Town Planning Report

Johnston Road, Mossman Gorge

Lot 1 SP150474

HRP15394

Seeking:

- Development Permit for a Material Change of Use (Retirement Facility)
- Preliminary Approval (s241) for Material Change of Use (Retirement Facility)
- Development Permit for Reconfiguring a Lot (one lot into two lots)

Prepared for
The Salvation Army / Douglas Shire Council

January 2016

Cardno
Shaping the Future

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001	16.12.15	Town Planning Report	Urbi Musso	Dominic Hammersley
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Executive Summary

1.1 Site Details

Site Details	
Address	Johnston Road, Mossman Gorge
RPD	Lot 1 SP150474
Owner	Douglas Shire Council (Refer to **Appendix A** - Current Title Search)
Locality	Mossman & Environs
Zoning	Community and Recreational Facilities
Overlays	Acid Sulfate Soils
	Natural Hazards (Bushfire Risk: Low and medium risk)
Site Area	4.378ha

1.2 Application Details

Application Details	
Development Type	> Material Change of Use (Development permit and s241 preliminary approval) > Reconfiguring a Lot (Development permit)
Level of Assessment	Code assessment (all)
Proposal Summary	Material Change of Use to facilitate the establishment of Stage 1 of the Mossman and District Aged Care Precinct, being a 42-bed Retirement facility; Preliminary approval (in accordance with s.241 of the SPA) for a Material Change of Use (Retirement facility) for the balance portion; Reconfiguring a Lot (one lot into two lots)
Defined Land Use	Material Change of Use: Retirement Facility
Referral – Concurrence	Nil
Referral – Advice	Nil
Applicant	The Salvation Army / Douglas Shire Council C/- Cardno HRP
Applicant's Representative	Dominic Hammersley
Reference	HRP15394

2 Introduction

This Town Planning report accompanies a Development Application with respect to land located at Johnston Road, Mossman Gorge (refer to **Figure 1 – Location Plan)**.

The Salvation Army / Douglas Shire Council is seeking development permits and preliminary approval for the following:

- Material Change of Use to facilitate the establishment of Stage 1 of the Mossman and District Aged Care Precinct, being a 42-bed Retirement facility;
- s241 preliminary approval for a Material Change of Use (Retirement facility) for the balance portion identified as 'Future Retirement Facility Development';
- Reconfiguring a Lot (one lot into two lots) to facilitate the Retirement facility of Stage 1 of the Mossman and District Aged Care Precinct being wholly within its own lot.

The proposal is assessable development under the *Douglas Shire Planning Scheme 2006* ('the Planning Scheme') (including all amendments current to 11 January 2013). The planning scheme requires Code Assessable development applications for the above aspects of development.

Section 313 of the *Sustainable Planning Act 2009* ("the SPA") prescribes the requirements for Code Assessment.

Section 6 – Summary of Compliance of this report provides a summary of the proposed development's compliance with the applicable provisions of the Douglas Shire Council Planning Scheme (2006).

3 Site Details and Characteristics

3.1 Site Details

3.1.1 Location

The subject site is situated at Johnston Road, Mossman Gorge and is located within the Community and Recreational Facilities Planning Area of the Mossman & Environs Locality.

3.2 Site Characteristics

3.2.1 Current Use of the Site

The site is currently vacant.

3.2.2 Road Frontages

The subject site has direct frontage to Johnston Road, to which Douglas Shire Council is Road Manager.

3.2.3 Ownership

The registered owner of the lot is Douglas Shire Council. Refer to **Appendix A – Current Title Search** for details.

3.2.4 Easements

The subject site is not burdened by any easements. Refer **Appendix A– Current Title Search** and **Appendix B – Registered Survey Plan and Smart Map** for details.

3.2.5 Existing Significant Vegetation and Waterway Values

The site includes areas mapped as containing Regulated Vegetation (Category B) refer **Appendix C – State Mapping Searches**.

3.2.6 Surrounding Land Uses and Zoning

Table 3 below outlines the various land uses and zones of the properties surrounding the subject lot.

Table 3 - Surrounding land uses and Zoning

Direction	Zoning	Land use
North	Community and Recreational Facilities	Sporting oval
East	Community and Recreational Facilities	Mossman hospital
South	Residential 1	Residential development (large homesites)
West	Conservation	Riparian corridor

3.2.7 Access

The site currently gains access informally from Johnston Road (Council controlled).

3.2.8 Existing Infrastructure and Services

Table 4 provides a description of the location of existing services on-site.

Table 4 – Existing Service Location

Water	The subject site is not connected to Council reticulated water. It is understood that a 150mm water main is located adjacent the site on the opposite side of Johnston Road.
Sewerage	The subject site is not connected to Council's sewer system. It is understood that a 150mm sewer main is located adjacent the site on the opposite side of Johnston Road.
Stormwater	Existing stormwater drainage infrastructure is located within the locality.
Electricity	Existing overhead electricity is provided along Johnston Road.
Access	Current access to the site is provided via Johnston Road.
Roads	The subject site has direct frontage to Johnston Road.

An Electrical Services Report (prepared by Sequal Consulting Group) and advice regarding sewer and water infrastructure (prepared by H20 Consultants) are provided at Appendices D and E.

3.2.9 Site Contamination

On 16 December 2016 a search of the Environmental Register and Contaminated Land Register was executed, which confirmed that the subject site is not included in either register.

Refer to **Appendix F – Searches CLR & EMR** for details.

3.2.10 Topography

The site is predominantly flat.

4 Proposed Development

4.1 Application Particulars

Application Particulars	
Development Type	> Material Change of Use (Development permit and s241 preliminary approval) > Reconfiguring a Lot (Development permit)
Level of Assessment	Code Assessment (all)
Proposal Summary	Material Change of Use to facilitate the establishment of Stage 1 of the Mossman and District Aged Care Precinct, being a 42-bed Retirement facility; S241 preliminary approval for a Material Change of Use (Retirement facility) for the balance of the Mossman and District Aged Care Precinct Master Plan; Reconfiguring a Lot (one lot into two lots)
Referral – Concurrence	N/A
Referral – Advice	N/A

4.2 Proposal Description

The development permit(s) and preliminary approval sought within this combined development application seek to realise the Mossman and District Aged Care Precinct ('the Aged Care Precinct'); a joint project between the Salvation Army and Douglas Shire Council.

The development includes Stage 1 of the Aged Care Precinct, which is a 42-bed Retirement facility that forms the subject of the Material Change of Use (Retirement facility) aspect of this development application. This stage of the development is also to be known as the 'Mossman Aged Care Plus Centre'.

The future stages of the Retirement facility are the subject of the preliminary approval aspect of this development application, and will be undertaken in the area identified as 'Future Retirement Facility Development' and on land located to the north of Stage 1, as identified on the Site Plan provided at **Appendix G – Architectural Plans**. Refer to section 4.4 of this report for further detail on future stages.

It is proposed within this combined development application that Stage 1 of the Retirement facility be located wholly within its own lot. Accordingly, this development application also seeks a development permit for Reconfiguring a Lot (one lot into two lots).

Detailed plans for Stage 1 of the Mossman Aged Care Plus Centre are provided at **Appendix G**.

4.3 Retirement facility (Stage 1)

The Retirement facility proposed as Stage 1 of the Precinct comprises the following:

- A total Gross Floor Area (GFA) of 3,066m^2
- 42-beds, across two (2) wings; each wing incorporating a terrace, living areas, dining room, kitchen and staff area;
- 5,976m^2 of Private Open Space (POS)
- An operational hub including staff rooms, meeting rooms, laundry, kitchen and the like, located between the two residential wings; and
- Ancillary facilities for residents including coffee servery fronting a terrace, hair salon and chapel.

Refer to the Architectural plans provided at **Appendix G**, for further detail on Stage 1 - Retirement facility.

4.3.1 Access and Car Parking

Dual access from Johnston Road is proposed to the Mossman Aged Care Plus Centre, to facilitate a utility/staff access and a separate general public / resident access. Access roads to service Stage 1 will be designed and constructed as part of the Operational Works / Building Works stage for the development.

We note that for Stage 1 it is not proposed to construct a public access road to the east of Stage 1 (within the proposed easement); this is instead intended to be opened as a public road as part of the development of the balance portion the subject of the preliminary approval. However, the Salvation Army intend to undertake construction of what is essentially a driveway to partial road standard (including intersection

treatment) in accordance with FNQROC to limit any construction impact(s) associated with the ultimate future development of the balance portion.

14 car parking spaces have been provided to the Retirement facility, located east of the core buildings, as follows:

- Nine (9) car parking spaces located in the main park; and
- Five (5) staff car parks located in the staff car park.

Car parking requirements have been calculated on the basis that no dwelling units are proposed within the facility and that up to 10 staff members will staff the facility at any one time. Further detail on car parking provision is provided at **Appendix I**.

Refer to the Architectural plans provided at **Appendix G**, for further detail on proposed access and car parking for Stage 1 - Retirement facility.

4.3.2 Flooding and Development Levels

A Flood Study of Marrs Creek was undertaken by Cardno 17 March 2008 ('the Flood Study') with regard to an Aged Care Facility previously proposed over the same site (of similar size and scope). The aim of the Flood Study was to:

- Calculate the 100 year flood levels in the creek adjacent to the site; and
- Determine the impact of the proposed filling of the subject site on flood levels in adjacent properties.

The results of the analysis show that the proposed filling results in an increase in the 100 year flood level in Marrs Creek adjacent to the subject site of 100-200 mm. The increase in the rural land further to the west is generally 50-100 mm. The proposed filling also results in a decrease in the 100 year flood level in Marrs Creek downstream of the Mossman showgrounds of up to 100 mm.

Flood immunity to the development is proposed to be achieved via the siting of the facility on the highest portion of the subject site, being the south west corner of the site. Further, operational works in association with Stage 1 of the Precinct will ensure that the Retirement facility has immunity (and required freeboard) from flooding associated with an ARI 200 year event, in accordance with the recommendations of the *Queensland Urban Drainage Manual* (*QUDM*) for aged care housing.

It is proposed that Council apply reasonable and relevant conditions for the undertaking of further flood analysis prior to or as part of a future Operational Works development application. However, for the purposes of this development application the information contained within the Flood Study is considered sufficient in demonstrating that the proposed development does not have unacceptable impact(s) on land for other than natural or rural activities.

Refer to the Engineering Report provided at **Appendix H** for further detail regarding flooding at the subject site.

4.3.3 Stormwater Management

It is proposed to collect the stormwater runoff from all roads, car parks and roofs via an underground stormwater network. Landscaped areas and lawns will be shaped to dissipate water via sheet flow as is currently occurring.

LIDAR survey indicates that a section of Marrs Creek passes within the site boundary towards the south western corner of the site. Stormwater runoff collected in underground drainage system(s) within the proposed development is proposed to discharge into the creek at this location.

Flows will be dissipated via an appropriate system such as a rock pad prior to discharge into the creek to prevent erosion issues from concentrated flows.

Stormwater quality management will be undertaken in accordance with the requirements of the *FNQROC Development Manual.*

Refer to the Engineering Report provided at **Appendix H** for further detail regarding Stormwater Management.

4.3.4 Traffic

A Traffic Impact Assessment (TIA) has been undertaken with respect to the Stage 1 Retirement facility, to assess the potential impacts of the proposed development on existing transport infrastructure.

The results of the TIA are provided at **Appendix H**.

4.3.5 Landscaping

Landscaping will be provided to contribute to the appearance and amenity of the development in accordance with the Landscaping plans provided at **Appendix G**.

4.3.6 Infrastructure Services

The site is able to be connected to all urban infrastructure services. An Electrical Services Report (prepared by Sequal Consulting Group) and advice regarding existing sewer and water infrastructure (prepared by H20 Consultants) is provided at **Appendices D and E.**

Connections to infrastructure will be provided at Operational Works Stage(s) of the proposed development.

4.3.7 Adopted Infrastructure Charges

It is understood that under Douglas Shire Council's Adopted Infrastructure Charges Resolution (that took effect from 1 July 2015), infrastructure charges are payable for the increase in demand generated by the proposed Retirement facility and for Reconfiguring a Lot.

We note however that the proposed development is to be undertaken in conjunction with a charitable organisation (being the Salvation Army) and accordingly, the Applicant intends to enter into an infrastructure charges agreement with Council.

4.4 Retirement facility (Preliminary Approval)

The preliminary approval aspect of the development is for Retirement facility; and as yet plans have not been prepared. However, it is intended that this aspect of the development comprise a range of dwelling types for retirement living, including attached and detached housing product. It is also anticipated that the Retirement facility on the balance portion will include supporting recreation and other activities.

4.5 Reconfiguring a Lot

The development includes the Reconfiguring a Lot of one lot into two lots.

Proposed Lot 1 is described as Stage 1 and comprises a total area of 13,935m^2.

Proposed Lot 2 is described as Stage 2 and comprises a total area of 29,845m^2 and contains an easement, benefiting Proposed Lot 1 for the purposes of a secondary vehicular access; which is intended to convert to public road as part of the future Retirement facility development on Proposed Lot 2.

Each lot will be provided with access from Johnston Road.

5 Statutory Town Planning Framework

5.1 Introduction

This section of the town planning report explains the applicable components of the statutory town planning framework and their relevance to the proposed development.

5.2 Sustainable Planning Act 2009

The *Sustainable Planning Act 2009* (the SPA) is the statutory instrument for the State of Queensland under which, amongst other matters, development applications are assessed by local governments.

The SPA delivers an Integrated Development Assessment System (IDAS) for integrating State and local government assessment and approval processes for development. Relevant stages in the IDAS process including referral and public notification are addressed below.

5.2.1 Material Change of Use

This development application seeks a development permit and preliminary approval for a Material Change of Use (Retirement facility). Section 10 of the SPA describes material change of use (emphasis added) as:

> ***(a) the start of a new use of the premises; or***
> *(b) the re-establishment on the premises of a use that has been abandoned; or*
> *(c) a material increase in the intensity or scale of the use of the premises.*

As per the *Inner Suburbs – District Assessment Tables* for *Initial Level of Assessment – Material Change of Use*, a Material Change of Use (Multiple dwelling) is code assessable.

5.2.2 Reconfiguring a Lot

This development application seeks a development permit for Reconfiguring a Lot. Section 10 of the SPA describes reconfiguring a lot (emphasis added) as:

> ***(a) creating lots by subdividing another lot; or***
> *(b) amalgamating 2 or more lots; or*
> *(c) rearranging the boundaries of a lot by registering a plan of subdivision; or*
> *(d) dividing land into parts by agreement rendering different parts of a lot immediately available for separate disposition or separate occupation, other than by an agreement that is—*
> *(i) a lease for a term, including renewal options, not exceeding 10 years; or*
> *(ii) an agreement for the exclusive use of part of the common property for a community titles scheme under the Body Corporate and Community Management Act 1997; or*
> *(e) creating an easement giving access to a lot from a constructed road.*

5.2.3 Code Assessment

The planning framework relevant to assessing the development application at the time of lodgement comprises the SPA and the Douglas Shire Council Planning Scheme (2006).

Section 238 of the SPA prescribes that a development permit is necessary for assessable development, as declared under the relevant planning scheme.

In this instance, a Code Assessable development application is required (for all types of development) to be made to the assessment manager to acquire the necessary development permit (refer to section 5.6 of this report).

Section 313 of SPA set out the provisions for assessment managers to assess code assessable applications as follows:

> *'(2) The assessment manager must assess the part of the application against each of the following matters or things to the extent the matter or thing is relevant to the development—*
>
> *(a) the State planning regulatory provisions;*

(b) the regional plan for a designated region, to the extent it is not identified in the planning scheme as being appropriately reflected in the planning scheme;

(c) if the assessment manager is not a local government—the laws that are administered by, and the policies that are reasonably identifiable as policies applied by, the assessment manager and that are relevant to the application;

(d) State planning policies, to the extent the policies are not identified in—

(i) any relevant regional plan as being appropriately reflected in the regional plan; or

(ii) the planning scheme as being appropriately reflected in the planning scheme;

(e) any applicable codes in the following instruments—

(i) a structure plan;

(ii) a master plan

(iii) a temporary local planning instrument;

(iv) a preliminary approval to which section 242 applies;

(v) a planning scheme;

(f) if the assessment manager is an infrastructure provider – an adopted infrastructure charges resolution or the priority infrastructure plan.

(3) In addition to the matters or things against which the assessment manager must assess the application under subsection (2), the assessment manager must assess the part of the application having regard to the following—

(a) the common material;

(b) any development approval for, and any lawful use of, premises the subject of the application or adjacent premises;

(c) any referral agency's response for the application.

(d) the purposes of any instrument containing an applicable code.

(4) If the assessment manager is not a local government, the laws that are administered by, and the policies that are reasonably identifiable as policies applied by, the assessment manager and that are relevant to the application, are taken to be applicable codes in addition to the applicable codes mentioned in subsection (2)(c) or (e).

(5) The assessment manager must not assess the application against, or having regard to, anything other than a matter or thing mentioned in this section.

(6) Subsection (2)(a), (b) and (d) does not apply for the part of an application involving assessment against the Building Act.'

According to Section 326 of the SPA:

'(1) The assessment manager's decision must not conflict with a relevant instrument unless—

(a) the conflict is necessary to ensure the decision complies with a State planning regulatory provision; or

(b) there are sufficient grounds to justify the decision, despite the conflict; or

(c) the conflict arises because of a conflict between—

(i) 2 or more relevant instruments of the same type, and the decision best achieves the purposes of the instruments; or

(ii) 2 or more aspects of any 1 relevant instrument, and the decision best achieves the purposes of the instrument.'

At the time of the lodgement of the development application, the common material comprises the application material only. The application material includes an assessment of the proposed development against the relevant planning documents and the assessment criteria of the SPA. However, information arising from the subsequent Information and Referral Stage will also form part of the common material to be assessed by Council.

5.2.4 Referral

Section 254 of the SPA states that:

> *"A referral agency has, for assessing and responding to the part of an application giving rise to the referral, the jurisdiction or jurisdictions prescribed under a regulation."*

Section 13 of the *Sustainable Planning Regulation 2009* ("SPR") explains that:

> *"For sections 250(a), 251(a) and 254(1) of the Act —*
>
> *(a) schedule 7, column 2 states the referral agency, and whether it is an advice agency or a concurrence agency, for the development application mentioned in column 1; and*
>
> *(b) schedule 7, column 3 states the jurisdiction of the referral agency mentioned in column 2."*

A review of the proposed development against Schedule 7 of the SPA is provided at section 5.4 of this report.

5.2.5 State Planning Regulatory Provisions

State planning regulatory provisions are planning instruments that the planning Minister can introduce. State Planning Regulatory Provisions affect the operation of a planning scheme. They provide a single overarching planning instrument that can be applied in a range of circumstances, with the ability to regulate and prohibit development.

The table below shows the current State Planning Regulatory Provisions. State Planning Regulatory Provisions developed under the *Integrated Planning Act 1997* remain current under the *Sustainable Planning Act 2009*.

Table 5-1 Table 14: State Planning Regulatory Provisions

Policy Number	Current State Planning Regulatory Policy	Applicable to Proposed Development
Oct 2013	Draft amendment to the South East Queensland Regional Plan 2009-2031 State planning regulatory provisions	No
Sep 2013	Guragunbah State Planning Regulatory Provision	No
June 2011	State planning regulatory provision (adopted charges)	Yes
Nov 2011	Yeerongpilly Transit Oriented Development State Planning Regulatory Provision	No
Oct 2010	Off-road motorcycling facility on State-owned land at Wyaralong	No
July 2010	State Planning Regulatory Provisions (Adult stores)	No
May 2010	South East Queensland Koala Conservation State Planning Regulatory Provisions	No

On 1 July 2015, Douglas Shire Council adopted the Adopted Infrastructure Charges Resolution 2015 ('AICR') which applies the SPRPs to infrastructure charges for all development. Accordingly, charges relating to

material change of use of a lot and for reconfiguring a lot are to be calculated in accordance with Council's AICR.

5.3 State Planning Policy

Section 313 of the SPA details that when assessing a Code Assessable application the assessment manager must have regard to:

'…

(d) State planning policies, to the extent the policies are not identified in—

(i) any relevant regional plan as being appropriately reflected in the regional plan; or

(ii) the planning scheme as being appropriately reflected in the planning scheme;

…'

The State Planning Policy (the SPP) commenced on 1 July 2014 and replaced the SPP which was released on 2 December 2013. The SPP is a broad and comprehensive statutory planning instrument, which enables development, protects our natural environment and allows communities to grow and prosper.

The State Interests identified in the SPP are the following:

Figure 1: Matters of State interest

The SPP applies to the:

(1) making or amending of a planning scheme, and

(2) designation of land for community infrastructure by a Minister, and

(3) making or amending of a regional plan, and

(4) assessment of a development application mentioned in Part E, to the extent the SPP has not been identified in the planning scheme as being appropriately integrated in the planning scheme, and

(5) carrying out of self-assessable development mentioned in Part F.

Although the *Douglas Shire Council Planning Scheme, Amended 11 January 2013* identifies that various State Planning Policies have been reflected in the planning scheme, the introduction of the State Planning Policy in 2014 has repealed these State Planning Policies. Therefore, for the purposes of development assessment, the *Douglas Shire Council Planning Scheme, Amended 11 January 2013* is viewed as a local government planning scheme that has not yet appropriately integrated the state interests in the SPP.

As a result, *Part E – Interim Development Assessment Requirements* of the SPP applies in the assessment of this development application. It is important to note that not all state interests have development assessment requirements.

5.3.1 Interim Development Assessment Requirements

In accordance with the SPP Interactive Mapping System (Development Assessment), interim development assessment requirements that are relevant to the assessment of this development application are detailed in the **Table 5-2** below.

Table 5-2 State Planning Policy

Interim Development Assessment Requirements		Applicable	Comments
Economic growth	Mining and extractive resources	No	The development application is not within a Key Resource Area (KRA).
Environment and heritage	**Biodiversity**	**YES**	**The site is identified as containing the following Matters of State Environmental Significance (MSES):** - **Wildlife habitat;** - **Regulated vegetation (and intersecting a watercourse).** **Accordingly, assessment against the relevant provisions of the SPP has been undertaken (refer section 6.3 of this report).**
	Coastal environment	No	The site is not located in the Coastal Management District and the developable area is not affected by storm tide inundation or erosion prone areas.
	Water quality	No	The proposed development is proposed on 4.378ha (that is, greater than 2500 square metres), however the Material Change of Use will not result in an impervious area greater than 25 percent of the net developable area. Accordingly, this aspect of the SPP is not triggered by the proposed development.
Hazards and safety	Emissions and hazardous activities	No	The site is not identified on the EMR or CLR registers.
	Natural hazards	No	The site is identified as being within a Flood hazard area, however the site is not identified within Local Government flood mapping. Accordingly, this aspect of the SPP is not triggered by the proposed development.
Infrastructure	State Transport Infrastructure	No	The site is not located in proximity to any state controlled road infrastructure
	Strategic airports and aviation facilities	No	The site is not located in proximity to Cairns Airport.

5.4 SARA Referral Review

In accordance with Schedule 7 of the *Sustainable Planning Regulation 2009* (current as at 28 May 2014) (SPR), the following referral review has been prepared:

Table 5-3 Referrals identified under Schedule 7, Table 2 of the *Sustainable Planning Regulation 2009*

Application Involving	Applicable	Comment
Environmentally relevant activities	No	This application does not involve the carrying out of a new, and/or continuation of an existing, environmentally relevant activity.
State-controlled road	No	This site is not located in proximity of a state controlled road.

Application Involving	Applicable	Comment
Clearing vegetation	No	The site is mapped as containing remnant vegetation, however is less than 5 hectares.
Strategic port land	No	This application does not involve identified strategic port land.
Major hazard facilities	No	This application is not for a major hazard facility or possible major hazard facility.
Taking or interfering with water	No	This application does not involve the taking of and/or interference with water.
Interfering with water in drainage and embankment areas or wild river floodplain management areas	No	This application does not involve any operational works that interferes with a water resource in a drainage and embankment areas or wild river floodplain management areas.
Particular dams	No	This application does not involve any operational works for the construction of a dam.
Removal of quarry material	No	This application does not involve the removal of quarry material, made assessable under Schedule 3, Part 1, Table 5, Item 1 of the SPR.
Tidal works, or development in a coastal management district	No	This application does not involve tidal works or development in a coastal management district.
Queensland heritage place	No	This application is not for a development on an identified Queensland heritage place.
Electricity infrastructure	No	Although the site is burdened by an easement for electricity, this application is for a Material Change of Use.
Contaminated land	No	This application does not relate to land identified on the Contaminated Land Register or Environmental Management Register.
Works or other development in or adjoining a fish habitat area	No	These triggers relate to: > Building work in a declared fish habitat area; > Operational work, completely or partly within a declared fish habitat area; or > Development that adjoins a declared fish habitat area. This application does not involve any of these development types.
Certain aquaculture	No	This application does not involve the establishment of aquaculture.
Constructing or raising waterway barrier works	No	This application does not involve the constructing or raising waterway barrier works.
Removal, destruction or damage of marine plants	No	This application does not involve development that will result in the removal, destruction or damage of marine plants.
Public passenger transport	No	The site is not located within 25m of a public passenger transport corridor.
Railways	No	The site is not located within 25m or a railway or future railway.
State-controlled transport tunnels	No	The site is not located within 25m of transport tunnel.
Oil and gas infrastructure	No	The site is not subject to an easement for a gas pipeline.
Regional plans	No	The site is not located within the SEQ region.
Certain agricultural or animal husbandry activities in a wild river area	No	This application does not involve any agricultural or animal husbandry activities in a wild river area.
Land in or near a wetland	No	The site is not located in or near a wetland.
Land in distributor-retailer's geographic area	No	The Douglas Shire area is not a participating local government for the purposes of this trigger.

5.4.2 Summary of Necessary Referrals to SARA

On the basis of the above analysis of Schedule 7 of the *Sustainable Planning Regulation 2009*, the development does not require further assessment in this respect.

5.5 Far North Queensland Regional Plan

The site is located wholly within the Urban Footprint of the Regional Plan.

Therefore, the following regional policies are relevant in the assessment of the proposed development:

- Strong Communities;
- Urban Development.

An assessment of the proposal against the relevant Desired Regional Outcomes (DROs) in respect of these policies is provided in **Table 5-5** below.

Table 5-4 Desired Regional Outcomes – Strong Communities

Desired Regional Outcome Objective The region's communities are vibrant, safe and healthy and resilient to climate change, and diversity is welcomed and embraced.	
4.1 Social Infrastructure The current and future needs of the community are met through coordinated and sequential provision of appropriate social infrastructure.	
Principle	**Comments**
Policies - *3.2.1 The coordination of community services and facilities is considered and incorporated in land use planning.* - *3.2.2 Accessible social infrastructure that is resilient to the impacts of climate change is provided that is well located in relation to transport, residential areas and employment, in accordance with the regional activity centres network (see section 4.2).*	**Complies** - *The proposed development is located adjacent the Mossman Hospital, creating a community service 'hub'.* - *The proposed development will be designed to be resilient to the impacts of climate change, particularly with respect to flooding, which the subject site is identified as being prone to.*

Table 5-5 Desired Regional Outcomes – Urban Development

Desired Regional Outcome Objective The region has an interlinked network of well planned, discrete, sustainable urban centres which reflect best practice urban and tropical design and offer convenient and accessible residential, employment, transport and other service opportunities.	
4.1 Compact Urban Form Urban development is consolidated and compact to facilitate land use and infrastructure efficiencies, conserve regional landscape and rural production land, and promote a range of other community benefits.	
Principle	**Comments**
Policies - *4.1.1 Urban development is contained within the urban footprint (maps 1a–1k).* - *4.1.2 Urban development is sequenced to ensure logical and orderly land use and infrastructure delivery.* - *4.1.6 An increasing proportion of dwellings are supplied from infill and redevelopment within appropriate areas.*	**Complies** - *The site is located within the Urban Footprint and the development is for Urban Purposes.* - *The proposed development provides for orderly land use, located adjacent existing development.* - *The proposed development for a Retirement facility is considered to be located in an appropriate area, adjacent existing development and the Mossman Hospital.*

4.4 Housing Choice and Affordability A variety of housing options are provided to facilitate housing choice and affordability to meet diverse community needs. Sufficient land is made available to meet longer term regional housing needs for a minimum of 15 years.	
Principle	**Comments**
Policies > *4.4.1 An appropriate range and mix of dwelling types and sizes are provided in new residential developments.* > *4.4.2 Land use planning assessments for state land consider the potential for land allocations to deliver housing options and affordability outcomes that address gaps in community need.*	**Complies** > *The proposed development seeks to provide residence for aged persons, thus adding diversity to existing dwelling types available.* > *The development is not proposed on state land.*

In view of the above assessment, the proposed development will not compromise the intent of the Far North Queensland Regional Plan. Therefore, the proposed development is viewed as being consistent with the main planning principles contained within this particular document.

5.6 Douglas Shire Council Planning Scheme 2006

The Douglas Shire Council Planning Scheme (as current at 17 December 2015) came into force on the 21 August 2006 and is the relevant planning scheme for the assessment of development proposals within the Douglas Shire Area.

5.6.1 Planning Area

The site is located within the Community and Recreational Facilities planning area of the Mossman and Environs locality. As per the Mossman and Environs Tables of Assessment, a Material Change of Use (Retirement facility) and Reconfiguring a Lot are code assessable.

5.6.2 Applicable Development Codes

As the proposal is Code assessable development, the proposal is assessed against the relevant Codes as required by Mossman and Environs Tables of Assessment. Below is a list of the codes relevant to each aspect of the proposal.

Material Change of Use (Retirement Facility)
Relevant Codes
Mossman & Environs Locality Code
Community and Recreational Facilities Planning Area Code
Acid Sulfate Soils Code
Natural Hazards Code
Multi-unit Housing / Holiday Accommodation / Retirement Facility Code
Design & Siting of Advertising Devices Code
Filling and Excavation Code
Landscaping Code
Vehicle Parking & Access Code
Sustainable Development Code

Reconfiguring a Lot
Relevant Codes
Mossman & Environs Locality Code
Community and Recreational Facilities Planning Area Code
Acid Sulfate Soils Code
Natural Hazards Code
Reconfiguring a Lot Code

A summary of compliance is set out in **Section 6** of this report. A detailed assessment against the all of the relevant provisions of the abovementioned codes is provided at **Appendix I – Statement of Code Compliance**.

5.6.3 Key Provisions (Community and Recreational Facilities Planning Area Code):

The Community and Recreational Facilities Planning Area Code states that the purpose of the Code is to facilitate the achievement of the following outcomes for the Community and Recreational Facilities Planning Area:

- accommodate community facilities such as schools, churches, community centres, State and Local Government facilities and major public utility depots or operations which are important to a locality or to the Shire, in locations which are convenient and accessible to the communities which the facilities serve;
- ensure that any expansion or redevelopment of community facilities is in keeping with the purpose and character of the facility and reflect contemporary community needs;
- ensure that areas are available for active sport and recreational pursuits, including facilities for commercial recreation;
- provide opportunities for sporting clubs using playing fields to establish club facilities;
- ensure that the use of recreational or club facilities does not affect the amenity of adjacent areas, particularly residential or environmental areas, through the sensitive design and siting of facilities and through buffering of facilities from sensitive land uses;
- ensure that areas and facilities are available to the general public and visitors to the Shire for recreational use and enjoyment;
- ensure that a range of functional open spaces, including local and district parks, major areas of parkland with a Shire-wide focus and open space links are provided for the use and enjoyment of residents of, and visitors to, the Shire; and
- ensure that the use of parkland does not affect the amenity of adjacent areas, particularly residential areas.

The proposed development, being for a Retirement facility is considered to be consistent with a ‘community facility’ and achieve compliance with the intent of the code.

6 Compliance Summary

6.1 Introduction

The following sections comprise a summary of compliance against the relevant provisions of the planning framework as they apply to the proposed development, identified in **Section 5** of this report.

More detailed information and responses to the Douglas Shire Council Planning Scheme (2006) provisions are included in the Appendices to the proposal report. **Appendix I – Statement of Code Compliance** is particularly relevant in this regard, as it contains an assessment of the proposed development against the relevant codes of the Planning Scheme.

6.2 State Planning Regulatory Provisions

The current State Planning Regulatory Provisions are listed in **Section 5.2.4** of this report.

There are no State Planning Regulatory Provisions that are relevant to the proposed development, other than State Planning Regulatory Provision (adopted charges).

6.3 State Planning Policies

The development application must have regard to all relevant and applicable State Planning Policies, which are not incorporated or reflected in the Douglas Shire Council Planning Scheme.

The State Planning Policies in force at the time of lodgement, and those which are identified in the Douglas Shire Council Planning Scheme as being appropriately reflected in the Planning Scheme are listed in **Section 5.3** of this Report.

The State Planning Policy of Biodiversity is relevant to the proposed development. Accordingly, an assessment against the relevant aspect of the State Planning Policy is provided in **Table 6-1** below.

Table 6-1 State Planning Policy Assessment

Requirement	Response
Biodiversity	
(1) enhances matters of state environmental significance where possible, and	**Complies** It is noted that regulated vegetation (and mapped wildlife habitat) is restricted to narrow fragments along the western boundary of the subject site. The building footprint of the retirement facility has been designed in consideration of existing MSES and is setback accordingly. Moreover, no vegetation clearing is proposed on this boundary; nor does the Reconfiguring a Lot aspect of development create a new boundary, making MSES vegetation clearing exempt. Landscaping complimentary to the existing vegetation located immediately to the west will also be provided in accordance with the landscaping plans provided at **Appendix G.**
(2) identifies any potential significant adverse environmental impacts on matters of state environmental significance, and	**Not Applicable** It is noted that regulated vegetation (and mapped wildlife habitat) is restricted to narrow fragments along the western boundary of the subject site. The building footprint of the retirement facility has been designed in consideration of existing MSES and is setback accordingly. Moreover, no vegetation clearing is proposed on this boundary; nor does the Reconfiguring a Lot aspect of development create a new boundary, making MSES vegetation clearing exempt.

Requirement	Response
(3) manages the significant adverse environmental impacts on matters of state environmental significance by protecting the matters of state environmental significance from, or otherwise mitigating, those impacts.	**Not Applicable** It is noted that regulated vegetation (and mapped wildlife habitat) is restricted to narrow fragments along the western boundary of the subject site. The building footprint of the retirement facility has been designed in consideration of existing MSES and is setback accordingly. Moreover, no vegetation clearing is proposed on this boundary; nor does the Reconfiguring a Lot aspect of development create a new boundary, making MSES vegetation clearing exempt. Landscaping complimentary to the existing vegetation located immediately to the west will also be provided in accordance with the landscaping plans provided at **Appendix G.**

6.4 Douglas Shire Council Planning Scheme

A comprehensive assessment of relevant codes of the Douglas Shire Council Planning Scheme is included as **Appendix I - Statement of Code Compliance** of this Town Planning Report. Compliance with the Codes is summarised below.

6.4.1 Mossman & Environs Locality Code

Development that complies with the Performance Criteria of the Mossman & Environs Locality Code complies with the code.

The proposed development complies with the Performance Criteria of the Code, and therefore complies with the Code.

A detailed assessment demonstrating compliance with each of the relevant Performance Criteria of the Mossman & Environs Locality Code has been provided in **Appendix I**.

6.4.2 Community and Recreational Facilities Planning Area Code

Development that complies with the Performance Criteria of the Community and Recreational Facilities Planning Area Code complies with the code.

The proposed development complies with the Performance Criteria of the Code, and therefore complies with the Code.

A detailed assessment demonstrating compliance with each of the relevant Performance Criteria of the Community and Recreational Facilities Planning Area Code has been provided in **Appendix I**.

6.4.3 Acid Sulfate Soils Code

Development that complies with the Performance Criteria of the Acid Sulfate Soils Code complies with the code.

The proposed development can, and will, comply with the Performance Criteria of the Code, and therefore complies with the Code.

A detailed assessment demonstrating compliance with each of the relevant Performance Criteria of the Acid Sulfate Soils Code has been provided in **Appendix I**.

6.4.4 Natural Hazards Code

Development that complies with the Performance Criteria of the Natural Hazards Code complies with the code.

The proposed development can comply with the Performance Criteria of the Code, and therefore complies with the Code (subject to reasonable and relevant conditions).

A detailed assessment demonstrating compliance with each of the relevant Performance Criteria of the Natural Hazards Code has been provided in **Appendix I**.

6.4.5 Multi-unit Housing / Holiday Accommodation / Retirement Facility Code

Development that complies with the Performance Criteria of the Multi-unit Housing / Holiday Accommodation / Retirement Facility Code complies with the code.

The proposed development complies with the Performance Criteria of the Code, and therefore complies with the Code.

A detailed assessment demonstrating compliance with each of the relevant Performance Criteria of the Multi-unit Housing / Holiday Accommodation / Retirement Facility Code has been provided in **Appendix I**.

6.4.6 Natural Areas and Scenic Amenity Code

Development of the Retirement facility (that is the Designated Development Area (DDA)) is not proposed within an area identified as containing Regulated Vegetation. Accordingly, assessment of the proposed development against the Natural Areas and Scenic Amenity Code has not been undertaken.

6.4.7 Reconfiguring a Lot Code

Development that complies with the Performance Criteria of the Reconfiguring a Lot Code complies with the code.

The proposed development complies with the Performance Criteria of the Code, and therefore complies with the Code.

A detailed assessment demonstrating compliance with each of the relevant Performance Criteria of the Reconfiguring a Lot Code has been provided in **Appendix I**.

6.4.8 Filling and Excavation Code

Development that complies with the Performance Criteria of the Filling and Excavation Code complies with the code.

The proposed development complies with the Performance Criteria of the Code, and therefore complies with the Code.

A detailed assessment demonstrating compliance with each of the relevant Performance Criteria of the Filling and Excavation Code has been provided in **Appendix I**.

6.4.9 Landscaping Code

Development that complies with the Performance Criteria of the Landscaping Code complies with the code.

The proposed development complies with the Performance Criteria of the Code, and therefore complies with the Code.

A detailed assessment demonstrating compliance with each of the relevant Performance Criteria of the Landscaping Code has been provided in **Appendix I**.

6.4.10 Vehicle Parking and Access Code

Development that complies with the Performance Criteria of the Reconfiguring a Lot Code complies with the code.

Parking provided to the proposed development has been calculated on the basis that no Dwelling units are proposed within the facility. Furthermore, residents of the facility are not expected to use private vehicles, due to the nature of the facility, being for aged care. Notwithstanding, the parking provided is in excess of the requirements of the Vehicle Parking and Access Code.

A detailed assessment demonstrating compliance with each of the relevant Performance Criteria of the Vehicle Parking and Code has been provided in **Appendix I**.

6.4.11 Sustainable Development Code

Development that complies with the Performance Criteria of the Reconfiguring a Lot Code complies with the code.

The proposed development does not detail water storage in the form of a water tank (in the provided plans) and therefore cannot achieve compliance with PO8 of the Code. This aspect (and other building work detail,

such as energy efficiency) of the code is considered to be relevant to Building Works stage of development, and not the material change of use stage of the development. Notwithstanding, the proposed development is considered to be able to achieve compliance with the purpose of the Sustainable Development Code.

A detailed assessment demonstrating compliance (to the extent possible) with each of the relevant Performance Criteria of the Reconfiguring a Lot Code has been provided in **Appendix I**.

6.4.12 Design and Siting of Advertising Devices Code

Assessment of the proposed development against the Design and Siting of Advertising Devices Code has not been undertaken as no signage is proposed at this time.

7 Conclusions and Recommendations

This Town Planning Report accompanies an application for a Material Change of Use (Development permit and Preliminary approval) for a Retirement facility and Reconfiguring a Lot (Development Permit) for land located Johnston Road, Mossman Gorge, properly described as Lot 1 on SP150474.

According to Section 326 of the SPA:

"(1) The assessment manager's decision must not conflict with a relevant instrument unless—

(a) the conflict is necessary to ensure the decision complies with a State planning regulatory provision; or

(b) there are sufficient grounds to justify the decision, despite the conflict; or

(c) the conflict arises because of a conflict between—

(i) 2 or more relevant instruments of the same type, and the decision best achieves the purposes of the instruments; or

(ii) 2 or more aspects of any 1 relevant instrument, and the decision best achieves the purposes of the instrument."

This Town Planning Report (and supporting application material) has demonstrated that the proposed development complies with the relevant parts of the Douglas Shire Council Planning Scheme, and where there is conflict, there are grounds to overcome such conflicts.

In particular, the proposed development:

(i) Satisfies the relevant Desired Environmental Outcomes of the Douglas Shire Council Planning Scheme;

(ii) Satisfies the intent for the Mossman & Environs locality as per the Douglas Shire Council Planning Scheme, in ensuring that residential amenity is maintained and enhanced;

(iii) Satisfies the intent for the Community and Recreational Facilities Planning Area Code, in accommodating a community facility ('Retirement facility') in a convenient and accessible location, that is also co-located with other community facilities, namely the hospital;

(iv) Is consistent with the Far North Queensland Regional Plan 2009;

(v) Satisfies relevant provisions of each of the codes applicable to the development or provides sufficient grounds why the development should be approved despite any conflict with the codes;

(vi) Satisfies the rules of the *Sustainable Planning Act 2009* for assessment of code assessable developments; and

(vii) Provides an opportunity for local residents to 'age in place', thus adding diversity to the dwelling types and options available within the local community.

In conclusion, based upon the planning assessment of the proposed development against the provisions of the SPA, Regional Plan, relevant State Planning Policies and the Douglas Shire Council Planning Scheme (2006), it is recommended that the Douglas Shire Council approves the development application, subject to reasonable and relevant conditions.

Yours faithfully

Dominic Hammersley
Business Development Manager/ Senior Planner
For CARDNO HRP

Johnston Road, Mossman Gorge

FIGURES

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Shaping the Future

FIGURE 1

N

0 50 100 150 200 metres

1:5,000

Cardno HRP

LEGEND

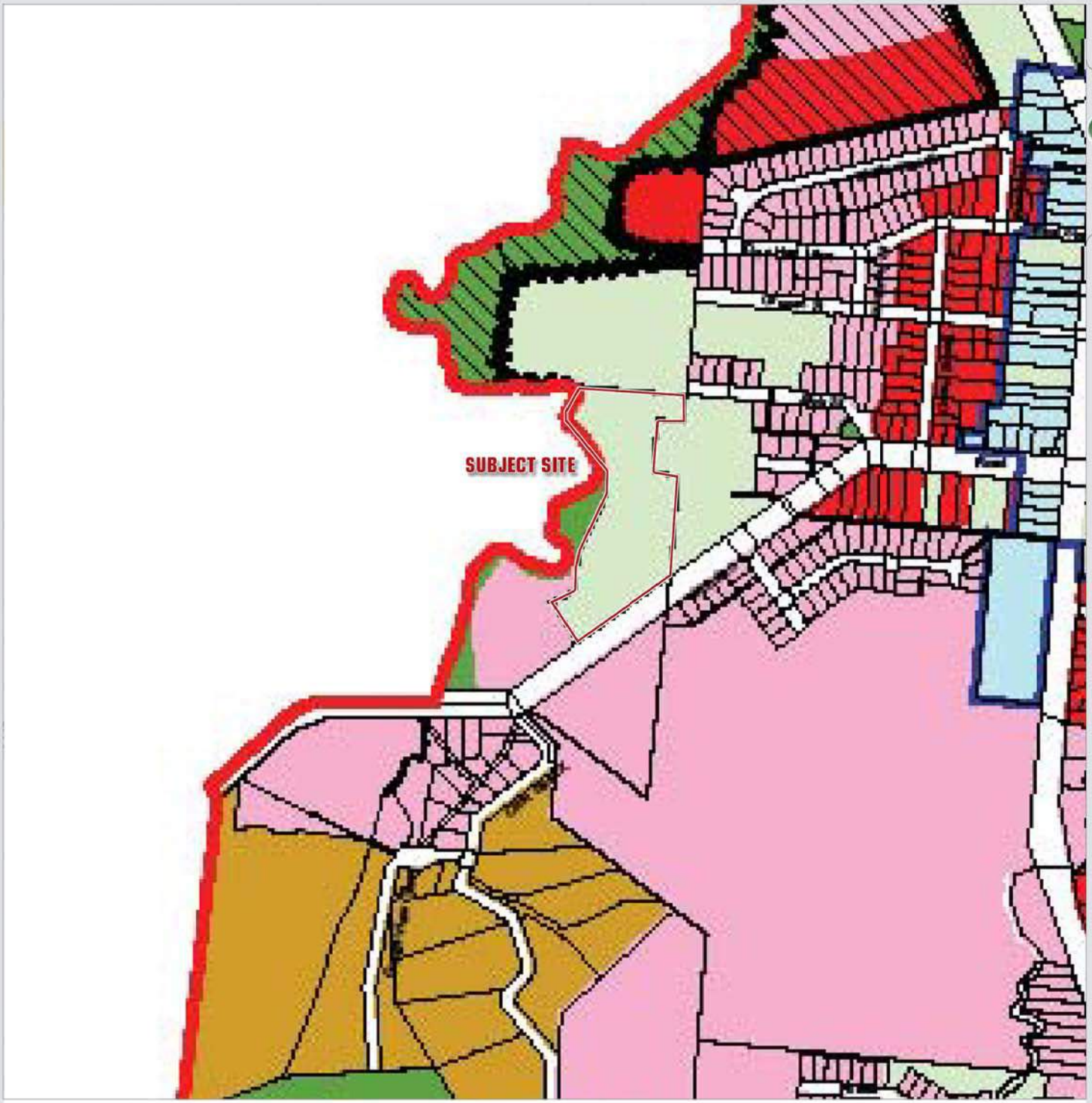
- SUBJECT SITE

JOHNSTON RD, MOSSMAN GORGE
LOT 1 ON SP150474

Location Map

FILENAME >	LOCATION MAP	DATE >	DECEMBER 2015
JOB NO. >	HRP15394	AMENDED >	N/A
SCALE >	1:5,000	VERSION >	1.0
SOURCE >	GOOGLE MAPS		

FIGURE 1



N

0 100 200 300 400 metres

1:10,000

Cardno HRP

LEGEND

- SUBJECT SITE
- LOW DENSITY RESIDENTIAL
- RESIDENTIAL 1
- RESIDENTIAL 2
- TOURIST AND RESIDENTIAL
- INDUSTRY
- COMMUNITY FACILITIES
- SPORT AND RECREATION
- OPEN SPACE
- CONSERVATION

JOHNSTON RD, MOSSMAN GORGE
LOT 1 ON SP150474

Zoning Map

FILENAME >	ZONING MAP	DATE >	DECEMBER 2015
JOB NO. >	HRP15394	AMENDED >	N/A
SCALE >	1:10,000	VERSION >	1.0
SOURCE >	DOUGLAS SHIRE COUNCIL PLANNING SCHEME		

Johnston Road, Mossman Gorge

APPENDIX A

TITLE SEARCH

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CURRENT TITLE SEARCH

DEPT OF NATURAL RESOURCES AND MINES, QUEENSLAND

Request No: 22460237
Search Date: 16/12/2015 09:38 **Title Reference: 50445633**
Date Created: 30/06/2003

Previous Title: 20467126

REGISTERED OWNER

Dealing No: 716386009 24/03/2015

DOUGLAS SHIRE COUNCIL

ESTATE AND LAND

Estate in Fee Simple

LOT 1 SURVEY PLAN 150474
Local Government: DOUGLAS

EASEMENTS, ENCUMBRANCES AND INTERESTS

1. Rights and interests reserved to the Crown by
Deed of Grant No. 20284031 (POR 1)

ADMINISTRATIVE ADVICES - NIL
UNREGISTERED DEALINGS - NIL

CERTIFICATE OF TITLE ISSUED - No

** End of Current Title Search **

Requested By: D-ENQ CITEC CONFIRM

Johnston Road, Mossman Gorge

APPENDIX B

REGISTERED SURVEY PLAN & SMART MAP

Cardno
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Land Title Act 1994 ; Land Act 1994
Form 21 Version 2

SURVEY PLAN

Sheet 1 of 2

Peg placed at all new corners, unless otherwise stated.

