre; or educational establishment minimises noise intrusion from a state-controlled road or type 1 multi-modal corridor in outdoor education areas and outdoor play areas. 	 ACCEPTABLE OUTCOMES AO26.1 A noise barrier or earth mound is provided which is designed, sited and constructed: to meet the following external noise criteria in each outdoor education area or outdoor play area: a. ≤63 dB(A) L₁₀ (12 hour) free field (between 6am and 6pm) in accordance with chapter 7 – Integrated noise barrier design of the Transport Noise Management Code of Practice: Volume 1 (Road Traffic Noise), Department of Transport and Main Roads, 2013. Note: To demonstrate compliance with the acceptable outcome, it is recommended that a RPEQ certified noise assessment report is provided, prepared in accordance with the SDAP Supporting Information: Environmental emissions in a state controlled road environment, Department of Transport and Main Roads 2017. OR 	Not Applicable The proposed development does not involve a childcare centre or educational establishment.
	AO26.2 Each outdoor education area and outdoor play area is shielded from noise generated from a state-controlled road or type 1 multi-modal corridor by a building, solid gap-free fence, or other solid gap- free structure.	Not Applicable As above.
Hospitals		
PO27 Development involving a hospital minimises noise intrusion from a state-controlled road or type 1 multi-modal corridor in patient care areas.	AO27.1 Hospitals are designed and constructed using materials which ensure patient care areas meet the following internal noise criteria: $1 = \sqrt{25} dP(A) I_{ensure}$ (1 hour) (maximum hour during	Not Applicable The proposed development does not involve a hospital.
	 ≤35 dB(A) L_{eq} (1 hour) (maximum hour during opening hours). 	
	Note: Noise levels from a state-controlled road or type 1 multi- modal corridor are to be measured in accordance with AS1055.1– 1997 Acoustics – Description and measurement of environmental noise.	
	To demonstrate compliance with the acceptable outcome, it is recommended that a RPEQ certified noise assessment report is	

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Performance outcomes	Acceptable outcomes	
	provided, prepared in accordance with the SDAP Supporting Information: Environmental emissions in a state controlled road environment, Department of Transport and Main Roads 2017.	
Vibration		
Hospitals		
PO28 Development involving a hospital minimises vibration impacts from vehicles using a state-controlled road or type 1 multi-modal corridor in patient care areas.	AO28.1 Hospitals are designed and constructed to ensure vibration in the treatment area of a patient care area does not exceed a vibration dose value of 0.1m/s ^{1.75} . AND	Not Applicable The proposed development does not involve a hospital.
	AO28.2 Hospitals are designed and constructed to ensure vibration in the ward area of a patient care area does not exceed a vibration dose value of 0.4m/s ^{1.75} . Note: To demonstrate compliance with the acceptable outcome, it is recommended that a RPEQ certified vibration assessment report is provided.	Not Applicable As above.
Air and light		
PO29 Development involving an accommodation activity minimises air quality impacts from a state-controlled road or type 1 multi-modal corridor in outdoor spaces for passive recreation.	AO29.1 Each dwelling has access to an outdoor space for passive recreation which is shielded from a state-controlled road or type 1 multi-modal corridor by a building, solid gap-free fence, or other solid gap-free structure.	Complies with AO29.1 Outdoor recreation areas are located at the rear of the site and within the confines of the building.
 PO30 Development involving a: 1. childcare centre; or 2. educational establishment minimises air quality impacts from a state-controlled road or type 1 multi-modal corridor in outdoor education areas and outdoor play areas. 	AO30.1 Each outdoor education area and outdoor play area is shielded from a state-controlled road or type 1 multi-modal corridor by a building, solid gap-free fence, or other solid gap-free structure.	Not Applicable The proposed development does not involve a childcare centre or educational establishment.

Performance outcomes	Acceptable outcomes	
PO31 Development involving an accommodation activity or hospital minimises lighting impacts from a state-controlled road or type 1 multi-modal corridor.	AO31.1 Buildings for an accommodation activity or hospital are designed to minimise the number of windows or transparent/translucent panels facing a state-controlled road or type 1 multi-modal corridor. OR	Complies with PO31 Compliance with the Performance Outcome can be conditioned.
	AO31.2 Windows facing a state-controlled road or type 1 multi-modal corridor include treatments to block light from a state-controlled road or type 1 multi-modal corridor.	Not Applicable As above.