Original information compiled from C157279, RP713129 and RP706519 in the Department of Natural Resources and Mines.

MOSSMAN RIVER

C 157279

2
221·8868 ha Bal

Orig 90°0' 136·794 Riv

32 SP 121816

31 SP 121816

DPD Orig 1013·424 Orig

2 RP 748899

5 DP 800086

1 DAN HART LANE

129 SR 81

EMT A RP 716321

GROGAN ST.

92 SR 81

JACK ST.

SEE SHEET 2

1
4·378 ha

JOHNSTON ROAD

SEE SHEET 2

2

11 RP 891901

3 RP 706241

2 RP 706240

309·255 Orig 312°06'10" Orig

673·913 Orig 222°06'10" Orig

No O.Mk Peg pld 302·739 265°06'10"

No O.Mk

11·03

385·235 222°06'10"

GORGE ROAD

1 RP 911413

0°06'10" Orig

311·81 Riv Orig

Orig 270°06'10" 252·908

1 RP 716977

4 RP 716977

5 RP 716977

22 No O.Mk OIP OPM

ROAD

MOSSMAN

Scale 1:8000 – Lengths are in Metres.

100 0 100 200 300 400 500 600 700 800 900 1000 1100

0 50mm 100mm 150mm

C&B Consultants Pty Ltd ACN 055 931 096 hereby certify that the Company has surveyed the land comprised in this plan by Laurence Rohan GREEN, Licensed Surveyor for whose work the company accepts responsibility, that the plan is accurate, that the said survey was performed in accordance with the Surveyors Act 1977 and the Surveyors Regulation 1992 and that the said survey was completed on 6/05/2003.

C & B CONSULTANTS PTY LTD A.C.N. 055 931 096 THE COMMON SEAL OF

Signed: James REDGWELL
Registered Licensed Surveyor

Director

12.6.03
Date

Plan of
Lots 1 & 2
Cancelling Lot 2 on RP 713129

PARISH: **VICTORY** COUNTY: **Solander**

Meridian: RP 713129 Add 5°17'50" for AMG Zone 55 Vide SR 797 F/N's: NO

Scale: 1:8000

Format: STANDARD

SP150474

Plan Status:

706739782

$328.95
28/06/2003 13:25

CS 400 NT

**WARNING : Folded or Mutilated Plans will not be accepted.
Plans may be rolled.
Information may not be placed in the outer margins.**

Registered

5. Lodged by
WGC CS 717
(Include address, phone number, reference, and Lodger Code)

1. Certificate of Registered Owners or Lessees.

I/We DRUMSARA PTY LIMITED

(Names in full)

*as Registered Owners of this land agree to this plan and dedicate the Public Use Land as shown hereon in accordance with Section 50 of the Land Title Act 1994.

*~~as Lessees of this land agree to this plan~~.

Signature of *Registered Owners *~~Lessees~~

DRUMSARA PTY LTD A.C.N. 010 188 966 THE COMMON SEAL OF

DRUMSARA PTY LIMITED

* Rule out whichever is inapplicable

2. Local Government Approval.

* DOUGLAS SHIRE COUNCIL

hereby approves this plan in accordance with the :

% Integrated Planning Act 1997

Dated this sixteenth day of June 2003

for and on behalf of DOUGLAS SHIRE COUNCIL

MAYOR

CHIEF EXECUTIVE OFFICER

* Insert the name of the Local Government.
# Insert designation of signatory or delegation
% Insert Integrated Planning Act 1997 or Local Government (Planning & Environment) Act 1990

3. Plans with Community Management Statement :

CMS Number :

Name :

4. References :

Dept File :

Local Govt :

Surveyor : 62141

6.

Existing			Created		
Title Reference	Lot	Plan	Lots	Emts	Road
20467126	2	RP 713129	1 & 2	—	—

ENCUMBRANCE EASEMENT ALLOCATIONS

Easement	Lots to be Encumbered
602680126	2

MORTGAGE ALLOCATIONS

Mortgage	Lots Fully Encumbered	Lots Partially Encumbered
602680127	1 & 2	—

POR 1	1 & 2
Orig	Lots

7. Portion Allocation :

8. Map Reference :
7965-23212

9. Locality :
MOSSMAN GORGE

10. Local Government :
DOUGLAS SHIRE COUNCIL

11. Passed & Endorsed :

By: C & B CONSULTANTS PTY LTD
Date: 12.6.03
Signed:
Designation : LICENSED SURVEYOR

12. Building Format Plans only.

I certify that :

* As far as it is practical to determine, no part of the building shown on this plan encroaches onto adjoining lots or road;
* Part of the building shown on this plan encroaches onto adjoining * lots and road

Licensed Surveyor/Director * Date
*delete words not required

13. Lodgement Fees :

Survey Deposit	$
Lodgement	$
New Titles	$
Photocopy	$
Postage	$
TOTAL	$

14. Insert Plan Number SP150474

Land Title Act 1994; Land Act 1994
Form 21A Version 1

ADDITIONAL SHEET

Sheet 2 of 2

TRAVERSES ETC

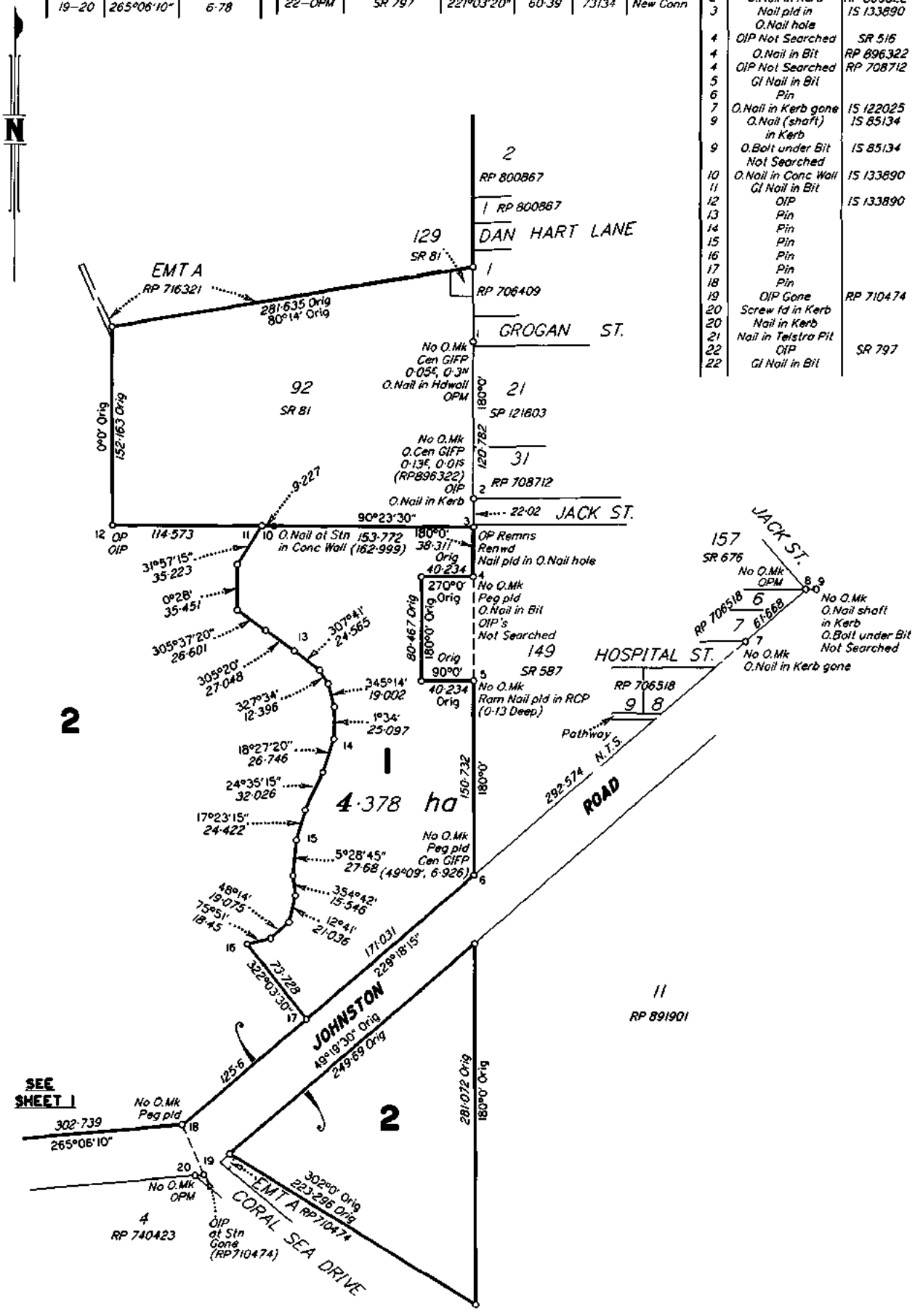
LINE	BEARING	DISTANCE
4–5	180°0'	80·467
8–9	90°01'45"	8·047
18–19	157°12'	42·28
19–20	265°06'10"	6·78

PERMANENT MARKS

PM	ORIGIN	BEARING	DIST	NO	
1–OPM	SP 121803	96°57'30"	4·655	117990	
8–OPM	DP 153385	149°31'30"	39·457	123491	New Conn
20–OPM	RP 740423	353°28'	1·0	90038	
22–OPM	SR 797	221°03'20"	60·39	73134	New Conn

REFERENCE MARKS

STN	TO	ORIGIN	BEARING	DIST
1	O.Nail in Hdwall	RP 896322	242°31'	4·305
2	OIP	RP 708712	180°0'	0·604
2	O.Nail in Kerb	RP 896322	142°44'	4·995
3	Nail pld in O.Nail hole	IS 133890	7°12'	5·13
4	OIP Not Searched	SR 516	270°0'	1·006
4	O.Nail in Bit	RP 896322	100°53'	3·885
4	OIP Not Searched	RP 708712	180°0'	4·414
5	GI Nail in Bit		81°52'	1·908
6	Pin		174°42'	6·204
7	O.Nail in Kerb gone	IS 122025	139°20'45"	4·85
9	O.Nail (shaft) in Kerb	IS 85134	180°09'35"	7·165
9	O.Bolt under Bit Not Searched	IS 85134	111°03'15"	9·084
10	O.Nail in Conc Wall	IS 133890	at Stn	
11	GI Nail in Bit		6°18'	14·059
12	OIP	IS 133890	324°03'	1·204
13	Pin		63°57'	4·973
14	Pin		68°48'	5·322
15	Pin		104°12'	4·199
16	Pin		183°30'	1·166
17	Pin		137°42'	5·499
18	Pin		166°37'	2·435
19	OIP Gone	RP 710474	at Stn	
20	Screw fd in Kerb		18°47'30"	12·638
20	Nail in Kerb		340°49'	17·734
21	Nail in Telstra Pit		217°11"	10·181
22	OIP	SR 797	135°06'30"	7·0
22	GI Nail in Bit		208°55'30"	24·516

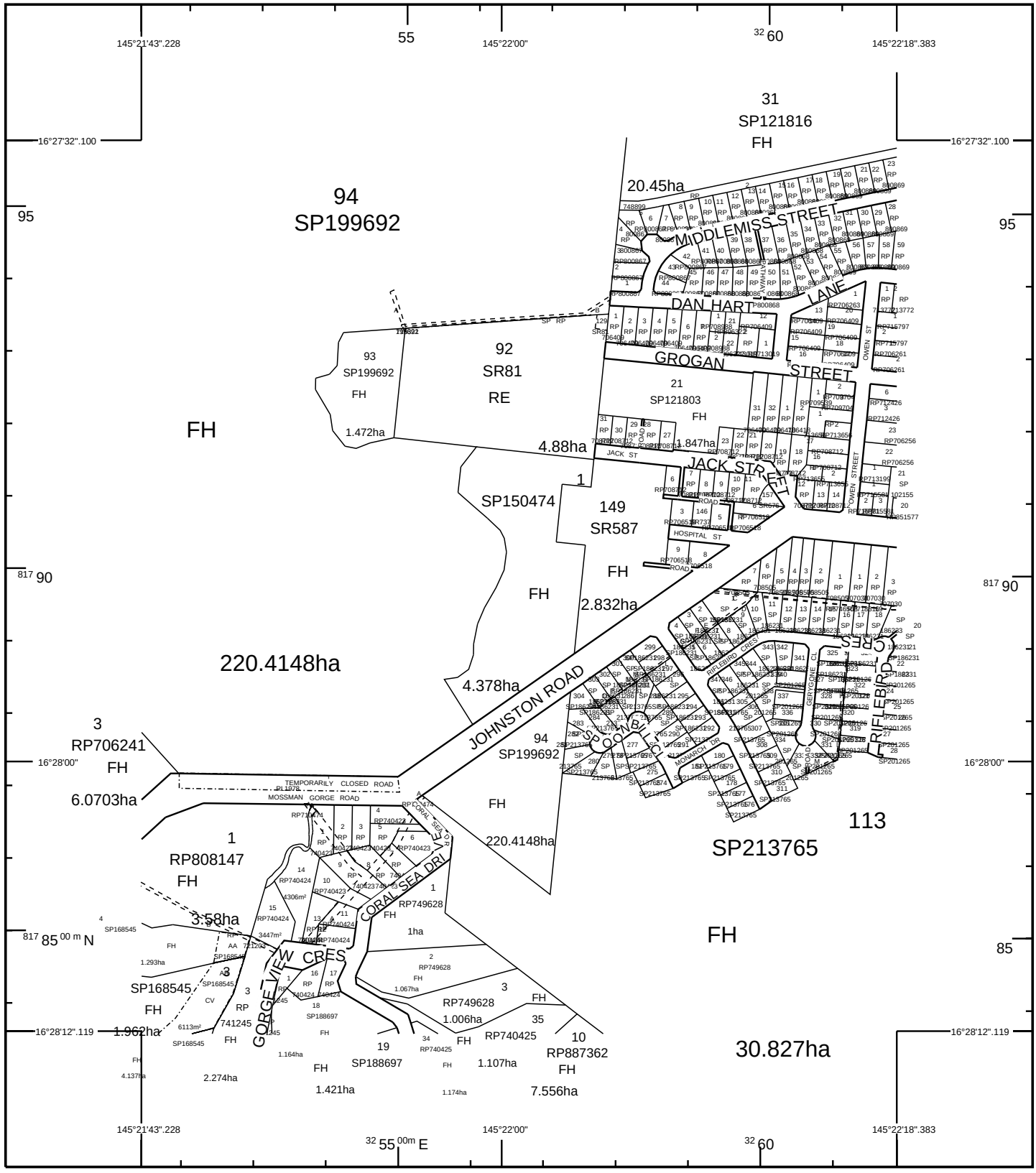


Scale 1:3000 – Lengths are in Metres.

50 0 50 100 150 200 250 300 350 400

0 50mm 100mm 150mm

Insert Plan Number **SP150474**



STANDARD MAP NUMBER
7965-23212

0 150 300 450 600 750 m

HORIZONTAL DATUM:GDA94 ZONE:55 SCALE 1 : 7500

SmartMap

An External Product of
SmartMap Information Services

Based upon an extraction from the
Digital Cadastral Data Base

MAP WINDOW POSITION &
NEAREST LOCATION

145°22'00".805
16°27'52".109
MOSSMAN GORGE
0.81 KM

SUBJECT PARCEL DESCRIPTION

DCDB

Lot/Plan	1/SP150474
Area/Volume	4.378ha
Tenure	FREEHOLD
Local Government	DOUGLAS SHIRE
Locality	MOSSMAN GORGE
Segment/Parcel	8671/12

CLIENT SERVICE STANDARDS

PRINTED (dd/mm/yyyy) 21/12/2015

DCDB 19/12/2015

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For further information on SmartMap products visit http://nrw.qld.gov.au/property/mapping/blinmap

GDA

Queensland Government

Johnston Road, Mossman Gorge

APPENDIX C

STATE MAPPING SEARCHES

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State Assessment and Referral Agency

Date: 16/12/2015

Department of Infrastructure
Local Government
and Planning

Matters of Interest for all selected Lot Plans

Qld waterways for waterway barrier works
Coastal zone
Category A and B extract from the regulated vegetation management map
Queensland heritage place

Matters of Interest by Lot Plan

Lot Plan: 1SP150474 (Area: 43780 m^2)
Qld waterways for waterway barrier works
Coastal zone
Category A and B extract from the regulated vegetation management map
Queensland heritage place

State Assessment and Referral Agency

Date: 16/12/2015

Queensland Government

Department of Infrastructure
Local Government
and Planning

N

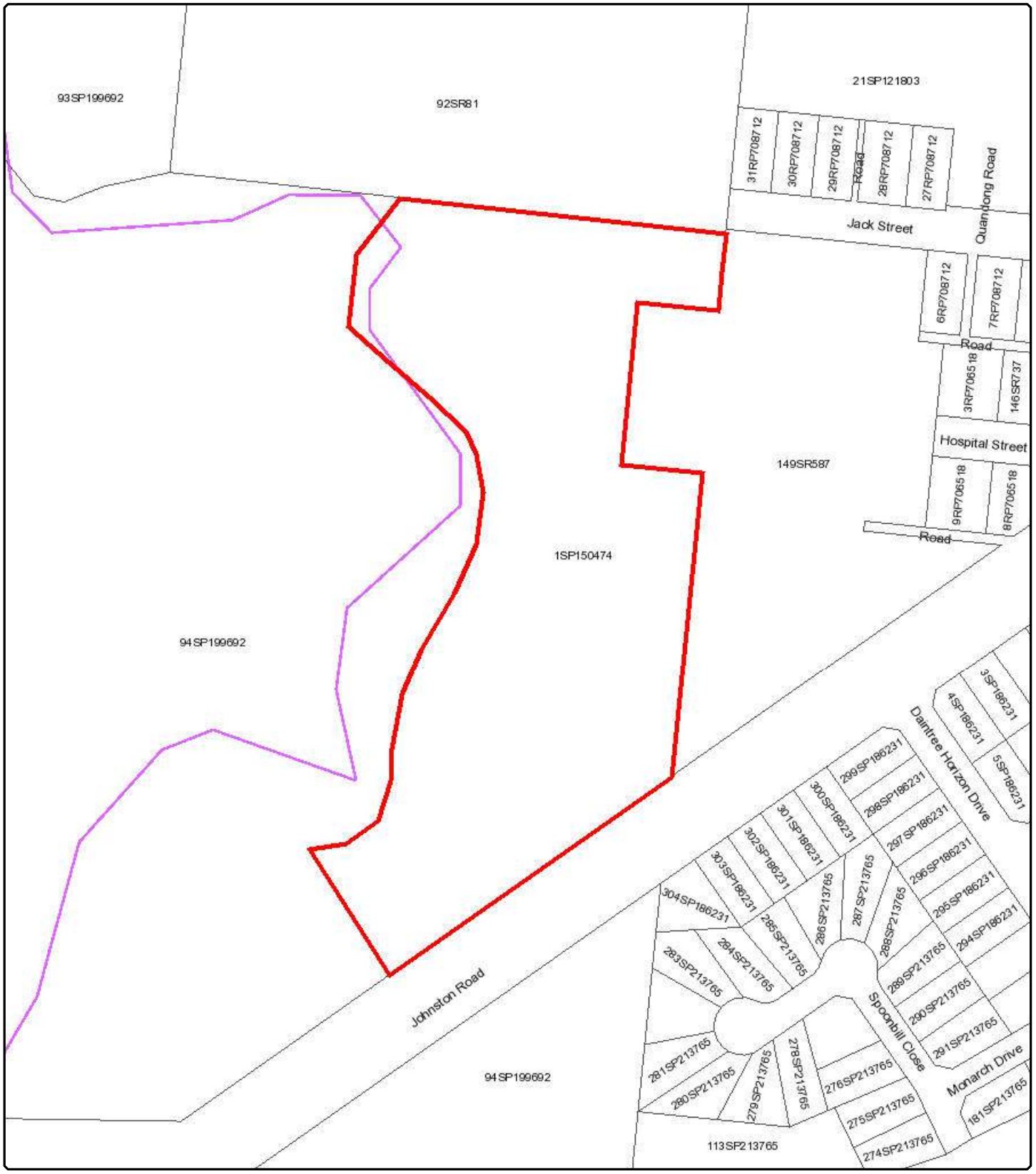
Legend

Queensland heritage place

Queensland heritage place

0 40 80 120 160

Metres



State Assessment and Referral Agency

Date: 16/12/2015

Queensland Government

Department of Infrastructure Local Government and Planning

0 40 80 120 160

Metres

Legend

Qld waterways for waterway barrier works

- 1 - Low
- 2 - Moderate
- 3 - High
- 4 - Major

State Assessment and Referral Agency

Date: 16/12/2015

Department of Infrastructure
Local Government
and Planning

Queensland Government

N

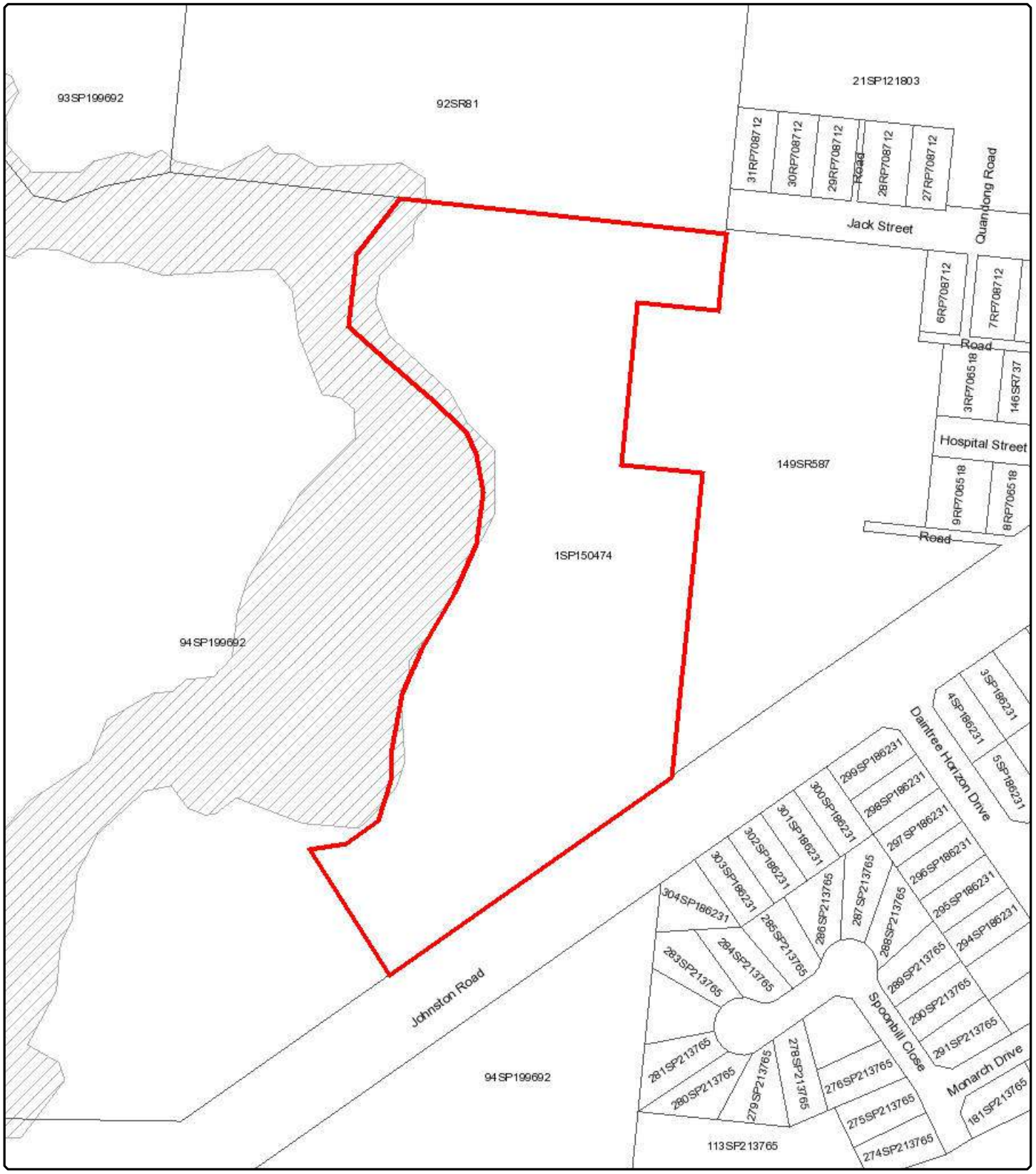
Legend

Coastal zone

Coastal zone

0 40 80 120 160

Metres



State Assessment and Referral Agency

Date: 16/12/2015

Department of Infrastructure
Local Government
and Planning

Queensland Government

0 40 80 120 160

Metres

N

Legend

Category A and B extract from the regulated vegetation management map

- Category A on the regulated vegetation management map
- Category B on the regulated vegetation management map

Johnston Road, Mossman Gorge

APPENDIX D

ELECTRICAL SERVICES REPORT

Cardno
Shaping the Future

SEQUAL CONSULTING GROUP

T 0409 563 419 | M PO Box 797N, North Cairns QLD 4870
A 212 Mulgrave Rd, Cairns | E rob@consultsequal.com.au
www.consultsequal.com.au
ACN 169 740 087

16 December 2015

Mossman Residential Aged Care Development

Preliminary Report on Electrical Supply Availability

This preliminary report on the provisioning of electrical supply to the Mossman Residential Aged Care Facility (RACF) has been prepared for the purpose of providing relevant advice to support the development application for the project.

Through the investigation & preparation of this report it has bene identified that the establishment of electrical supply to the site can be obtained through the provision of a HV extension from existing overhead supply at the street frontage and establishment of a new padmount substation within the RACF site

Maximum Demand

With a total floor area for the facility in the order of 3,600m² and an average anticipated loading of 125 Watts per m² the facility is likely to have an estimated maximum demand of approximately 800 Amps per phase and an estimated 'after diversity' maximum demand of around 70% of this figure or approximately 560 Amps per phase.

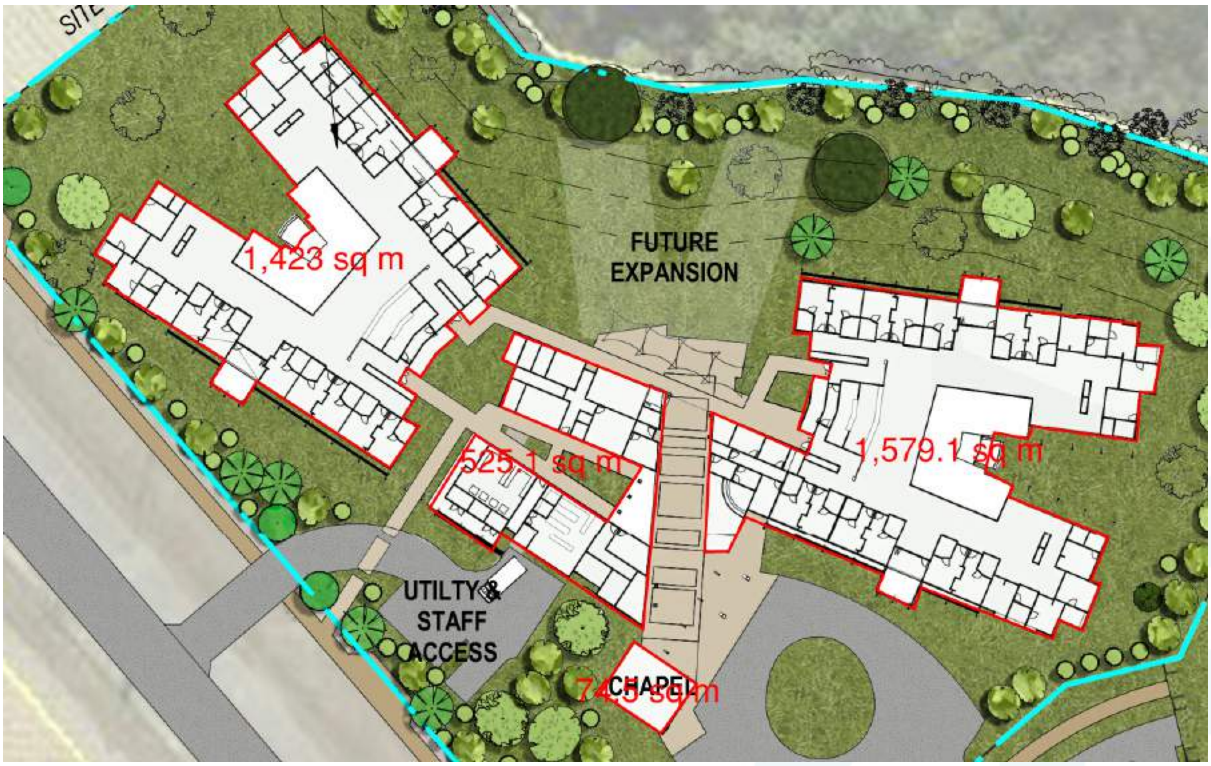


Figure 1.0 : Approximate Gross Floor Areas

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Residential Development

On the basis that the balance of the land contained with this parcel is estimated to accommodate up to forty (40) residential properties, the additional prospective demand represented by the residential development would typically represents a further 350 A/ph.

Ergon Infrastructure

Preliminary advice from Ergon Energy indicates Ergon has a 500kVA padmount substation at the hospital (SS8433) and have overhead high voltage extending along the road in front of Lot 1 on SP150474 as below

Figure 2.0 : Existing Ergon Infrastructure

Supply to the Residential Aged Care Facility

The electrical demand for the Residential Aged Care Facility precludes supply being made available at low voltage and will necessitate a new substation to be provided at the RACF site. With HV cabling already run along the street frontage, any associated upstream cost will be relatively minor.

Based on the advice that the balance of the development site will be used for residential housing development then no allowance or provisions need to be considered for supply to the subdivision from the RACF as further detailed below.

On this basis, it is likely (pending final demand calculations at the time of application) that Ergon will provision the RACF site with a dedicated 500kVA padmount substation requiring:

- 1.5m wide cable easement from the street to the substation site;
- 6m x 4m easement at the substation site*;
- 3m wide vehicle access maintained from the street to the substation site;
- Civil works for accommodation of the substation constructed by the developer including:
  - Masonry blockwork plinth;
  - Interlocking paving to the 6m x 4m substation easement;
  - Provision of conduits between the street and the substation site.

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**We have assumed a combined earthing system can be achieved at the site. In the event that a separated earthing system is required (determined by Ergon engineering study) the size of the substation easement would be increased to 10m x 12m. In this case, paving need only extend to the 6m x 4m area however the exclusive use easement will extend beyond the paved area.*

As Ergon has HV overhead poles & wires in the street, it is likely that any Council DA conditions for the provision of new street lighting to the intersection will need to be carried out by Ergon if required to be accommodated on Ergon poles. If required, Ergon will take this work in to account when determine the cost of the works.

The cost of provisioning the site with a dedicated substation will be determined by Ergon in response to a formal application once more detailed loadings are known. The cost of the application will typically be in the order of $1000 and will expire after one month if not accepted.

For a development of this nature, being a single customer installation where the developer is also the owner, it is likely Ergon will take the cost of revenue generated by the facility into account when calculating any capital contribution payable by the developer. As such, it is estimated the cost of the Ergon works could be in the order of $ 200,000+ (including street lighting) with a substantial component of this cost potentially being absorbed by Ergon when the value of revenue generated is offset against the capital works cost.

It should be noted that Ergon have not given advice in regards to costs and this advice has been based on past experience only.

Supply to the Balance of Site

Since the balance of the site which is proposed to accommodate residential housing will be subdivided as a separate Lot, this portion of land will be eligible for a separate point of supply from Ergon and need not be a consideration for the RACF development. When the internal roads and trunk services are determined for the balance of the site, a dedicated 500kVA substation site will be selected by the design consultant in conjunction with Ergon and HV cable access in and out of the subdivision incorporated within the services corridor.

Summary

In summary:

- The new RACF will represent an after diversity maximum demand of approximately 560 Amps per phase;
- Supply will need to be provisioned from a new on-site substation;
- The RACF substation will require easements to the substation itself and over lead-in cable access;
- The cost of making supply available will be subject to Ergon assessment and is likely to be substantially offset by revenue generated by the facility*;
- The balance of the site will be supplied from a separate point of supply and not the RACF infrastructure;

We trust the above provides sufficient information to support the development application in respect of power supply provisioning, however please do not hesitate to contact the undersigned if further information is required in support of this matter.

Yours Faithfully,

Rob Bufi
SEQUAL Consulting Group Pty Ltd

Johnston Road, Mossman Gorge

APPENDIX E

SEWER AND WATER INFRASTRUCTURE ADVICE

Cardno
Shaping the Future

8/146 Anderson Street, Cairns 4870
PO Box 135 Bungalow, Qld 4870
Ph: (07) 40321468 Fax: (07) 40321754
Mobile: 0417 726656
Email: admin@h2oconsultants.com.au

- Hydraulic Design & Consulting
- Fire Protection Systems
- Backflow Prevention Certification
- Alternate Fire Solutions
- Wastewater Management

9th December 2015

Thomson Adsett
Po Box 3053
Cairns Qld 4870

Att: Peter Cowen

Dear Sir,

Re: Mossman Aged Care

This advice has been prepared by H2O Consultants on behalf of the Client in relation to the proposed development of the 42 Bed Aged Care and 40 Residential Accommodation Units, on Lot 1 of SP150474.

In particular this advice addresses the proposed demand of the Water and Sewerage Infrastructure. This advice seeks to assist Douglas Shire Council to determine that the proposed development can adequately be serviced by existing water and sewer infrastructure.

SEWER:
The proposed site does not have a connection to the council sewer system. It is believed there is a 150mm sewer main running adjacent the site on the opposite side of Johnston Road. We are unable to find any records of this sewer main, advice from Council is that this sewer main is approx, 1m deep.

There is also a 65mm Poly Sewer Rising Main running adjacent to the street, this rising main comes from the Mossman Gorge site, no formal records have been found to support this.

An existing gravity sewer system servicing the Mossman Hospital is approx 220m towards the North East. an existing sewer manhole 35/3 is located on Johnstone Road. This sewer manhole is approx, 2.8m deep and has a 150mm future connection branch.

It is proposed to run a 150mm gravity sewer main adjacent to Johnstone Road with concrete sewer manholes spaced at no more than 90m centres in accordance with the FNQROC Development Manual.

A concrete sewer manhole will be placed on the boundary of the proposed development for the connection of all house drainage. All internal drainage will be done in Accordance with AS3500.2.

Expected Demand from the Proposed Development will be 91ED.
42 Beds x 1.2 ED and 40 Single Bed Residential Units x 1 ED.

WATER:
The proposed site does not have a connection to the council water system. There is an existing 150mm water main running adjacent the site on Johnston Road.

Flow Tests conducted on the nearest in ground fire hydrant with a flow rate of 20 litres per second at 500kpa.

The proposed development requires a Fire Hydrant, Fire Sprinkler and Fire Hose Reels service to comply with Sections of the National Construction Codes. A flow rate of 20 litres per second at 350kpa is required for Fire Fighting purposes.

A 100mm service meter is required and shall be located at the boundary. All internal water will be designed in Accordance with AS3500.1 and AS24191.1 and AS2118.4

Expected Demand from the Proposed Development will be 91ED.
42 Beds x 1.2 ED and 40 Single Bed Residential Units x 1 ED and/or a Peak Hour Demand of 3 litres per second.

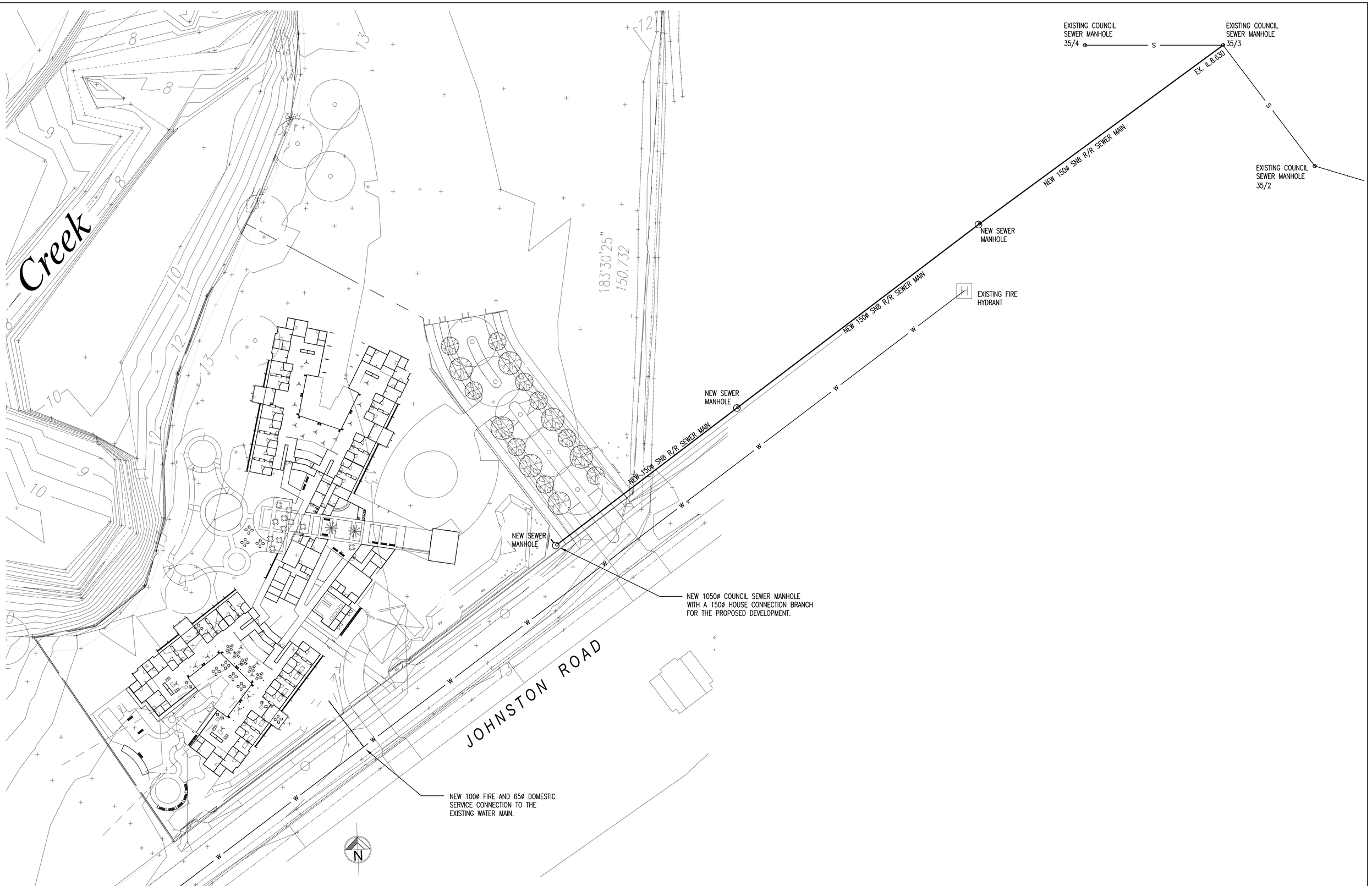
Attached Sketch H01 shows the location of existing sewer and water mains and the proposed connections to the site.

All internal services will be documented during the Building Approval Process.

For further information or clarification on the above, please do not hesitate to contact the under signed on 40321468.

Yours Faithfully

Shane Barnes
Principal
A.H.S.C.A., Q.B.S.A., M.P.A.Q



DATE	REV	AMENDMENT	CHKD
15.12.2015	1	PRELIMINARY SKETCH DESIGN FOR DA	SB

REFERENCE COORDINATION DRAWINGS

DESCRIPTION	DRAWING NO.	REV	CHKD
ARCHITECTURAL DRAWING	X	-	SB

HYDRAULIC ENGINEER

H2O CONSULTANTS

8/146 AndersonStreet, CAIRNS
Po Box 135, Bungalow, Q 4870
P: 07 40321468
F: 07 40321754
M: 0417 726656
E: admin@h2oconsultants.com.au

PROJECT
MOSSMAN AGED CARE PLUS CENTRE
LOT 1 SP150474 JOHNSTON RD

CLIENT
THOMSON ADSETT

DATE	DEC 2015	DRAWN	SB
SCALE	1:500	CHECKED	SB
SHEET SIZE	A1	APPROVED	SB
CAD FILE	x-MOSSMAN AGED CARE		

TITLE
HYDRAULIC SERVICES
SITE PLAN

PROJECT NO.	DRAWING NO.	REVISION
X	H01	1

Johnston Road, Mossman Gorge

APPENDIX F

CLR & EMR SEARCHES

Cardno
Shaping the Future

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

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

Transaction ID: 50248238 EMR Site Id: 16 December 2015
This response relates to a search request received for the site:
Lot: 1 Plan: SP150474

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 EHP has not been notified
2. land on which a notifiable activity is being or has been undertaken (or a complete list of activities) if EHP has not been notified

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

Administering Authority

Johnston Road, Mossman Gorge

APPENDIX G

ARCHITECTURAL PLANS

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Shaping the Future

MOSSMAN & DISTRICT AGED CARE PRECINCT
DEVELOPMENT APPLICATION

Drawing No.	Revision	Description
SK01	Rev 8	Locality Plan
SK02	Rev 8	Site Plan
SK03	Rev 8	Floor Plan
SK09	Rev 2	Typical Sections
SK10	Rev 1	Entry Perspective
SK11	Rev 1	Johnston Road Perspective
SK12	Rev 1	Art Corridor Perspective
SK13	Rev 1	Breezeway Connector
SK14	Rev 1	Gardens to Marrs Creek
SK15	Rev 1	Elevations
SK20	Rev 1	Overview + Design Charter

ISSUE FOR DEVELOPMENT APPLICATION

thomson adsett

Project	MOSSMAN AGED CARE PLUS CENTRE	Drawing Title	COVER PAGE	Drawing Number	15.0285.11 SK00
Client	THE SALVATION ARMY	Date		Scale	

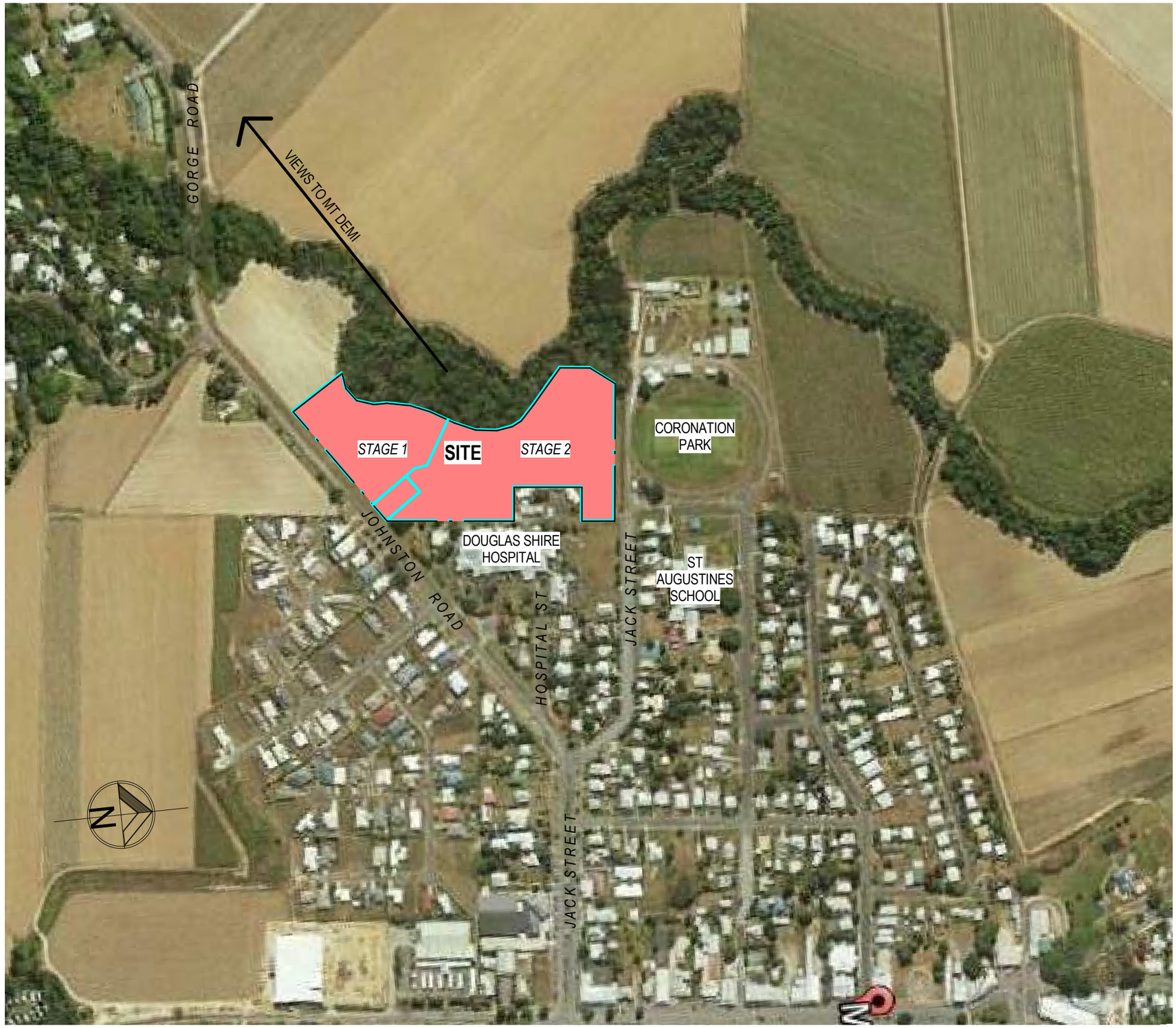
 17/12/2015 4:25:15 PM C:_REVITLOCALFILES\2015\15.0285.11 Site Plan_newmanp.rvt

Original Sheet Size A3 - 297 x 420mm

NORTH BOUNDARY - *JACK STREET*

JOHNSTON ROAD TOWARDS MT DEMI

SITE BETWEEN EAST AND WEST BOUNDARIES - *HOSPITAL AND RIPARIAN CORRIDOR*



2 SITE LOCALITY PLAN

1 : 5000

ISSUE FOR DEVELOPMENT APPLICATION

thomson adsett

Project	MOSSMAN AGED CARE PLUS CENTRE	Drawing Title	SITE LOCALITY PLAN	Drawing Number	15.0285.11 SK01
Client	THE SALVATION ARMY	Date	17.12.2015	Scale	1 : 5000 8

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PROPOSED LOT 1	13,935 m2
PROPOSED LOT 2	29,845 m2
GFA	3,066 m2
COVERED AREA	1,122 m2
PRIVATE OPEN SPACE	5,976 m2
PUBLIC COMMUNITY SPACE	3,771 m2
RESIDENTIAL UNITS	42 BEDROOMS
CAR PARKING	14 SPACES

ISSUE FOR DEVELOPMENT APPLICATION

thomson adsett

Project	MOSSMAN AGED CARE PLUS CENTRE	Drawing Title	SITE PLAN	Drawing Number	15.0285.11 SK02
Client	THE SALVATION ARMY	Date	17.12.2015	Scale	1 : 1000 8

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ISSUE FOR DEVELOPMENT APPLICATION

thomson adsett

Project	MOSSMAN AGED CARE PLUS CENTRE	Drawing Title	FLOOR PLAN	Drawing Number	15.0285.11 SK03
Client	THE SALVATION ARMY	Date	17/12/2015	Scale	1 : 500 8

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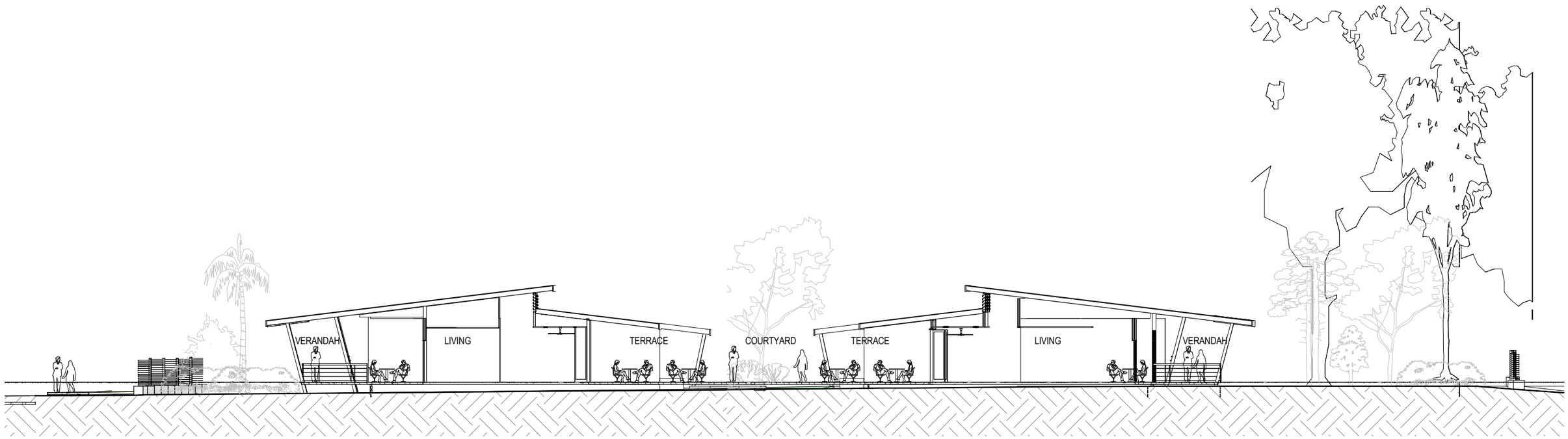
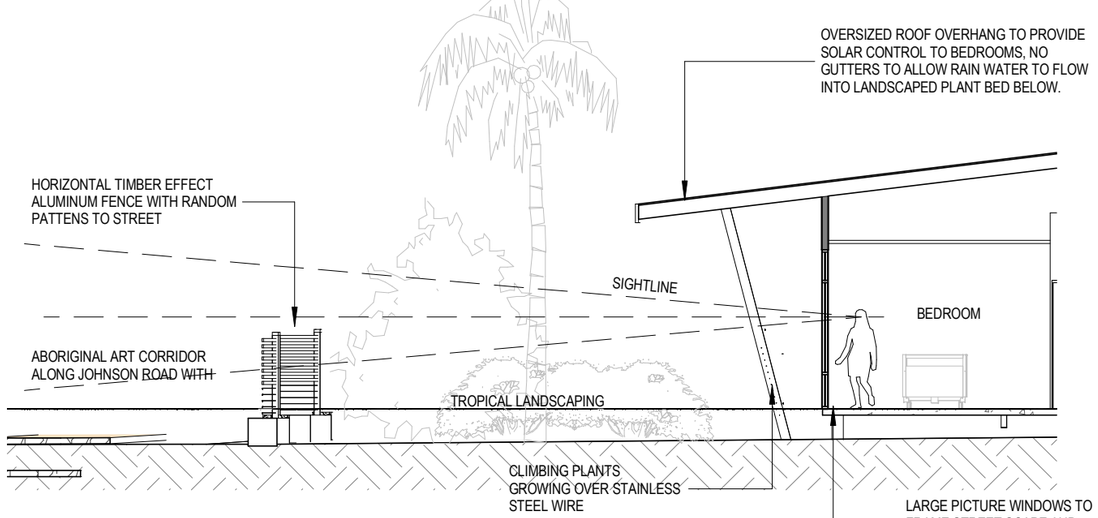


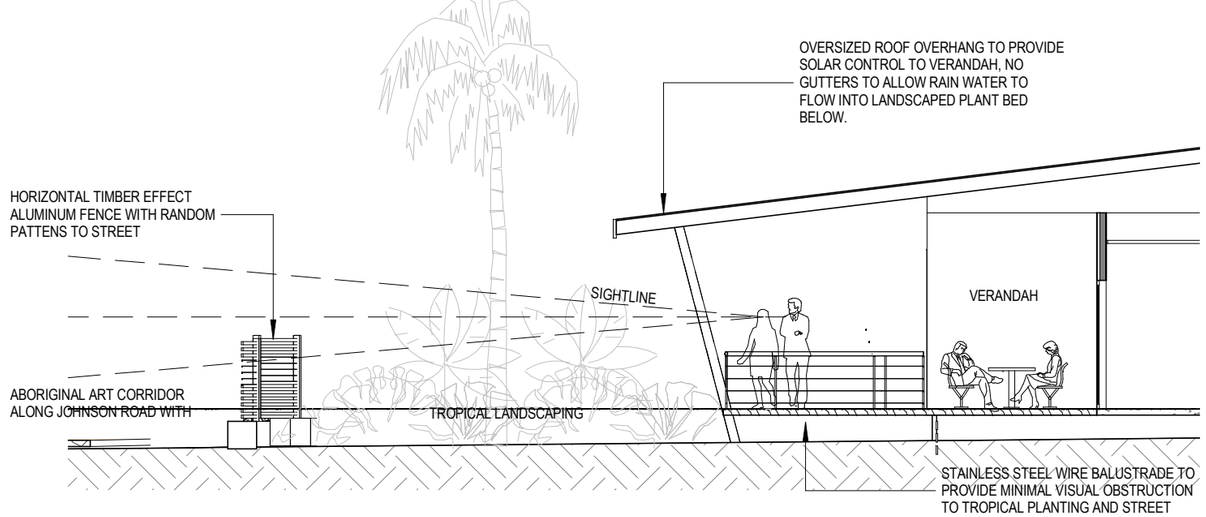
2 SECTION AA

1 : 200



3 STREET VIEW FROM BEDROOM

1 : 100



4 STREET VIEW FROM COMMUNAL VERANDAH

1 : 100

ISSUE FOR DEVELOPMENT APPLICATION

thomson adsett

Project	MOSSMAN AGED CARE PLUS CENTRE	Drawing Title	SECTION	Drawing Number	15.0285.11 SK09
Client	THE SALVATION ARMY	Date	17/12/2015	Scale	As indicated 2

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Original Sheet Size A3 - 297 x 420mm

ISSUE FOR DEVELOPMENT APPLICATION

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Project	MOSSMAN AGED CARE PLUS CENTRE	Drawing Title	ENTRY PERSPECTIVE	Drawing Number	15.0285.11 SK10
Client	THE SALVATION ARMY	Date	17/12/2015	Scale	1

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Original Sheet Size A3 - 297 x 420mm

ISSUE FOR DEVELOPMENT APPLICATION

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Project	MOSSMAN AGED CARE PLUS CENTRE	Drawing Title	JOHNSON ROAD PERSPECTIVE	Drawing Number	15.0285.11 SK11
Client	THE SALVATION ARMY	Date	17/12/2015	Scale	2

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Original Sheet Size A3 - 297 x 420mm

ISSUE FOR DEVELOPMENT APPLICATION

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Project	MOSSMAN AGED CARE PLUS CENTRE	Drawing Title	ART CORRIDOR PERSPECTIVE	Drawing Number	15.0285.11 SK12
Client	THE SALVATION ARMY	Date	17/12/2015	Scale	2

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Original Sheet Size A3 - 297 x 420mm

ISSUE FOR DEVELOPMENT APPLICATION

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Project	MOSSMAN AGED CARE PLUS CENTRE	Drawing Title	BREEZEWAY CONNECTOR	Drawing Number	15.0285.11 SK13
Client	THE SALVATION ARMY	Date	17/12/2015	Scale	1

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Original Sheet Size A3 - 297 x 420mm

ISSUE FOR DEVELOPMENT APPLICATION

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Project	MOSSMAN AGED CARE PLUS CENTRE	Drawing Title	GARDENS TO MARRS CREEK	Drawing Number	15.0285.11 SK14
Client	THE SALVATION ARMY	Date	17/12/2015	Scale	1

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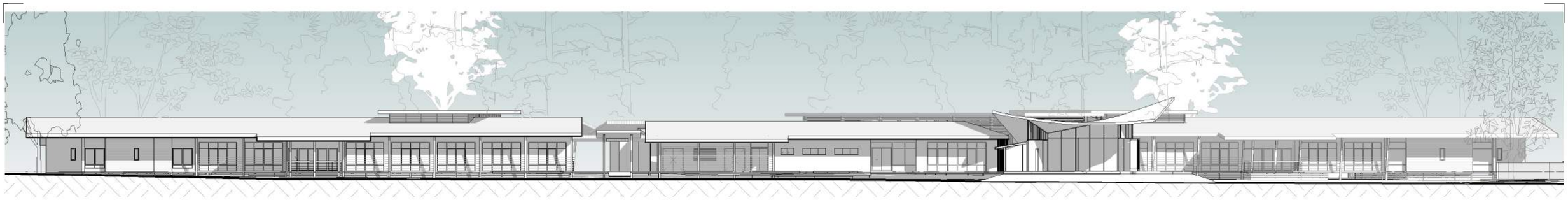


1 SE ELEVATION

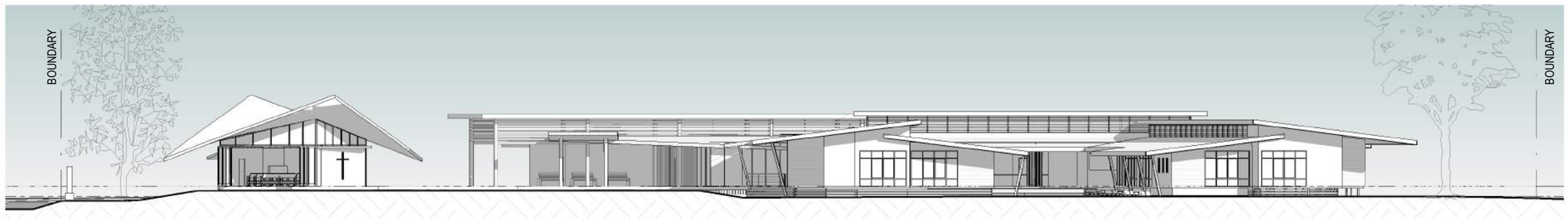
1 : 350

2 NW ELEVATION

1 : 350

3 SW ELEVATION

1 : 350



4 NE ELEVATION

1 : 350

ISSUE FOR DEVELOPMENT APPLICATION

thomson adsett

Project	MOSSMAN AGED CARE PLUS CENTRE	Drawing Title	ELEVATIONS	Drawing Number	15.0285.11 SK15
Client	THE SALVATION ARMY	Date	17/12/2015	Scale	1 : 350 1

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Original Sheet Size A3 - 297 x 420mm

Overview

The Mossman Aged Care Plus Centre provides a 42 bed residential aged care development and associated administration services to the community of Mossman. The facility is located on the South-West corner of Lot 1 SP 150474 with Johnstone Road frontage, on a parcel of 1.4 ha.

The facility includes;

42 bed aged care centre
Associated administration services
Chapel and cafe open to the public

The carpark includes:

Parking for 14 cars, including staff parking

JOHNSTON ROAD - ESTABLISHING A LOCAL SCULPTURE WALK TOWARDS MOSSMAN GORGE

(ARTIST'S IMPRESSION ONLY)

Design Charter

Everyone benefits from well-designed buildings, spaces and places.

It is the belief of the project team that this development will create a high quality for the Mossman community as a facility with considered design in architectural and landscape design quality and connection to the public realm.

The facility has been designed as a series of buildings connected by covered pathways, which is visually and environmentally engaged with its surroundings. The facility has been designed to create a positive, normal and structured environment for residents. The residential zones are focused on the house group and planning. Bedrooms have views to Mt Demi, Johnston Road and landscaped areas, with all residents having access to gardens and shaded outdoor spaces. Public buildings such as the chapel and café have been positioned to activate the breezeway running through the facility and engage residents with the community.

This residential aged care facility will be a home in a garden. The outdoor space, connection to the surrounding environment and overall landscape design are integral to the residential spaces as well as the public interface of the facility. Outdoor spaces will be designed to take advantage of aspects to Mt Demi and the riparian corridor to Mars Creek. The design of these spaces will respect and reference cultural activities and influences of the residents both aesthetically and functionally.

This scheme proposes that the framework for a community art trail will be created along Johnston Road, with a public pathway leading to open spaces along the fence where artwork and sculpture can be installed. The fence will be designed to create a more solid backdrop backdrop to these spaces, but will have more visibility through to the facility in other areas. Landscaping and shade trees will complement the street frontage and will assist in reinforcing a secure fence line to the facility in an attractive manner.

With street frontage to a key tourist route, there is the opportunity to create a high quality architectural project for the Mossman community in the development of this site. The chapel sits at the front entry of the facility as a statement structure identifying the complex and welcoming the public in. A covered open breezeway disects the administration building, leading public through to the café and gardens beyond with views to the riparian corridor on the West façade. The residential and administration buildings are designed with deep overhangs and direct connections to outdoor spaces to facilitate cross-ventilation, increase natural daylight internally and encourage flexibility in environmental control for residents. These design features also result in a building which is tropical in its design and responsive to the scale and nature of its surroundings.

CAFE & BREEZEWAY

NATIVE-STYLE GARDENS

CHAPEL & ENTRY BREEZEWAY

ISSUE FOR DEVELOPMENT APPLICATION

thomson adsett	Project	MOSSMAN AGED CARE PLUS CENTRE	Drawing Title	OVERVIEW + DESIGN CHARTER	Drawing Number	15.0285.11 SK20
	Client	THE SALVATION ARMY	Date		Scale	

Suzan Quigg Landscape Design
PO Box 638 Malanda QLD 4885
P: 07 4095 1017
M: 0407 035 381
E: suzanjq@bigpond.com
www.suzanquigg.com

SITE BOUNDARY

EXISTING VEGETATION

PARK

JOHNSTON ROAD

PUBLIC ACCESS ROAD

GENERAL CONCEPT

REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
1	RAINFOREST WALK
2	FRONT BOUNDARY WALL BECOMES ART SPACE THAT IS THE START OF THE MOSSMAN GORGE INDIGENOUS ART TRAIL
3	PANELS OF ART-WORK ON WALLS - MOSAICS AND MURALS
4	CHAPEL
5	PATH
6	RAISED BOARDWALKS BETWEEN BUILDINGS
7	COVERED AVENUE
8	DECK
9	MAIN ENTRANCE
10	SERVICE ENTRANCE
11	GARDEN WALK
12	INFORMAL PATH THROUGH TREES
13	INFORMAL SEATING HUB
14	ART SPACE FOR FUTURE SCULPTURE
15	PARKING
16	ENTRY PLANTING/SIGNAGE AND ARTWORK
17	LANDSCAPED ROUNDABOUT WITH WATER FEATURE AND SEATING AREA
18	PAVING
19	WATER FEATURE

THIS IS A PRELIMINARY CONCEPT ONLY FOR DISCUSSION PURPOSES.

REFER TO PLANT LEGEND/SUGGESTIONS ON PAGE L02

SALVATION ARMY

MOSSMAN GORGE AGED CARE FACILITY

at
JOHNSTON ROAD
MOSSMAN

GENERAL CONCEPT

SCALE: 1:300@A1 1:600@A3

JOB No: 161005

DWG No: L01 ISSUE No: 1

DATE: 10 DECEMBER 2015

SENTINEL-TYPE TREE -
Brachychiton acerifolius
(Flame Tree)

TREE WITH SPREADING CANOPY
Cassia 'Rainbow Showers'

FOOTPATH-TYPE TREE
Buckinghamia celcissima
(Ivory Curl Tree)

Heliconia 'Sexy Pink'

Heliconia 'Hot Rio Nights'

Hibiscus tiliaceus
Native Beach Hibiscus

Dietes bicolor
(Fortnight Lily)

GENERAL CONCEPT

CONCEPT PLANT SCHEDULE

SEMI-MATURE TREES WITH SPREADING CANOPY ADVANCED IN-GROUND TREES USED TO CREATE AVENUE AND ENTRY STATEMENT CASSIA JAVANICA / APPLE BLOSSOM SHOWER CASSIA X `RAINBOW SHOWERS` / RAINBOW SHOWERS	13
MEDIUM HEIGHT FLOWERING NATIVE FOOTPATH TREE BUCKINGHAMIA CELSISSIMA / IVORY CURL TREE	12
SEMI-MATURE PALMS EX GROUND PLAMS TO GIVE `INSTANT EFFECT" TO LANDSCAPING WHEN FIRST INSTALLED WODYETIA BIFURCATA / FOXTAIL PALM	56
FLOWERING SHADE TREE EX GROUND SPECIMEN DELONIX REGIA / POINCIANA	10
NATIVE SHADE TREE FLINDERSIA SCHOTTIANA / SILVER ASH	10
SENTINEL TREE BRACHYCHITON ACERIFOLIUS / FLAME TREE	17
GENERAL RAINFOREST TREES HARPULLIA PENDULA / TULIPWOOD NEOLITSEA DEALBATA / WHITE BOLLY GUM	13
RAINFOREST TREES - BUSHTUCKER CASTANOSPERMUM AUSTRALE / MORETON BAY CHESTNUT DAVIDSONIA PRURIENS / DAVIDSON`S PLUM	11
FEATURE RAINFOREST TREES/PALMS/LARGE SHRUBS TO BE PLANTED IN SHADY AREAS ONCE RAINFOREST ESTABLISHED CYATHEA AUSTRALIS / AUSTRALIAN TREE FERN	26
FEATURE RAINFOREST TREE WHICH CAN BE KEPT SMALL SYZYGIUM LUEHMANNII / SMALL-LEAVED LILLY PILLY	20
TREE TO GATHER UNDER DEPLANCHEA TETRAPHYLLA / GOLDEN BOUQUET TREE	4
FEATURE TROPICAL PLANTS 2-3M HELICONIA CARIBAEA X BIHAI `HOT RIO NIGHTS` / HOT RIO NIGHTS HELICONIA HELICONIA CHARTACEA `SEXY PINK` / HELICONIA SEXY PINK HELICONIA ORTHOTRICHA `TWILIGHT` / TWILIGHT CRAB CLAWS	53
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COLOURFUL SHRUBS TO 1.5M -	210,8 m²
NATIVE EDGE PLANTS UNDER 600MM DIANELLA REVOLUTA / SPREADING FLAX LILY	34,7 m²
GRASSY TYPE LOW FOLIAGE DIETES BICOLOR / FORTNIGHT LILY	25,0 m²
LOW NATIVE GROUND COVER/PROSTRATE SHRUBS GARDENIA PSIDIOIDES / GARDENIA `GLENNIE RIVER`	25,7 m² 64
COLOURFUL GROUNDCOVER/EDGE SHRUBS -	44,4 m²

PREDOMINANTLY NATIVE-STYLE GARDENS

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SALVATION ARMY

MOSSMAN GORGE AGED CARE FACILITY

at
JOHNSTON ROAD
MOSSMAN

CONCEPT PLANT SCHEDULE

SCALE: 1:300@A1 1:600@A3

JOB No: 161005

DWG No: L02 ISSUE No: 1

DATE: 10 DECEMBER 2015

Johnston Road, Mossman Gorge

APPENDIX H

ENGINEERING REPORT

Cardno
Shaping the Future

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PROJECT MANAGEMENT | ENGINEERING | PLANNING

Mossman Aged Care Facility
Engineering Report
For the Salvation Army

Reference Number: 645-001

06/01/2016

Prepared by:

ProjexPartners

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CONTENTS

Appendices

1 INTRODUCTION

Projex Partners have been engaged by The Salvation Army to prepare an Engineering Report to support the Material Change of Use application for a 4.378 ha site located on Johnston Road, Mossman at Lot 1 on SP150474.

The site is currently zoned as Community and Recreation Facilities within the Douglas Shire Council Planning Scheme 2006. The applicant is requesting development permits and preliminary approval of the following:

1. Material Change of Use to facilitate the establishment of Stage 1 of the Mossman and District Aged Care Precinct, being a 42-bed Retirement facility;
2. S241 preliminary approval for a Material Change of Use (Retirement facility) for the balance portion identified as 'Future Retirement Facility Development';
3. Reconfiguration of a Lot (one lot into two lots) to facilitate the retirement facility of Stage 1 of the Mossman and District Aged Care Precinct being wholly within its own lot.

Figure 1-1 below outlines the layout of the proposed facility.

Figure 1-1 Proposed Development Layout

The purpose of this report is as follows:

- Assess traffic impacts including:
  - Determination of development generated traffic
  - Assessment of intersection warrants for the two proposed access points on Johnston Road
  - Provision of a concept layout for the two access points
- Assess stormwater management including:
  - Legal point(s) of discharge
  - Stormwater quality management
  - Assess flood management/mitigation
- Provision of a preliminary pavement design for the access road and carparks.

2 TRAFFIC IMPACT ASSESSMENT

The proposed development consist of a 42 bed residential aged care facility (including administration services) and a possible future development in the balance lot to the north. Construction of the aged care facility is expected to be complete in 2016. Refer **Appendix A** for the proposed development site layout.

The intersection warrants have been analysed for the 10 year horizon of 2026.

2.1 Existing Volumes

A traffic count was undertaken on 20 November 2014 between 2pm and 4pm to obtain PM peak traffic volumes at the intersection of Johnston Road and the Captain Cook Highway. The timing of the traffic count was confirmed with TMR officers prior to commencement to confirm acceptance. The count was undertaken manually with two surveyors standing on each corner of Johnston Road. Each surveyor counted cars associated with 3 movements of a possible 6 movements identified for the intersection. **Appendix B** presents the results of the traffic count.

The traffic volumes on Johnston Road were derived by summing the number of vehicles departing and entering from the Captain Cook Highway. Future traffic growth has been adopted as 2% per annum in addition to the development generated traffic. The traffic volumes derived are shown in **Table 2-1**.

Table 2-1 - Traffic Volumes (PM Peak) – Johnston Road

Direction of Travel	Traffic Count 2014 (vehicles/hour)	Projected Traffic Volumes 2016 (vehicles/hour)	Projected Traffic Volumes 2026 (vehicles/hour)
Johnston Road Eastbound	107	111	136
Johnston Road Westbound	93	97	118

To determine the traffic travelling beyond the proposed site entrance an aerial investigation was conducted, the results of which are provided in **Table 2-2**. The investigation involved quantifying the number of properties that gain access prior to the site as a ratio of the total number of properties that gain access from Johnston Road. The areas associated with this investigation are shown in **Figure 2-1** with the blue hatch indicating properties that are accessed prior to the site and orange indicating properties that are accessed after the sites.

This assessment relies solely on the distribution of residential dwellings to predict traffic distributions and is believed to be a reasonable assumption to make during the PM peak. Traffic generated by the Mossman Gorge Centre (further to the west) is expected to be offset by traffic generated from both Mossman Multi-Purpose Health Service and St Augustine's Primary School (both to the east). Therefore the ratios within **Table 2-2** remain a true indication.

Table 2-2 - Traffic Distribution

Unit	Total	Prior to Site access	After Site Access
Residential Dwelling	212	157 (≈ 75%)	55 (≈ 25%)

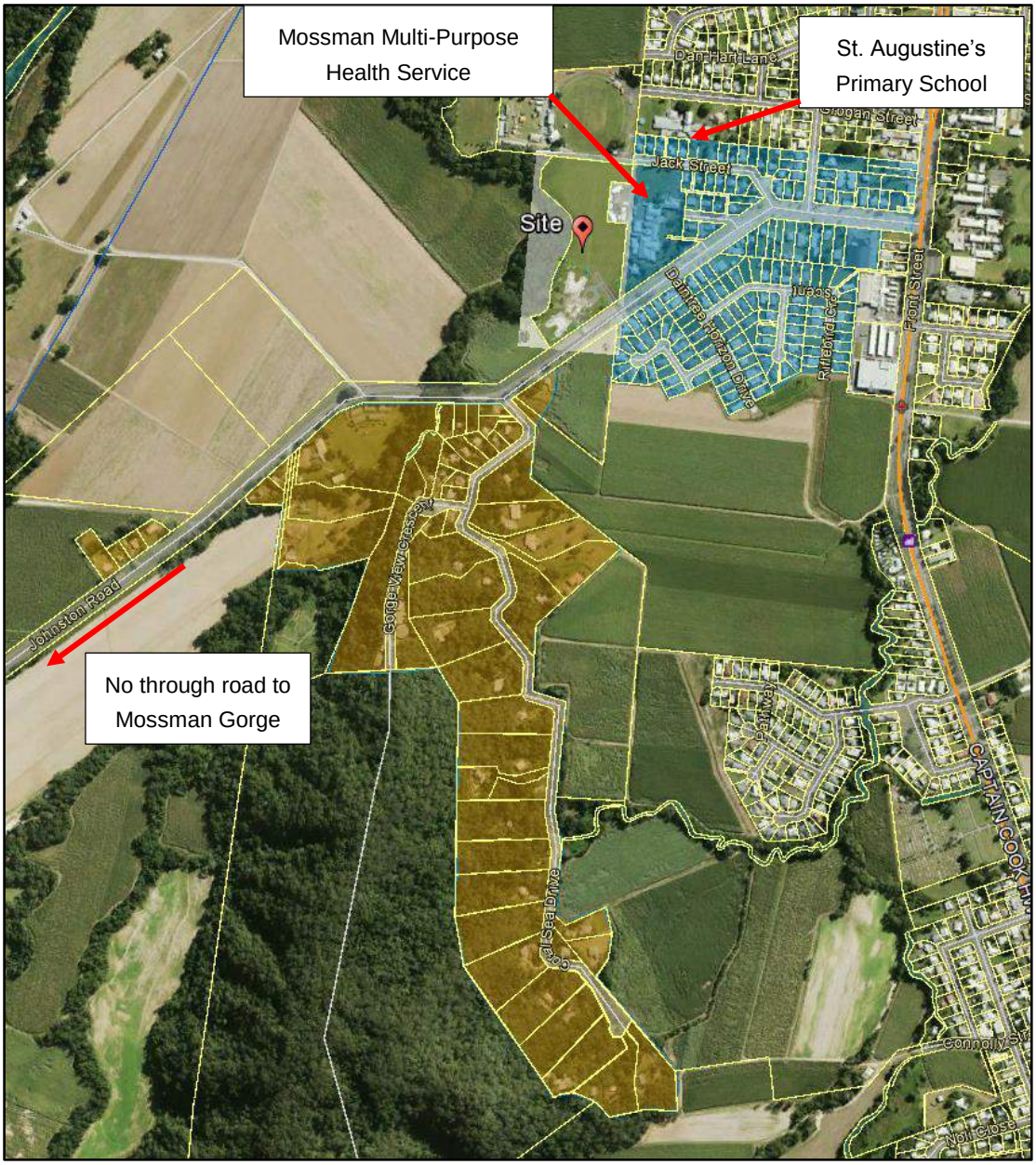


Figure 2-1 - Traffic Distribution

To derive the traffic volumes beyond the proposed development (excluding development traffic) the traffic counts from **Table 2-1** have been combined with the traffic distribution from **Table 2-2** with the results presented in **Table 2-3**.

Table 2-3 - Traffic Volumes (PM Peak) – Beyond Proposed Development

Direction of Travel	Traffic Count 2014 (HV)	Projected Traffic Volumes 2016 (HV)	Projected Traffic Volumes 2026 (HV)
Johnston Road Eastbound	27 (1)	28 (1)	34 (2)
Johnston Road Westbound	23 (1)	24 (1)	29 (1)

2.2 Development Generated Traffic

The traffic generated by the proposed development has been derived from *TMR's Road Planning and Design Fundamentals (2005)*, Appendix 3A – Trip Generation Rates. The development of the balance lot to the north has been assumed to consist of 40 dwellings for use as a retirement village and has been included within this report to facilitate future development via the same intersection configuration.

The aged care centre has a small rear car park (5 spaces) for kitchen/laundry staff with a separate access to Johnston Road. This access will also be used for deliveries and garbage removal outside of peak times. The results presented in **Table 2-4** and are reflective of the site being 100% developed.

Table 2-4 - Development Generated Traffic

Development Category	Peak rate / unit	Number of units (beds/dwellings/staff)	Peak hour (vehicles/hour)
Intersection 1			
Retirement / Aged Homes	0.1 – 0.2 (0.2 adopted)	42	9
Residential Dwellings (detached)	0.40[1]	40 (Assumed)	16
		Total (vehicles/hour)	25
Intersection 2			
Staff	1	5	5
		Total (vehicles/hour)	5

2.3 Intersection Warrants

This section assesses the turn treatment warrants for both of the proposed access points shown in **Figure 2-2**.

Johnston Road is not a thoroughfare and proceeding further west leads to rural residential areas and the Mossman Gorge Centre, as a result it has been assumed that all departures will proceed east and that all arrivals will come from the east in the PM peak.

As this assessment is for the PM peak it has been assumed that 60% of the generated trips are receiving traffic (i.e. residents returning home) and 40% are departing traffic for Intersection 1. As Intersection 2 will only be used by staff it has been assumed that 100% arrive in the AM peak and 100% depart in the PM peak as a conservative approach.

[1] A peak rate / unit of 0.4 has been adopted for detached residential dwellings for use as a retirement village. This value is interpolated from the peak rates for retirement/aged care homes and detached dwellings as documented in Chapter 3, Table 3.9 of TMR's RPDM.

Figure 2-2 - Site Accesses

2.3.1 Main Access (Intersection 1)

The main access to the site (illustrated as '1' in **Figure 2-2**) will be used by all residents/medical staff of the aged care facility and possible future development to the north and has been assigned the corresponding traffic (25VPH). The traffic distribution through this intersection is shown in **Figure 2-3** for the 2026 scenario.

The turn treatment warrants are shown in **Figure 2-4** as per *Austroads Guide to Road Design Part 4A: Unsignalised and Signalised Intersections (2010)*. Based on turning volumes Q_R of 15 and a through volume Q_M of 63 it has been determined that intersection 1 configuration should be a Basic Right (BAR) / Basic Left (BAL).

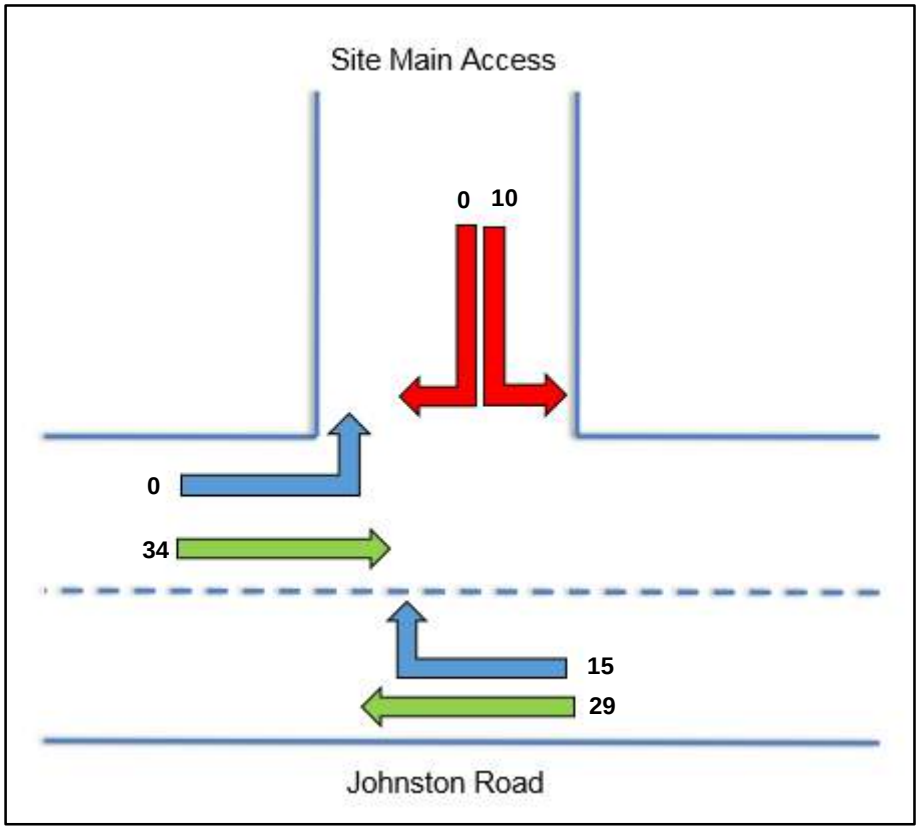


Figure 2-3 - Traffic Distribution (2026) - Intersection 1

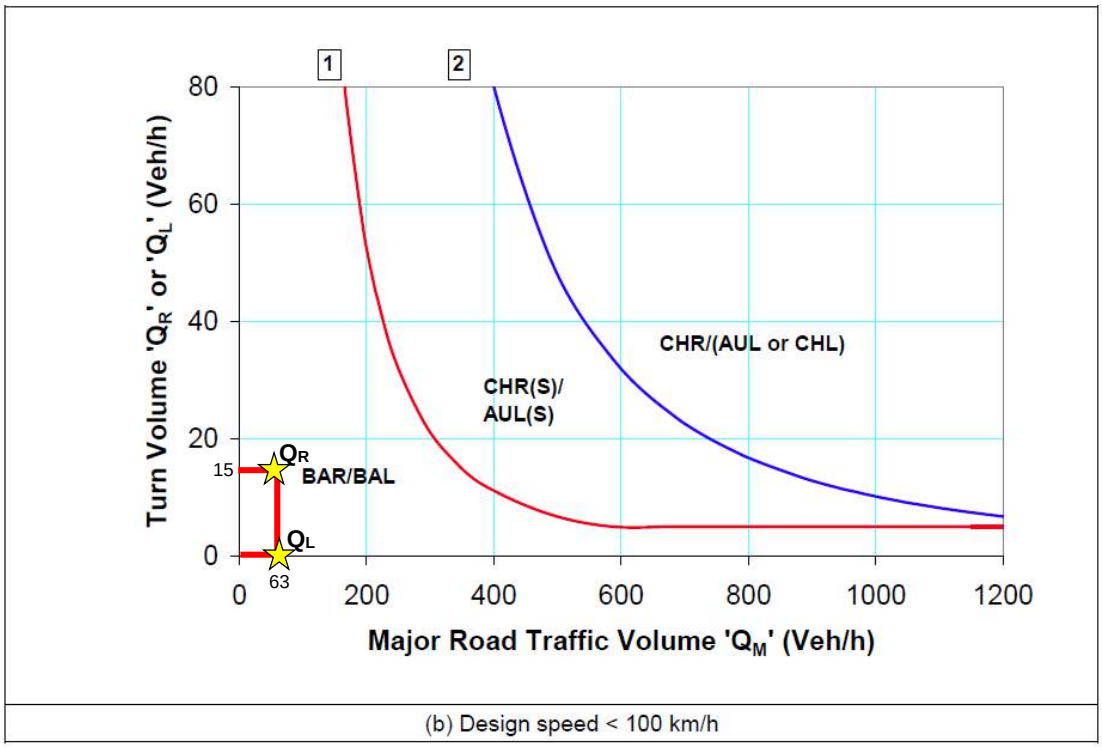


Figure 2-4 - Turn Treatment Warrants - Intersection 1

2.3.2 Secondary Access (Intersection 2)

The secondary access to the site (illustrated as '2' in **Figure 2-2**) will be used to by the staff of the aged care facility and garbage trucks/deliveries. It has been assumed that no garbage trucks/deliveries will access the site during the PM peak period. The traffic distribution at the secondary access is shown in **Figure 2-5** for the 2026 scenario.

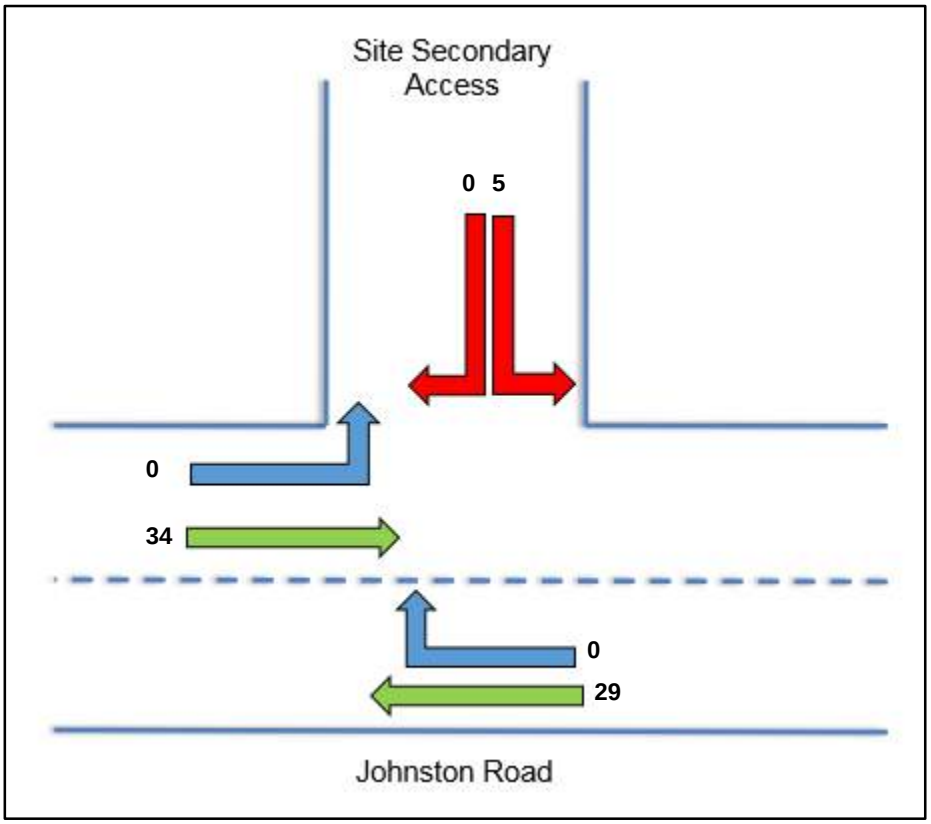


Figure 2-5 - Traffic Distribution (2026) - Intersection 2

The installation of a turn treatment similar to that of the main access at this location has potential to attract unwanted traffic from visitors not familiar with the site. To deter vehicles using this access a simple left (SL) / simple right (SR) turn treatment has been adopted. This treatment has been determined using the Extended Design Domain (EDD) from TMR's *Supplement to Austroads Guide to Road Design Part 4A: Unsignalised and Signalised Intersections (2014)* as shown in **Figure 2-6**.

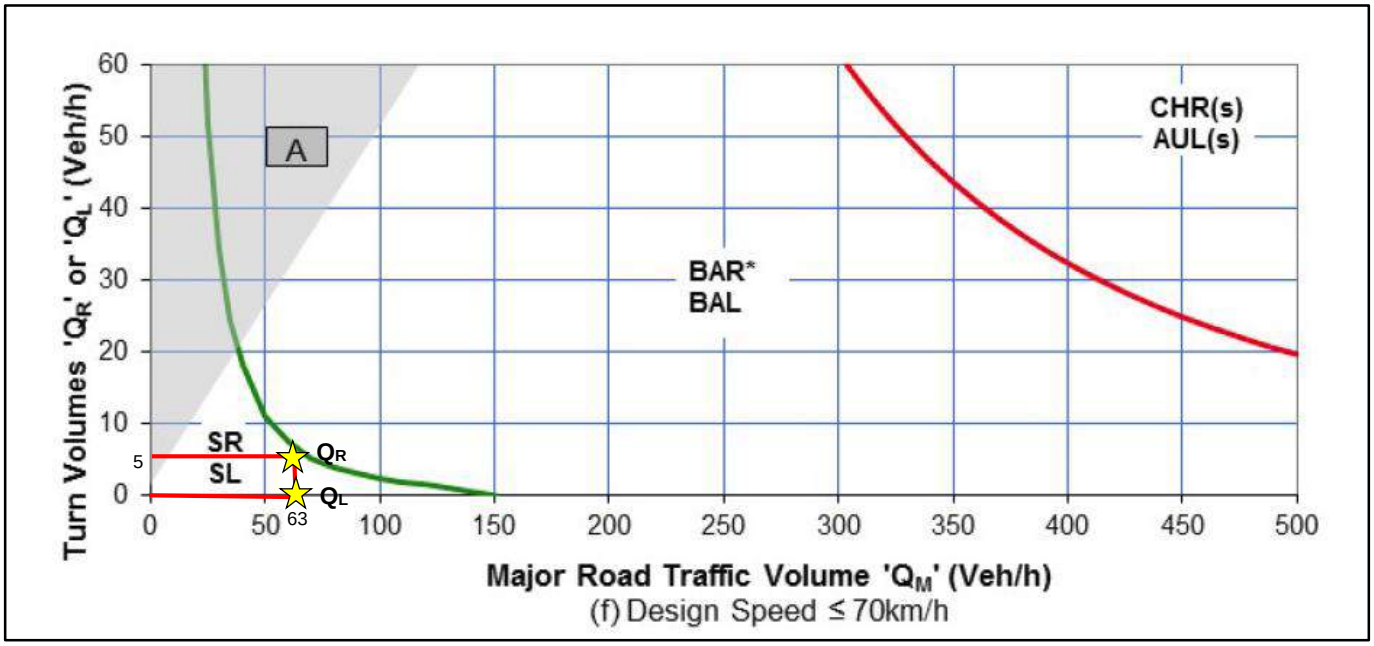


Figure 2-6 - EDD for intersection Warrants

A Simple Right (SR) / Simple Left (SL) configuration at this intersection will consist of a vehicle crossover to Council standards with no turn treatments.