Table 1.2.3: Development in a future state-controlled road environment

Performance outcomes	Acceptable outcomes	
PO32 Development does not impede delivery of a future state-controlled road.	 AO32.1 Development is not located in a future state- controlled road. OR AO32.2 Development is sited and designed so that permanent buildings, structures, infrastructure, services or utilities are not located in a future state- controlled road. 	Not ApplicableThe site is not mapped as a future State-controlledRoad.Not ApplicableAs above.
	OR all of the following acceptable outcomes apply: AO32.3 Structures and infrastructure located in a future state-controlled road are able to be readily relocated or removed without materially affecting the viability or functionality of the development. AND	Not Applicable As above.
	AO32.4 Development does not involve filling and excavation of, or material changes to, a future state-controlled road. AND	Not Applicable As above.
	AO32.5 Land is able to be reinstated to the pre- development condition at the completion of the use.	Not Applicable As above.

Performance outcomes	Acceptable outcomes	
PO33 Vehicular access to a future state-controlled road is located and designed to not create a safety hazard for users of a future state-controlled road or result in a worsening of operating conditions on a future state-controlled road.	AO33.1 Development does not require new or changed access between the premises and a future state-controlled road. AND	Not Applicable As above.
Note: Where a new or changed access between the premises and a future state-controlled road is proposed, the Department of Transport and Main Roads will need to assess the proposal to determine if the vehicular access for the development is safe. An assessment can be made by Department of Transport and Main Roads as part of the development assessment process and a decision under section 62 of <i>Transport Infrastructure Act 1994</i> issued.	AO33.2 Vehicular access for the development is consistent with the function and design of the future state-controlled road.	Not Applicable As above.
 PO34 Filling, excavation, building foundations and retaining structures do not undermine, or cause subsidence of, a future state-controlled road. Note: To demonstrate compliance with this performance outcome, it is recommended that an RPEQ certified geotechnical assessment is provided, prepared in accordance with the Road Planning and Design Manual, 2nd edition: Volume 3, Department of Transport and Main Roads, 2016. Refer to the SDAP Supporting Information: Filling, excavation and retaining structures in a state-controlled road environment, Department of Transport and Main Roads, 2017, for further guidance on how to comply with this performance outcome and prepare a geotechnical assessment. 	No acceptable outcome is prescribed.	Not Applicable As above.
 PO35 Fill material from a development site does not result in contamination of land for a future state-controlled road. Note: Refer to the SDAP Supporting Information: Filling, excavation and retaining structures in a state-controlled road environment, Department of Transport and Main Roads, 2017, for 	AO35.1 Fill material is free of contaminants including acid sulfate content. Note: Soil and rocks should be tested in accordance with AS1289 – Methods of testing soils for engineering purposes and AS4133 2005 – Methods of testing rocks for engineering purposes.	Not Applicable As above.
further guidance on how to comply with this performance outcome.	AO35.2 Compaction of fill is carried out in accordance with the requirements of AS1289.0 2000 – Methods of testing soils for engineering purposes.	Not Applicable As above.

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Performance outcomes	Acceptable outcomes	
PO36 Development does not result in an actionable nuisance, or worsening of, stormwater, flooding or drainage impacts in a future state-controlled road. Note: Refer to the SDAP Supporting Information: Stormwater and drainage in a state-controlled road environment, Department of Transport and Main Roads, 2017, for further guidance on how to comply with this performance outcome.	No acceptable outcome is prescribed.	Not Applicable As above.
PO37 Run-off from the development site is not unlawfully discharged to a future state-controlled road.	AO37.1 Development does not create any new points of discharge to a future state-controlled road. AND	Not Applicable As above.
Note: Refer to the SDAP Supporting Information: Stormwater and drainage in a state-controlled road environment, Department of Transport and Main Roads, 2017, for further guidance on how to comply with this performance outcome.	AO37.2 Stormwater run-off is discharged to a lawful point of discharge. Note: Section 3.9 of the Queensland Urban Drainage Manual, Institute of Public Works Engineering Australasia (Queensland Division), Fourth Edition, 2016, provides further information on lawful points of discharge.	Not Applicable As above.
	AO37.3 Development does not worsen the condition of an existing lawful point of discharge to the future state-controlled road.	Not Applicable As above.