2.4 Sight Distance

The sight distance requirements as indicated by *Austroads Guide to Road Design Part 4A: Unsignalised and Signalised Intersections (2010)* are as follows:

- Approach Sight Distance (ASD) = 64m;
- Safe Intersection Sight Distance (SISD) = 141m;
- Minimum Gap Sight Distance (MGSD) = 97m.

The values above are based on the access road having an 85th percentile speed of 60km/h and Johnston Road's 85th percentile speed of 70km/h.

Both of the proposed site accesses are located on a straight flat section of Johnston Road. Initial investigations indicate that both access points satisfies sight distance requirements.

2.5 Proposed Layout Plan

A concept plan indicating the proposed layout of the two access points, including turn path analysis, has been attached at **Appendix C**.

3 STORMWATER MANAGEMENT

3.1 Existing Site Catchment and Characteristics

The site is situated within the catchment of and adjacent to Marrs Creek, approximately 2.0km upstream of its confluence point with the Mossman River.

The site is relatively flat with LIDAR survey indicating levels ranging between 10 – 14m AHD. The majority of the site currently flows in a north easterly direction across the eastern site boundary into the rear of adjoining lots and towards Jack Street/Mossman Showgrounds. The remainder of the site sheet flows towards Marrs Creek to the west.

3.1.1 Existing Land Use

The site is currently an undeveloped lot used for agriculture.

3.1.2 Vegetation

The western edge of the lot contains riparian habitat lining the banks of the adjacent creek including large trees. The remainder of the site has been cleared of all significant vegetation to support agricultural uses.

3.1.3 Groundwater

No groundwater studies have been conducted on this site as part of this report.

3.2 Developed Conditions

3.2.1 Proposed Stormwater Drainage Infrastructure

It is proposed to collect the stormwater runoff from all roads, car parks and roofs via an underground stormwater network. Landscaped areas and lawns will be shaped to dissipate water via sheet flow as is currently occurring.

The design standards proposed for the sizing of stormwater infrastructure are for Urban Residential High Density (greater than 20 dwelling units/ha) as per QUDM as shown **Table 3-1.**

Table 3-1 - Design ARI's

Minor Drainage System	Major Drainage System
10 year ARI	200 year ARI

3.2.2 Legal Point of Discharge

LIDAR survey indicates that a section of Marrs Creek passes within the site boundary towards the south western corner of the site. Stormwater runoff collected in underground drainage system(s) within the proposed development is proposed to discharge into the creek at this location.

Flows will be dissipated via an appropriate system such as a rock pad prior to discharge into the creek to prevent erosion issues from concentrated flows.

If detailed survey reveals that discharging stormwater into Marrs Creek within the property boundary is not possible, or that sufficient levels cannot be obtained within the site boundary, access rights will be requested from the adjacent property owner for the installation of the drainage outlet.

3.2.3 Stormwater Quality Management

As per FNQROC design guidelines, stormwater quality interception devices are required for this site to achieve the following criteria:

- 90% reduction in Total Suspended Solids (TSS) greater than 3.0mm;
- 60% reduction in Total Phosphorous (TP);
- 40% reduction in Total Nitrogen (TN);
- Removal of the above contaminants prior to crossing the property boundary and be configured to prevent re-injection of captured contaminants;
- The device shall be of a proprietary design and construction with a manufacturer's performance guarantee;
- The device is required to treat all first flush runoff, defined as the 3 months ARI storm event, from the site;
- The device will be designed to provide for routine cleanout at three monthly intervals and will not compromise the hydraulic performance of the upstream drainage system;

Accordingly it is proposed to provide a proprietary SQID just prior to the creek outlet to capture and treat flows from the piped drainage system. The exact location and design of the device will be provided with the detailed design.

3.2.4 Flood Mitigation

A preliminary flood study was conducted by Cardno in 2008 to support a previous development application relevant to the proposed development location and is attached at **Appendix D**. This report provides indicative flood levels of 13 – 13.6m AHD around the site for the 100 year ARI event.

The aged care facility is proposed to be located towards the south west corner of the site and on the highest section of land. According to the Cardno flood study the majority of this area is located above the estimated Q100 flood levels however, *Table 7.3.2 of Queensland Urban Drainage Manual* (QUDM) recommends an ARI of 200 years for aged care housing. It is therefore assumed that some relatively minor earthworks/filling in this corner of the site will be necessary to achieve the required flood immunity and freeboard of 300mm to all finished floor levels. This will be investigated further with detailed design.

Given that the proposed development is expected to be above the existing AEP 1% flood levels, no significant impacts on existing flood levels are anticipated.

3.2.5 Severe Storm Impact Statement

The minor drainage system is expected to be okay during a severe storm event. Overland flow paths through the development can be provided to enable the free drainage of flood waters. However the flooding of the adjacent Marrs Creek during a severe storm event may lead to flows discharging across the site, this should be further investigated during detailed design to check the adequacy of the proposed 300mm freeboard.

4 PAVEMENT DESIGN

A geotechnical Report has been completed for this site by ETS Materials Testing dated November 2015 and is attached at **Appendix E**. This report indicates a CBR of 9 for the site based on a single test sample located central to the site. **Figure 4-1** shows the design chart used for the preliminary pavement design taken from *Austroads Pavement Design for Light Traffic (2006).* The traffic loading in ESA's has been adopted as 5 x 10^4 as indicated in FNQROC for an access place.

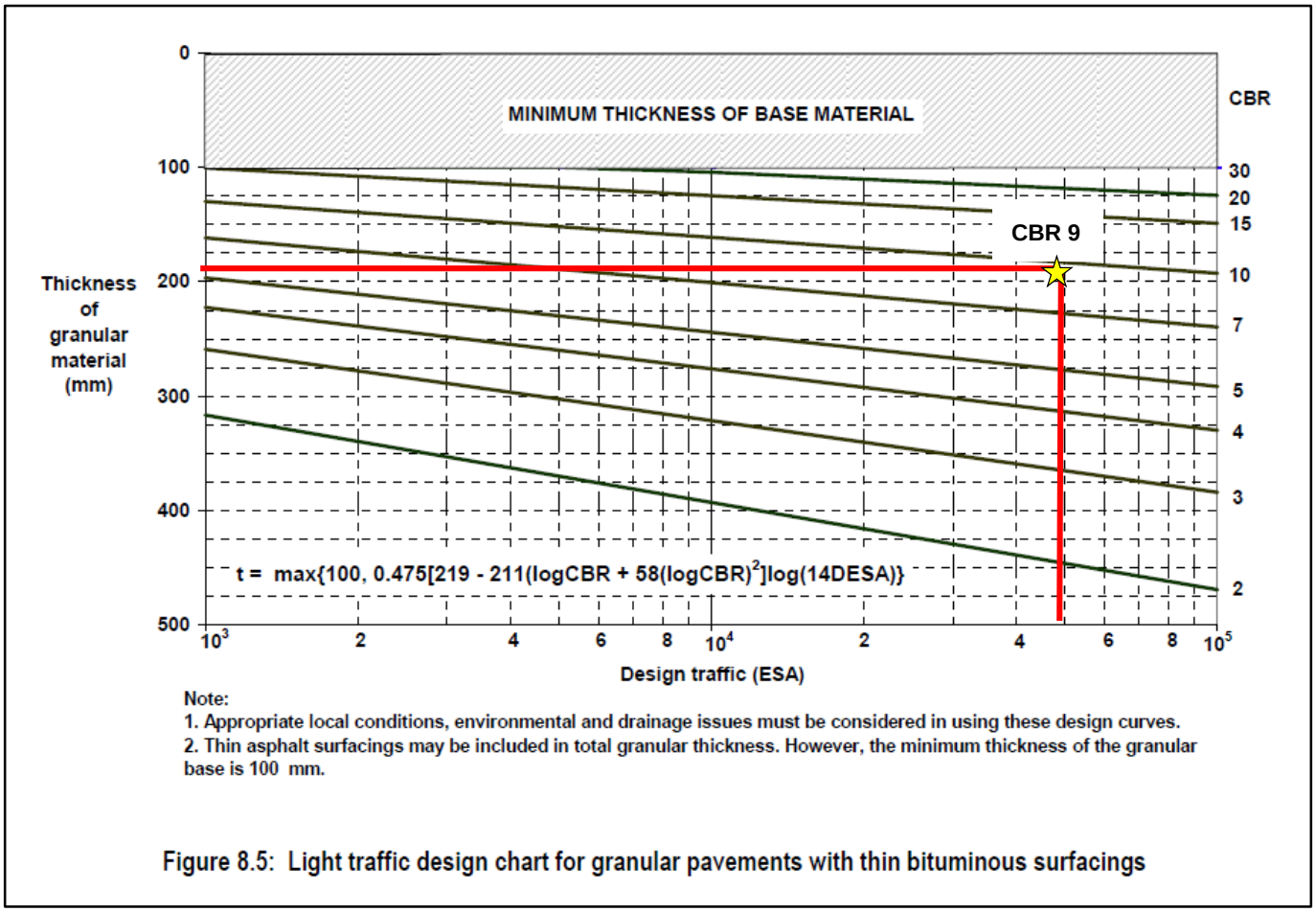


Figure 4-1 - Pavement Design Chart

As per FNQROC Development Manual, Design Guideline – D3 Road Pavements and in conjunction with the design chart in **Figure 4-1** the minimum pavement design has been adopted for Douglas Shire Council is shown in **Table 4-1**.

Table 4-1 - Preliminary Pavement Design

Street Type	Minimum Pavement (mm)[2]	Surface Treatment	Minimum Base Course CBR	Minimum Subbase Course CBR
Access Place	200	30mm AC	60	45

[2] Minimum pavement thickness does not include the depth of surfacing.

5 SUMMARY

Projex Partners has been engaged by The Salvation Army to prepare an Engineering Report to support the Material Change of Use application for a 4.378 ha site located on Johnston Road, Mossman at Lot 1 on SP150474. The site is currently zoned as Community and Recreation Facilities within the Douglas Shire Council Planning Scheme 2006. The proposed development includes reconfiguration of a lot (1 into 2), the first to contain the Mossman and District Aged Care Facility and the second reserved for a possible future retirement facility development.

The report analysed two accesses into the proposed development, the main access and a secondary access. Although no layout plan has been provided for the 'Future Retirement Facility Development' it is proposed that access would be gained from the same access as the Aged Care Precinct. To facilitate access to a future development via the same intersection configuration an allowance was made for 40 additional dwellings within this traffic impact assessment. The findings of this assessment indicated that the main access warrants a BAR/BAL configuration for the fully developed 10 year horizon this requires widening on Johnston Road for a right turn and flares for the left turns. The secondary access caters for a small staff car park with no internal access to the rest of the site and warrants a SR/SL configuration which does not require any widening works on Johnston Road.

The stormwater assessment for this site has indicated that an end of line stormwater quality interception device will be provided to capture all suspended solids and pollutants from the site. The stormwater will then be dissipated back into sheet flow prior to discharge into the adjacent creek. Flood immunity is proposed to be provided by situating the development on the highest portion of the site and ensuring all finished finished floor levels have minimum freeboard to flood waters in a 200 year ARI storm.

A preliminary pavement design has been conducted based on the traffic loading for an access street. A geotechnical report has been conducted indicating that the ground has a satisfactory CBR value able to adopt the minimum pavement design.

Appendix A

Proposed Site Layout Plan

PROPOSED LOT 1	13,935 m2
PROPOSED LOT 2	29,845 m2
GFA	3,066 m2
COVERED AREA	1,122 m2
PRIVATE OPEN SPACE	5,976 m2
PUBLIC COMMUNITY SPACE	3,771 m2
RESIDENTIAL UNITS	42 BEDROOMS
CAR PARKING	14 SPACES

ISSUE FOR DEVELOPMENT APPLICATION

thomson adsett

Project	MOSSMAN AGED CARE PLUS CENTRE	Drawing Title	SITE PLAN	Drawing Number	15.0285.11 SK02
Client	THE SALVATION ARMY	Date	17.12.2015	Scale	1 : 1000 8

 21/12/2015 4:19:57 PM C:_REVITLOCALFILES\2015\15.0285.11 Site Plan_newmanp.rvt

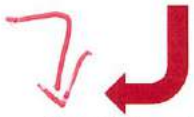
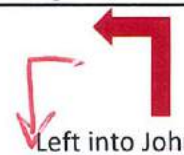
Original Sheet Size A3 - 297 x 420mm

Appendix B

Traffic Count Data

Captain Cook Hwy
14
Johnston Rd

Name Glen Walker.
Date 20-11-14 20/11/2014
Time 1400 2pm-4pm
Location Johnston Rd - Captain Cook Hwy, Mossman

Movement	15min	30min	45min	1hr
 Captain Cook Hwy South	52	57	73	65
 Left out of Johnston	15	19	19	24
 Right out of Johnston	12	16	30	22
 Captain Cook Hwy North				
 Right into Johnston				
 Left into Johnston				

Name Glen Walker
Date 20-11-14 20/11/2014
Time 1400 2pm-4pm
Location Johnston Rd - Captain Cook Hwy, Mossman

Movement	1hr15	1hr30	1hr45	2hr
Captain Cook Hwy South	83	90	90	82
Left out of Johnston	23	25	22	24
Right out of Johnston	38	38	17	21
Captain Cook Hwy North				
Right into Johnston				
Left into Johnston				

Name Tyler
Date 20/11/2014
Time 2pm-4pm
Location Johnston Rd - Captain Cook Hwy, Mossman

Movement	15min	~~30min~~ 30min	~~45min~~ 45min	1hr
 Captain Cook Hwy South	52	57	73	65
 Left out of Johnston	15	19	19	24
 Right out of Johnston	12	16	30	22
 Captain Cook Hwy North	39	56	63	91
 Right into Johnston	6	23	18	20
 Left into Johnston	12	15	25	32

Name Tyler
Date 20/11/2014
Time 2pm-4pm
Location Johnston Rd - Captain Cook Hwy, Mossman

Movement	1hr15	1hr30	1hr45	2hr
 Captain Cook Hwy South	83	90	90	82
 Left out of Johnston	23	25	22	24
 Right out of Johnston	38	38	17	21
 Captain Cook Hwy North	85	100	88	80
 Right into Johnston	31	27	21	17
 Left into Johnston	16	22	13	17

Appendix C

Concept Site Access Plan

Single Unit Truck/Bus (12.5 m)

Overall Length	12.500m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.490m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	12.500m

Service Vehicle (8.8 m)

Overall Length	8.800m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.427m
Track Width	2.500m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	12.500m

Projex Partners

Last Modified: - Jan 06, 2016 - 9:02am W:\645-001 The Salvation Army\645-001 Mossman Aged Care\Drawings\SKETCHES\645-001-SK01.dwg

Projex Partners

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CLIENT

No.	Description	Date	Drawn	Design	Check	RPEQ
1	FOR INFORMATION	17/12/15	RH			

APPROVED

RPEQ

SCALE

1:500 0 5 10 20 30 A1

1:1000 A3

MOSSMAN AGED CARE

CONCEPT SITE ACCESS

DRAWING NUMBER 645-001 | No IN SET OF | REVISION 1

Appendix D

Marrs Creek Flood Study - Cardno

KUBIRRI AGED CARE FACILITY

Marrs Creek Flood Study

17 March 2008
Job No. Q074047

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Cardno (Qld) Pty Ltd

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Document Control

Version	Date	Author		Reviewer	
		Name	Initials	Name	Initials
1	17 March 2008	M. Della		K.Brown	

KUBIRRI AGED CARE FACILITY
MARRS CREEK FLOOD STUDY

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APPENDICES

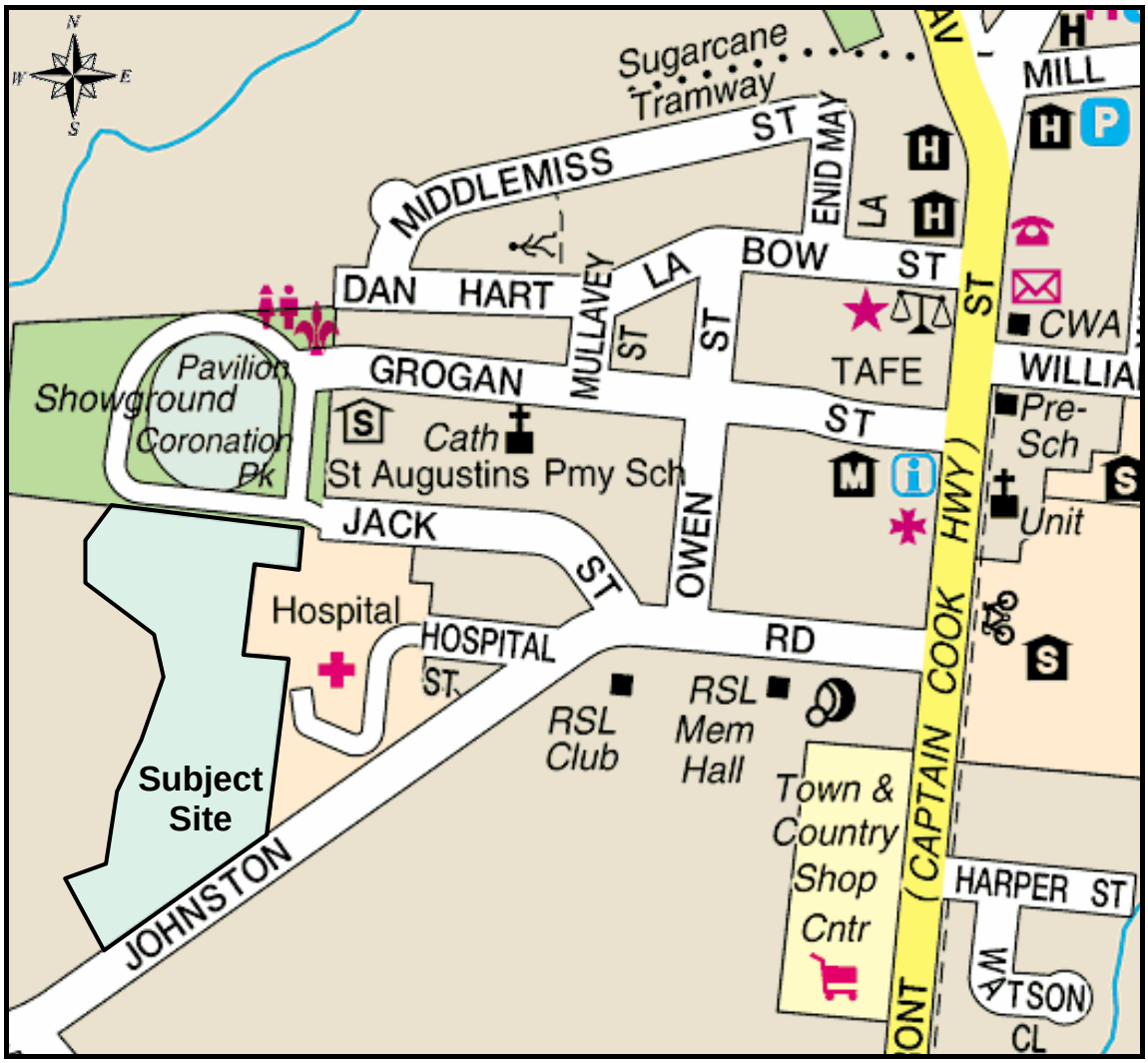
1. INTRODUCTION

It is proposed to develop the Kubirri Aged Care Facility and Retirement Village at the subject site at Mossman (refer Layout Plan in Appendix A). The site is bounded by the Mossman Hospital to the east, Marrs Creek to the west, Johnston Road to the south, and the Mossman Showgrounds to the north (refer Locality Plan below).

Marrs Creek flows along the western boundary of the site. An investigation of the flooding behaviour of Marrs Creek was therefore carried out to:

- calculate the 100 year flood levels in the creek adjacent to the site; and
- determine the impact of the proposed filling of the subject site on flood levels in adjacent properties.

This report presents the results of the flood investigation.



Locality Plan
(Copyright © Universal Publishers Pty Limited)

2. CATCHMENT DESCRIPTION

The subject site is located in the Marrs Creek catchment. Marrs Creek flows along the western boundary of the site, and discharges into the Mossman River just upstream of the Captain Cook Highway in Mossman. The confluence of Marrs Creek with the Mossman River is located approximately two kilometres downstream of the subject site.

The catchment area of Marrs Creek to the downstream end of the subject site is approximately 967 hectares.

The upstream reaches of the catchment are very steep, and rise to a peak level of approximately 750 mAHD. However, in the vicinity of the subject site, the catchment slope is relatively low, with the floodplain areas adjacent to the creek used for growing sugar cane. The ground levels within the subject site are generally between 10 and 15 mAHD.

Photographs of Marrs Creek in the vicinity of the subject site are contained in Appendix B.

3. CATCHMENT HYDROLOGY

3.1 Catchment Area

The size of the Marrs Creek catchment to the downstream end of the subject site was determined from 1:50,000 topographic maps of the area. The catchment boundary is shown in Figure 1. The total catchment area was calculated to be approximately 967 hectares.

3.2 Time of Concentration

The time of concentration for the catchment was calculated using two different methodologies, as described in the *Queensland Urban Drainage Manual* (QUDM), Section 5.05.5(d): the Bransby-Williams' Equation and the Modified Friend's Equation.

The formula for the Bransby-Williams' Equation is:

$$t_c = \frac{92.7L}{A^{0.1}S^{0.2}}$$

where: t_c = time of concentration of the catchment (min)
L = length of flowpath from the outlet to the catchment divide (km)
A = catchment area (ha)
S = equal area slope (m/km)

The formula for the Modified Friend's Equation is:

$$t_c = \frac{8.5L}{ChA^{0.1}S^{0.4}}$$

where: t_c = time of concentration of the catchment (h)
L = length of flowpath from the outlet to the catchment divide (km)
Ch = Chezy's coefficient at the site = $R^{1/6}/n$
R = hydraulic radius = $0.65R_s$ (where the slope varies along the stream)
R_s = hydraulic radius at the site (m)
n = average Manning's n roughness along the stream
A = catchment area (km²)
S = equal area slope (%)

Using these equations, the time of concentration of the catchment to the downstream end of the subject site was calculated using the following parameters:

- Stream Length = 8470 m
- Catchment Area = 967 ha
- Equal Area Slope = 2.7%
- Hydraulic Radius at Outlet = 2.0 m
- Average Manning's n Roughness = 0.07

The resultant times of concentration using each methodology are:

- Bransby-Williams 204 minutes
- Modified Friend's 155 minutes

Thus, a time of concentration of 2.5 hours (150 minutes) was adopted for the catchment.

3.3 Coefficient of Runoff

The coefficient of runoff for the catchment was determined in accordance with QUDM Section 5.04, as shown below.

The 1 hour, 10 year average recurrence interval (ARI) rainfall intensity in Mossman is 81.16 mm/h (ref. *FNQROC Development Manual*). The fraction impervious of the undeveloped catchment is 0%. Thus, the 10 year coefficient of runoff is 0.70 (ref. QUDM Table 5.04.2)

The coefficient of runoff for the 100 year ARI event is therefore 0.84.

3.4 Rational Method

Using the time of concentration of 2.5 hours, the Rational Method was used to calculate the 100 year discharge from the catchment.

Design rainfall intensities were obtained from the FNQROC Development Manual IFD Chart 18 – Port Douglas and Mossman.

The resultant peak discharges for the 100 year event using the Rational Method is 165 m^3/s.

3.5 WBNM Model

A WBNM hydrologic model of the catchment was established. The model layout for the catchment is shown in Figure 2.

The design rainfall data for the Marrs Creek catchment was determined in accordance with Australian Rainfall and Runoff Volume 2. The information derived is as follows:

2 Year ARI, 1 hour Intensity	62 mm/h
2 Year ARI, 12 hour Intensity	17.0 mm/h
2 Year ARI, 72 hour Intensity	5.5 mm/h
50 Year ARI, 1 hour Intensity	100 mm/h
50 Year ARI, 12 hour Intensity	35.0 mm/h
50 Year ARI, 72 hour Intensity	16.0 mm/h
Regional Skewness	0.15
Geographical Factor F2	3.85
Geographical Factor F50	17.0

The design rainfall losses adopted for the analysis were:

Pervious Area	Initial Loss = 0 mm
	Continuing Loss = 2.5 mm/h
Impervious Area	Initial Loss = 0 mm
	Continuing Loss = 0 mm/h

The WBNM model was run for a range of storm durations, from 10 minutes to 24 hours, with the 6 hour event producing the peak discharge from the catchment. The peak discharge calculated by the WBNM model is 169 m^3/s.

This result shows that the peak flow calculated by the WBNM model agrees well with that from the Rational Method. Thus, it was considered that the WBNM model could be used to calculate the discharge hydrographs from the catchment.

4. HYDRAULIC ANALYSIS

4.1 Model Setup

The flood flow along Marrs Creek was modelled using the 2-dimensional unsteady flow software TUFLOW (Build 2007-07-BA).

A digital terrain model (DTM) of the study area was set up based on a detailed field survey carried out by C&B Group in October and December 2007. The survey extended from Johnston Road (upstream of the site) to the cane railway line (downstream). Details of the waterway crossings at Johnston Road and the cane railway were included in the survey. A copy of the survey plan is contained in Appendix C.

Based on this survey data, a TUFLOW model of the study area was established. A fine 2 metre grid was used to define the flow paths within the model.

Culverts and bridge crossings were input into the TUFLOW model as 1-dimensional flow links. Inlet and outlet loss coefficients of 0.5 and 1.0 respectively were used for all structures. The TUFLOW model checks the operation of culverts under both inlet and outlet flow control, for Class 1 (free water surface) and Class 2 (submerged entrance) conditions.

The Manning's n roughness values applicable to the study area were determined from aerial photographs and site inspection. The values used are summarised in Table 1.

Table 1 Manning's n Values

Location	Manning's n
Marrs Creek main channel	0.05
Heavily vegetated areas adjacent to Marrs Creek	0.15
Rural farming land	0.10
Grassed areas in Showgrounds	0.03

As discussed in Section 2, photographs of the study area are contained in Appendix B.

A stage-discharge rating curve was adopted for the boundary condition at the downstream end of the TUFLOW model. The cross section of the flow area at the downstream boundary was extracted from the DTM. The hydraulic gradient was derived from the longitudinal slope in the area to be approximately 1.0%. However, the downstream boundary is located a sufficient distance downstream of the site so as not to affect the calculated flood levels within the site.

Subcatchment hydrographs calculated by the WBNM model were input into the TUFLOW model at two locations: at the upstream boundary of the model (at Johnston Road); and midway through the subject site. As discussed in Section 3, the 6 hour storm event produced the peak discharge in Marrs Creek in the vicinity of the site.

4.2 Calculated Flood Levels

The TUFLOW model was used to calculate the peak flood levels in the study area for two scenarios:

- existing site conditions; and
- filling of the subject site.

The calculated peak flood levels for both scenarios, and the anticipated extent of inundation within the study area, are shown in Appendix D.

In summary, the 100 year flood level in Marrs Creek adjacent to the subject site under existing conditions varies from approximately 13.4 mAHD (at the upstream end of the site) to approximately 12.9 mAHD (at the downstream end), as shown in Figure D1.

With the subject site filled, the 100 year flood levels vary from approximately 13.6 mAHD (at the upstream end) to approximately 13.0 mAHD (at the downstream end), as shown in Figure D2.

Thus, the proposed filling results in an increase in the 100 year flood level in Marrs Creek adjacent to the subject site of 100-200 mm (refer Figure D3 in Appendix D). The increase in the rural land further to the west is generally 50-100 mm.

The proposed filling also results in a decrease in the 100 year flood level in Marrs Creek downstream of the showgrounds of up to 100 mm.

5. CONCLUSION

It is proposed to develop the Kubirri Aged Care Facility and Retirement Village at Mossman. Marrs Creek flows along the western boundary of the subject site.

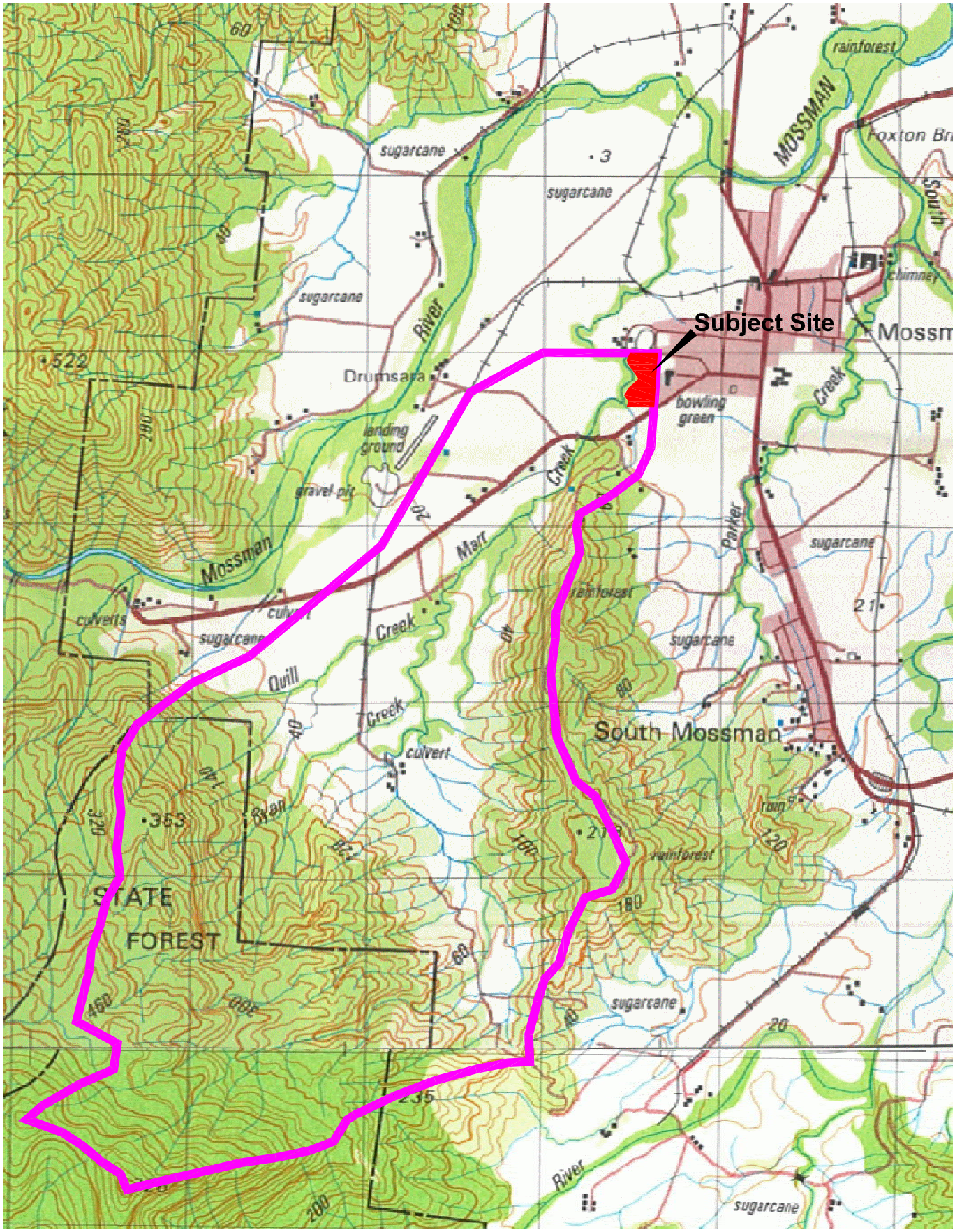
An investigation of the flooding behaviour of Marrs Creek was carried out to:

- calculate the 100 year flood levels in the creek adjacent to the site; and
- determine the impact of the proposed filling of the subject site on flood levels in adjacent properties.

A WBNM hydrologic model of the catchment was set up to determine the 100 year flood flows from the catchment.

The flood flow in Marrs Creek within the study area was modelled using TUFLOW. The results of the analysis show that the proposed filling results in an increase in the 100 year flood level in Marrs Creek adjacent to the subject site of 100-200 mm. The increase in the rural land further to the west is generally 50-100 mm. The proposed filling also results in a decrease in the 100 year flood level in Marrs Creek downstream of the Mossman showgrounds of up to 100 mm.

FIGURES



Scale 1:30,000 (A4)

FIGURE 1
CATCHMENT PLAN

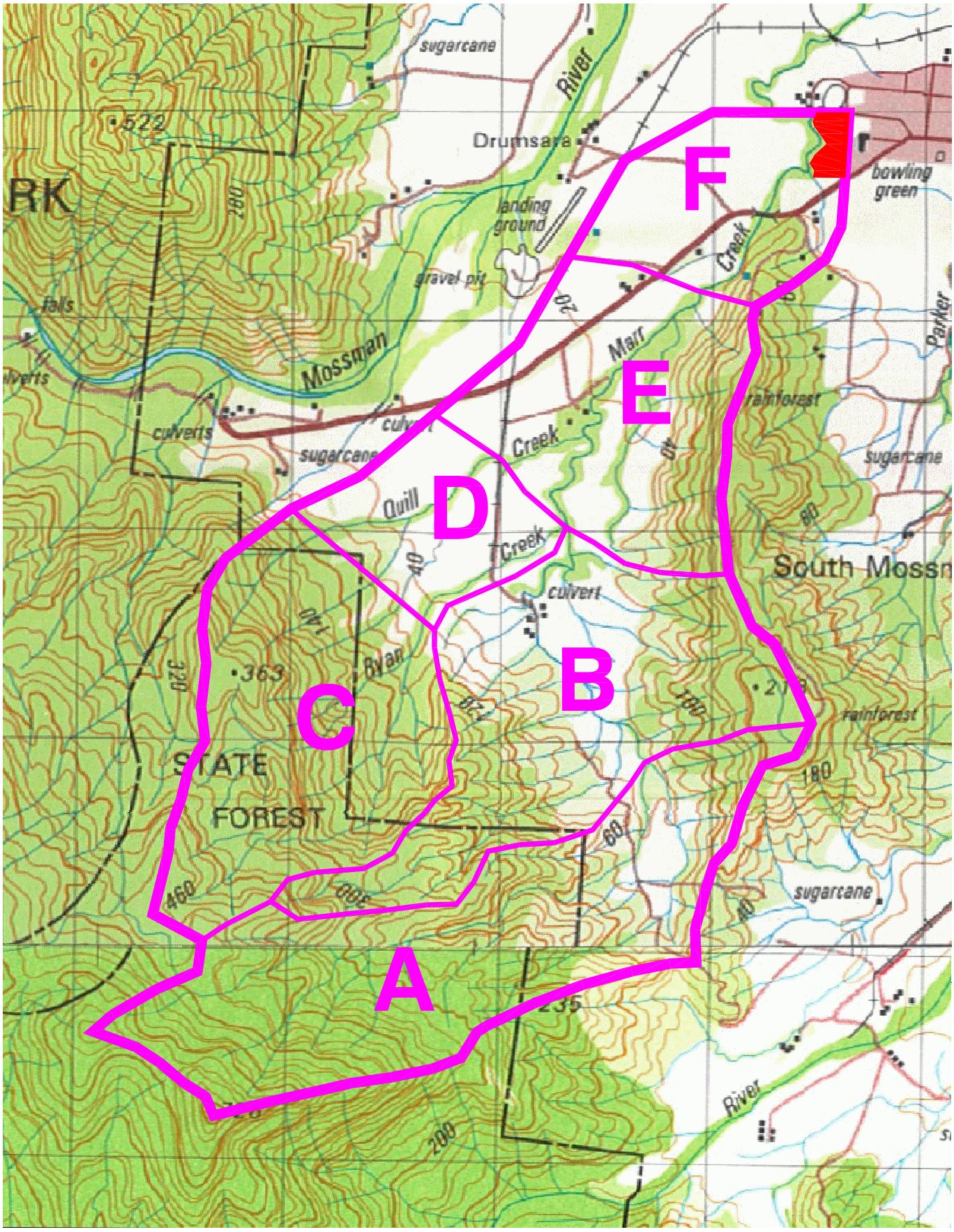
Rev: Orig. Date: 14 March 2008

Project No.: Q074047

CEC Group Pty Ltd

CAD FILE: D:\Cardno\Q074047\Acad\Figure1.dwg
XREF's:

PRINT DATE: 16 March, 2008 - 2:17pm



Scale 1:25,000 (A4)

FIGURE 2

WBNM Model Layout

Rev: Orig. Date: 14 March 2008

Project No.: Q074047

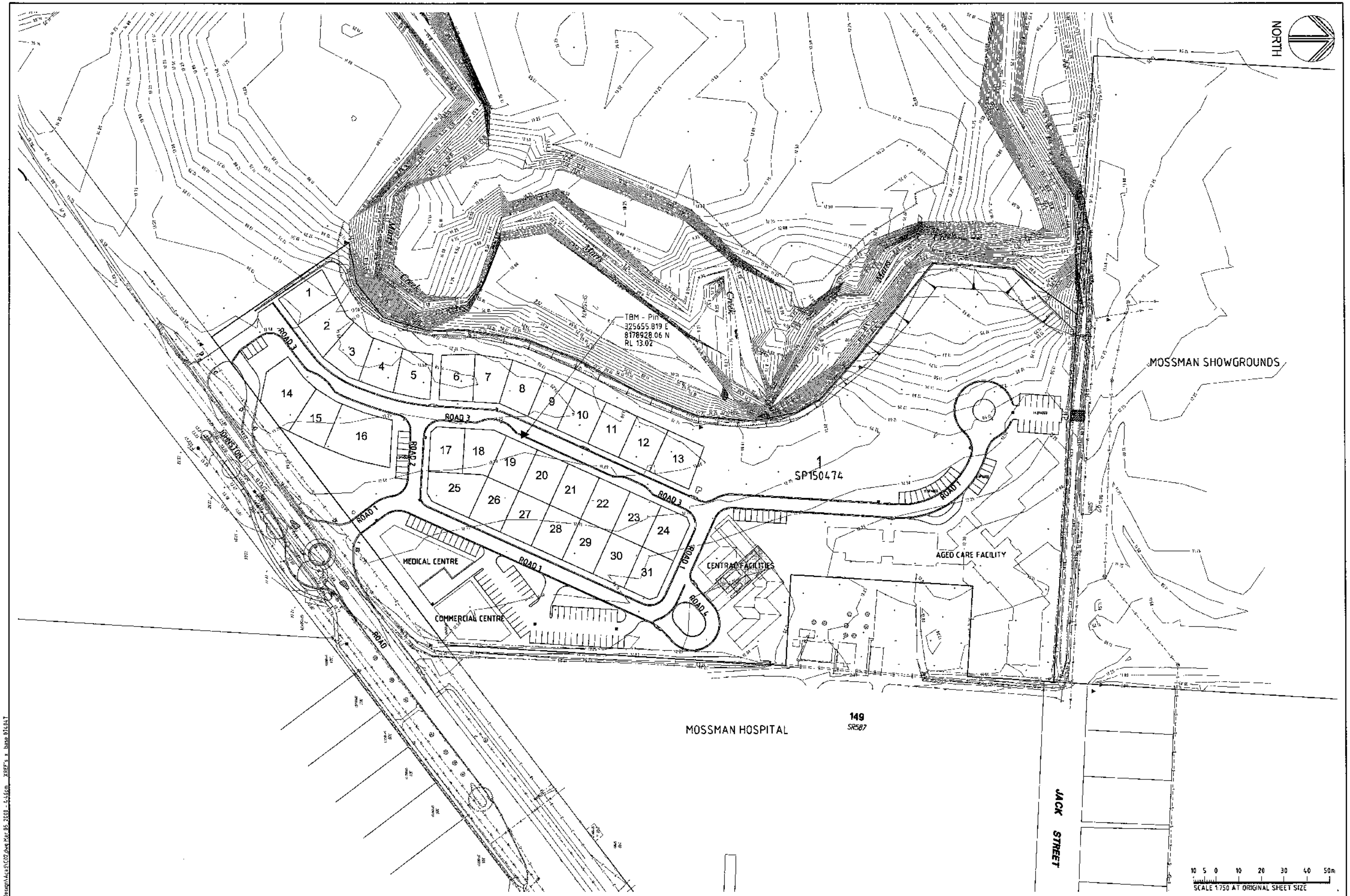
CEC Group Pty Ltd

CAD FILE: D:\Cardno\Q074047\Acad\Figure1.dwg
XREF's:

PRINT DATE: 16 March, 2008 - 2:15pm

APPENDIX A

Layout of Proposed Development



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A	29.02.08	OPERATIONAL WORKS ISSUE	MAP	MAP

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DESIGNED: XB 29.02.08
CHECKED / PROJECT MGR: MAP 29.02.08
APPROVED PROJECT DIRECTOR: M.A. PERRY, MANAGER 29.02.08

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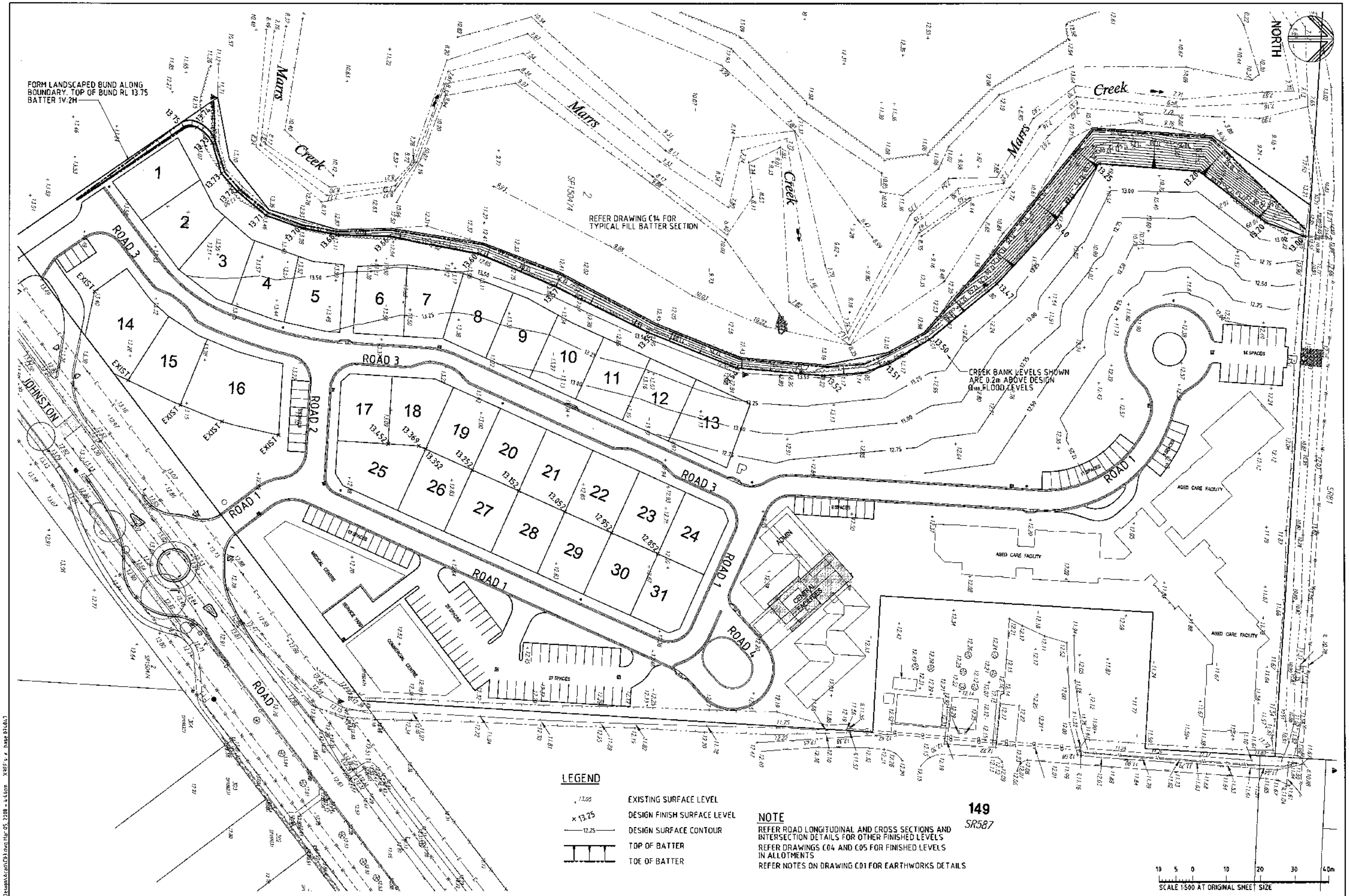
Rockhampton	(07) 4934 7500	(07) 4926 4376
Darling Downs	(07) 4637 8122	(07) 4637 8155
Toowoomba	(07) 4633 9333	(07) 4634 9355
Darwin	(08) 8981 3813	(08) 8941 1768

CLIENT: CEC GROUP PTY. LTD.
PROJECT: KUBIRRI AGED CARE FACILITY AND RETIREMENT VILLAGE
LOT 1 SP150474 JOHNSTON ROAD, MOSSMAN
TITLE: OVERALL LAYOUT PLAN

ORIGINAL SHEET SIZE	JOB No.	DRAWING NO.	ISSUE
A1	Q074047-001	C02	A



LEGEND

13.05	EXISTING SURFACE LEVEL
× 13.25	DESIGN FINISH SURFACE LEVEL
12.25	DESIGN SURFACE CONTOUR
	TOP OF BATTER
	TOE OF BATTER

NOTE

REFER ROAD LONGITUDINAL AND CROSS SECTIONS AND INTERSECTION DETAILS FOR OTHER FINISHED LEVELS

REFER DRAWINGS C04 AND C05 FOR FINISHED LEVELS IN ALLOTMENTS

REFER NOTES ON DRAWING C01 FOR EARTHWORKS DETAILS

SCALE 1:500 AT ORIGINAL SHEET SIZE

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DESIGNED KB 29.02.08
CHECKED / PROJECT MNGR MAP 29.02.08
APPROVED PROJECT DIRECTOR M.A. PERRY MANAGER 29.02.08

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Darwin	(08) 8981 3613	(08) 8941 1766

CLIENT CEC GROUP PTY. LTD.

PROJECT KUBIRRI AGED CARE FACILITY AND RETIREMENT VILLAGE
LOT 1 SP150474 JOHNSTON ROAD, MOSSMAN

TITLE BULK EARTHWORKS PLAN AND DETAILS

ORIGINAL SHEET SIZE	JOB_No.	DRAWING NO.	ISSUE
A1	Q074047-001	C03	A

APPENDIX B

Photos of Study Area

Photo 1. Looking north at upstream of Site

Photo 2. Marrs Creek at upstream end of site

Photo 3. Marrs Creek at downstream end of site

Photo 4. Johnston Road crossing over Marrs Creek (upstream of site)

Photo 5. Cane Railway crossing over Marrs Creek (downstream of site)

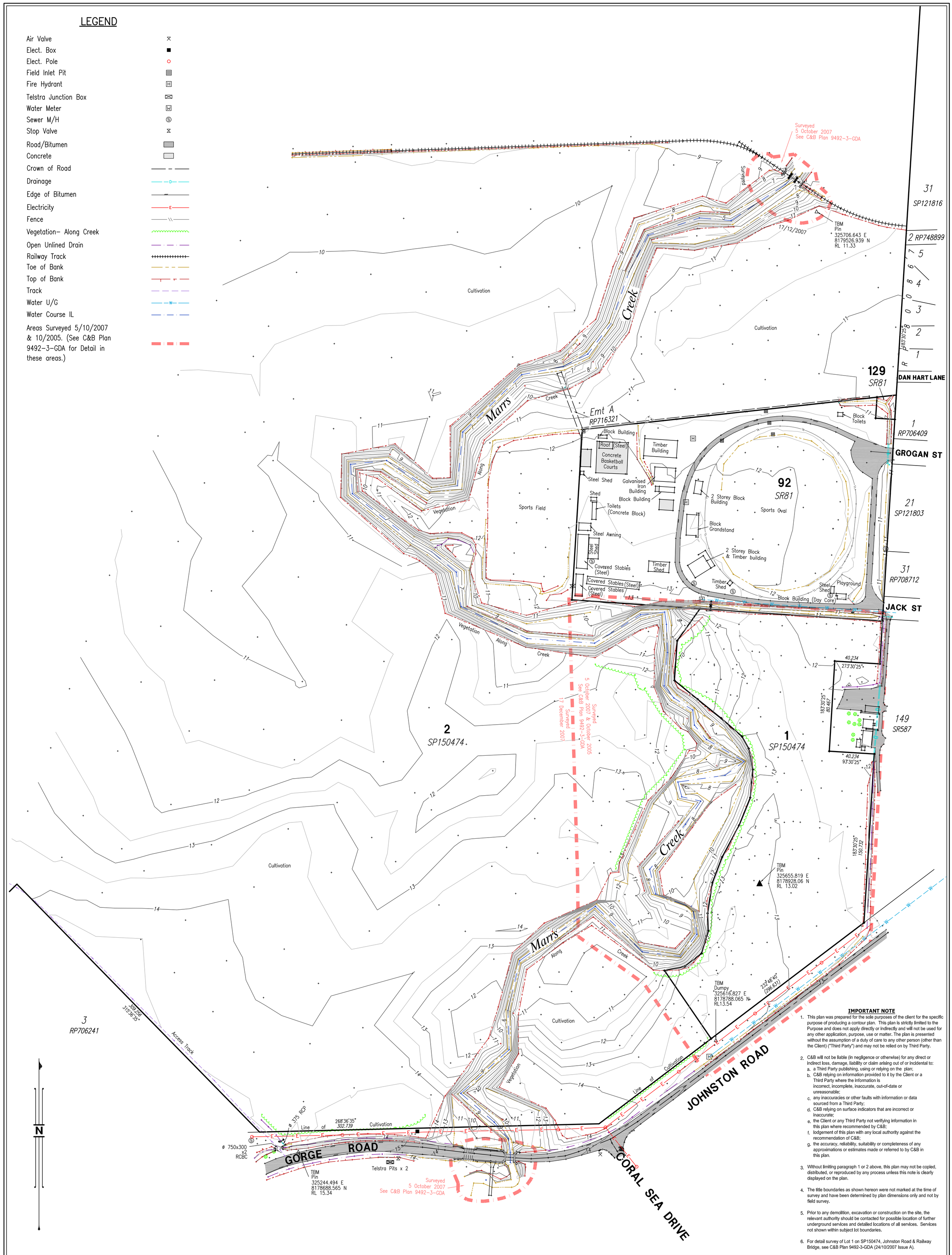
Photo 6. Marrs Creek at Cane Railway

APPENDIX C

Field Survey Plan

LEGEND

- Air Valve
- Elect. Box
- Elect. Pole
- Field Inlet Pit
- Fire Hydrant
- Telstra Junction Box
- Water Meter
- Sewer M/H
- Stop Valve
- Road/Bitumen
- Concrete
- Crown of Road
- Drainage
- Edge of Bitumen
- Electricity
- Fence
- Vegetation– Along Creek
- Open Unlined Drain
- Railway Track
- Toe of Bank
- Top of Bank
- Track
- Water U/G
- Water Course IL
- Areas Surveyed 5/10/2007 & 10/2005. (See C&B Plan 9492–3–GDA for Detail in these areas.)



NOTES

Level Datum: AHD Derived

Origin of Levels: S.Pkt 318
Daintree Horizons
RL 12.532

Meridian: Approx. MGA (by Hand Held GPS) (Vide Plan 9492–3–GDA)

Origin of Coordinates: C&B Plan 9492–3–GDA (Approx MGA)

Contour Interval: 0.50
Index: 1.00

Note:

DTM in Marrs Creek is derived from Cross Section Levels.

Detail survey of major features only in Lot 92 on SR81 & Lot 2 on SP150474. Trees, Services & minor details not shown.

0 15 30 45 60 75
metres

SCALE 1:1500 IS APPLICABLE ONLY TO THE ORIGINAL SHEET SIZE. (A1)

IMPORTANT NOTE

1. This plan was prepared for the sole purposes of the client for the specific purpose of producing a contour plan. This plan is strictly limited to the Purpose and does not apply directly or indirectly and will not be used for any other application, purpose, use or matter. The plan is presented without the assumption of a duty of care to any other person (other than the Client) ("Third Party") and may not be relied on by Third Party.
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   b. C&B relying on information provided to it by the Client or a Third Party where the information is incorrect, incomplete, inaccurate, out-of-date or unreasonable;
   c. any inaccuracies or other faults with information or data sourced from a Third Party;
   d. C&B relying on surface indicators that are incorrect or inaccurate;
   e. the Client or any Third Party not verifying information in this plan where recommended by C&B;
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   g. the accuracy, reliability, suitability or completeness of any approximations or estimates made or referred to by C&B in this plan.
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4. The title boundaries as shown hereon were not marked at the time of survey and have been determined by plan dimensions only and not by field survey.
5. Prior to any demolition, excavation or construction on the site, the relevant authority should be contacted for possible location of further underground services and detailed locations of all services. Services not shown within subject lot boundaries.
6. For detail survey of Lot 1 on SP150474, Johnston Road & Railway Bridge, see C&B Plan 9492-3-GDA (24/10/2007 Issue A).

PROJECT MANAGER/SURVEYOR: Andrew GARRETT	DESIGNED		
CHECKED	SURVEYED: DGP/AJS	17/12/2007	
DRAWN: JMG 02/01/2008	FIELD BK.: 1142	LEVEL DATUM: AHD Derived	
DRAFTING CHECKED	SHEET SIZE: A1	SHEET OF SHEETS: 1 of 1	
CAD: 9492-2.DWG	SCALE: 1:1500		

KURRIBI HOLDINGS PTY LTD

CONTOUR SURVEY

Lots 92 & 129 on SR81, Lots 1 & 2 on SP150474 & Part of Lot 149 on SR587
Marrs Creek Cross Sections
Gorge & Johnston Roads, MOSSMAN

MOSSMAN OFFICE PO Box 355 MOSSMAN QLD 4873
Tel: (07) 4098 1148 Fax: (07) 4098 1814
mossman@cbgroup.com.au www.cbgroup.com.au

PROJECT MANAGEMENT
PLANNING
ENVIRONMENTAL SERVICES
SURVEYING

C&B A CONICS COMPANY

C&B CONSULTANTS PTY LTD
ACN 055 931 096

C&B GROUP

AMENDED	ISSUE	DRAWING NO.
		9492-2

APPENDIX D

TUFLOW Model Results

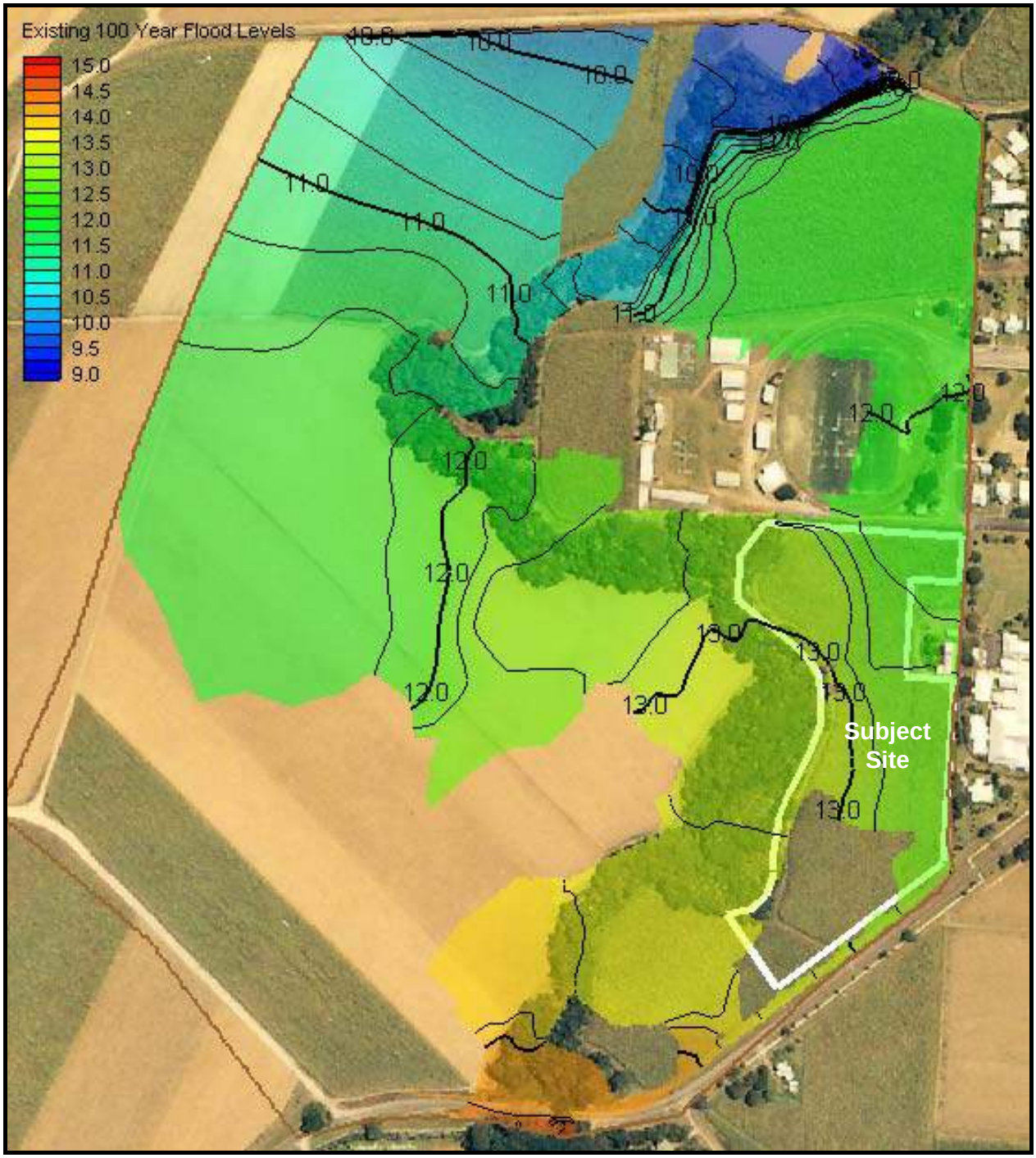

Figure D1. Existing 100 Year Flood Levels

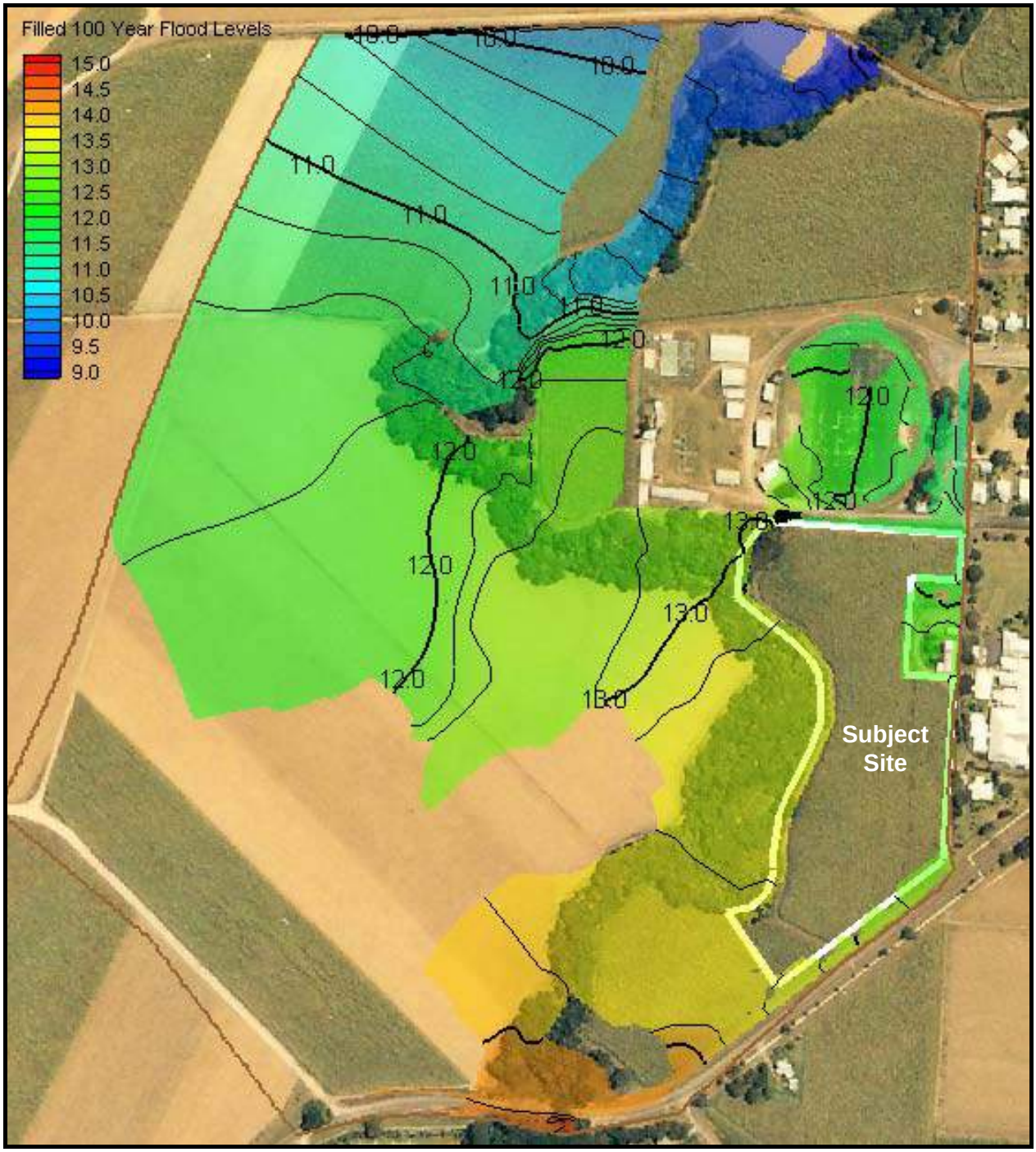

Figure D2. Filled Site 100 Year Flood Levels

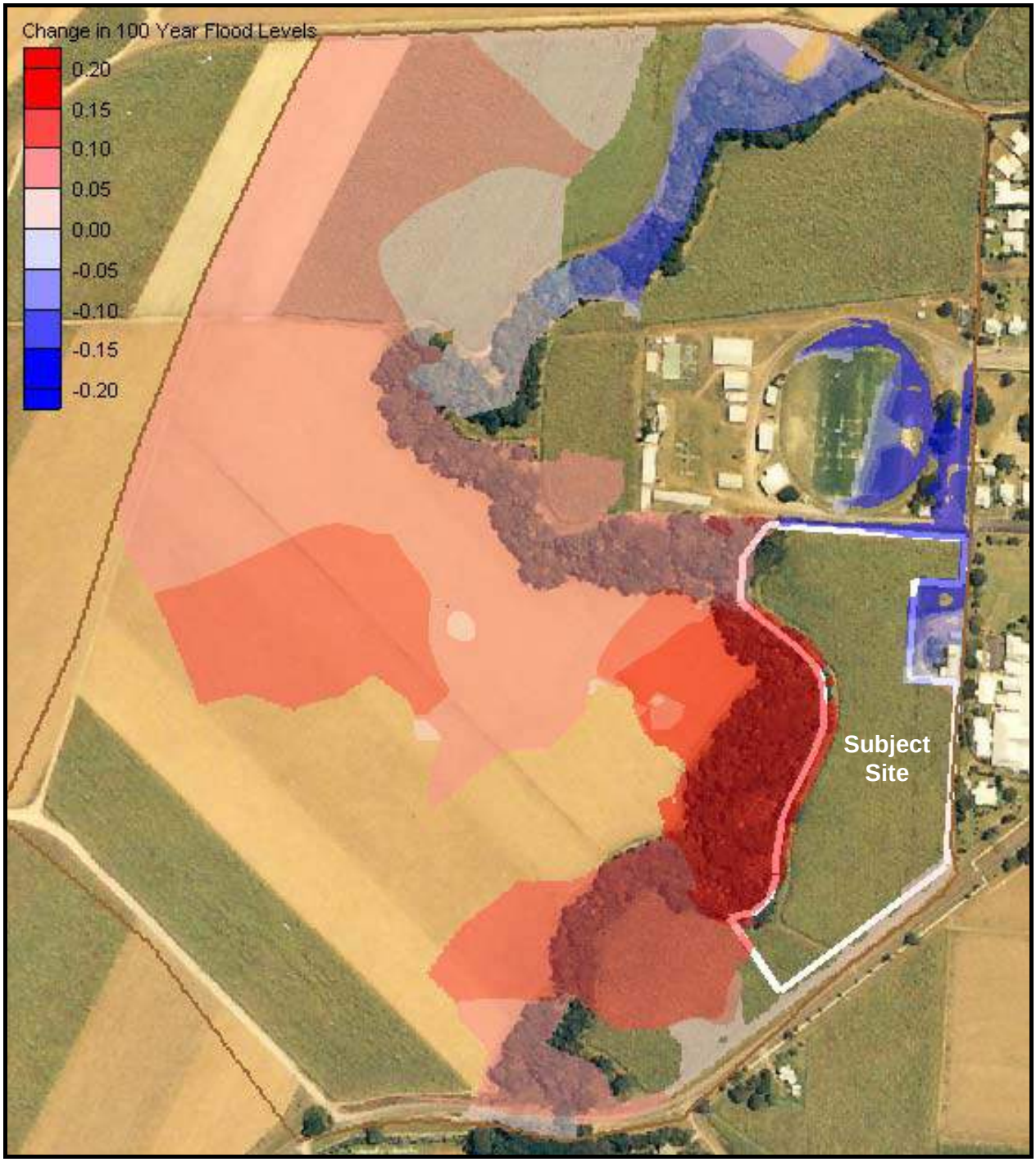

Figure D3. Change in 100 Year Flood Levels due to Filling of Subject Site

Appendix E

Geotechnical Report - ETS

ETS GEOTECHNICAL

THE SALVATION ARMY

CARE OF THOMSON ADSETT PTY LTD

GEOTECHNICAL INVESTIGATION

MOSSMAN AGED CARE FACILITY

JOHNSTON ROAD, MOSSMAN

REPORT NUMBER: GT15-264-001R REV 1

NOVEMBER 2015

REVISION 1

ETS GEO Pty Ltd
ABN 16 121 817 794
PO Box 587
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Telephone: (07) 4047 8600

Email: admin@etsgeo.com.au

Document Status							
Revision No.	***Author***	***Reviewer***	***Reason for Issue***	***Approved for Issue***			
				Name	***Signature***	***Date***	***RPEQ No***
1	C. Ryan	L. Jones	FINAL				

TABLE OF CONTENTS

1.0 INTRODUCTION

ETS GEO Pty Ltd (ETS) has conducted a geotechnical investigation for the proposed development of an Aged Care Facility in Mossman, to be located on Johnston Road. The investigation was undertaken for Thomson Adsett Pty Ltd on behalf of The Salvation Army.

It is understood that the proposed development involves the construction of three, single storey accommodation wings, an administration building, access roads and car parking.

The scope of the investigation comprised the excavation of twelve boreholes to a maximum depth of 1.8 metres followed by laboratory testing, engineering analysis and reporting.

The aim of the investigation was to identify subsurface materials, material properties and groundwater conditions to enable a geotechnical assessment and advice to be provided on the following:

- Provide a summary of the subsurface materials encountered and groundwater conditions;
- Provide foundation recommendations including:
    - high level or deep foundations;
    - site classification in accordance with AS2870:2011
    - allowable bearing capacity;
    - estimated settlement;
- Earthworks recommendations;
- Pavement recommendations (i.e. subgrade CBR values).

2.0 STANDARDS & GUIDELINES

The soil classification descriptions, field and laboratory testing were completed in general accordance with the following Australian Standards.

AS 1726-1993	Geotechnical Site Investigations
AS 1289	Methods of Testing Soils for Engineering Purposes

3.0 FIELD WORK

Fieldwork was conducted by ETS on the 17th November 2015 and included a visual assessment of the subject site and its surrounds. Twelve boreholes (BH) were drilled to a depth of 1.8 metres at the proposed development locations. Dynamic Cone Penetrometer (DCP) testing was carried out alongside each borehole to determine the density/consistency of the strata encountered.

The results of the field work (BH and DCP Logs) are presented in Appendix B. The locations at which the field work was conducted are displayed in Appendix A.

4.0 SITE CONDITIONS AND OBSERVATIONS

4.1 Visual Assessment

The proposed site was located on the northern side of Johnston Road on land believed to have previously been used for sugar cane farming. The site was generally level and was covered in short thick grass.

Appendix D presents photographs of the subject site.

4.2 Subsurface Conditions

The subsurface conditions throughout the site were generally uniform. Typically Silty CLAY of low plasticity was encountered from the ground surface level to borehole termination depth. The material predominantly had trace fine to medium gravel throughout and was of a stiff to very stiff consistency.

The groundwater table was not encountered in any of the boreholes. It should be noted that groundwater levels are affected by climatic conditions, rainfall and soil permeability, and may therefore vary depending on the time of the investigation.

The locations at which the boreholes were undertaken are displayed in Appendix A. The borehole logs are presented in Appendix B.

5.0 LABORATORY TESTING

The following laboratory testing was conducted in our NATA accredited laboratory on samples recovered during fieldwork in order to assist with the assessment of geotechnical design parameters to be used in the analysis:

- Atterberg Limits; and
- California Bearing Ratio.

Results of the laboratory testing are presented in Appendix C.

6.0 ENGINEERING ASSESSMENT AND RECOMMENDATIONS

6.1 Site Classification

The Atterberg Limits tests indicate the soil is slightly reactive to changes in moisture content with an estimated predicted ground surface movement (y_s) within the **Class S** category (0 to ≥20mm) in accordance with AS2870-2011[1] "Residential Slabs and Footings – Construction". This classification is based on the site in its current state (i.e. no additional earthworks).

Should any filling be undertaken at the proposed structure location the estimated predicted ground surface movement (y_s) should be re-assessed as the reported site classification may change.

The ground surface movement (y_s) estimated in this report does not take into account the effects of future trees planted for landscaping purposes. It is recommended that any proposed landscaping for the project is reviewed by ETS well prior to construction phase to ensure that the given site classification for the site is not affected.

Footing design should be completed in accordance with the recommendations listed in Section 6.2, 6.3 and 6.4 of this report.

---

[1] Australian Standard AS 2870-2011 "Residential Slabs and Footings – Construction", Standards Australia

6.2 Footing Options

The use of high level strip or pad footings is considered feasible at this site due to the consistency of the materials encountered throughout the site.

A high level stiffened raft footing system is considered suitable for use at this site. All structures should be designed in accordance with the principles of AS2870 and the site prepared in accordance with Section 6.6 of this report.

6.3 Allowable Bearing Capacity

The bearing capacity of the soil was determined using Skempton's Bearing Capacity equation. A minimum foundation depth of 0.4m was adopted. Based on this an Ultimate Bearing Capacity of 300kPa was calculated, an Allowable Bearing Capacity of 100kPa may be adopted.

Should the use of upper level footings be considered at this site, it is recommended that ETS inspect the excavated footings to confirm the bearing capacity.

6.4 Estimated Settlement

In order to determine the estimated settlement of the proposed development the following assumptions have been made, these should be confirmed once a design has been finalised:

- The elastic modulus E_s is taken as 19MPa for the stiff Silty CLAY in which the base of the footing would be founded;
- Footings will be founded at a minimum depth of 0.4m into the soil;
- The minimum footing width is assumed to be 0.3m;
- That a relatively incompressible stratum is present at 10m;
- Loading from the proposed structure will be not greater than 100kN/m^2.

Based on the above assumptions, the immediate settlement has been estimated to be up to 20 mm and differential settlement can be assumed to be less than 10 mm.

6.5 Retaining Walls

When designing temporary support systems and retaining walls, consideration should be given to the type of retention system adopted and the appropriate lateral earth pressure distributions.

Lateral earth pressure coefficients for use in temporary support and retaining wall design are presented in Table 1. It should be noted that these parameters do not take into account the surcharge load from the buildings, sloping ground or water pressure.

TABLE 1: Lateral Earth Pressure Coefficients

Material	Unit Weight (kN/m^3)	Friction Angle (°) (drained)	Lateral Earth Pressure Coefficients		
			k_o	k_a	k_p
Stiff Silty CLAY	18	26	0.56	0.39	2.65

The above listed parameters are based on retaining insitu materials. Should imported materials be utilised ETS should be contacted for a revision of the lateral earth pressure coefficients.

Drainage should be provided behind permanent walls to prevent build-up of water pressures due to the ingress of rainwater and groundwater seepage. Retaining wall backfill should therefore comprise free draining material with a subsoil drainage pipe installed behind the rear base of the wall. The drainage pipe should be located in the base of the backfilled trench and should be carefully graded to minimise the potential for water to remain within the backfill and produce clay swell. The ground surface behind the top of the wall should be suitably sealed and graded to avoid ponding and to restrict moisture ingress from rainfall and runoff. If the soil behind the wall is subjected to large moisture variations due to natural or man-made circumstances, pressures greater than these may occur.

The structural engineers/designers should consult with ETS to confirm the adequacy of the design from a geotechnical viewpoint (i.e. global stability).

6.6 Cut and Fill Earthworks

The following general procedures are suggested for any site preparation and earthworks to be performed at the site:

- Strip & remove topsoil, soil containing significant amounts of organic materials, 'uncontrolled' filling and also any deleterious soft, wet or highly compressible materials if encountered at footing or pavement formation levels;

- Undertake 'proof' rolling of the exposed surface levels across the site with a minimum 12 tonne static weight smooth drum roller or similar. Any soft or loose material that cannot be improved by compaction should be removed and replaced with approved select fill (loading around the crest should be not take place);

- Any exposed natural foundation soils should be compacted to a minimum dry density ratio of 98% using Standard compaction and moisture treated to a moisture range of -2%(dry) to +2%(wet) of optimum moisture content (OMC);

- Where the foundation levels are to be raised or subgrade materials are to be excavated (i.e. remove & replace), the foundation soils should be prepared as detailed below:

    - Approved filling should be undertaken by placing fill in uniform horizontal layers not exceeding 200mm loose thickness and compacted to achieve a dry density ratio of at least 98% using Standard compaction for cohesive soil or to at least 75% density index for sand. The moisture content of any cohesive soil fill materials should be maintained at -2% to +2% of OMC, during and after compaction;

    - Filling should be placed at least two (2) metres beyond the design profile and then trimmed to the design profile;

    - Where unsuitable materials are to be excavated it is recommended that all excavated insitu soils are removed from the site and approved select fill is placed and compacted in the excavation. The excavation should be benched to "key in" the select fill material and optimise compaction. The benches should slope back at 1V:5H and be at least 0.5m wide, refer to Figure 1 below;

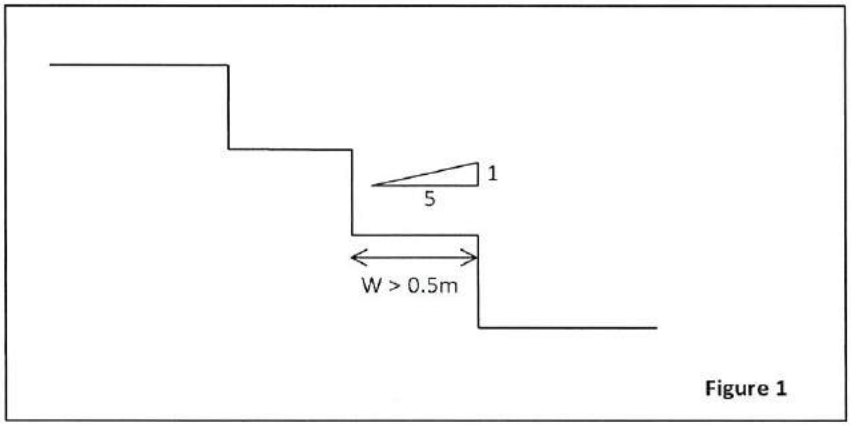


Figure 1

- Approved filling (general fill) should be a well graded material free from organic materials, have a Plasticity Index less than or equal to 15%, and should not contain any individual particles greater than 75mm in size;
- In order for filling to be considered 'controlled' any earthworks that are undertaken beneath any of the proposed structures or pavements are to be performed under full time 'Level 1' inspection and testing as described and in accordance with AS3798:2007.

It should be noted that there may be trafficability issues for rubber wheeled earthmoving equipment if construction activities are undertaken either during, or soon after, wet weather, due to the moistening and softening of the sandy clay / clay soils. In order to minimise these issues, the use of tracked equipment is suggested. In addition to this, achieving a satisfactory 'proof' roll under wet weather conditions may also be difficult. Should this situation arise, additional geotechnical advice should be sought.

6.7 Drainage

Drainage measures that should be implemented and/or maintained at this site include:

- Provision of subsurface drainage behind any retaining walls.
- Provision of kerbing and drainage structures on all driveways.

- All stormwater should be collected and discharged from the site via pipes into designated drainage paths and not allowed to flow on to the ground around founding structures.

6.8 California Bearing Ratio

Following earthworks, it is envisaged that the soil beneath the top soil layer will be exposed. Laboratory testing was carried out on the expected subgrade material between 0.2-0.5m beneath the ground surface level. The California Bearing Ratio (CBR) value represents the 'strength' of this material, compacted to 97% density ratio using 'standard' compactive effort, under saturation. The results of the testing indicated a CBR value of 9.0%.

The results are presented in Appendix C.

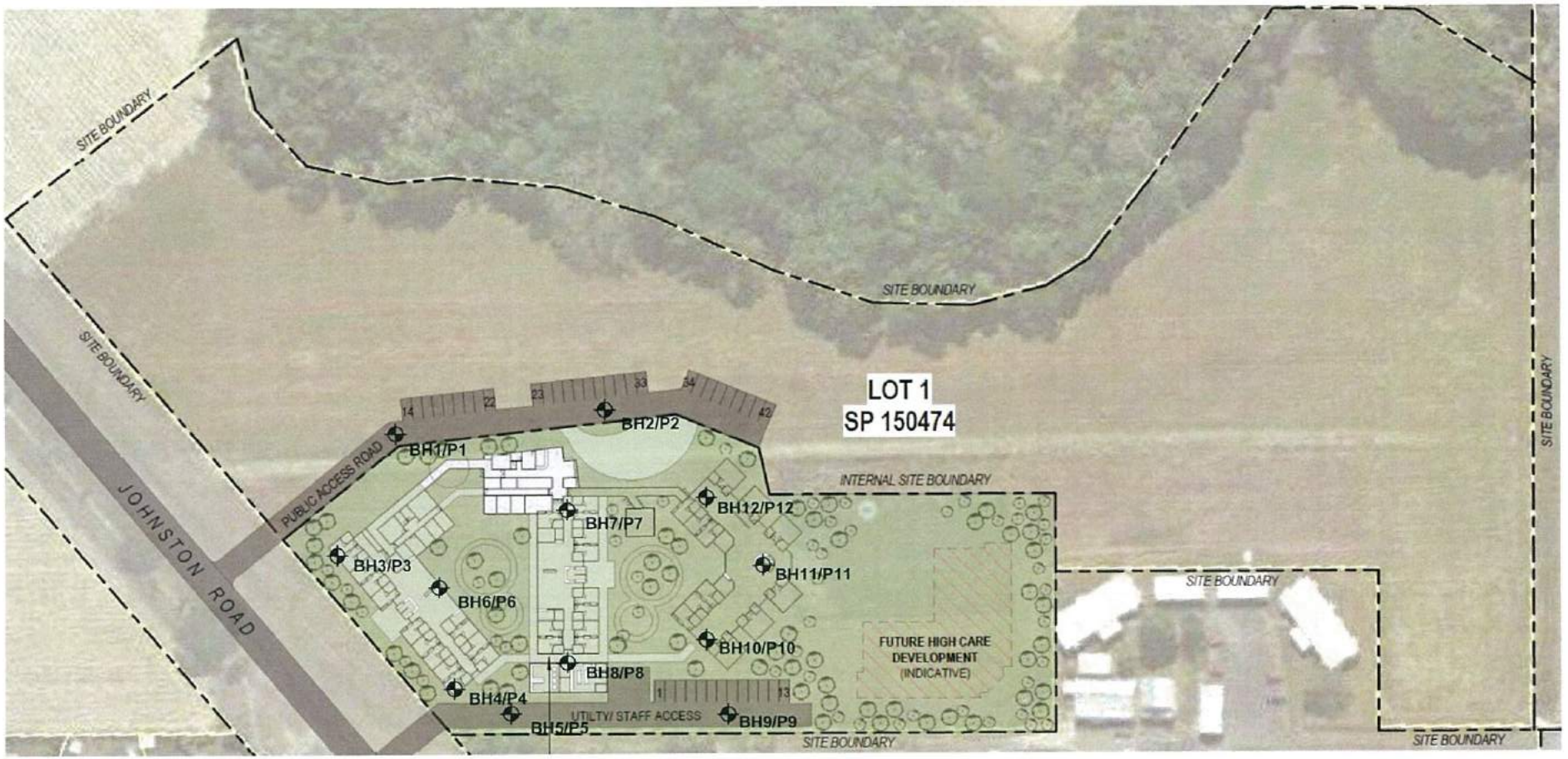
7.0 CONSTRUCTION INSPECTION

All foundation excavations shall be inspected by ETS GEO Pty Ltd to confirm assumptions made in this report.

8.0 LIMITATIONS

We have prepared this report for the use of **THE SALVATION ARMY** for design purposes in accordance with generally accepted geotechnical engineering practices. No other warranty, expressed or implied, is made as to the professional advice included in this report. This report has not been prepared for use by parties other than **THE SALVATION ARMY** or their design consultants, i.e. Architect & Civil/Structural Engineers. It may not contain sufficient information for purposes of other parties or for other uses. Your attention is drawn to the document - "Understand the Limitations of Your Geotechnical Report", which is included in Appendix E of this report. This document has been prepared to advise you of what your realistic expectations of this report should be, and to present you with recommendations on how to minimise the risks associated with the ground works for this project. The document is not intended to reduce the level of responsibility accepted by ETS, but rather to ensure that all parties who may rely on this report are aware of the responsibilities each assumes in so doing.

APPENDIX A – LOCALITY PLAN



Legend

Test Hole and DCP Locations

N

ETS GEOTECHNICAL & MATERIALS TESTING

PO Box 587
Redlynch QLD 4870

Telephone: (07) 4047 8600
Facsimile: (07) 4047 8699

E-mail: admin@etsgeo.com.au

TITLE:
GEOTECHNICAL INVESTIGATION
MOSSMAN AGED CARE FACILITY
JOHNSTON STREET, MOSSMAN

PROJECT NO.:	SCALE:	DRAWN BY:
GT15-264	NTS	CR
DATE: 27/11/15	**OFFICE:** CNS	**APPROVED BY:** LJ

CLIENT: THOMSON ADSETT PTY LTD

DRAWING NO.: GT15-264-001 DRW

APPENDIX B – BOREHOLE AND DCP LOGS

HOLE NO.:	BH1	**SHEET :**	1 OF 1
CUSTOMER:	Thmoson Adsett Pty Ltd	**JOB NO :**	GT15-264
PROJECT:	Mossman Aged Care Facility	**DATE:**	17/11/15
LOGGED BY:	DK	**REVIEWED BY:**	CR
MACHINE:	DB 2000	**RL:**	-
PIT DIMENSIONS:	-	**COORDINATES:**	E: 325669.000, N: 8178867.000 (56 MGA94)

DEPTH (m)	METHOD	WATER	SAMPLE OR FIELD TEST	USCS SYMBOL	GRAPHIC LOG	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	DCP (blows per 100mm)	STRUCTURE AND ADDITIONAL OBSERVATIONS
0.0				CL		GRAVELLY SILTY CLAY: grey brown, low plasticity, fine to medium, siltstone gravel	D to M	St	5	
									6	
									6	
				CL		GRAVELLY SILTY CLAY: pale orange brown, low plasticity, fine to medium, siltstone gravel			6	
0.5									5	
			D 0.60 - 0.80 m						4	
									4	
									5	
		Not Encountered		CL		GRAVELLY SILTY CLAY: pale yellow brown, low plasticity, fine to medium, siltstone gravel			5	
1.0									6	
									5	
									5	
				CL		SILTY CLAY: pale yellow mottled orange brown, low plasticity	M	VSt	5	
									8	
1.5									8	
			D 1.60 - 1.80 m						7	
									8	
									8	
						TEST BH1 TERMINATED AT 1.80 m Target depth			9	
2.0										
2.5										

METHOD
BU bucket
AU auger

SAMPLES AND TESTING
U50 undisturbed tube dia mm
D disturbed sample
BS bulk sample
PP pocket penetrometer (UCS) kPa
HV hand vane

WATER
standing water level
inflow
partial loss
complete loss

CONSISTENCY/DENSITY
Fines
VS very soft
S soft
F firm
St stiff
VSt very stiff
H hard
Coarse
VL very loose
L loose
MD medium dense
D dense
VD very dense

MOISTURE CONDITION
D dry
M moist
W wet

PENETRATION
0 no resistance to
4 absolute refusal

NOTES

HOLE NO.:	BH2	**SHEET :**	1 OF 1
CUSTOMER:	Thmoson Adsett Pty Ltd	**JOB NO :**	GT15-264
PROJECT:	Mossman Aged Care Facility	**DATE:**	17/11/15
LOGGED BY:	DK	**REVIEWED BY:**	CR
MACHINE:	DB 2000	**RL:**	-
PIT DIMENSIONS:	-	**COORDINATES:**	E: 325658.000, N: 8178932.000 (56 MGA94)

DEPTH (m)	METHOD	WATER	SAMPLE OR FIELD TEST	USCS SYMBOL	GRAPHIC LOG	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	DCP (blows per 100mm)	STRUCTURE AND ADDITIONAL OBSERVATIONS
0.0		Not Encountered		CL		SILTY CLAY: pale grey brown, trace fine to medium gravel	D to M	St	6 5 4	
				CL		SILTY CLAY: orange brown, trace fine to medium gravel			5 8 8 6	
0.5			D 0.60 - 0.80 m					St to VSt	8	
				CL		SILTY CLAY: yellow brown, trace fine to medium gravel			8 6 6 8 6 6 8 6	
1.5				CL		SILTY CLAY: pale yellow mottled orange brown, trace fine to medium gravel			8 9	
						TEST BH2 TERMINATED AT 1.80 m Target depth			8	
2.0										
2.5										

METHOD
BU bucket
AU auger

SAMPLES AND TESTING
U50 undisturbed tube dia mm
D disturbed sample
BS bulk sample
PP pocket penetrometer (UCS) kPa
HV hand vane

WATER
standing water level
inflow
partial loss
complete loss

CONSISTENCY/DENSITY
Fines
VS very soft
S soft
F firm
St stiff
VSt very stiff
H hard
Coarse
VL very loose
L loose
MD medium dense
D dense
VD very dense

MOISTURE CONDITION
D dry
M moist
W wet

PENETRATION
0 no resistance
to
4 absolute refusal

NOTES

HOLE NO.:	BH3	**SHEET :**	1 OF 1
CUSTOMER:	Thmoson Adsett Pty Ltd	**JOB NO :**	GT15-264
PROJECT:	Mossman Aged Care Facility	**DATE:**	17/11/15
LOGGED BY:	DK	**REVIEWED BY:**	CR
MACHINE:	DB 2000	**RL:**	-
PIT DIMENSIONS:	-	**COORDINATES:**	E: 325683.000, N: 8178855.000 (56 MGA94)

DEPTH (m)	METHOD	WATER	SAMPLE OR FIELD TEST	USCS SYMBOL	GRAPHIC LOG	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	DCP (blows per 100mm)	STRUCTURE AND ADDITIONAL OBSERVATIONS
0.0		Not Encountered		CL		SILTY CLAY: pale grey brown, trace fine to medium gravel	D to M	St to VSt	6 5 4	
				CL		SILTY CLAY: orange brown, trace fine to medium gravel			5 6 6	
0.5			D 0.60 - 0.80 m						5 8	
				CL		SILTY CLAY: yellow brown, trace fine to medium gravel		VSt	8 8 5 7 8 8 9 12 8	
1.0										
1.5				CL		SILTY CLAY: pale yellow mottled orange brown, trace fine to medium gravel			6 8	
2.0						TEST BH3 TERMINATED AT 1.80 m Target depth			9	
2.5										

METHOD
BU bucket
AU auger

SAMPLES AND TESTING
U50 undisturbed tube dia mm
D disturbed sample
BS bulk sample
PP pocket penetrometer (UCS) kPa
HV hand vane

WATER
standing water level
inflow
partial loss
complete loss

CONSISTENCY/DENSITY
Fines
VS very soft
S soft
F firm
St stiff
VSt very stiff
H hard
Coarse
VL very loose
L loose
MD medium dense
D dense
VD very dense

MOISTURE CONDITION
D dry
M moist
W wet

PENETRATION
0 no resistance to
4 absolute refusal

NOTES

HOLE NO.:	BH4	**SHEET :**	1 OF 1
CUSTOMER:	Thmoson Adsett Pty Ltd	**JOB NO :**	GT15-264
PROJECT:	Mossman Aged Care Facility	**DATE:**	17/11/15
LOGGED BY:	DK	**REVIEWED BY:**	CR
MACHINE:	DB 2000	**RL:**	-
PIT DIMENSIONS:	-	**COORDINATES:**	E: 325785.000, N: 8178881.000 (56 MGA94)

DEPTH (m)	METHOD	WATER	SAMPLE OR FIELD TEST	USCS SYMBOL	GRAPHIC LOG	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	DCP (blows per 100mm)	STRUCTURE AND ADDITIONAL OBSERVATIONS
0.0		Not Encountered		CL		SILTY CLAY: pale grey brown, trace fine to medium gravel	D to M	St	6	
									8	
									7	
				CL		SILTY CLAY: orange brown, trace fine to medium gravel			6	
									8	
0.5									9	
			D 0.60 - 0.80 m						8	
									7	
				CL		SILTY CLAY: yellow brown, trace fine to medium gravel			6	
									5	
1.0									5	
									6	
									7	
									6	
								St to VSt	8	
1.5									8	
				CL		SILTY CLAY: pale yellow mottled orange brown, trace fine to medium gravel			9	
									8	
						TEST BH4 TERMINATED AT 1.80 m Target depth			8	
2.0										
2.5										

METHOD
BU bucket
AU auger

SAMPLES AND TESTING
U50 undisturbed tube dia mm
D disturbed sample
BS bulk sample
PP pocket penetrometer (UCS) kPa
HV hand vane

WATER
standing water level
inflow
partial loss
complete loss

CONSISTENCY/DENSITY
Fines
VS very soft
S soft
F firm
St stiff
VSt very stiff
H hard
Coarse
VL very loose
L loose
MD medium dense
D dense
VD very dense

MOISTURE CONDITION
D dry
M moist
W wet

PENETRATION
0 no resistance to
4 absolute refusal

NOTES

HOLE NO.:	BH5	**SHEET :**	1 OF 1
CUSTOMER:	Thmoson Adsett Pty Ltd	**JOB NO :**	GT15-264
PROJECT:	Mossman Aged Care Facility	**DATE:**	17/11/15
LOGGED BY:	DK	**REVIEWED BY:**	CR
MACHINE:	DB 2000	**RL:**	-
PIT DIMENSIONS:	-	**COORDINATES:**	E: 325735.000, N: 8178901.000 (56 MGA94)

DEPTH (m)	METHOD	WATER	SAMPLE OR FIELD TEST	USCS SYMBOL	GRAPHIC LOG	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	DCP (blows per 100mm)	STRUCTURE AND ADDITIONAL OBSERVATIONS
0.0		Not Encountered		CL		SILTY CLAY: pale grey brown, trace fine to medium gravel	D to M	St to VSt	7	
									8	
									8	
				CL		SILTY CLAY: orange brown, trace fine to medium gravel			6	
0.5			D 0.60 - 0.80 m						5	
									5	
									7	
									5	
				CL		SILTY CLAY: yellow brown, trace fine to medium gravel			6	
1.0									8	
								VSt	9	
									12	
									12	
									9	
1.5									8	
									8	
				CL		SILTY CLAY: pale yellow mottled orange brown, trace fine to medium gravel			9	
									9	
						TEST BH5 TERMINATED AT 1.80 m Target depth			8	
2.0										
2.5										

METHOD
BU bucket
AU auger

SAMPLES AND TESTING
U50 undisturbed tube dia mm
D disturbed sample
BS bulk sample
PP pocket penetrometer (UCS) kPa
HV hand vane

WATER
standing water level
inflow
partial loss
complete loss

CONSISTENCY/DENSITY
Fines
VS very soft
S soft
F firm
St stiff
VSt very stiff
H hard
Coarse
VL very loose
L loose
MD medium dense
D dense
VD very dense

MOISTURE CONDITION
D dry
M moist
W wet

PENETRATION
0 no resistance to
4 absolute refusal

NOTES

HOLE NO.:	BH6	**SHEET :**	1 OF 1
CUSTOMER:	Thmoson Adsett Pty Ltd	**JOB NO :**	GT15-264
PROJECT:	Mossman Aged Care Facility	**DATE:**	17/11/15
LOGGED BY:	DK	**REVIEWED BY:**	CR
MACHINE:	DB 2000	**RL:**	-
PIT DIMENSIONS:	-	**COORDINATES:**	E: 325695.000, N: 8178883.000 (56 MGA94)

DEPTH (m)	METHOD	WATER	SAMPLE OR FIELD TEST	USCS SYMBOL	GRAPHIC LOG	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	DCP (blows per 100mm)	STRUCTURE AND ADDITIONAL OBSERVATIONS
0.0				CL		SILTY CLAY: pale yellow brown, trace fine to medium gravel	D to M	St to VSt	8	
									7	
									5	
				CL		SILTY CLAY: yellow brown, trace fine to medium gravel			6	
0.5									5	
			D 0.60 - 0.80 m						7	
								VSt	9	
									8	
				CL		SILTY CLAY: pale orange brown, trace fine to medium gravel			10	
1.0		Not Encountered							8	
									7	
									7	
									6	
1.5									9	
									9	
									10	
				CL		SILTY CLAY: pale orange brown, trace fine to medium gravel			8	
									9	
2.0						TEST BH6 TERMINATED AT 1.80 m Target depth			10	
2.5										

METHOD
BU bucket
AU auger

SAMPLES AND TESTING
U50 undisturbed tube dia mm
D disturbed sample
BS bulk sample
PP pocket penetrometer (UCS) kPa
HV hand vane

WATER
standing water level
inflow
partial loss
complete loss

CONSISTENCY/DENSITY
Fines
VS very soft
S soft
F firm
St stiff
VSt very stiff
H hard
Coarse
VL very loose
L loose
MD medium dense
D dense
VD very dense

MOISTURE CONDITION
D dry
M moist
W wet

PENETRATION
0 no resistance to
4 absolute refusal

NOTES

HOLE NO.:	BH7	**SHEET :**	1 OF 1
CUSTOMER:	Thmoson Adsett Pty Ltd	**JOB NO :**	GT15-264
PROJECT:	Mossman Aged Care Facility	**DATE:**	17/11/15
LOGGED BY:	DK	**REVIEWED BY:**	CR
MACHINE:	DB 2000	**RL:**	-
PIT DIMENSIONS:	-	**COORDINATES:**	E: 325683.000, N: 8178925.000 (56 MGA94)

DEPTH (m)	METHOD	WATER	SAMPLE OR FIELD TEST	USCS SYMBOL	GRAPHIC LOG	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	DCP (blows per 100mm)	STRUCTURE AND ADDITIONAL OBSERVATIONS
0.0				CL		SILTY CLAY: pale grey brown, trace fine to medium gravel	D to M	St to VSt	6	
									9	
									8	
				CL		SILTY CLAY: orange brown, trace fine to medium gravel			5	
									5	
0.5			D 0.60 - 0.80 m						6	
									5	
		Not Encountered							7	
				CL		SILTY CLAY: yellow brown, trace fine to medium gravel			8	
1.0									8	
									9	
									7	
									7	
									6	
1.5									8	
									12	
				CL		SILTY CLAY: pale yellow mottled orange brown, trace fine to medium gravel			11	
									10	
						TEST BH7 TERMINATED AT 1.80 m Target depth			9	
2.0										
2.5										

METHOD
BU bucket
AU auger

SAMPLES AND TESTING
U50 undisturbed tube dia mm
D disturbed sample
BS bulk sample
PP pocket penetrometer (UCS) kPa
HV hand vane

WATER
standing water level
inflow
partial loss
complete loss

CONSISTENCY/DENSITY
Fines
VS very soft
S soft
F firm
St stiff
VSt very stiff
H hard
Coarse
VL very loose
L loose
MD medium dense
D dense
VD very dense

MOISTURE CONDITION
D dry
M moist
W wet

PENETRATION
0 no resistance
to
4 absolute refusal

NOTES

HOLE NO.:	BH8	**SHEET :**	1 OF 1
CUSTOMER:	Thmoson Adsett Pty Ltd	**JOB NO :**	GT15-264
PROJECT:	Mossman Aged Care Facility	**DATE:**	17/11/15
LOGGED BY:	DK	**REVIEWED BY:**	CR
MACHINE:	DB 2000	**RL:**	-
PIT DIMENSIONS:	-	**COORDINATES:**	E: 325728.000, N: 8178921.000 (56 MGA94)

DEPTH (m)	METHOD	WATER	SAMPLE OR FIELD TEST	USCS SYMBOL	GRAPHIC LOG	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	DCP (blows per 100mm)	STRUCTURE AND ADDITIONAL OBSERVATIONS
0.0		Not Encountered		CL		SILTY CLAY: pale grey brown, trace fine to medium gravel	D to M	St to VSt	6	
									5	
									9	
				CL		SILTY CLAY: orange brown, trace fine to medium gravel			8	
0.5									7	
			D 0.60 - 0.80 m						7	
									6	
									8	
				CL		SILTY CLAY: yellow brown, trace fine to medium gravel			5	
1.0									7	
								VSt	9	
									8	
									8	
1.5									11	
									10	
									8	
				CL		SILTY CLAY: pale yellow mottled orange brown, trace fine to medium gravel			9	
									8	
2.0						TEST BH8 TERMINATED AT 1.80 m Target depth				
2.5										

METHOD
BU bucket
AU auger

SAMPLES AND TESTING
U50 undisturbed tube dia mm
D disturbed sample
BS bulk sample
PP pocket penetrometer (UCS) kPa
HV hand vane

WATER
standing water level
inflow
partial loss
complete loss

CONSISTENCY/DENSITY
Fines
VS very soft
S soft
F firm
St stiff
VSt very stiff
H hard
Coarse
VL very loose
L loose
MD medium dense
D dense
VD very dense

MOISTURE CONDITION
D dry
M moist
W wet

PENETRATION
0 no resistance to
4 absolute refusal

NOTES

HOLE NO.:	BH9	**SHEET :**	1 OF 1
CUSTOMER:	Thmoson Adsett Pty Ltd	**JOB NO :**	GT15-264
PROJECT:	Mossman Aged Care Facility	**DATE:**	17/11/15
LOGGED BY:	DK	**REVIEWED BY:**	CR
MACHINE:	DB 2000	**RL:**	-
PIT DIMENSIONS:	-	**COORDINATES:**	E: 325741.000, N: 8178961.000 (56 MGA94)

DEPTH (m)	METHOD	WATER	SAMPLE OR FIELD TEST	USCS SYMBOL	GRAPHIC LOG	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	DCP (blows per 100mm)	STRUCTURE AND ADDITIONAL OBSERVATIONS
0.0		Not Encountered		CL		SILTY CLAY: pale grey brown, trace fine to medium gravel	D to M	St to VSt	7	
									9	
									8	
				CL		SILTY CLAY: orange brown, trace fine to medium gravel			8	
									7	
0.5									7	
			D 0.60 - 0.80 m						6	
									8	
				CL		SILTY CLAY: yellow brown, trace fine to medium gravel			7	
									6	
1.0									8	
									9	
									11	
									11	
1.5									10	
									8	
				CL		SILTY CLAY: pale yellow mottled orange brown, trace fine to medium gravel			9	
									8	
						TEST BH9 TERMINATED AT 1.80 m Target depth			8	
2.0										
2.5										

METHOD
BU bucket
AU auger

SAMPLES AND TESTING
U50 undisturbed tube dia mm
D disturbed sample
BS bulk sample
PP pocket penetrometer (UCS) kPa
HV hand vane

WATER
standing water level
inflow
partial loss
complete loss

CONSISTENCY/DENSITY
Fines
VS very soft
S soft
F firm
St stiff
VSt very stiff
H hard
Coarse
VL very loose
L loose
MD medium dense
D dense
VD very dense

MOISTURE CONDITION
D dry
M moist
W wet

PENETRATION
0 no resistance to
4 absolute refusal

NOTES

HOLE NO.:	BH10	**SHEET :**	1 OF 1
CUSTOMER:	Thmoson Adsett Pty Ltd	**JOB NO :**	GT15-264
PROJECT:	Mossman Aged Care Facility	**DATE:**	17/11/15
LOGGED BY:	DK	**REVIEWED BY:**	CR
MACHINE:	DB 2000	**RL:**	-
PIT DIMENSIONS:	-	**COORDINATES:**	E: 325722.000, N: 8178956.000 (56 MGA94)

DEPTH (m)	METHOD	WATER	SAMPLE OR FIELD TEST	USCS SYMBOL	GRAPHIC LOG	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	DCP (blows per 100mm)	STRUCTURE AND ADDITIONAL OBSERVATIONS
0.0		Not Encountered		CL		SILTY CLAY: pale grey brown, trace fine to medium gravel	D to M	St	6	
									6	
									5	
						SILTY CLAY: orange brown, trace fine to medium gravel			7	
0.5									5	
				CL				St to VSt	9	
			D 0.60 - 0.80 m						8	
									7	
						SILTY CLAY: yellow brown, trace fine to medium gravel			8	
1.0									9	
									9	
				CL					8	
									8	
									6	
1.5									6	
									9	
				CL		SILTY CLAY: pale yellow mottled orange brown, trace fine to medium gravel			8	
									7	
						TEST BH10 TERMINATED AT 1.80 m Target depth			8	
2.0										
2.5										

METHOD
BU bucket
AU auger

SAMPLES AND TESTING
U50 undisturbed tube dia mm
D disturbed sample
BS bulk sample
PP pocket penetrometer (UCS) kPa
HV hand vane

WATER
standing water level
inflow
partial loss
complete loss

CONSISTENCY/DENSITY
Fines
VS very soft
S soft
F firm
St stiff
VSt very stiff
H hard
Coarse
VL very loose
L loose
MD medium dense
D dense
VD very dense

MOISTURE CONDITION
D dry
M moist
W wet

PENETRATION
0 no resistance to
4 absolute refusal

NOTES

HOLE NO.:	BH11	**SHEET :**	1 OF 1
CUSTOMER:	Thmoson Adsett Pty Ltd	**JOB NO :**	GT15-264
PROJECT:	Mossman Aged Care Facility	**DATE:**	17/11/15
LOGGED BY:	DK	**REVIEWED BY:**	CR
MACHINE:	DB 2000	**RL:**	-
PIT DIMENSIONS:	-	**COORDINATES:**	E: 325697.000, N: 8178971.000 (56 MGA94)

DEPTH (m)	METHOD	WATER	SAMPLE OR FIELD TEST	USCS SYMBOL	GRAPHIC LOG	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	DCP (blows per 100mm)	STRUCTURE AND ADDITIONAL OBSERVATIONS
0.0				CL		SILTY CLAY: pale grey brown, trace fine to medium gravel	D to M	St	7	
									5	
									5	
				CL		SILTY CLAY: orange brown, trace fine to medium gravel			6	
0.5									5	
			D 0.60 - 0.80 m						9	
		Not Encountered							8	
									6	
				CL		SILTY CLAY: yellow brown, trace fine to medium gravel			6	
									5	
1.0								VSt	9	
									9	
									8	
									9	
1.5									11	
									8	
				CL		SILTY CLAY: pale yellow mottled orange brown, trace fine to medium gravel			8	
									7	
						TEST BH11 TERMINATED AT 1.80 m Target depth			9	
2.0										
2.5										

METHOD
BU bucket
AU auger

SAMPLES AND TESTING
U50 undisturbed tube dia mm
D disturbed sample
BS bulk sample
PP pocket penetrometer (UCS) kPa
HV hand vane

WATER
standing water level
inflow
partial loss
complete loss

CONSISTENCY/DENSITY
Fines
VS very soft
S soft
F firm
St stiff
VSt very stiff
H hard
Coarse
VL very loose
L loose
MD medium dense
D dense
VD very dense

MOISTURE CONDITION
D dry
M moist
W wet

PENETRATION
0 no resistance to
4 absolute refusal

NOTES

HOLE NO.:	BH12	**SHEET :**	1 OF 1
CUSTOMER:	Thmoson Adsett Pty Ltd	**JOB NO :**	GT15-264
PROJECT:	Mossman Aged Care Facility	**DATE:**	17/11/15
LOGGED BY:	DK	**REVIEWED BY:**	CR
MACHINE:	DB 2000	**RL:**	-
PIT DIMENSIONS:	-	**COORDINATES:**	E: 325679.000, N: 8178962.000 (56 MGA94)

DEPTH (m)	METHOD	WATER	SAMPLE OR FIELD TEST	USCS SYMBOL	GRAPHIC LOG	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	DCP (blows per 100mm)	STRUCTURE AND ADDITIONAL OBSERVATIONS
0.0		Not Encountered		CL		SILTY CLAY: pale grey brown, trace fine to medium gravel	D to M	St	6 6 5	
				CL		SILTY CLAY: orange brown, trace fine to medium gravel			5 8 7 7 7	
0.5			D 0.60 - 0.80 m							
				CL		SILTY CLAY: yellow brown, trace fine to medium gravel			6 6	
1.0								VSt	5 9 8 9 9	
1.5				CL		SILTY CLAY: pale yellow mottled orange brown, trace fine to medium gravel			10 8	
						TEST BH12 TERMINATED AT 1.80 m Target depth			9 9	
2.0										
2.5										

METHOD
BU bucket
AU auger

SAMPLES AND TESTING
U50 undisturbed tube dia mm
D disturbed sample
BS bulk sample
PP pocket penetrometer (UCS) kPa
HV hand vane

WATER
standing water level
inflow
partial loss
complete loss

CONSISTENCY/DENSITY
Fines
VS very soft
S soft
F firm
St stiff
VSt very stiff
H hard
Coarse
VL very loose
L loose
MD medium dense
D dense
VD very dense

MOISTURE CONDITION
D dry
M moist
W wet

PENETRATION
0 no resistance
to
4 absolute refusal

NOTES

APPENDIX C – LABORATORY RESULTS

Engineering Testing Services Pty Ltd
13001 SOILS
info@engineeringtesting.com.au
www.engineeringtesting.com.au
ABN: 89 119 263 366
NATA Accreditation No 1833

HEAD OFFICE - CAIRNS
Ph: 07 4047 8600 - Fax: 07 4047 8699
Unit 1, 220 Scott St CAIRNS Qld 4870
PO Box 252 BUNGALOW Qld 4870

TOWNSVILLE
Ph: 07 4774 4135 - Fax: 07 4774 4357
Unit D 26-30 Lorna Court Bohle Qld 4818

MACKAY
Ph: 07 4952 5266
Unit 8/16, Nexus Business Park,
Transport Avenue, Paget Qld 4740

Atterberg Limits Report

Client:	**Thomason Adsett**	Report Number:	**GT15-264-001 ATT**
Client Address:	**PO Box 3053 Cairns Post Shop Qld 4870**		
Job Number:	**GT15-264**	Report Date:	**20/11/2015**
Project:	**Geotechnical Investigation Mossman Aged Care**	Order Number:	-
Location	**Johnston Road, Mossman**		
Lab No:	**GT15-264-001**	Sample Location:	
Date Sampled:	**17/11/2015**	**BH 1**	
Date Tested:	**19/11/2015**	**0.6-0.8m**	
Sampled By:	**DK**		
Sample Method:	**AS1289.1.2.1 6.5.3**		
Material Source:	**Insitu Material**	Spec Description:	-
For Use As:	-	Lot Number:	-
Remarks:	-	Spec Number:	-

Plasticity Tests	Test Method	Specification Minimum	Result	Specification Maximum
Liquid Limit (%)	**AS1289 3.1.2**	-	**26**	-
Plastic Limit (%)	**AS1289 3.2.1**	-	**19**	-
Plasticity Index	**AS1289 3.3.1**	-	**7**	-
Linear Shrinkage (%)	**AS1289 3.4.1**	-	**5.0**	-

NATA
ACCREDITED FOR TECHNICAL COMPETENCE

Accredited for compliance with ISO/IEC 17025.

APPROVED SIGNATORY

Darren Koch
Senior Geotechnician
Cairns Laboratory
NATA Accreditation No. 1833

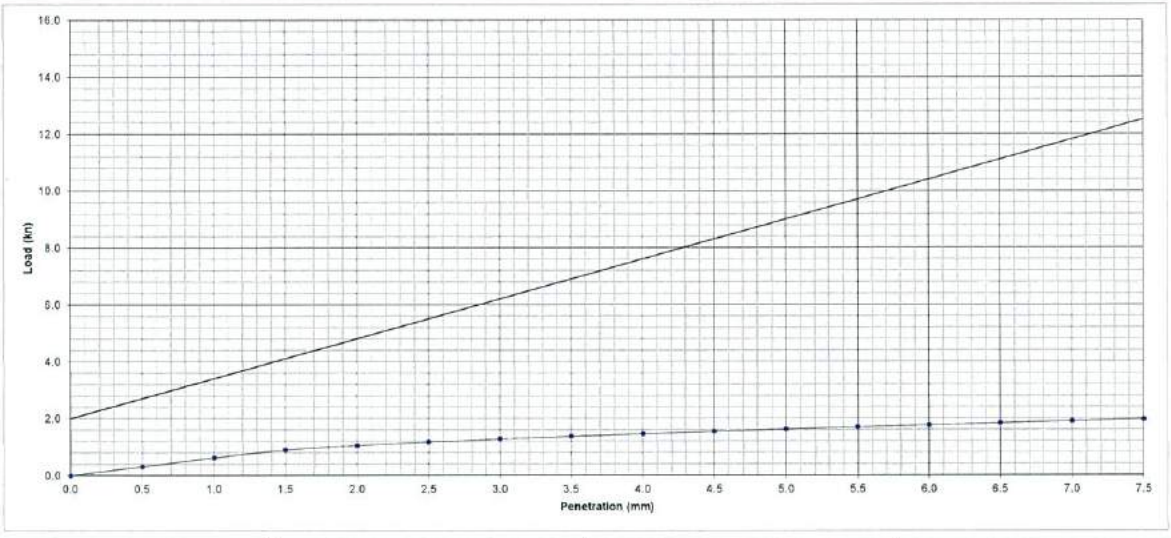
FORM NUMBER

REP ASATT-1

Engineering Testing Services Pty Ltd
Phone: 07 4047 8600 - Fax: 07 4047 8699
Unit 1, 220 Scott St CAIRNS Qld 4870
PO Box 252 BUNGALOW Qld 4870
info@engineeringtesting.com.au
www.engineeringtesting.com.au
ABN: 71 882 809 386
NATA Accreditation No: 1833

California Bearing Ratio Report (1 Point)

Client:	Thomason Adsett	Report Number:	GT15-264-01 CBR
Client address:	PO Box 3053 Cairns Post Shop Qld 4870		
Job Number:	GT15-264	Report Date:	24/11/2015
Project:	Geotechnical Investigation Mossman Aged Care	Order Number:	-
Location	Johnston Road, Mossman		
Lab No:	CS000	Sample Location	
Date Sampled:	17/11/2015	BH2	
Date Tested:	23/11/2015	0.2 - 0.5m	
Sampled By:	DK		
Sample Method:	AS1289.1.2.1 6.5.4		
Material Source:	Insitu Material	Test Method :	AS1289 6.1.1
For Use As:	Subgrade	Lot Number:	-
Remarks:	-	Item Number :	-



Maximum Dry Density - MDD (t/m³) :	1.683	Soaking Period (Days) / Test Condition (Soaked/Unsoaked) :	4 / Soaked
Optimum Moisture Content - OMC (%) :	19.1	Swell (%) / Surcharge (kg):	0.5 / 4.5
Compactive Effort :	Standard	Hygroscopic Moisture Content (%) :	18.4
Nominated % Maximum Dry Density Compaction :	97	Moisture Content (Top) after Penetration (%) :	20.9
Nominated % Optimum Moisture Content Compaction :	100.0	Optional Moisture Content (Remainder) after Penetration (%) :	20.3
Achieved Dry Density before Soak (t/m³) :	1.631	CBR 2.5mm (%) :	9.0
Achieved Percentage of Maximum Dry Density (%) :	97	CBR 5.0mm (%) :	8.0
Achieved Moisture Content (%) :	19.8	Field Moisture Content (%) :	18.4
Achieved Percentage of Optimum Moisture Content (%) :	104	CBR Value (%) :	9.0
Soil Description :	Yellow-brown Silty CLAY		

Approved Signatory

Darren Koch
Cairns Laboratory
NATA Accred. No. 1833

Form Number

REP QCBR-1

APPENDIX D - PHOTOGRAPHS

APPENDIX E - UNDERSTAND THE LIMITATIONS OF YOUR GEOTECHNICAL REPORT

GEOTECHNICAL & MATERIALS TESTING

UNDERSTAND THE LIMITATIONS OF YOUR GEOTECHNICAL REPORT

This report has been based on project details as provided to us at the time of the commission. It therefore applies only to the site investigated and to a specific set of project requirements as understood by Engineering Testing Services.

If there are changes to the project, you need to advise us in order that the effect of the changes on the report recommendations can be adequately assessed. Engineering Testing Services cannot take responsibility for problems that may occur due to project changes if they are not consulted.

It is important to remember that the subsurface conditions described in the report represent the state of the site at the time of investigation. Natural processes and the activities of man can result in changes to site conditions. For example, ground water levels can change or fill can be placed on a site after the investigation is completed. If there is a possibility that conditions may have changed with time, Engineering Testing Services should be consulted to assess the impact on the recommendations of the report.

The site investigation only identifies the actual subsurface conditions at the location and time when the samples were taken. Geologists and engineers then extrapolate between the investigation points to provide an assumed three-dimensional picture of the site conditions. The report is based on the assumption that the site conditions as identified at the investigation locations are representative of the actual conditions throughout an area. This may not be the case and actual conditions may differ from those inferred to exist. This will not be known until construction has commenced. Your geotechnical report and the recommendations contained within it can therefore only be regarded as preliminary.

In the event that conditions encountered during construction are different to those described in the report, Engineering Testing Services should be consulted immediately. Nothing can be done to change the actual site conditions which exist but steps can be taken to reduce the impact of unexpected conditions. For this reason, the services of Engineering Testing Services should be retained through the development stage of a project.

Problems can occur when other design professionals misinterpret a report. To help avoid this, Engineering Testing Services should be retained for work with other design professionals to explain the implications of the report.

This report should be retained as a complete document and should not be copied in part, divided or altered in any way.

It is recommended that Engineering Testing Services is retained during the construction phase to confirm that conditions encountered are consistent with design assumptions. For example, this may involve assessment of bearing capacity for footings, stability of natural slopes or excavations or advice on temporary construction conditions.

This document has been produced to help all parties involve recognise their individual responsibilities.

Johnston Road, Mossman Gorge

APPENDIX I

STATEMENT OF CODE COMPLIANCE

Cardno
Shaping the Future

Statement of Code Compliance
Material Change of Use (Retirement facility)
Mossman & Environs Locality Code
Community and Recreational Facilities Planning Area Code
Acid Sulfate Soils Code
Natural Hazards Code
Multi-unit Housing / Holiday Accommodation / Retirement Facility Code
Reconfiguring a Lot
Mossman & Environs Locality Code
Community and Recreational Facilities Planning Area Code
Acid Sulfate Soils Code
Natural Hazards Code
Natural Areas and Scenic Amenity Code
Reconfiguring a Lot Code
General Codes
Filling and Excavation Code
Landscaping Code
Vehicle Parking & Access Code
Sustainable Development Code
Design & Siting of Advertising Devices Code – Not assessed (no signage proposed at this time)

Mossman & Environs Locality Code

Performance Criteria		Acceptable Measures		Proposal
General Requirements				
P1	Buildings and structures complement the Height of surrounding development and Buildings are limited to two Storeys.	**A1.1**	In this Locality the maximum Height of Buildings/structures is 6.5 metres. In addition, the roof (including any ancillary roof features) does not exceed a maximum Height of 3.5 metres above the intersection of the pitching part of the roof and the wall of the Building.	**R1.1 Complies** The height of buildings/structures proposed will range from approximately 5.25 - 5.6 metres in height. Further, roofs will not extend greater than 3.5 metres above the wall of the building.
P2	Development is connected to all urban services.	**A2.1**	Development is connected to available urban services by underground connections, wherever possible. AND/OR Contributions are paid when applicable in accordance with the requirements of Planning Scheme Policy No 11 – Water Supply and Sewerage Headworks and Works External Contributions.	**R2.1 Will Comply** The subject site is able to be connected to all services.
P3	Landscaping of development Sites complement the existing character of the Mossman Locality	**A3.1**	Landscaping incorporates the requirements of Planning Scheme Policy No 7 – Landscaping with particular emphasis on appropriate species for this Locality.	**R3 Performance Solution** The proposed development will be landscaped in accordance with the Landscape plans provided (refer **Appendix G**).
P4	Development Sites are provided with efficient and safe vehicle Access and manoeuvring areas on Site and to the Site, to an acceptable standard for the Locality.	**P4.1**	All Roads, driveways and manoeuvring areas on Site and adjacent to the Site are designed and maintained to comply with the specifications set out in the Planning Scheme Policy No 6 – FNQROC Development Manual.	**P4.1 Will Comply** All roads, driveways and manoeuvring areas will be designed in accordance with the relevant provisions of the FNQROC Development Manual or where for the proposed access east of Stage 1; only partial construction of a future road is intended to occur for the purposes of a driveway for the secondary access to the Mossman Aged Care Plus Centre (Stage 1).
Note: P5-P10 have regard to sites located within the Town Centre and are not applicable to the proposed development				
Note: P11 has regard to sites located within Local Centres and is not applicable to the proposed development				
Note: P12 has regard to Residential Development and is not applicable to the proposed development				
P13	Good quality agricultural land, particularly sugar cane land, within the environs of the locality is protected from urban or incompatible development.	**A13.1**	No urban development encroaches into the Rural Planning Area located within the Locality boundary. UNLESS A buffer is provided in accordance with the requirements of State Planning Policy 1/92 and Planning Guidelines – Separating Agricultural and Residential Land Uses (DNR 1997).	**A13.1 Complies** The proposed development is located on land zoned for community and recreational facilities and does not encroach upon land Rural Planning Area zoned land.

Performance Criteria		Acceptable Measures		Proposal
P14	Industrial development is located in existing or identified industrial areas to facilitate efficient use of industrial land and to effectively service the needs of the Shire.	**A14.1**	Class A Industry uses are located in the Industry Planning Area at the southern end of Mossman around Sawmill Road to effectively service the Shire, particularly Port Douglas.	**R14 Not Applicable** The proposed development does not constitute Industrial development.
		A14.2	Class B Industry uses are located in the Industry Planning Area at the northern end of Mossman around the Mill to service the needs of the Mill and to consolidate allied industrial uses.	
P15	Industrial land and uses are protected from incompatible urban development.	**A15.1**	No residential development encroaches into the Industry Planning Area.	**R15.1 Complies** The proposed development is located on land zoned for community and recreational facilities and does not encroach upon Industrial Planning Area zoned land.
		A15.2	Buffers are provided between Industry uses and incompatible urban uses of 40 metres and include Landscaping for screening or incorporate land use activities which are compatible to interface with the adjacent Industry uses.	
Community facilities				
P16	Community facilities are provided to service the local community in convenient and accessible locations.	**A16.1**	Community facilities are conveniently located within or near the Town Centre and in close proximity to existing community facilities to service the needs of local residents.	**P16 Performance Solution** The proposed development, being for a Retirement facility is located adjacent the Mossman Hospital and in proximity of the Town Centre, which is considered to be a convenient and accessible location.
		A16.2	Public car parking areas are provided within or in close proximity to the Town Centre, existing community facilities, sporting/recreation grounds.	
Note: P17 has regard to Flood Immunity for Residential Development and is not applicable to the proposed development				
Note: P18 has regard to Scenic Amenity and Conservation Areas and is not applicable to the proposed development				
Note: P19-P23 have regard to the Foxton Avenue Special Management Area and are not applicable to the proposed development				

Community and Recreational Facilities Planning Area Code

Performance Criteria		Acceptable Measures		Proposal
Consistent and Inconsistent Uses				
P1	The establishment of uses is consistent with the outcomes sought for the Community and Recreational Facilities Planning Area.	**A1.1**	Uses identified as inconsistent uses in the Assessment Table are not established in the Community and Recreational Facilities Planning Area.	**R1.1 Complies** The proposed land use of Retirement facility, is not identified as an inconsistent use within the Community and Recreational Facilities Planning Area.
Building/Structure Siting				
P2	Buildings/structures are Setback to ensure that they are compatible with the character of the area and do not adversely affect other uses, particularly residential uses.	**A2.1**	A2.1 Buildings are Setback not less than: • a minimum of 8 metres from a State-Controlled Road; or • in other cases, a minimum of 6 metres from the Main Street Frontage; • 4 metres from any secondary Road Frontage; and • 3 metres from side and rear boundaries.	**R2 Performance Solution** Building to road frontage setbacks range from 3 metres – 14 metres. Landscaping is proposed within the setback areas in order to provide a buffer between the Retirement facility and the Johnston Road frontage. The proposed development is setback from the western boundary 7 metres and the north-western boundary (fronting vegetation) 12 metres. Accordingly, the above setbacks are considered to ensure compatibility with the surrounding area and minimize impacts to adjoining land uses (identified as residential and conservation).
Site Access and Car Parking				
P3	Car parking areas are Setback from the boundaries of the Site to ensure a high standard of amenity and to ensure that the amenity of adjacent residential land, residential uses or other sensitive Sites is protected.	**A3.1**	A3.1 Car parking areas are Setback; • 6 metres from the Road Frontage/s of the Site; and • 3 metres from any other Site boundary.	**R3 Performance Solution** The staff car park is setback approximately 3 metres from the Johnston Road frontage. The general car park is setback approximately 10 metres from the road frontage. Landscaping is proposed within the setback area to maintain a high standard of amenity.
P4	The Setbacks to car parking areas are landscaped to enhance the amenity of the Site and to provide a buffer to adjacent residential land, residential uses and other sensitive Sites.	**P4.1**	The Setback between the Road Frontage/s and the car parking area is landscaped with Dense Planting.	**P4.1 Complies** Landscaping within the road frontage setback and car parking areas will include deep planting, to be undertaken in accordance with the landscaping plans provided at **Appendix G.**
Night lighting				
P5	P5 Night lighting of playing fields and club facilities do not adversely affect the amenity of adjacent areas or uses.	**A5.1**	Where the Site adjoins land included in a Residential 1, Residential 2 or Tourist and Residential Planning Area or land developed partially or wholly for residential purposes, illumination levels parallel to and at a distance of 1.5 metres outside the Site for a Height of 10 metres do not exceed 8 lux in either the vertical or horizontal plane. OR Where regional standard facilities require a lux	**P5 Performance Solution** Lighting will be provided to the proposed development in accordance with the relevant standards, and in consideration of adjoining land uses.

Performance Criteria		Acceptable Measures		Proposal
			level of 100 – 200 lux shielding mechanisms and the correct design and positioning of the lights ensure minimal spillage to adjacent land.	
Landscaping				
P6	P6 Landscaping is functional, provides visual interest and form, incorporates native vegetation, provides screening and enhances the visual appearance of the development and provides for useable public recreation/congregation areas, where appropriate.	**A6.1**	All Site boundary Setback areas are provided with Dense Planting for a minimum distance of 2 metres or as specified above in A3.1. OR A greater distance specified in a Land Use Code.	**A6.1 Complies** Landscaping of side boundary setbacks includes deep planting of approximately 2-5 metres, to be undertaken in accordance with the landscaping plans provided at **Appendix G.**
Note: P6-10 have regard to Sloping Sites and are not applicable to the proposed development				

Multi-unit Housing / Holiday Accommodation / Retirement Facility Code

Performance Criteria		Acceptable Measures		Proposal
Site Requirements				
P1	A Site for Multi-Unit Housing/Holiday Accommodation/Retirement Facilities has sufficient area and dimensions to accommodate the Buildings/structures, open space, car parking and associated vehicular Access, Landscaping and recreation facilities for the enjoyment of guests.	**A1.1**	The Site has a minimum area of 1000 m2. AND The Site has a minimum Road Frontage of 25 metres.	**R1.1 Complies** The site area on which the Retirement facility is proposed is 13,935m^2, thus meeting the requirements of A1.1.
Site Layout				
P2	The building bulk is reduced through effective design and materials	**A2.1** **A2.2** **A2.3** **A2.4**	The overall length of any Building does not exceed 30 metres. The length of any continuous wall plane does not exceed 15 metres. Building bulk is reduced by balconies, patios, recesses and variations in exterior building materials and colours. Elevations provide visual interest through building elements, exterior colours, textures and materials. AND Buildings are designed in accordance with the requirements of the Planning Scheme Policy No 2 – Building Design and Architectural Elements.	**R2.1 Performance Solution** The main building of Stage 1 of the proposed development (comprising sleeping quarters, staff and meeting rooms) is approximately 40 metres long. Notwithstanding, building incorporates various design materials, awnings, landscaping, setbacks and various openings to reduce building bulk. **R2.2 Performance Solution** Wall planes range from 20-40 metres. Notwithstanding, buildings feature incorporate various design materials, awnings, landscaping, setbacks and various openings to reduce building bulk. **R2.4 Performance Solution** Visual interest is provided to building elevations through the use of a variety of building materials, awnings, decking and opening.
P3	The development addresses the Main Street Frontage to facilitate casual surveillance and to enhance the amenity of the streetscape	**A3.1** **A3.2**	The Building has balconies, windows or patios that face the Main Street Frontage, and remain unenclosed. Perimeter fencing to any street Frontage complies with any specific fencing requirements detailed in the relevant Planning Area Code.	**R3.1 Complies** Buildings facing the road frontage feature windows and decking/patio areas that remain unenclosed. **R3.2 Performance solution** Specific fencing requirements are not detailed within the Community and Recreational Facility Planning Area. Notwithstanding, boundary fencing will facilitate casual surveillance and enhance the amenity of the streetscape.
P4	The development does not adversely affect the privacy or liveability of adjoining development, and achieves a pleasant living environment for residents.	**A4.1** **A4.2**	Windows and openings of Habitable Rooms do not overlook Habitable Rooms of adjoining developments. OR Where Habitable Rooms overlook Habitable Rooms of adjoining developments, privacy is protected by fixed external screens or other suitable elements to avoid overlooking. Screening is provided where any windows, balconies or patios overlook other windows, balconies or patios of other Dwelling Units/Private	**R4.1 Complies** Habitable rooms as proposed do not overlook adjoining developments that contain habitable rooms. **R4.2 Performance Solution** The proposed development has been designed to ensure that windows, balconies and patios do not overlook other windows, balconies or patios of other bedrooms within the proposed development. Thus, a pleasant living environment will be provided for residents.

Performance Criteria		Acceptable Measures		Proposal
			Rooms within the development.	
P5	Vehicle parking areas and driveways are safe, convenient and have minimal impacts on adjoining development.	**A5.1**	Vehicle parking areas are located under or behind the Building so they are not visually prominent from the street.	**R5.1 Performance Solution** Car parking areas are located to the front and side of the proposed development. Notwithstanding, parking areas will be heavily landscaped to reduce visual impact from the street and will be safe and convenient in their location.
		A5.2	The car parking area is: • illuminated at night; • well ventilated to avoid fumes being trapped; • screened from adjoining development; • 60% covered.	**R5.2 Performance solution** Safe and convenient car parking will be provided that are well ventilated, screened from adjoining development and will be illuminated as required.
		A5.3	The driveway is a minimum of 2 metres from the side or rear boundary. OR A minimum of 1 metre with an average of 1.5 metre Landscaping screen is provided along the side or rear boundary adjacent to the driveway.	**R5.3 Complies** The driveways to the proposed development is not located within proximity to the rear boundary, due to the Retirement facility's location at the southern end of the lot. It is noted that the eastern access is located within a proposed easement to be nominated within Proposed Lot 2.
P6	Development does not adversely impact on the natural environment[43] [43] Vegetation clearing is required to be undertaken in accordance with Local Law – Vegetation Management.	**A6.1**	The siting of Multi-Unit Housing/Holiday Accommodation minimises cut unless required for a basement or semi-basement car park.	**R6.1 Performance Solution** Multi-unit housing / holiday accommodation is not proposed as part of this development application. Notwithstanding, the Retirement facility the subject of the development application will not adversely impact on the natural environment.
Landscaping and Open Space				
P7	The development provides a functional and usable Landscaping and Recreation Area for the use of guests	**A7.1**	Landscaping and Recreation Areas must be provided at a minimum rate of: • 30 m2 for the first bedroom of each Dwelling Unit; plus • 15 m2 for each additional bedroom of each Dwelling Unit; or • 15 m2 for each Private Room. AND A minimum of 4 metres by 4 metres of Landscaping and Recreation Area is provided for each Dwelling Unit which is directly accessible from a habitable living room. OR At least 50% of the total Landscaping and Recreation Area required for all Dwelling Units/Private Rooms specified above is provided as one communal area, having a minimum dimension of 6 metres.	**R7.1 Performance Solution** Communal recreation areas and ample landscaping is provided in the grounds of the proposed Retirement facility, in various locations. Specifically, 5,976m^2 of Private Open Space is proposed, which equates to 142m^2 per dwelling unit / room. Additionally, 3,771m^2 of 'public community space' is proposed.

Performance Criteria		Acceptable Measures		Proposal
		A7.2	Each Dwelling Unit/Private Room is provided with a private roofed balcony, or patio with a minimum area of 6m2 and a minimum depth of 2 metres. In the case of each Dwelling Unit if the private roofed balcony, or patio is directly accessible to the private open space area required in A7.1 above, the area of the balcony, or patio can be used in the calculation of the private open space area up to a maximum area of 6 m2 for each Dwelling Unit.	**R7.2 Performance Solution** Due to the nature of the development, communal recreation areas (as opposed to private balcony and/or patio areas) and ample landscaping is provided in the grounds of the proposed Retirement facility, in various locations. **R7.3 Performance Solution** A swimming pool is not proposed as part of this development. Notwithstanding, communal recreation areas and ample landscaping is provided in the grounds of the proposed Retirement facility, in various locations.
		A7.3	Any swimming pool, including surrounding coping or paving, located within the front Setback is Setback a minimum of 3 metres from the Main Street Frontage. AND No suspended or above ground swimming pool structures are located within the 6 metre Setback to the Main Street Frontage.	
P8	The development provides residents with a range of on Site services and facilities.	**A8.1**	A communal clothes drying area of 30m2 is provided in a central location. OR Each Dwelling Unit has its own clothes drying area designated in their private open space and screened from view from public vantage points and other Dwelling Units on Site or on adjacent Sites.	**R8.1 Performance Solution** Due to the nature of the proposed development, a dedicated laundry is proposed within the Retirement facility for laundering services. **R8.2 Will Comply** Refuse storage will be provided to the proposed development in an accessible and screened location.
		A8.2	A refuse bin storage area is provided and located for convenient use by all guests and is readily accessible to waste management contractors. AND The refuse bin storage area is screened from view from public Roads, is roofed and drained to sewer and has a hose and hose cock attached to provide for cleaning	
Retirement Facility (Extra Provisions)				
Location and Amenity				
P9	Retirement Facilities are located in areas which offer convenience to residents, and are designed to be compatible with the locality and surrounding area in which they are located.	**A9.1**	Retirement Facilities are conveniently located in established areas in close proximity to public transport, Shopping Facilities and health care services.	**R9.1 Complies** The Retirement facility proposed is located adjacent the Mossman Hospital. Various other facilities (such as hairdressing salon, kitchen and chemist) are proposed within the facility.
Design Layout				
P10	Retirement Facilities are designed to provide for the amenity and security of residents[44.]	**A10.1**	The Retirement Facility incorporates covered walkways wide enough to accommodate	**R10.1 Complies** A main covered walkway extends from the general car park area to

Performance Criteria		Acceptable Measures		Proposal
	[44] Retirement Facilities are required to be designed in accordance with the requirements of the Aged Care Act 1997 or any other relevant legislation.		wheelchairs and ramps, where necessary, which provide on Site weather protection between all areas of the complex.	the westernmost frontage of the main building of the facility. Additional pathways within the facility are sheltered by awnings and extended roof lines.
		A10.2	Decorative perimeter security fencing and gates are provided to ensure the safety and security of residents and the fencing complies with the relevant Planning Area Code.	**R10.2 Complies** Decorative perimeter security fencing will be provided to the proposed development. Entrance to the facility is restricted via entrance through the main building, to ensure the safety and security of residents.
		A10.3	Security screens are provide on all Dwelling Units or residential rooms to ensure the safety and security of residents, while allowing for the capture of prevailing breezes.	**R10.3 Complies** It is understood that security screens will be provided to residential rooms to ensure safety.
P11	The internal layout of the Retirement Facility and the location of the Retirement Facility allows for the safe evacuation of residents in an emergency and provides for emergency services to efficiently Access the Site.	**A11.1**	The design of the Retirement Facility ensures that external circulation and Access and egress points on the Site facilitate the evacuation of the Site in an efficient manner.	**A11.1 Performance Solution** It is understood that an evacuation plan will be created for the proposed facility detailing evacuation point(s).
		A11.2	The Site of the Retirement Facility is not prone to inundation and all circulation pathways throughout the Site are constructed above 3.2 metres AHD.	**A11.2 Performance Solution** It is understood that the subject site is prone to flood inundation (refer to the Flood Study provided at **Appendix H)**. Notwithstanding, the proposed development will be constructed to ensure the safe evacuation of residents in an emergency and facilitate effective emergency access.
		A11.3	The location and Site of the Retirement Facility are readily accessible to emergency vehicles.	**A11.3 Complies** The proposed development features dual access and dedicated ambulance parking to facilitate the access of emergency vehicles.
Ancillary Facilities				
P12	Retirement Facilities provides residents with a range of on Site services and facilities.	**A12.1**	Retirement Facilities incorporate a range of ancillary services and facilities, such as: lounge areas, library/reading room, TV games/recreation room, pharmacy, hairdresser, convenience store and the like.	**A12.1 Complies** The proposed development will incorporate a range of activities for residents, including patio areas, chemist, chapel, terrace and hairdressing salon.

Natural Hazards Code

Performance Criteria		Acceptable Measures		Proposal
Bushfire				
P1	Development does not compromise the safety of people or property from bushfire.	**A1.1**	Any development on land identified as High Risk Hazard on any Natural Hazards Overlay on any Locality Map complies with the relevant requirements of State Planning Policy 1/03 – Mitigating the Adverse Impacts of Flood, Bushfire and Landslide. AND Development complies with a Bushfire Management Plan prepared for the site.	**R1.1 Performance Solution** The proposed development is not located in an area of High risk hazard with regard to bushfire. Notwithstanding, the siting of the proposed facility and various attenuation measures to the buildings themselves will consider bushfire hazard to maintain the safety of residents.
P2	Development maintains the safety of people and property by: • avoiding areas of High or Medium Risk Hazard; or • mitigating the risk through: - lot design and the siting of Buildings; and - including firebreaks that provide adequate: • Setbacks between Building/structures and hazardous vegetation, and • Access for fire fighting/other emergency vehicles; - providing adequate Road Access for fire fighting/other emergency vehicles and safe evacuation; and - providing an adequate and accessible water supply for fire-fighting purposes	**A2.1**	Development is located on a Site that is not subject to High or Medium Risk Hazard. OR For all development (if development is proposed to be located on a Site that is subject to High or Medium Risk Hazard), then: Buildings and structures on lots greater than 2500 m2: • are sited in locations of lowest hazard within the lot; and • achieve Setbacks from hazardous vegetation of 1.5 times the predominant mature canopy tree Height or 10 metres, whichever is the greater; and • 10 metres from any retained vegetation strips or small areas of vegetation; and • are sited so that elements of the development least susceptible to fire are sited closest to the bushfire hazard. Building and structures on lots less than or equal to 2500 m2, maximise Setbacks from hazardous vegetation. AND For uses involving new or existing Buildings with a Gross Floor Area greater than 50 m2 each lot has: • a reliable reticulated water supply that has sufficient flow and pressure characteristics for fire fighting purposes at all times (minimum pressure and flow is 10 litres a second at 200 kPa); or	**R2.1 Complies** The proposed development is not located in an area of High risk hazard with regard to bushfire.

Performance Criteria	Acceptable Measures	Proposal
	• an on Site water storage of not less than 5000 litres (eg. accessible dam or tank with fire brigade tank fittings, swimming pool). A2.2 For development that will result in multiple Buildings or lots (if development is proposed to be located on a Site that is subject to High or Medium Risk Hazard), then: Residential lots are designed so that their size and shape allow for: • efficient emergency Access to Buildings for fire fighting appliances (eg. by avoiding long narrow lots with long Access drives to Buildings); and • Setbacks and Building siting in accordance with 2.1 (a) above. AND Firebreaks are provided by: • a perimeter Road that separates lots from areas of bushfire hazard and that Road has: - a minimum cleared width of 20 metres; and - a constructed Road width and all-weather standard complying with Council standards. OR • where it is not practicable to comply with fire break provisions above, maintenance trails are located as close as possible to the boundaries of the lots and the adjoining bushland hazard, and the fire/maintenance trails: - have a minimum cleared width of 6 metres; and - have a formed width and gradient, and erosion control devices to Council standards; and - have vehicular Access at each end; and - provide passing bays and turning areas for fire fighting applicants; and - are either located on public land, or within an Access easement that is granted in favour of the Council and Queensland Fire Rescue Service (QFRS). AND	

Performance Criteria		Acceptable Measures		Proposal
			sufficient cleared breaks of 6 metres minimum width in retained bushland within the development (eg. creek corridors and other retained vegetation) to allow burning of sections and Access for bushfire response. AND Roads are designed and constructed in accordance with applicable Council and State government standards and: • have a maximum gradient of 12.5%; and • exclude culs-de-sac, except where a perimeter Road isolates the development from hazardous vegetation or the culs-de-sac are provided with an alternative Access linking the cul-de-sac to other through Roads.	
P3	Public safety and the environment are not adversely affected by the detrimental impacts of bushfire on hazardous materials manufactured or stored in bulk.	**A3.1**	Development complies with a Bushfire Management Plan prepared for the site.	**R3.1 Performance Solution** Hazardous materials, should they be stored in bulk, will be stored in accordance with the relevant practices to ensure the safety of staff and residents.

Acid Sulfate Soils Code

Performance Criteria		Acceptable Measures		Proposal
Disturbance of Acid Sulfate Soils				
P1	The release of acid and associated metal contaminants into the environment are avoided either by: • not disturbing Acid Sulfate Soils; or by • preventing the potential impacts of any disturbance through appropriate Site planning, treatment and ongoing management.	**A1.1**	The disturbance of Acid Sulfate Soils is avoided by: • not excavating or removing more than 100 m3 of material identified as containing or potentially containing Acid Sulfate Soils; • not permanently or temporarily extracting groundwater that results in the aeration of previously saturated Acid Sulfate Soils; and • demonstrating that any filling in excess of 500 m3 of material to depths greater than an average depth of 0.5 metres will not result in ground water extrusion from Acid Sulfate Soils and the aeration of previously saturated Acid Sulfate Soils from the compaction or movement of those soils. • A1.2 Site planning, treatment and ongoing management are undertaken so that: • acid and metal contaminants are not generated and acidity is neutralised; • untreated Acid Sulfate Soils are not taken off-Site unless this is to an alternative location for treatment; and • surface and groundwater flows from areas containing Acid Sulfate Soils do not release leachate containing acid or metal contaminants into the environment.	**R1.1 Will Comply** Earthworks to facilitate the proposed development will be detailed at the Operational Works stage of the proposed development, however will be designed in consideration of Acid sulfate soils.
Identification and Management of Acid Sulfate Soils				
P2	The location and extent of Acid Sulfate Soils are identified on the development Site and appropriately management so as to avoid the release of acid and associated metal contaminants into the environment.	**A2.1**	No Acceptable Solution (Information that the Council may request to demonstrate compliance with the Performance Criteria is outlined in Planning Scheme Policy No 9 – Reports and Information the Council May Request, for code and impact assessable development).	**R2 Performance Solution** Earthworks to facilitate the proposed development will be detailed at the Operational Works stage of the proposed development, however will be designed in consideration of Acid sulfate soils.

Natural Areas and Scenic Amenity Code

The Natural Areas and Scenic Amenity Code has not been addressed as the Designated Development Area (DDA) is located outside of areas mapped as containing Remnant Vegetation

Reconfiguring a Lot Code

Performance Criteria		Acceptable Measures		Proposal
Area and Dimensions of Lots				
P1	P1 Lots are of sufficient area and dimensions to meet the requirements of the users and accommodate the form of development likely to be constructed in the respective Planning Areas, together with the open space, Landscaping, Access and car parking associated with the particular form of development.	**A1.1**	A1.1 Lots comply with the area and dimensions identified for lots in the respective Planning Areas in Table 1.	**R1.1 Performance Solution** No minimum area or dimensions are specified for the Community and Recreational Facilities planning area. Notwithstanding, the site is to be subdivided into two lots, with Proposed Lot 1 (Stage 1) having a total area of 13,935m^2, and Proposed Lot 2 having a total area of 29,845m^2 and are considered to be of sufficient dimension to meet the requirements of future Retirement facility development.
Note: P2-P6 have regard to Planning Areas not relevant to the proposed development				
Infrastructure for Local Communities				
P7	Provision is made for open space that: • meets the recreational needs of residents and visitors to the Shire; • provides a diverse range of settings; • creates effective linkages with other areas of open space and natural areas; and • contributes to the visual and Scenic Amenity of the Shire.	**A7.1**	An area of 10% of the land to be reconfigured is provided as open space in accordance with Planning Scheme Policy No 9 – Open Space Contributions. OR A contribution is paid in lieu of an area being designated for open space in accordance with Planning Scheme Policy No 9 – Open Space Contributions OR A combination of the above, as agreed to by Council.	**R7.1 Performance Solution** Adequate communal open space is provided within the proposed lot to meet the recreational needs of residents, create linkages with the natural vegetation located to the west and provide a diverse range of settings for residents. Moreover, (a) the Retirement facility is a managed environment where the active and passive recreation needs of residents will be, in part managed; and (b) the expansive on site area available for the passive and active recreation needs of residents is such that Open Space Contributions should not be payable; and no land dedication is required as no demand is created by the proposed development.
P8	Informal Parks and Sporting Parks are provided and sited to meet the needs of local residents in the Shire.	**A8.1**	Informal Parks are provided at the ratio of 2 hectares per 1000 persons with a minimum size of Informal Parks being 0.5 – 1 hectare (Local Parks) and 3 – 5 hectares (District Parks). AND Sporting Parks are provided at the ratio of 2 hectares per 1000 persons with a minimum size of Sporting Parks being 1.2 – 2 hectares (Local Parks) and 5 hectares (District Parks).	**R8.1 Does Not Comply** Due to the nature of the proposed development, an informal park for the local community is not proposed as part of the development. Adequate communal open space is provided on site to meet the recreational needs of residents, create linkages with the natural vegetation located to the west and provide a diverse range of settings for residents.
Road Network				
P9	The Road network: • is integrated and consistent with the existing and proposed local Road network; • is legible and retains existing features, views, topography and vegetation;	**A9.1** **A9.2**	Roads are designed and constructed in accordance with the specifications set out in Planning Scheme Policy No 6 – FNQROC Development Manual. The Road network takes into consideration the natural and cultural features of the Site, existing vegetation, Watercourses and contours.	**R9.1 Not Applicable** No additional roads are proposed. Proposed Lot 1 and Proposed Lot 2 have sufficient road frontage and vehicular accesses will be constructed to provide access to Proposed Lot 1 and Proposed Lot 2. **R9.2 Not Applicable** No additional roads are proposed. A Traffic Impact Assessment (TIA) has been undertaken with regard to the proposed development and

Performance Criteria		Acceptable Measures		Proposal
	• is convenient and safe for local residents; • facilitates walking and cycling within the neighbourhood; and • is compatible with the intended role of the State-Controlled Road and does not prejudice traffic safety or efficiency.	**A9.3**	The Road network is designed to reduce traffic speeds and volumes on local streets in residential areas to facilitate parking and manoeuvring and to integrate with the existing and proposed pedestrian and bicycle paths network.	will be provided under separate cover. Note that no cultural features are not understood to be located onsite. **R9.3 Not Applicable** No additional roads are proposed. A Traffic Impact Assessment (TIA) has been undertaken with regard to the proposed development and will be provided under separate cover.
		A9.4	Direct Access is not provided to a State-Controlled Road where legal and practical Access from another Road is possible.	**R9.4 Complies** Direct access is not proposed to a State-controlled road as part of the proposed development.
		A9.5	Where the created allotments have frontage to more than one Road, Access to the individual allotments is from the lower order Road.	**R9.5 Performance Solution** Proposed Lot 1 and Proposed Lot 2 will have frontage to and access from Johnston Road.
P10	The Road network for industrial/commercial reconfigurations ensures convenient movement and Access for vehicles, particularly heavy vehicles, without affecting the amenity of residential neighbourhoods.	**A10.1**	Roads are designed and constructed in accordance with the specifications set out in Planning Scheme Policy No 6 – FNQROC Development Manual.	**R10.1 Not Applicable** The proposed development is not for industrial or commercial purposes and will not generate industrial/commercial traffic.
		A10.2	Industrial/commercial traffic is able to Access a major Road without intruding into a residential neighbourhood.	**R10.2 Not Applicable** The proposed development is not for industrial or commercial purposes and will not generate industrial/commercial traffic.
Pedestrian and Bicycle Network				
P11	Networks of pedestrian and bicycle paths are provided in safe and convenient locations.	**A11.1**	Safe and convenient walking and cycling networks are provided to link residential areas to schools, community facilities, parks and public transport, Tourist Attractions, commercial and industrial areas.	**R11.1 Performance Solution** Due to the nature of the proposed development, walking paths will be provided within the Retirement facility. Further, a footpath will be provided to the frontage of the lot.
		A11.2	The pedestrian and bicycle path network is constructed in accordance with the specifications set out in Planning Scheme Policy No 6 – FNQROC Development Manual.	**R11.2 Will Comply** The footpath provided to the frontage of the proposed lot will be constructed in accordance with the relevant FNQROC standards.
		A11.3	Lighting for bicycle paths is provided in accordance with the relevant Australian Standards.	**R11.3 Performance Solution** The footpath provided to the frontage of the proposed lot will be constructed in accordance with the relevant FNQROC standards.
Stormwater Drainage				
P12	Stormwater runoff is contained and managed so that it does not adversely affect: • natural Watercourses; • surface or underground water quality; or • the built environment either upstream or downstream of the Site.	**A12.1**	Stormwater drainage is designed and constructed in accordance with the specifications set out in Planning Scheme Policy No 6 – FNQROC Development Manual.	**R12.1 Will Comply** Stormwater infrastructure design will be detailed at the Operational Works stage of the proposed development, however will be designed and constructed in accordance with the provisions of the FNQROC Development Manual. Stormwater management will be addressed in further detail in a report to be provided under separate cover.
Water Supply				
P13	An adequate, safe and reliable supply of potable water is provided.	**A13.1**	Where in a water supply area, each new lot is connected to Council's reticulated water supply	**R13.1 Will Comply**

Performance Criteria		Acceptable Measures		Proposal
			system. AND The extension of and connection to the reticulated water supply system is designed and constructed in accordance with the specifications set out in Planning Scheme Policy No 6 – FNQROC Development Manual	The proposed lot will be connected to Council's reticulated water supply, as identified within the Sewer and Water Infrastructure Advice provided at **Appendix E**. Water connections will be designed and constructed in accordance with the provisions of the FNQROC Development Manual. **R13.2 Performance Solution** The Applicant seeks to enter into an Infrastructure Agreement with regard to Infrastructure Charges. Notwithstanding, An adequate, safe and reliable supply of potable water will be provided to the proposed lot.
		A13.2	A contribution is paid in accordance with Planning Scheme Policy No 11 – Water Supply and Sewerage Headworks and Works External Contributions.	
Treatment and Supply of Effluent				
P14	Provision is made for the treatment and disposal of effluent to ensure that there are no adverse impacts on water quality and no adverse ecological impacts as a result of the system or as a result of increasing the cumulative effect of systems in the locality.	**A14.1**	Each new lot is connected to Council's sewerage system. AND The extension of and connection to the sewerage system is designed and constructed in accordance with the specifications set out in Planning Scheme Policy No 6 – FNQROC Development Manual. OR Where the Site is not in a sewerage scheme area, the proposed disposal system meets the requirements of relevant Sections of the Environmental Protection Policy (Water) 1997. AND The proposed on Site effluent disposal system is located on and contained within the lot in accordance with the Standard Sewage Law.	**R14.1 Will Comply** The proposed lot will be connected to Council's sewerage system, as identified within the Sewer and Water Infrastructure Advice provided at **Appendix E**. Sewer connections will be designed and constructed in accordance with the provisions of the FNQROC Development Manual. **R14.2 Performance Solution** The Applicant seeks to enter into an Infrastructure Agreement with regard to Infrastructure Charges. Notwithstanding, sewer connection will be provided to the proposed lot.
		A14.2	A contribution is paid in accordance with Planning Scheme Policy No 11 – Water Supply and Sewerage Headworks and Works External Contributions	
Note: P15-P20 has regard to Residential Development – Standard Format Plan with Common Property and are not applicable to the proposed development				
Note: P21 has regard to Boundary Realignment and is not applicable to the proposed development				
Energy Efficiency				
P22	The road and lot layout facilitates the siting and design of buildings to conserve non-renewable energy sources and assists in orientation and design appropriate for the local tropical conditions.	**P22.1**	No Acceptable Solution	**R22 Complies** The lot layout provides adequate opportunity to facilitate the appropriate orientation of the Retirement facility proposed onsite.
P23	The road and lot layout minimises fossil fuel use by: • reducing the need for and length of local vehicle trips,	**P23.1**	No Acceptable Solution	**R23 Complies** The proposed design of the Retirement facility encourages walking through the provision of footpaths both within the facility grounds and

Performance Criteria	Acceptable Measures	Proposal
• maximising public transport effectiveness, • encouraging walking and cycling, and • provision of appropriate street landscaping		via the footpath located along the lot frontage. The provision of facilities within the proposed facility will reduce the need for vehicle trips.

Filling and Excavation Code

Performance Criteria		Acceptable Measures		Proposal
Filling and Excavation - General				
P1	All filling and excavation work does not create a detrimental impact on the slope stability, erosion potential or visual amenity of the Site or the surrounding area.	**A1.1**	The height of cut and/or fill, whether retained or not, does not exceed 2 metres in height. AND Cuts in excess of those stated in A1.1 above are separated by benches/terraces with a minimum width of 1.2 metres that incorporate drainage provisions and screen planting.	**R1.1 Complies** Detailed Operational Works drawings will be provided at the Operational Works stage of the proposed development. Notwithstanding, only minor earthworks / filling are required in the south west corner of the subject site (the site of the proposed facility) to allow finished floor levels to have immunity to the ARI 200 flood plus a freeboard of 300mm (refer **Engineering Report**). This will involve fill of less than 2.0 metres in height. Accordingly, the minor filling required will not detrimentally impact slope, erosion potential or visual amenity.
		A1.2	Cuts are supported by batters, retaining or rock walls and associated benches/terraces are capable of supporting mature vegetation.	
		A1.3	Cuts are screened from view by the siting of the Building/structure, wherever possible.	**R1.2 Will Comply** Detailed Operational Works drawings will be provided at the Operational Works stage of the proposed development. Notwithstanding, all Operational Works will be designed in accordance with the relevant standards.
		A1.4	Topsoil from the Site is retained from cuttings and reused on benches/terraces.	
		A1.5	No crest of any cut or toe of any fill, or any part of any retaining wall or structure, is located closer than 600 mm to any boundary of the property, unless the prior written approval of the adjoining landowner and the Council, has been obtained.	**R1.3 Not Applicable** Detailed Operational Works drawings will be provided at the Operational Works stage of the proposed development. Notwithstanding, no cuts are proposed.
		A1.6	Non-retained cut and/or fill on slopes are stabilised and protected against scour and erosion by suitable measures, such as grassing, Landscaping or other protective/aesthetic measures.	**R1.4 Complies** Detailed Operational Works drawings will be provided at the Operational Works stage of the proposed development. Notwithstanding, any topsoil cut from the site will be re-used on site. **R1.5 Will Comply** Detailed Operational Works drawings will be provided at the Operational Works stage of the proposed development. Notwithstanding, no toe of any fill will be located within 600 mm to any boundary. **R1.6 Will comply**

Performance Criteria		Acceptable Measures		Proposal
				Detailed Operational Works drawings will be provided at the Operational Works stage of the proposed development. Notwithstanding, fill will be stabilized and protected against scour.
Visual Impact and Site Stability				
P2	Filling and excavation are carried out in such a manner that the visual/scenic amenity of the area and the privacy and stability of adjoining properties is not compromised.	**A2.1**	The extent of filling or excavation does not exceed 40% of the Site area or 500 m2 whichever is the lesser. EXCEPT THAT A2.1 does not apply to reconfiguration of 5 lots or more.	**R2.1 Performance Solution** Detailed Operational Works drawings will be provided at the Operational Works stage of the proposed development. Notwithstanding, only minor earthworks / filling are understood to be required in the south west corner of the subject site (the site of the proposed facility) to allow finished floor levels to have immunity to the ARI 200 flood plus a freeboard of 300mm. Accordingly, the minor filling required is not expected to impact upon visual/scenic amenity or compromise the privacy or stability of adjoining properties.
		A2.2	Filling and excavation does not occur within 2 metres of the Site boundary.	**R2.2 Performance Solution** Detailed Operational Works drawings will be provided at the Operational Works stage of the proposed development. Notwithstanding, only minor earthworks / filling are understood to be required in the south west corner of the subject site (the site of the proposed facility) to allow finished floor levels to have immunity to the ARI 200 flood plus a freeboard of 300mm. Accordingly, the minor filling required is not expected to impact upon visual/scenic amenity or compromise the privacy or stability of adjoining properties.
Flooding and Drainage				
P3	Filling and excavation does not result in a change to the run off characteristics of a Site which then have a detrimental impact upon the Site or nearby land or adjacent Road reserves.	**A3.1**	Filling and excavation does not result in the ponding of water on a Site or adjacent land or Road reserves.	**R3.1 Will Comply** A Flood Study is provided at **Appendix H** of the Town Planning Report**.** The proposed works are not expected to result in the ponding of water at the subject site or adjacent land/road reserves.
		A3.2	Filling and excavation does not result in an increase in the flow of water across a Site or any other land or Road reserves.	
		A3.3	Filling and excavation does not result in an increase in the volume of water or concentration of water in a Watercourse and overland flow paths.	**R3.2 Performance Solution** A Flood Study is provided at **Appendix H** of the Town Planning Report, which indicates that filling to accommodate
		A3.4		

Performance Criteria		Acceptable Measures		Proposal
			Filling and excavation complies with the specifications set out in the Planning Scheme Policy No 6 – FNQROC Development Manual.	the proposed development will result in an increase in the 100 year flood level in Marrs Creek adjacent to the subject site of 100-200mm. The increase of the flow level on rural land further to the west is generally 50-100mm. Notwithstanding, due to the Rural nature of the adjacent land use, the increase of flow is not considered to generate a detrimental impact on the rural land or Marrs Creek. **R3.3 Performance Solution** A Flood Study is provided at **Appendix H** of the Town Planning Report, which indicates that filling to accommodate the proposed development will result in an increase in the 100 year flood level in Marrs Creek adjacent to the subject site of 100-200mm. The increase of the flow level on rural land further to the west is generally 50-100mm. Notwithstanding, due to the Rural nature of the adjacent land use, the increase of flow is not considered to generate a detrimental impact on the rural land or Marrs Creek. **R3.4 Will Comply** Detailed Operational Works drawings will be provided at the Operational Works stage of the proposed development. Notwithstanding, all Operational Works will be designed in accordance with the relevant specifications as set out in the FNQROC Development Manual.
Water Quality				
P4	Filling and excavation does not result in a reduction of the water quality of receiving waters.	**A4.1**	Water quality is maintained to comply with the specifications set out in the Planning Scheme Policy No 6 – FNQROC Development Manual.	**R4.1 Will Comply** Detailed Operational Works drawings will be provided at the Operational Works stage of the proposed development. Notwithstanding, all Operational Works will be designed in accordance with the relevant specifications as set out in the FNQROC Development Manual.

Landscaping Code

Performance Criteria		Acceptable Measures		Proposal
Landscape Design				
P1	Landscape design satisfies the purpose and the detailed requirements of this Code.	**A1.1**	Landscaping is undertaken in accordance with a Landscape Plan drawn to scale which complies with and illustrates all the relevant requirements of this Code and Planning Scheme Policy No 7 – Landscaping. AND Landscaping is maintained in accordance with the requirements specified in this Code and Planning Scheme Policy No 7 – Landscaping.	**R1.1 Will Comply** The proposed development will be landscaped in accordance with the Landscape plans provided at **Appendix G** of the Town Planning Report. Landscaping will be maintained as required under Planning Scheme Policy No 7 – Landscaping.
Landscape-Character and Planting				
P2	Landscaping contributes to a sense of place, is functional to the surroundings and provides dominant visual interest and form.	**A2.1**	A minimum of 80% of the proposed landscape area is open to the sky for sunlight and ventilation.	**R2.1 Complies** The proposed development will be landscaped in accordance with the Landscape plans provided (refer **Appendix G** of the Town Planning Report), which allows for more than 80% of the landscaped area to be open to the sky.
		A2.2	The percentage of native or endemic species utilised in the Landscaping is as specified in the Locality Code. OR Where not specified in the Locality Code, in accordance with Planning Scheme Policy No. 7 – Landscaping.	**R2.2 Performance Solution** The proposed development will be landscaped in accordance with the Landscape plans provided at **Appendix G** of the Town Planning Report, which allows for a variety of native and endemic plant species creating visual interest and form.
		A2.3	Landscaping includes planting layers comprised of canopy, middle storey, screening and groundcovers, with palm trees used as accent plants only.	**R2.2 Complies** The proposed development will be landscaped in accordance with the Landscape plans provided at **Appendix G** of the Town Planning Report, which incorporate a variety of planting layers and heights.
P3	Landscaping is consistent with the existing landscape character of the area and native vegetation existing on the Site is to be retained wherever possible and integrated with new Landscaping[47]. [47] Vegetation clearing is required to be	**A3.1**	Existing native vegetation on Site is retained and incorporated into the Site design, wherever possible.	**R3.1 Complies** The proposed development will be landscaped in accordance with the Landscape plans provided at **Appendix G** of the Town Planning Report, which allows for a variety of native and endemic plant species to ensure consistency with the surrounding area. It is understood that any existing native
		A3.2	Any mature vegetation on the Site which is removed or damaged during development of the Site is replaced with advanced native	

Performance Criteria	Acceptable Measures	Proposal
undertaken in accordance with Local Law – Vegetation Management.	species. **A3.3** Where there is an existing landscape character in a street or locality which results from existing vegetation, similar species are planted on Site or on the street. **A3.4** Street trees are 100% native species which enhance the landscape character of the streetscape, with species chosen from the Plant Species Schedule in Planning Scheme Policy No 7 – Landscaping.	vegetation located along the western boundary of the subject site is understood will be retained for the proposed development. **R3.2 Complies** The proposed development will be landscaped in accordance with the Landscape plans provided at **Appendix G** of the Town Planning Report, which includes semi-mature native and endemic plant species to ensure consistency with the surrounding area. Notwithstanding, it is understood that any mature vegetation located along the western boundary of the subject site is understood will be retained for the proposed development. **R3.3 Performance Solution** The proposed development will be landscaped in accordance with the Landscape plans provided at **Appendix G** of the Town Planning Report, which allows for a variety of native and endemic plant species to ensure consistency with the surrounding area. **R3.4 Performance Solution** The proposed development will be landscaped in accordance with the Landscape plans provided at **Appendix G** of the Town Planning Report. *Cassia javanica* (Apple Blossom Shower) and *Cassia X 'Rainbow Showers'* (Rainbow Showers), semi-mature trees with spreading canopy are proposed as street trees for the proposed development, which are considered to be consistent with the existing landscape character of the area (notwithstanding that they're not native). It is noted that *Delonix regia* (Poinciana) and Cassia species exist on Johnston Road and therefore the proposed street trees perpetuate the existing landscape character. Note – Although not relevant to the Performance Criteria 'heritage' flowering street trees (that are readily available in Far North Queensland in advanced sizes) have been chosen to reflect the nature of this extension to the urban fabric. That is, special consideration has been given to the fact that the proposed development is a Retirement facility, and that the positive, restorative effects of the landscape have been considered in the selection of plant species (including street

Performance Criteria		Acceptable Measures		Proposal
				trees).
P4	Plant species are selected with consideration to the scale and form of development, screening, buffering, streetscape, shading and the locality of the area.	**A4.1**	Species are selected in accordance with the Plant Species Schedule in Planning Scheme Policy No 7 – Landscaping.	**R4.1 Performance Solution** The proposed development will be landscaped in accordance with the Landscape plans provided at **Appendix G** of the Town Planning Report, which incorporate plant species in consideration of screening, buffering, streetscape, shading, the locality of the area and the scale and form of the proposed development.
P5	Shade planting is provided in car parking areas where uncovered or open, and adjacent to driveways and internal Roadways.	**A5.1**	Where car parking areas are uncovered or open, shade trees are planted at regular intervals (a minimum of 1 shade tree is provided for every 5 car parks) throughout the car parking areas, and adjacent to driveways and internal Roadways.	**R5.1 Performance Solution** The proposed development will be landscaped in accordance with the Landscape plans provided at **Appendix G** of the Town Planning Report, which incorporates shade planting in car parking areas.
		A5.2	A minimum of 1 shade tree is provided for every 10 metres along a driveway or internal Roadway.	**R5.2 Performance Solution** The proposed development will be landscaped in accordance with the Landscape plans provided at **Appendix G** of the Town Planning Report, which incorporates shade planting in car parking areas.
		A5.3	Landscape beds and trees are protected by garden edging, bollards or wheel stops.	**R5.3 Will Comply** The proposed development will be landscaped in accordance with the Landscape plans provided at **Appendix G** of the Town Planning Report. It is understood that landscape beds and trees will be protected by garden edging, bollards or wheel stops as appropriate.
		A5.4	Trees within car parking areas have a minimum planting area the equivalent of 1 car parking bay, with a minimum topsoil depth of 0.8 metre.	**R5.4 Performance Solution** The proposed development will be landscaped in accordance with the Landscape plans provided at **Appendix G** of the Town Planning Report, which incorporates shade planting in car parking areas. It is understood that appropriate species (in terms of soil requirements and planting bay area) have been selected for the car parking areas.
Screening				
P6	Fences along street Frontages are articulated with appropriate Landscaping.	**A6.1**	Perimeter fencing to any street Frontage complies with the relevant Planning Area Code.	**R6.1 Performance Solution** The proposed development will be landscaped in accordance with the Landscape plans provided at **Appendix G** of the Town

Performance Criteria		Acceptable Measures		Proposal
		A6.2	Trees, shrubs and groundcovers are planted within any recessed areas along the fence line.	Planning Report. The front boundary fence will include a wall and art spaces and will have consideration of the safety requirements of the Retirement facility population. **R6.2 Performance Solution** The proposed development will be landscaped in accordance with the Landscape plans provided at **Appendix G** of the Town Planning Report, which includes 'feature tropical plants' and 'hardy flowering edge plants / shrubs to 1M' landscaping adjacent the front fence (refer to **Appendix G** for species detail).
P7	Landscaping within Recreation Areas of residential development are functional, well designed and enhance the residential amenity.	**A7.1**	One shade tree is provided for each private open space or private Recreation Area.	**R7.1 Performance Solution** The proposed development will be landscaped in accordance with the Landscape plans provided at **Appendix G** of the Town Planning Report. Landscaping within Recreation Areas is considered to be functional, well designed and will enhance the residential amenity.
		A7.2	Tree species provide 30% shade over the area within 5 years.	
		A7.3	A minimum of 50% of the Landscaping and Recreational Area is landscaped, with trees, shrubs, groundcovers, minimising large expanses of hardstand areas and structures.	**R7.2 Performance Solution** The proposed development will be landscaped in accordance with the Landscape plans provided at **Appendix G** of the Town Planning Report. Landscaping within Recreation Areas is considered to be functional, well designed and will enhance the residential amenity.
		A7.4	Plants are located to provide shelter and shade to Habitable Rooms and outdoor Recreation Areas from the hot summer sun.	**R7.3 Performance Solution** The proposed development will be landscaped in accordance with the Landscape plans provided at **Appendix G** of the Town Planning Report. Landscaping within Recreation Areas is considered to be functional, well designed and will enhance the residential amenity. **R7.4 Complies** The proposed development will be landscaped in accordance with the Landscape plans provided at **Appendix G** of the Town Planning Report, which detail shade and shelter plants to outdoor Recreation Areas to adjacent Habitable Rooms.
P8	Undesirable features are screened with Landscaping.	**A8.1**	Landscaping of Dense Planting is planted along and near retaining walls, long blank	**R7.1 Performance Solution** The proposed development will be landscaped in accordance

Performance Criteria		Acceptable Measures		Proposal
			walls of Buildings, mechanical and air-conditioning units, clothes drying areas, bin enclosures and other utility structures with appropriate trees, shrubs and groundcovers.	with the Landscape plans provided at **Appendix G** of the Town Planning Report, which detail landscaping to screen undesirable features.
P9	The environmental values of the Site and adjacent land are enhanced.	**A9.1**	Landscaping using similar endemic or native species, is planted on-Site on land adjoining an area of natural environmental value.	**R9.1 Complies** The proposed development will be landscaped in accordance with the Landscape plans provided at **Appendix G** of the Town Planning Report, which detail the use of endemic and native species on site.
Streetscape and Site Amenity				
P10	Landscaping for residential development enhances the streetscape and the visual appearance of the development.	**A10.1**	Dense Planting along the front of the Site incorporates: • shade canopy trees to provide shade to the Frontage of the Site within 5 years of planting; • landscape screening of blank walls; • low shrubs, groundcovers and mulch to completely cover unsealed ground.	**R10.1 Complies** Dense planting is proposed in the site frontage. Refer **Appendix G** of the Town Planning Report for detail.
		A10.2	Dense Planting to the rear of the Site incorporates: • 1 shade tree for an average of every 75 m2, growing to the Building eave Height within 5 years of planting; • screening shrubs to grow to 3 metres in Height within 2 years of planting; • low shrubs, groundcovers and mulch to completely cover unsealed ground.	**R10.2 Performance Solution** Dense planting is proposed in the rear of the site. Refer **Appendix G** of the Town Planning Report for detail.
		A10.3	Dense Planting to the side boundaries incorporates: • trees planted for an average of every 10 metres where adjacent to	**R10.3 Complies** Dense planting to side boundaries complies with the requirements of A10.3. Refer **Appendix G** of the Town Planning Report for detail.

Performance Criteria		Acceptable Measures		Proposal
			a Building; • Low shrubs, groundcovers and mulch to completely cover unsealed ground.	
P11	Landscaping for non-residential development enhances the streetscape and the visual appearance of the development.	**A11.1**	Dense Planting along the front boundary of the Site where a Building is Setback from the front alignment, incorporates: • shade canopy trees to provide shade to the Frontage of the Site within 5 years of planting where appropriate; • landscape screening of blank • walls; • low shrubs, groundcovers and mulch to completely cover unsealed ground.	**R11.1 Complies** The proposed development will be landscaped in accordance with the Landscape plans provided at **Appendix G** of the Town Planning Report, which detail the use of semi-mature trees to the frontage of the site, the landscaping of blank walls, use of low shrubs and ground covers to cover unsealed ground.
		A11.2	Dense Planting to the rear of the Site where a Building is Setback from the rear alignment, incorporates: • 1 shade tree for an average of every 75 m2 growing to the Building eave Height within 5 years of planting; • screening shrubs to grow to 3 metres in Height within 2 years of planting; • low shrubs, groundcovers and mulch to completely cover unsealed ground.	**R11.2 Complies** The proposed development will be landscaped in accordance with the Landscape plans provided at **Appendix G** of the Town Planning Report, which detail the use of flowering shade trees, sentinel trees and rainforest trees combined with screening shrubs, low shrubs and ground covers to cover unsealed ground.
		A11.3	Dense Planting to the side boundaries where visible from the street or adjoining a boundary to a different Planning Area, and where a Building is Setback from the side boundary, incorporates: • trees planted for an average of every 10 metres where adjacent to	**R11.3 Complies** The proposed development will be landscaped in accordance with the Landscape plans provided at **Appendix G** of the Town Planning Report, which detail the use of flowering shade trees and rainforest trees combined with low shrubs and ground covers to cover unsealed ground.

Performance Criteria		Acceptable Measures		Proposal
			a Building;	
		A11.4	• screening shrubs, low shrubs and groundcover appropriate for the amount of space, light and ventilation of the area; • low shrubs, groundcovers and mulch to completely cover unsealed ground. A minimum of 20% of shade trees and shrubs is incorporated in all areas of Landscaping growing to the Building eave Height within 5 years.	**R11.4 Complies** The proposed development will be landscaped in accordance with the Landscape plans provided at **Appendix G** of the Town Planning Report, which detail greater than 20% of shade trees to be used in landscaping of the subject site.
Maintenance and Drainage				
P12	Landscaped areas are designed in order to be maintained in an efficient manner.	**A12.1**	A maintenance program is undertaken in accordance with the Maintenance Schedule in Planning Scheme Policy No 7 – Landscaping.	**R12.1 Performance Solution** Landscaped areas have been designed to be maintained efficiently.
		A12.2 **A12.3**	A reticulated irrigation system is provided to common Landscaping and Recreation Areas and planter boxes in accordance with Australian Standards, with 1 hose cock within each area.	**R12.2 Performance Solution** Landscaped areas have been designed to be maintained efficiently.
		A12.4	Turf areas are accessible by standard lawn maintenance equipment.	**R12.3 Performance Solution** Landscaped areas have been designed to be maintained efficiently.
		A12.5	Plant species are selected with long life expectancy and minimal maintenance requirements where on-Site management will be limited.	**R12.4 Performance Solution** Landscaped areas have been designed to be maintained efficiently.
			Mulching is provided to all garden beds to reduce weed growth and to retain water, and is to be replenished every year in the ongoing maintenance program.	**R12.5 Performance Solution** Landscaped areas have been designed to be maintained efficiently.
P13	Stormwater runoff is minimised and re-used	**A13.1**	Adequate drainage is provided to all paving,	**R13.1 Will Comply**

Performance Criteria		Acceptable Measures		Proposal
	in Landscaping through water infiltration, where appropriate.		turf and garden beds, including the use of swales, spoon drains, subsurface drainage, field gullies, rock or pebble lined Watercourses and stormwater connections.	Adequate drainage will be provided to paving, turf and garden beds, as appropriate.
		A13.2	Overland flow paths are not to be restricted by Landscaping works	**R13.1 Will Comply** Overland flow paths are not expected to be restricted by landscaping works.
		A13.3	Water runoff is re-used through draining of hard surface areas towards permeable surfaces, turf, garden beds and by minimising impervious surfaces on the Site.	**R13.1 Will Comply** Adequate drainage to absorb water runoff will be provided to paving, turf and garden beds, as appropriate.
Safety				
P14	Tree species and their location accommodate vehicle and pedestrian sight lines.	**A14.1**	Trees located near pathways, driveways, Access points, parking areas and street corners have a minimum 3.0 metres of clear trunk.	**R14.1 Performance Solution** The proposed development will be landscaped in accordance with the Landscape plans provided at **Appendix G** of the Town Planning Report. Tree species have been chosen and located to accommodate vehicle and pedestrian sight lines.
P15	The landscape design enhances personal safety and reduces the potential for crime and vandalism.	**A15.1**	Security and foot lighting is provided to all common areas, including car parks, entries, driveways and pathways.	**R15.1 Performance Solution** The proposed development will be landscaped in accordance with the Landscape plans provided at **Appendix G** of the Town Planning Report, which are understood to consider personal safety and the potential for crime and vandalism.
		A15.2	Hard surfaces are stable, non-slippery and useable in all weathers.	**R15.2 Performance Solution** The proposed development will be landscaped in accordance with the Landscape plans provided at **Appendix G** of the Town Planning Report. Hard surfaces will be designed and constructed to consider the personal safetyof residents and guests of the Retirement facility (including the grade of all pedestrian areas).
		A15.3	Bushfire hazard is minimised with planting of bushfire resistant species near bushfire prone areas, (refer to the Bushfire Risk Overlay on the relevant Locality Map).	**R15.3 Performance Solution** The proposed development will be landscaped in accordance with the Landscape plans provided at **Appendix G** of the Town Planning Report, which include species that do not accentuate bushfire risk.
		A15.4	Lighting for bicycle paths is provided in accordance with the relevant Australian	

Performance Criteria		Acceptable Measures		Proposal
			Standards	**R15.4 Performance Solution** The proposed development will be landscaped in accordance with the Landscape plans provided at **Appendix G** of the Town Planning Report, which are understood to consider personal safety and the potential for crime and vandalism. Lighting will be detailed at the Building Works stage of the proposed development, however will be designed in accordance with the relevant Australian Standards.
Utilities and Services				
P16	The location and type of plant species does not adversely affect the function and accessibility of services and facilities and service areas.	**A16.1**	Plant species are selected and sited with consideration to the location of overhead and underground services.	**R16.1 Complies** The proposed development will be landscaped in accordance with the Landscape plans provided at **Appendix G** of the Town Planning Report, which consider overhead electricity lines.
		A16.2	All underground services are to be located under pathways and below the eaves of the Building.	**R16.2 Performance Solution** Service provision will be detailed at the Operational Works stage of development. Notwithstanding, landscaping as proposed is not expected to adversely affect the function and accessibility of required services, facilities and service areas.
		A16.3	Irrigation control devices are located in the common Landscaping and Recreation Area	**R16.3 Performance Solution** Service provision will be detailed at the Operational Works stage of development. Notwithstanding, landscaping as proposed is not expected to adversely affect the function and accessibility of required services, facilities and service areas.
		A16.4	Landscaping is located to enable trade persons to Access and view meters and other mechanical equipment within the Site.	**R16.4 Performance Solution** Service provision will be detailed at the Operational Works stage of development. Notwithstanding, landscaping as proposed is not expected to adversely affect the function and accessibility of required services, facilities and service areas.
		A16.5	Landscaping does not limit Access for service vehicles or rubbish trucks to utility areas, bin enclosures or docking areas.	**R16.5 Performance Solution** Service provision will be detailed at the Operational Works stage of development. Notwithstanding, landscaping as proposed is not expected to adversely affect the function and accessibility of required services, facilities and service areas.

Performance Criteria	Acceptable Measures	Proposal
	A16.6 Landscaping near electric lines or substations is designed and developed so that any vegetation at maturity or Landscaping structures or works do not exceed 40 metres in Height on land: • in an electric line shadow; or • within 5.0 metres of an electric line shadow; or within 5.0 metres of a substation boundary. **A16.7** Elsewhere, vegetation is planted at a distance that is further from the nearest edge of an electric line shadow or substation boundary than the expected maximum Height at maturity of the vegetation. **A16.8** On a Site adjoining an electricity substation boundary, the vegetation foliage at maturity is not within 3.0 metres of the substation boundary. However, where a substation has a solid wall along any part of its boundary, foliage may extend to, but not above or beyond, that solid wall.	**R16.6 Performance Solution** Service provision will be detailed at the Operational Works stage of development. Notwithstanding, landscaping as proposed is not expected to adversely affect the function and accessibility of required services, facilities and service areas. **R16.7 Performance Solution** Service provision will be detailed at the Operational Works stage of development. Notwithstanding, landscaping as proposed is not expected to adversely affect the function and accessibility of required services, facilities and service areas. **R16.8 Performance Solution** Service provision will be detailed at the Operational Works stage of development. Notwithstanding, landscaping as proposed is not expected to adversely affect the function and accessibility of required services, facilities and service areas.

Vehicle Parking and Access Code

Performance Criteria	Acceptable Measures	Proposal
Vehicle Parking Numbers		
P1 Sufficient parking spaces are provided on the Site to accommodate the amount and type of vehicle traffic expected to be generated by the use or uses of the Site, having particular regard to: • the desired character of the area in which the Site is located; • the nature of the particular use and its specific characteristics and scale; • the number of employees and the likely number of visitors to the Site; • the level of local accessibility; • the nature and frequency of any public transport serving the area; • whether or not the use involves the retention of an existing Building and the previous requirements for car parking for the Building; • whether or not the use involves an identified Valuable Conservation Feature and Valuable Site; and • whether or not the use involves the retention of significant vegetation.	**A1.1** The minimum number of vehicle parking spaces provided on the Site is not less than the number prescribed in Schedule 1 of this Code for the particular use or uses. Where the number of spaces calculated from the Schedule is not a whole number, the number of spaces provided is the next highest whole number.	**R1.1 Performance Solution** 14 Car parking spaces have been provided to the proposed development. This is considered to be sufficient, given the nature of the facility and the traffic expected to be generated from the proposed development. The following identifies car parking space provision to the proposed development, in comparison with the requirements of Schedule 1: • 1 car space per Dwelling Unit; **Not applicable/required** – no Dwelling Units proposed; • plus 1 visitor car space per 5 Dwelling Units; **Not applicable/required** – no Dwelling Units proposed; • 1 visitor car space per 10 hostel, nursing home or similar beds; **5 car parks provided**; • 1 car space per 2 staff members; **5 car parks provided** (assumes 10 staff); and • 1 car space for ambulance parking, designated accordingly. **1 ambulance space provided** An additional four (4) spaces have been provided to cater for up to eight additional staff OR 40 additional beds (as part of a possible future extension).
Parking for People with Disabilities		
P2 Parking spaces are provided to meet the needs of vehicle occupants with disabilities[49]. [49] Disabled access and facilities are provided in accordance with the Building Code of Australia and the Australian Standards.	**A2.1** For parking areas with a total number of ordinary vehicle spaces less than 50, wheelchair accessible spaces are provided as follows: • Medical, higher education, entertainment facilities and shopping centres – 2 spaces; • All other uses – 1 space.	**R2.1 Complies** Two (2) PWD car parking spaces have been provided to the proposed development.

Performance Criteria		Acceptable Measures		Proposal
		A2.2	For parking areas with 50 or more ordinary vehicle spaces, wheelchair accessible spaces are provided as follows: • Medical, higher education, entertainment facilities and shopping centres – 3% (to the closest whole number) of the total number of spaces required; • All other uses – 2% (to the closest whole number) of the total number of spaces required.	**R2.2 Not Applicable** Refer to response R2.1 above.
Motorcycles				
P3	In recognition that motorcycles are low Road-space transport, a proportion of the parking spaces provided may be for motorcycles. The proportion provided for motor cycles is selected so that: • ordinary vehicles do not demand parking in the spaces reserved for motor cycles due to capacity constraints; and, • it is a reflection of the make-up of the likely vehicle fleet that uses the parking; and, • it is not a reflection of the lower cost of providing motorcycle parking.	**A3.1**	Parking for motorcycles is substituted for ordinary vehicle parking to a maximum level of 2% per cent of total ordinary parking. AND The motorcycle parking complies with other elements of this Code.	**R3.1 Performance Solution** No dedicated motorcycle parking spaces have been provided to the proposed development. Additional car parking spaces have been provided which may be utilized by motorcycles should they so be required.
Compact Vehicles				
P4	A proportion of the parking spaces provided may be for compact vehicles. The proportion of total parking provided for compact vehicles is selected considering: • compact vehicles spaces are not available to non-compact vehicles; and, • it is a reflection of the proportion of the likely vehicle fleet that uses the parking; and,	**A4.1**	For parking areas exceeding 100 spaces for short term users or 50 spaces for long-term users, parking is provided for compact vehicles as a substitute for ordinary vehicle parking so that: • compact vehicle parking does not exceed 10% of total vehicle parking required; and, • the parking location is proximate to the entry locations for parking	**R4.1 Performance Solution** No compact vehicle parking has been provided to the proposed development.

Performance Criteria		Acceptable Measures		Proposal
	• compact vehicle spaces are located so as to be proximate to pedestrian destinations such that they present significant inclination for use by users of compact vehicles; and, • the scale of parking spaces, likely users and the likely degree of familiarity with the availability of such spaces.		users; and, • the parking provided complies with other elements of this Code.	
Bicycles Parking				
P5	Sufficient bicycle parking spaces with appropriate security and end of trip facilities are provided on-site to accommodate the amount of bicycles expected to be generated by the use or uses.	**A5.1**	The minimum number of bicycle parking spaces provided on Site is not less than the number prescribed in Schedule 1 of this Code, for the particular use or uses.	**R5.1 Performance Solution** No bicycle parking spaces have been provided to the proposed development, as no bicycle traffic is expected to be generated by the proposed use.
Vehicular Access to the Site				
P6	The location of Access points minimises conflicts and is designed to operate efficiently and safely taking into account: • the amount and type of vehicular traffic; • the type of use (eg long-stay, short-stay, regular, casual); • Frontage Road traffic conditions; • the nature and extent of future street or intersection improvements; • current and future on-street parking arrangements; • the capacity of the adjacent street system; and • the available sight distance.	**A6.1** **A6.2** **A6.3**	The location of the Access points is in accordance with the provisions of the relevant Australian Standards. AND Where the Site has Frontage to more than one street, the Access is from the lowest order street. All redundant Accesses must be removed and a suitable barrier Erected to prevent further use of the Access. Only one Access point is to be provided to each Site unless stated otherwise in another Code.	**R6.1 Performance Solution** Access points to the proposed development are considered to minimize conflicts and take into account expected traffic, road frontage conditions and sight lines. A Traffic Impact Assessment report is provided at **Appendix H** of the Town Planning Report. **R6.1 Performance Solution** The site is currently accessed via an informal access point, which will be made redundant as part of development. Access points to the proposed development are considered to minimize conflicts and take into account expected traffic, road frontage conditions and sight lines. A Traffic Impact Assessment report is provided at **Appendix H** of the Town Planning Report. **R6.1 Performance Solution** Two access points have been provided to the proposed development, due to the nature of the facility: A utility/staff access and a general public access. Notwithstanding, the access points provided are considered to minimize conflicts and take into account expected traffic, road frontage conditions

Performance Criteria		Acceptable Measures		Proposal
				and sight lines. A Traffic Impact Assessment report is provided at **Appendix H** of the Town Planning Report.
Accessibility and Amenity for Users				
P7	On-Site vehicle parking is provided where it is convenient, attractive and safe to use, and does not detract from an attractive or existing streetscape character.	**A7.1**	Short term visitor parking is provided at the front or on the main approach side of the Site, with easy Access to the Building entry, where such provision is in keeping with the desired character of the area in which the Site is located. AND In mixed use premises that include residential or accommodation uses (excluding, Port Douglas – Tourist Centre), at least 50% of the required number of parking spaces for the non-residential use/s on the Site is provided in an easily accessible location on the premises, so as to be convenient to use for customers and other visitors.	**R7.1 Performance Solution** On-site parking is provided to the proposed development in accordance with the Floor Plan (Dwg. No. 15.0285.11 SK03) provided at **Appendix G** of the Town Planning Report. The parking is in a convenient location that is attractive and safe to use, and does not detract from the existing streetscape character.
P8	The layout of parking areas provides a high degree of amenity and accessibility for different users.	**A8.1**	The layout of the parking area provides for the accessibility and amenity of the following: • People with Disabilities • Cyclists • Motorcyclists • Compact Vehicles • Ordinary Vehicles • Service Delivery Vehicles.	**R8.1 Performance Solution** The parking layout considers the requirements of likely users of the proposed development, incorporating PWD car parking, ambulance parking, service delivery vehicles and staff car parking and provides a high degree of amenity and accessibility for different users.
		A8.2	Where covered parking areas are required in accordance with Schedule 1 of this Code, sails or other secure structural forms of covering provide shade and weather protection for vehicles and passengers.	**R8.2 Performance Solution** Covered parking is not required for the proposed land use. Notwithstanding, The parking layout considers the requirements of likely users of the proposed development, incorporating PWD car parking, ambulance parking, service delivery vehicles and staff car parking and provides a high degree of amenity and accessibility for different users.

Performance Criteria		Acceptable Measures		Proposal
Access Driveways				
P9	The dimensions of Access driveways cater for all vehicles likely to enter the Site and minimises the disruption of vehicular, cyclist and pedestrian traffic.	**A9.1**	Access driveways are designed in accordance with the provisions of the relevant Australian Standards.	**R9.1 Will Comply** Access driveways will be detailed at the Operational Works stage of the development, and will be designed in accordance with the relevant Australian Standards.
P10	The surface construction materials of Access driveways within the Road reserve contribute to the streetscape and alerts pedestrians to the location of the driveway.	**A10.1**	Surface construction materials are consistent with the current or intended future streetscape or character of the area and contrast with the surface construction materials of any adjacent footpath.	**R10.1 Will Comply** Access driveways will be detailed at the Operational Works stage of the development, and will be designed in accordance with the relevant Australian Standards.
Access for People with Disabilities				
P11	Access for people with disabilities is provided to the Building from the parking area and from the street.	**A11.1**	Access for people with disabilities is provided in accordance with the relevant provisions of the Australian Standards.	**R11.1 Will Comply** Access for PWD will be provided to the development in accordance with the relevant Australian Standards.
Access for Pedestrians				
P12	Access for pedestrians is provided to the Building from the parking area and from the street.	**A12.1**	Defined, safe pedestrian pathways are provided to the Building entry from the parking area and from the street.	**R12.1 Complies** Pathways will be provided to the development in accordance with the Site Plan (Dwg. No. 15.0285.11 (SK02)), provided at **Appendix G** of the Town Planning Report.
Access for Cyclists				
P13	Access for cyclists is provided to the Building or to bicycle parking area from the street.	**R13.1**	Access pathways for cyclists are provided in accordance with the relevant provisions of the Australian Standards. AND Where Access for cyclists is shared with Access for pedestrians and vehicles, the shared use is identified by signage and linemarking.	**R11.1 Will Comply** Access for cyclists will be provided to the development in accordance with the relevant Australian Standards.
Dimensions of Parking Spaces				
P14	Parking spaces have adequate areas and dimensions to meet user requirements.	**A14.1**	Car parking for the disabled, ordinary car parking spaces and motorcycle parking spaces meet the requirements of the relevant Australian Standards. AND	**R14.1 Complies** Car parking spaces within the proposed development have been designed in accordance with the requirements of the relevant Australian Standards.

Performance Criteria		Acceptable Measures		Proposal
			Parking spaces for special vehicles that are classified in accordance with the relevant Australian Standards meet the requirements of that Standard. AND Parking spaces for standard sized buses have the following minimum dimensions: • width: 4 metres • length: 20 metres • clear Height: 4 metres. AND Parking spaces for compact vehicles have the following minimum dimensions: • 15 per cent less in width measurements than required by Australian Standards for any ordinary vehicle; and, • 20 per cent less in length measurements than required by Australian Standards for any ordinary vehicle. AND Parking spaces for special vehicles meet the requirements dictated by the vehicle dimensions and manoeuvring characteristics and provide sufficient clearance to obstructions and adjacent vehicles to achieve a level of service to users equivalent to that specified by the relevant Australian Standards.	
		A14.2	Parking spaces for bicycles meet the requirement of the relevant Australian Standard.	**R14.2 Not Applicable** No parking spaces for bicycles have been provided to the proposed development, as it is not expected that the proposed development will generate bicycle traffic.
On-Site Driveways, Maneuvering Areas and Parking / Standing Areas				
P15	On-Site driveways, manoeuvring areas and vehicle parking/standing areas are designed,	**A15.1**	On-Site driveways, vehicle manoeuvring and	**R15.1 Will Comply**

Performance Criteria		Acceptable Measures		Proposal
	constructed and maintained such that they: • are at gradients suitable for intended vehicle use; • consider the shared movements of pedestrians and cyclists; • are effectively drained and surfaced; and • are available at all times they are required.		loading/unloading areas: • are sealed in urban areas: AND upgraded to minimise noise, dust and runoff in other areas of the Shire in accordance with the relevant Locality Code; • have gradients and other design features in accordance with the provisions of the relevant Australian Standards; and • drain adequately and in such a way that adjoining and downstream land is not adversely affected.	Access driveways, manoeuvring areas and loading/unloading areas will be sealed, to be detailed at the Operational Works stage of the development.
		A15.2	Parking areas are kept and used exclusively for parking and are maintained in a suitable condition for parking.	**R15.2 Will Comply** Parking areas will be maintained exclusively for parking purposes.
Vehicle Circulation, Queuing and Set Down Areas				
P16	Sufficient area or appropriate circulation arrangements are provided to enable all vehicles expected to use the Site to drive on and off the Site in forward gear.	**A16.1**	Circulation and turning areas comply with the provisions of the relevant Australian Standards.	**R16.1 Complies** Circulation and turning areas have been designed to comply with the relevant Australian Standards.
P17	An on-Site circulation system provides safe and practical Access to all parking, loading/unloading and manoeuvring areas.	**A17.1**	Circulation driveways comply with the provisions of the relevant Australian Standards.	**R17.1 Complies** The circulation driveway has been designed to comply with the relevant Australian Standards.
P18	Where vehicle queuing, set down or special vehicle parking is expected, sufficient queuing or parking area is provided to enable vehicles to stand without obstructing the free flow of moving traffic or pedestrian movement.	**A18.1**	Queuing and set down areas comply with the relevant Australian Standard and any relevant AUSTROAD Guidelines.	**R18.1 Performance Solution** No set down areas have been provided to the proposed development. Notwithstanding, sufficient area is available at the entrance of the proposed facility to enable vehicles to queue and set down, without obstructing traffic or pedestrian movement.

Sustainable Development Code

Performance Criteria	Acceptable Measures	Proposal
Energy Efficiency		
P1 Buildings are designed and sited to: • maximise the thermal comfort achieved within the building using passive design measures; and • minimise the need for energy reliant cooling appliances to achieve accepted levels of thermal comfort.	**A1.1** For residential buildings, each dwelling unit achieves a minimum 5 star BERS™ or NatHERS™ (or equivalent) energy rating. OR **A1.2** For residential buildings: (a) all door openings and windows in habitable rooms that face between north and south east and south west and north are fully shaded by adjustable external shutters or blinds, and (b) glazed windows or door assemblies have a minimum WERS51 Rating of 3 stars for cooling, and (c) all external walls (excluding windows and other glazing) achieve an overall R-value not less than R1.5, and (d) all ceilings (excluding garages, open verandas and carports) achieve an overall R-value of R3.0, and (e) all habitable rooms have: have a window or door in opposite walls that are open-able to the outside; or • have a direct flow path from an open-able window through the doorways or other openings within the dwelling unit to another window or opening to the outside; Or • open directly onto an unobstructed breezeway that is a minimum of 900 mm wide and open-able at both ends with a minimum 1.5m2	**R1.1 Not Applicable** No dwelling units are proposed. **R1.2 Not Applicable** Relevant to the Building work stage of the development only. **R1.3 Not Applicable** Relevant to the Building work stage of the development only.

Performance Criteria		Acceptable Measures		Proposal
			opening; Or • have a minimum ceiling height of 2.7m and at least one ceiling fan.	
		A1.3	For non-residential buildings: (a) glazed windows or door assemblies have a minimum WERS52 Rating of 3 stars for cooling, and (b) all external walls (excluding windows and other glazing) achieve an overall R-value not less than R1.5, and (c) all ceilings (excluding garages, open verandas and carports) achieve an overall R-value of R3.0.	
tP2	Hot water systems support the efficient use of natural resources and minimise consequent pollution such as greenhouse gas emissions.	**A2.1**	For all buildings with individual hot water systems installed in each dwelling unit or tenancy, all hot water systems installed comprise: (a) a system with a minimum of 24 Renewable Energy Certificates, or (b) a natural gas system, or (c) a liquid petroleum gas (LPG) system with a 5 star AGA Energy Rating Label.	**R2.1 Not Applicable** Relevant to the Building work stage of the development only. **R2.2 Not Applicable** Refer response R2.1 above.
		A2.2	For all buildings with centrally installed hot water systems: (a) a low NOx gas water heating system/s supply hot water to all dwelling units or tenancies, Or (b) solar water heaters supply hot water to all dwelling units or tenancies where less than 25% of water heating is provided by booster units, or (c) electric heat pump water heaters supply	

Performance Criteria		Acceptable Measures		Proposal
			hot water to all dwelling units or tenancies, or (d) a gas-fired cogeneration or fuel cell unit is installed which supplies electricity and uses waste heat for cooling/heating and hot water.	
P3	Where practicable, and consistent with density and design provisions, residents should have access to a non-mechanical clothes drying area: (a) taking advantage of natural ventilation; and (b) receiving ample sunlight, in a manner that does not impair visual amenity	**A3.1**	No Acceptable Solution	**R3.1 Performance Solution** The facility will contain a laundry service for residents, which may provide for non-mechanical drying areas. Laundry specifics will be detailed at the building works stage of development.
P4	Cooking appliances are energy efficient.	**A4.1**	For residential buildings, each dwelling unit has: (a) a gas cook-top installed with a range hood; and (b) a gas oven with appropriate ventilation; or (c) a fan-forced electric oven	**R4.1 Not Applicable** Relevant to the Building work stage of the development only.
P5	All electrical appliances intended to be installed as standard into any residential building shall meet a minimum standard of 4 stars in accordance with the Australian Energy Rating Label.	**A5.1**	All: • Dishwashers; • Clothes dryers; • Clothes washers; • Airconditioners; and • Refrigerators/freezers where installed with the development, shall meet a minimum 4 star rating in accordance with the Australian Energy Rating Label.	**R5.1 Not Applicable** Relevant to the Building work stage of the development only.
P6	Lighting is energy efficient.	**A6.1**	For residential buildings: (a) The minimum circuit efficacy for all common area lighting is 75 lumens per watt. (b) All common area lighting is fitted with automatic controllers. (c) Kitchens and living areas are fitted with energy efficient light fixtures such as fluorescent lighting.	**R5.1 Not Applicable** Relevant to the Building work stage of the development only. **R5.1 Not Applicable** The proposed development is for a Retirement Facility. Notwithstanding, it is understood that the proposed facility will incorporate energy efficient lighting, to be detailed at the

Performance Criteria		Acceptable Measures		Proposal
		A6.2	For Business Facilities, the average lighting power density does not exceed 10 watts per square metre.	building works stage of development. **R5.1 Not Applicable** The proposed development is for a Retirement Facility. Notwithstanding, it is understood that the proposed facility will incorporate energy efficient lighting, to be detailed at the building works stage of development.
		A6.3	For Shops and Shopping Facilities, the average lighting power density does not exceed 23 watts per square metre.	**R5.1 Not Applicable** The proposed development is for a Retirement Facility. Notwithstanding, it is understood that the proposed facility will incorporate energy efficient lighting, to be detailed at the building works stage of development.
		A6.4	Individual tenancies within non-residential buildings are fitted with energy efficient light fixtures such as fluorescent lighting.	
P7	Air conditioning, where not covered by an Australian Energy Rating Label, is energy efficient.	**R7**	Air conditioning units or systems comply with the minimum energy performance requirements specified in the Australian/New Zealand Standard AS/NZS 3823.2.2003.	**R7.1 Not Applicable** Relevant to the Building work stage of the development only.
Water Conservation and Reuse				
P8	Rainwater harvesting systems are incorporated into residential and non-residential buildings to ensure collection, treatment and reuse of rainwater on-site to reduce run-off and demand on the potable water supply. Internal fixtures supplied from a rainwater tank must have a continuous supply of water.	**A8.1**	All residential buildings provide rainwater storage tank/s on-site fitted with a first flush device and vermin-proof mesh strainer on the inlet and that has a capacity of: (a) 30,000 litres per dwelling unit where located in the Rural Planning Area or the Rural Settlement Planning Area, or (b) 5,000 litres per dwelling unit where located in any other Planning Area. All non-residential buildings provide rainwater storage tank/s on-site fitted with a first flush device and vermin-proof mesh strainer on the inlet and that has a capacity of 5,000 litres per toilet/urinal unit.	**R8.1 Not applicable** Relevant to the Building work stage of the development only. **R8.2 Not Applicable** Relevant to the Building work stage of the development only.
		A8.2	The rainwater tank is plumbed for external use for irrigation and pool top up and internal	**R8.3 Not Applicable** Relevant to the Building work stage of the development only.

Performance Criteria		Acceptable Measures		Proposal
			use for toilet cisterns and washing machine cold water taps.	
		A8.3	A rainwater tank has – (a) An automatic switching device providing supplementary water from the reticulated town water supply; or (b) A trickle top up system, providing supplementary water from the reticulated town water supply with – (i) A minimum flow rate of 2 litres per minute and a maximum flow rate of 4 litres per minute; and (ii) Top up valves installed in an accessible location; and (iii) A storage volume of the reticulated town water supply top up shall be no more than and no less than 1000 litres	**R8.4 Not Applicable** Relevant to the Building work stage of the development only.
		A8.4	A backflow prevention device is installed to protect the potable water within the reticulated town water supply system in accordance with AS/NZS 3500:2003 Plumbing and Drainage.	
P9	Plumbing fittings must support the efficient use of water.	**A9.1**	All sink, tub or basin taps or mixers have a certified AAA Water Conservation Rating.	**R9.1 Not applicable** Relevant to the Building work stage of the development only. **R9.2 Not Applicable** Relevant to the Building work stage of the development only.
		A9.2	All toilets have: (a) 4 litre or less average flush cisterns (when calculated in accordance with Australian/New Zealand Standard AS/NZS 6400:2003), and (b) matched pans.	**R9.3 Not Applicable** Relevant to the Building work stage of the development only.
		A9.3	All showers have thermostatic mixers.	
Waste Minimisation				

Performance Criteria	Acceptable Measures	Proposal
P10 Site and building design must facilitate efficient sorting and disposal to maximise recycling opportunities.	**A10.1** For residential buildings, each dwelling unit has separated, built-in temporary storage for recyclable materials and general waste. **A10.2** All buildings include a refuse bin storage area: (a) with sufficient capacity for the collection of recyclable materials and general refuse, and (b) located for convenient use by all residents/tenants and readily accessible to waste management contractors, and (c) screened from view from public roads, is roofed and drained to sewer and includes a hose cock to provide for cleaning of refuse bins.	**R10.1 Performance Solution** The proposed facility will incorporate efficient sorting and disposal of waste to facilitate recycling opportunities. **R10.2 Will Comply** The proposed facility will incorporate an area for the efficient sorting and disposal of waste.
Landscaping and Irrigation		
P11 Landscaping must facilitate sustainable tropical design by: • providing sufficient space for the retention and/or establishment of significant substantial vegetation, • using locally appropriate plant species, • using paving design and materials that minimise heat reflection and site run-off, • providing appropriate seasonal shade and passive cooling/heating of outdoor spaces throughout the year, • providing private open space located to maximise indoor/outdoor connections, and • design and plant selection to	**A11.1** Impervious paving is limited to: (a) vehicle manoeuvring areas, (b) vehicle hard-stand areas, and (c) pedestrian movement paths. **A11.2** Landscape and recreation areas are planted to: (a) ensure the penetration of prevailing north-east and south summer breezes and north-east winter morning sun, and (b) minimise exposure to the prevailing west and south-west winter winds, and (c) shade the western walls of buildings. **A11.3** Opportunities for water infiltration on-site are maximised through: (a) minimising the extent of impervious surfaces, (b) use of porous paving in low traffic areas,	**R11.1 Complies** The proposed development will be landscaped in accordance with the Landscape plans provided at **Appendix G** of the Town Planning Report, which identify that impervious paving is limited to hardstand areas, manoeuvring areas and pedestrian paths. **R11.2 Complies** The proposed development will be landscaped in accordance with the Landscape plans provided at **Appendix G** of the Town Planning Report, which have been designed to consider prevailing breezes and sun paths. **R11.3 Complies** The proposed development will be landscaped in accordance with the Landscape plans provided at **Appendix G** of the Town Planning Report, which have been designed to consider

Performance Criteria		Acceptable Measures		Proposal
	minimise water use and contribute to stormwater management.		(c) draining hard surfaces towards permeable surfaces, and (d) inclusion of turf and garden beds.	drainage.
Solar Panels				
P12	Solar hot water systems are located for optimum performance.	**A12.1**	Solar hot water systems are located on the roof of a building and the panels face solar north.	**R12.1 Will comply** Hot water system (where provided) specifics will be detailed at the building works stage of development. Notwithstanding, solar hot water systems, should they be utilised, will be located for optimum performance.
Private Swimming Pools				
P13	A swimming pool for recreational use by residents of a residential building is designed and constructed to minimise its resource needs by consideration of: • potential usage in terms of number of swimmers; • purpose (e.g, lap swimming, plunging, etc); • siting issues; and • filtration systems.	**A13.1**	No Acceptable Solution.	**R13.1 Not Applicable** The proposed development does not include a swimming pool.

Johnston Road, Mossman Gorge

APPENDIX J

IDAS FORMS

Cardno
Shaping the Future

IDAS form 1—Application details

(*Sustainable Planning Act 2009* version 4.2 effective 3 August 2015)

This form must be used for **ALL** development applications.

You **MUST** complete **ALL** questions that are stated to be a mandatory requirement unless otherwise identified on this form.

For all development applications, you must:

- complete this form (*IDAS form 1—Application details)*
- complete any other forms relevant to your application
- provide any mandatory supporting information identified on the forms as being required to accompany your application.

Attach extra pages if there is insufficient space on this form.

All terms used on this form have the meaning given in the *Sustainable Planning Act 2009* (SPA) or the Sustainable Planning Regulation 2009.

This form and any other IDAS form relevant to your application must be used for development applications 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*. Whenever a planning scheme is mentioned, take it to mean land use plan for the strategic port land, Brisbane core port land or airport land.

PLEASE NOTE: This form is not required to accompany requests for compliance assessment.

Mandatory requirements

Applicant details (Note: the applicant is the person responsible for making the application and need not be the owner of the land. The applicant is responsible for ensuring the information provided on all IDAS application forms is correct. Any development permit or preliminary approval that may be issued as a consequence of this application will be issued to the applicant.)

Name/s (individual or company name in full)	**Douglas Shire Council and The Salvation Army (joint applicants) c/- Cardno HRP**		
For companies, contact name	**Dominic Hammersley**		
Postal address	PO Box 1619		
	Suburb	Cairns	
	State	QLD	Postcode 4870
	Country	Australia	
Contact phone number	07 4051 0288		
Mobile number (non-mandatory requirement)			
Fax number (non-mandatory requirement)			

Email address (non-mandatory requirement)	Dominic.Hammersley @cardno.com.au
Applicant's reference number (non-mandatory requirement)	HRP15394

1. What is the nature of the development proposed and what type of approval is being sought?

Table A—Aspect 1 of the application (If there are additional aspects to the application please list in Table B—Aspect 2.)

a) What is the nature of the development? (Please only tick one box.)

☒ Material change of use ☐ Reconfiguring a lot ☐ Building work ☐ Operational work

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

☐ Preliminary approval under s241 of SPA ☐ Preliminary approval under s241 and s242 of SPA ☒ Development permit

c) Provide a brief description of the proposal, including use definition and number of buildings or structures where applicable (e.g. six unit apartment building defined as a *multi-unit dwelling*, 30 lot residential subdivision etc.)

Development application for a Material Change of Use (Retirement facility)

d) What is the level of assessment? (Please only tick one box.)

☐ Impact assessment ☒ Code assessment

Table B—Aspect 2 of the application (If there are additional aspects to the application please list in Table C—Additional aspects of the application.)

a) What is the nature of development? (Please only tick one box.)

☒ Material change of use ☐ Reconfiguring a lot ☐ Building work ☐ Operational work

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

☒ Preliminary approval under s241 of SPA ☐ Preliminary approval under s241 and s242 of SPA ☐ Development permit

c) Provide a brief description of the proposal, including use definition and number of buildings or structures where applicable (e.g. six unit apartment building defined as a *multi-unit dwelling*, 30 lot residential subdivision etc.)

Preliminary approval for the balance portion identified as 'Future Retirement Facility Development'

d) What is the level of assessment?

☐ Impact assessment ☒ Code assessment

Table C—Additional aspects of the application (If there are additional aspects to the application please list in a separate table on an extra page and attach to this form.)

☒ Refer attached schedule ☐ Not required

2. Location of the premises (Complete Table D and/or Table E as applicable. Identify each lot in a separate row.)

Table D—Street address and lot on plan for the premises or street address and lot on plan for the land adjoining or adjacent to the premises (Note: this table is to be used for applications involving taking or interfering with water.) (Attach a separate schedule if there is insufficient space in this table.)

☒ Street address **and** lot on plan (All lots must be listed.)

☐ Street address **and** lot on plan for the land adjoining or adjacent to the premises (Appropriate for development in water but adjoining or adjacent to land, e.g. jetty, pontoon. All lots must be listed.)

Street address					**Lot on plan description**		**Local government area** (e.g. Logan, Cairns)
Lot	Unit no.	Street no.	Street name and official suburb/ locality name	Post-code	Lot no.	Plan type and plan no.	
i)			Johnston Road, Mossman Gorge	4873	1	SP150474	Douglas Shire Council
ii)							
iii)							

Planning scheme details (If the premises involves multiple zones, clearly identify the relevant zone/s for each lot in a separate row in the below table. Non-mandatory)

Lot	Applicable zone / precinct	Applicable local plan / precinct	Applicable overlay/s
i)	Community and Recreational Facilities	Mossman and Environs	Acid Sulfate Soils Natural Hazards
ii)			
iii)			

Table E—Premises coordinates (Appropriate for development in remote areas, over part of a lot or in water not adjoining or adjacent to land e.g. channel dredging in Moreton Bay.) (Attach a separate schedule if there is insufficient space in this table.)

Coordinates (Note: place each set of coordinates in a separate row)				**Zone reference**	**Datum**	**Local government area (if applicable)**
Easting	Northing	Latitude	Longitude			
					☐ GDA94 ☐ WGS84 ☐ other	

3. Total area of the premises on which the development is proposed (indicate square metres)

4.378ha

4. Current use/s of the premises (e.g. vacant land, house, apartment building, cane farm etc.)

Vacant land

5. Are there any current approvals (e.g. a preliminary approval) associated with this application? (Non-mandatory requirement)

☒ No ☐ Yes—provide details below

List of approval reference/s	Date approved (dd/mm/yy)	Date approval lapses (dd/mm/yy)

6. Is owner's consent required for this application? (Refer to notes at the end of this form for more information.)

☐ No

☒ Yes—complete either Table F, Table G or Table H as applicable

Table F	
Name of owner/s of the land	
I/We, the above-mentioned owner/s of the land, consent to the making of this application.	
Signature of owner/s of the land	
Date	

Table G	
Name of owner/s of the land	**Douglas Shire Council**
☒ The owner's written consent is attached or will be provided separately to the assessment manager.	

Table H	
Name of owner/s of the land	
☐ By making this application, I, the applicant, declare that the owner has given written consent to the making of the application.	

7. Identify if any of the following apply to the premises (Tick applicable box/es.)

☐ Adjacent to a water body, watercourse or aquifer (e.g. creek, river, lake, canal)—complete Table I

☐ On strategic port land under the *Transport Infrastructure Act 1994*—complete Table J

☐ In a tidal water area—complete Table K

☐ On Brisbane core port land under the *Transport Infrastructure Act 1994* (No table requires completion.)

☐ On airport land under the *Airport Assets (Restructuring and Disposal) Act 2008* (no table requires completion)

☐ Listed on either the Contaminated Land Register (CLR) or the Environmental Management Register (EMR) under the *Environmental Protection Act 1994* (no table requires completion)

Table I
Name of water body, watercourse or aquifer

Table J	
Lot on plan description for strategic port land	Port authority for the lot

Table K	
Name of local government for the tidal area (if applicable)	Port authority for the tidal area (if applicable)

8. Are there any existing easements on the premises? (e.g. for vehicular access, electricity, overland flow, water etc)

☒ No ☐ Yes—ensure the type, location and dimension of each easement is included in the plans submitted

9. Does the proposal include new building work or operational work on the premises? (Including any services)

☐ No ☒ Yes—ensure the nature, location and dimension of proposed works are included in plans submitted

10. Is the payment of a portable long service leave levy applicable to this application? (Refer to notes at the end of this form for more information.)

☒ No—go to question 12 ☐ Yes

11. Has the portable long service leave levy been paid? (Refer to notes at the end of this form for more information.)

☐ No

☐ Yes—complete Table L and submit with this application the yellow local government/private certifier's copy of the receipted QLeave form

Table L		
Amount paid	Date paid (dd/mm/yy)	QLeave project number (6 digit number starting with A, B, E, L or P)

12. Has the local government agreed to apply a superseded planning scheme to this application under section 96 of the *Sustainable Planning Act 2009*?

☒ No

☐ Yes—please provide details below

Name of local government	Date of written notice given by local government (dd/mm/yy)	Reference number of written notice given by local government (if applicable)

13. List below all of the forms and supporting information that accompany this application (Include all IDAS forms, checklists, mandatory supporting information etc. that will be submitted as part of this application)

Description of attachment or title of attachment	Method of lodgement to assessment manager
Town Planning Report (incl. Appendices)	Email

14. Applicant's declaration

☒ By making this application, I declare that all information in this application is true and correct (Note: it is unlawful to provide false or misleading information)

Notes for completing this form

- Section 261 of the *Sustainable Planning Act 2009* prescribes when an application is a properly-made application. Note, the assessment manager has discretion to accept an application as properly made despite any non-compliance with the requirement to provide mandatory supporting information under section 260(1)(c) of the *Sustainable Planning Act 2009*

Applicant details

- Where the applicant is not a natural person, ensure the applicant entity is a real legal entity.

Question 1

- Schedule 3 of the Sustainable Planning Regulation 2009 identifies assessable development and the type of assessment. Where schedule 3 identifies assessable development as "various aspects of development" the applicant must identify each aspect of the development on Tables A, B and C respectively and as required.

Question 6

- Section 263 of the *Sustainable Planning Act 2009* sets out when the consent of the owner of the land is required for an application. Section 260(1)(e) of the *Sustainable Planning Act 2009* provides that if the owner's consent is required under section 263, then an application must contain, or be accompanied by, the written consent of the owner, or include a declaration by the applicant that the owner has given written consent to the making of the application. If a development application relates to a state resource, the application is not required to be supported by evidence of an allocation or entitlement to a state resource. However, where the state is the owner of the subject land, the written consent of the state, as landowner, may be required. Allocation or entitlement to the state resource is a separate process and will need to be obtained before development commences.

Question 7

- If the premises is listed on either the Contaminated Land Register (CLR) or the Environmental Management Register (EMR) under the *Environmental Protection Act 1994* it may be necessary to seek compliance assessment. Schedule 18 of the Sustainable Planning Regulation 2009 identifies where compliance assessment is required.

Question 11

- The *Building and Construction Industry (Portable Long Service Leave) Act 1991* prescribes when the portable long service leave levy is payable.
- The portable long service leave levy amount and other prescribed percentages and rates for calculating the levy are prescribed in the Building and Construction Industry (Portable Long Service Leave) Regulation 2002.

Question 12

- The portable long service leave levy need not be paid when the application is made, but the *Building and Construction Industry (Portable Long Service Leave) Act 1991* requires the levy to be paid before a development permit is issued.
- Building and construction industry notification and payment forms are available from any Queensland post office or agency, on request from QLeave, or can be completed on the QLeave website at www.qleave.qld.gov.au. For further information contact QLeave on 1800 803 481 or visit www.qleave.qld.gov.au.

Privacy—The information collected in this form will be used by the Department of Infrastructure, Local Government and Planning (DILGP), assessment manager, referral agency and/or building certifier in accordance with the processing and assessment of your application. Your personal details should not be disclosed for a purpose outside of the IDAS process or the provisions about public access to planning and development information in the *Sustainable Planning Act 2009*, except where required by legislation (including the *Right to Information Act 2009*) or as required by Parliament. This information may be stored in relevant databases. The information collected will be retained as required by the *Public Records Act 2002*.

OFFICE USE ONLY

Date received		Reference numbers	

NOTIFICATION OF ENGAGEMENT OF A PRIVATE CERTIFIER

To _____ Council. I have been engaged as the private certifier for the building work referred to in this application

Date of engagement	Name	BSA Certification license number	Building classification/s

QLEAVE NOTIFICATION AND PAYMENT (For completion by assessment manager or private certifier 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

The *Sustainable Planning Act 2009* is administered by the Department of Infrastructure, Local Government and Planning. This form and all other required application materials should be sent to your assessment manager and any referral agency.

Table C – Schedule

Aspect 3 of the application

a) What is the nature of development? (Please only tick one box.)

☐ Material change of use ☒ Reconfiguring a lot ☐ Building work ☐ Operational work

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

☐ Preliminary approval under s241 of SPA ☐ Preliminary approval under s241 and s242 of SPA ☒ Development permit

c) Provide a brief description of the proposal, including use definition and number of buildings or structures where applicable (e.g. six unit apartment building defined as a *multi-unit dwelling*, 30 lot residential subdivision etc.)

Reconfiguring a Lot (one lot into two lots)

d) What is the level of assessment?

☐ Impact assessment ☒ Code assessment

IDAS form 5—Material change of use assessable against a planning scheme

(*Sustainable Planning Act 2009* version 3.1 effective 3 August 2015)

This form must be used for development applications for a material change of use assessable against a planning scheme.

You **MUST** complete **ALL** questions that are stated to be a mandatory requirement unless otherwise identified on this form.

For all development applications, you must:

- complete *IDAS form 1—Application details*
- complete any other forms relevant to your application
- provide any mandatory supporting information identified on the forms as being required to accompany your application.

Attach extra pages if there is insufficient space on this form.

All terms used on this form have the meaning given in the *Sustainable Planning Act 2009* (SPA) or the Sustainable Planning Regulation 2009.

This form must also be used for material change of use on 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* that requires assessment against the land use plan for that land. Whenever a planning scheme is mentioned, take it to mean land use plan for the strategic port land, Brisbane core port land or airport land.

Mandatory requirements

1. Describe the proposed use. (Note: this is to provide additional detail to the information provided in question 1 of *IDAS form 1—Application details*. Attach a separate schedule if there is insufficient space in this table.)

General explanation of the proposed use	Planning scheme definition (include each definition in a new row) (non-mandatory)	No. of dwelling units (if applicable) or gross floor area (if applicable)	Days and hours of operation (if applicable)	No. of employees (if applicable)
Retirement Facility	Retirement Facility	3,066m2 GFA (42 dwelling units / rooms)	7 days, 24 hours	10 (approx.)

2. Are there any current approvals associated with the proposed material change of use? (e.g. a preliminary approval.)

☒ No ☐ Yes—provide details below

List of approval reference/s	Date approved (dd/mm/yy)	Date approval lapses (dd/mm/yy)

3. Does the proposed use involve the following? (Tick all applicable boxes.)

The reuse of existing buildings on the premises	☒ No	☐ Yes
New building work on the premises	☐ No	☒ Yes
The reuse of existing operational work on the premises	☒ No	☐ Yes
New operational work on the premises	☐ No	☒ Yes

Mandatory supporting information

4. Confirm that the following mandatory supporting information accompanies this application

Mandatory supporting information	Confirmation of lodgement	Method of lodgement
All applications		
A site plan drawn to an appropriate scale (1:100, 1:200 or 1:500 are **recommended** scales) which shows the following: • the location and site area of the land to which the application relates (*relevant land*) • the north point • the boundaries of the relevant land • any road frontages of the relevant land, including the name of the road • the location and use of any existing or proposed buildings or structures on the relevant land (note: where extensive demolition or new buildings are proposed, two separate plans [an existing site plan and proposed site plan] may be appropriate) • any existing or proposed easements on the relevant land and their function • the location and use of buildings on land adjoining the relevant land • all vehicle access points and any existing or proposed car parking areas on the relevant land. Car parking spaces for persons with disabilities and any service vehicle access and parking should be clearly marked • for any new building on the relevant land, the location of refuse storage • the location of any proposed retaining walls on the relevant land and their height • the location of any proposed landscaping on the relevant land • the location of any stormwater detention on the relevant land.	☒ Confirmed	
A statement about how the proposed development addresses the local government's planning scheme and any other planning instruments or documents relevant to the application.	☒ Confirmed	
A statement about the intensity and scale of the proposed use (e.g. number of visitors, number of seats, capacity of storage area etc.).	☒ Confirmed	
Information that states: • the existing or proposed floor area, site cover, maximum number of storeys and maximum height above natural ground level for existing or new buildings (e.g. information regarding existing buildings but not being reused) • the existing or proposed number of on-site car parking bays, type of vehicle cross-over (for non-residential uses) and vehicular servicing arrangement (for non-residential uses).	☒ Confirmed ☐ Not applicable	

A statement addressing the relevant part(s) of the State Development Assessment Provisions (SDAP).	☐ Confirmed ☒ Not applicable	
When the application involves the reuse of existing buildings		
Plans showing the size, location, existing floor area, existing site cover, existing maximum number of storeys and existing maximum height above natural ground level of the buildings to be reused.	☐ Confirmed ☒ Not applicable	
When the application involves new building work (including extensions)		
Floor plans drawn to an appropriate scale (1:50, 1:100 or 1:200 are **recommended** scales) which show the following: • the north point • the intended use of each area on the floor plan (for commercial, industrial or mixed use developments only) • the room layout (for residential development only) with all rooms clearly labelled • the existing and the proposed built form (for extensions only) • the gross floor area of each proposed floor area.	☒ Confirmed	
Elevations drawn to an appropriate scale (1:100, 1:200 or 1:500 are **recommended** scales) which show plans of all building elevations and facades, clearly labelled to identify orientation (e.g. north elevation)	☒ Confirmed	
Plans showing the size, location, proposed site cover, proposed maximum number of storeys, and proposed maximum height above natural ground level of the proposed new building work.	☒ Confirmed ☐ Not applicable	
When the application involves reuse of other existing work		
Plans showing the nature, location, number of on-site car parking bays, existing area of landscaping, existing type of vehicular cross-over (non-residential uses), and existing type of vehicular servicing arrangement (non-residential uses) of the work to be reused.	☐ Confirmed ☒ Not applicable	
When the application involves new operational work		
Plans showing the nature, location, number of new on-site car parking bays, proposed area of new landscaping, proposed type of new vehicle cross-over (non-residential uses), proposed maximum new vehicular servicing arrangement (non-residential uses) of the proposed new operational work.	☒ Confirmed ☐ Not applicable	

Privacy—Please refer to your assessment manager, referral agency and/or building certifier for further details on the use of information recorded in this form.

OFFICE USE ONLY

Date received		Reference numbers	

The *Sustainable Planning Act 2009* is administered by the Department of Infrastructure, Local Government and Planning. This form and all other required application materials should be sent to your assessment manager and any referral agency.

IDAS form 7—Reconfiguring a lot

(*Sustainable Planning Act 2009* version 3.2 effective3 August 2015)

This form must be used for development applications or requests for compliance assessment for reconfiguring a lot.

You **MUST** complete **ALL** questions that are stated to be a mandatory requirement unless otherwise identified on this form.

For all development applications, you must:

- complete *IDAS form 1—Application details*
- complete any other forms relevant to your application
- provide any mandatory supporting information identified on the forms as being required to accompany your application.

For requests for compliance assessment, you must:

- complete IDAS form 32—Compliance assessment
- Provide any mandatory supporting information identified on the forms as being required to accompany your request

Attach extra pages if there is insufficient space on this form.

All terms used on this form have the meaning given in the *Sustainable Planning Act 2009* (SPA) or the Sustainable Planning Regulation 2009.

Mandatory requirements

1. What is the total number of existing lots making up the premises?	**1**

2. What is the nature of the lot reconfiguration? (Tick all applicable boxes.)

- ☒ subdivision—complete questions 3–6 and 11
- ☐ boundary realignment—complete questions 8, 9 and 11
- ☒ creating an easement giving access to a lot from a constructed road—complete questions 10 and 11
- ☐ dividing land into parts by agreement—please provide details below and complete questions 7 and 11

3. Within the subdivision, what is the number of additional lots being created and their intended final use?

Intended final use of new lots	Residential	Commercial	Industrial	Other—specify
Number of additional lots created				1 – Community facility (Retirement facility)

4. What type of approval is being sought for the subdivision?

- ☒ Development permit
- ☐ Preliminary approval
- ☐ Compliance permit

5. Are there any current approvals associated with this subdivision application or request?
(E.g. material change of use.)

☒ No ☐ Yes—provide details below

List of approval reference/s	Date approved (dd/mm/yy)	Date approval lapses (dd/mm/yy)

6. Does the proposal involve multiple stages?

☒ No—complete Table A ☐ Yes—complete Table B

Table A

a)	What is the total length of any new road to be constructed? (metres)	0 metres
b)	What is the total area of land to be contributed for community purposes? (square metres)	0 square metres

c) Does the proposal involve the construction of a canal or artificial waterway?

☒ No ☐ Yes

d) Does the proposal involve operational work for the building of a retaining wall?

☒ No ☐ Yes

Table B—complete a new Table B for every stage if the application involves more than one stage

a)	What is the proposed estate name? (if known and if applicable)	
b)	What stage in the development does this table refer to?	

c) If a development permit is being sought for this stage, will the development permit result in additional residential lots?

☐ No ☐ Yes—specify the total number

d)	What is the total area of land for this stage? (square metres)	
e)	What is the total length of any new road to be constructed at this stage? (metres)	
f)	What is the total area of land to be contributed for community purposes at this stage? (square metres)	

g) Does the proposal involve the construction of a canal or artificial waterway?

☐ No ☐ Yes

h) Does the proposal involve operational work for the building of a retaining wall?

☐ No ☐ Yes

7. Lease/agreement details—how many parts are being created and what is their intended final use?

Intended final use of new parts	Residential	Commercial	Industrial	Other—specify
Number of additional parts created				

8. What are the current and proposed dimensions following the boundary realignment for each lot forming the premises?

Current lot			Proposed lot		
Lot plan description	Area (square metres)	Length of road frontage	Lot number	Area (square metres)	Length of road frontage

9. What is the reason for the boundary realignment?

10. What are the dimensions and nature of the proposed easement? (If there are more than two easements proposed please list in a separate table on an extra page and attach to this form.)

Width (m)	Length (m)	Purpose of the easement (e.g. pedestrian access)?	What land is benefitted by the easement?
TBC	TBC	Access	Proposed Lot 1

Mandatory supporting information

11. Confirm that the following mandatory supporting information accompanies this application or request

Mandatory supporting information	Confirmation of lodgement	Method of lodgement
All applications and requests for reconfiguring a lot		
Site plans drawn to an appropriate scale (1:100, 1:200 or 1:500 are the **recommended** scales) which show the following: • the location and site area of the land to which the application or request relates (***relevant land***) • the north point • the boundaries of the relevant land • any road frontages of the relevant land, including the name of the road • the contours and natural ground levels of the relevant land • the location of any existing buildings or structures on the relevant land • the allotment layout showing existing lots, any proposed lots (including the dimensions of those lots), existing or proposed road reserves, building envelopes and existing or proposed open space (note: numbering is required for all lots) • any drainage features over the relevant land, including any watercourse, creek, dam, waterhole or spring and any land subject to a flood with an annual exceedance probability of 1% • any existing or proposed easements on the relevant land and their function • all existing and proposed roads and access points on the relevant land • any existing or proposed car parking areas on the relevant land • the location of any proposed retaining walls on the relevant land and their height • the location of any stormwater detention on the relevant land • the location and dimension of any land dedicated for community	☒ Confirmed	

purposes • the final intended use of any new lots.		
For a development application – A statement about how the proposed development addresses the local government's planning scheme and any other planning documents relevant to the application. For a request for compliance assessment – A statement about how the proposed development addresses the matters or things against which the request must be assessed.	☒ Confirmed	
A statement addressing the relevant part(s) of the State Development Assessment Provisions (SDAP).	☐ Confirmed ☒ Not applicable	

Notes for completing this form

- For supporting information requirements for requests for compliance assessment, please refer to the relevant matters for which compliance assessment will be carried out against. To avoid an action notice, it is recommended that you provide as much of the mandatory information listed in this form as possible.

Privacy—Please refer to your assessment manager, referral agency and/or building certifier for further details on the use of information recorded in this form.

OFFICE USE ONLY

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APPENDIX

K

OWNER'S CONSENT

Cardno
Shaping the Future

Owner's consent to the making of a development application under the *Sustainable Planning Act 2009*

I, Linda Kay Cardew
[insert name in full]

Chief Executive Officer (CEO)
[insert position in full

I, _____ *[insert name in full]*

_____
[insert position in full

of Douglas Shire Council,

as owner of premises identified as follows:
Johnston Road, Mossman Gorge more properly described as Lot 1 on SP150474

consent to the making of a development application under the *Sustainable Planning Act 2009* by Cardno HRP on behalf of the Applicant:

Douglas Shire Council

on the premises described above for the purposes of:

> a Development Permit for Material Change of Use (Retirement facility)
> Preliminary approval (s241) for Material Change of Use (Retirement facility)
> a Development Permit for Reconfiguring a Lot

Linda Cardew
[signature]

signed on the 18th day of December 20 15

_____
[signature]

signed on the _____ day of _____ 20 _____

Seal *[if used]*