brazier motti

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DOCUMENT TRANSMITTAL

#59,419

TO: **DOUGLAS SHIRE COUNCIL**
ATTENTION: **The Chief Executive Officer**
ADDRESS: **PO Box 723 MOSSMAN QLD 4873**
Australia Post

DATE: **6/01/2015**
OUR REF: 31122-42-1
PROJECT: **Reconfiguring a Lot (1 Lot into 58 Lots, New Road and Balance Land) - Front Street, Mossman**

DRAWING NO	DESCRIPTION	REV	TYPE	QTY
31122-042-01	Brazier Motti Report		DC	3
31122-042-01	Application Fee - Cheque: $28,092.65		CH	1

COMMENTS

Dear Sir/Madam,

Please find attached three (3) copies of a development application seeking a development permit for Reconfiguring a Lot (1 Lot into 58 Residential Lots, New Road and Balance Land) being Stages 4 & 7 of Daintree Horizons Estate on land described as Lot 113 on SP213765 located at Front Street, Mossman.

Please note that a cheque to the amount of $28,092.65 has also been provided for the applicable application fee in order to assess the proposed development application.

Should you have any queries regarding this matter please do not hesitate to contact this office.

Kind regards,

Charlton Best

ISSUED BY: **Charlton Best**

CH = Cheque, DC = Document, FM = Forms, PL = Plan Copy

brazier motti

DEVELOPMENT APPLICATION FOR A DEVELOPMENT PERMIT FOR RECONFIGURING A LOT (1 LOT INTO 58 RESIDENTIAL LOTS & NEW ROAD) BEING STAGES 4 & 7 OF DAINTREE HORIZONS ESTATE

on land described as

LOT 113 ON SP213765

at

FRONT STREET, MOSSMAN

for

BRIE BRIE ESTATE PTY LTD, D C WATSON PTY LTD, G MUNTZ PTY LTD & HUGH CRAWFORD PTY LTD

CONTENTS

APPENDICES

FIGURES

1.0 INTRODUCTION

This report has been prepared on behalf of the applicant, Maxholl Pty Ltd.

Maxholl Pty Ltd are seeking approval from Douglas Shire Council of an application for Reconfiguring a Lot for Stages 4 & 7 of Daintree Horizons Estate, located at Front Street, Mossman. Specifically, approval is sought for the creation of 58 residential allotments, new road and balance land.

The report reviews the characteristics of the site and evaluates the town planning issues associated with the proposed development. The facts and circumstances relied on in the preparation of this report are current and relevant at December 2014.

1.1 SUMMARY OF APPLICATION

Details of the application are summarised in the table below:

Location	Front Street, Mossman – Lot 113 on SP213765
Proposal	Reconfiguration of a Lot (1 lot into 58 residential lots, new road and balance land)
Planning Scheme	Douglas Shire Planning Scheme
Level of Assessment	Code Assessable
Referral Agencies	Department of State Development Infrastructure and Planning (SARA)

Mandatory IDAS Forms, including Forms 1 and 7 are included at *Appendix A* of this report. Land owners consent to the making of this application is confirmed on IDAS Form 1.

2.0 THE SITE

2.1 SUBJECT LAND

The land subject to this application is summarised in the following table:

Site Address	Front Street, Mossman
Property Description	Lot 113 on SP213765, Parish of Victory, County of Solander
Site Area	30.827 hectares
Encumbrances	Easement A on RP710474 – Douglas Shire Council
Registered Land Owner	Brie Brie Estate Pty Ltd, Hugh Crawford Pty Ltd, G Muntz Pty Ltd & D C Watson Pty Ltd

The current Certificate of Title confirming the abovementioned is included at *Appendix B* of this report. A current SmartMap is also included at *Appendix B*.

2.2 SITE CHARACTERISTICS

The subject land parcel of Lot 113 on SP213765 is irregular in shape. The portion of Lot 113 on SP213765 which is intended for Stages 4 & 7 is currently vacant land, as identified in Figure 1 below:

Figure 1: Satellite Imagery of the subject land (green indicates existing easements and red highlights existing covenant) (source Google Earth December 2014 – image date 28-09-2013)

The subject land has road frontage to Front Street along the eastern boundary and frontage onto Johnson Road along a small portion of its north-western boundary. Neither of the stages proposed as part of this development will require direct access onto these road frontages. The subject land is also bounded by numerous other freehold land parcels and the existing Woolworths Shopping complex along its eastern boundary, which provides a land buffer from the Captain Cook Highway.

Essential infrastructure utilities including water supply, reticulated sewerage, stormwater drainage, electricity and telecommunications are located within close proximity to the proposed development area and access to these services is readily available.

2.3 SURROUNDING AREA

The subject development area is located within close proximity to the Mossman Central Business District and many other convenience facilities which currently service the surrounding locality. All facilities have the capacity to service the proposed development. The Mossman Locality is also highly connected via established public transport routes.

Dominant land uses adjacent to, and/or within proximity to the proposed development area are represented by the surrounding planning areas which include:

- North: Residential 1
- East: Residential 1 and Commercial
- South: Residential 1
- West: Residential 1 and Rural Settlement

The uses in the locality are predominately single detached residential dwellings, convenience facilities and commercial facilities.

As demonstrated above, the locality is generally comprised of a mix of land uses. Therefore, having regard to the above features of the surrounding locality, it is considered that the proposed Reconfiguring a Lot to create fifty-eight (58) residential allotments, new road and balance land will be consistent with the strategic intent for the subject site and would be in keeping with the local character of the area.

Appendix C contains a Planning Area Map identifying the site in relation to the surrounding area.

3.0 PROPOSAL

Approval of the Development Application will authorise a Development Permit for the Reconfiguration of a Lot (1 lot into 58 residential lots, new road and balance land) on land described as Lot 113 on SP213765 located at Front Street, Mossman.

3.1 DESIGN

The development application represents the next phase of the Daintree Horizons Estate being Stages 4 & 7 which comprises:

- 58 residential allotments;
- New road; and
- Balance land.

Stages 4 & 7 comprises allotments which range in area between 800m^2 and 1,115m^2. The average lot size for the proposed development is approximately 860m^2. Brazier Motti Proposal Plan 31122/119A illustrates the subject subdivision layout and is included at *Appendix D*.

The proposed subdivision will continue the high standard of residential development associated with the current Daintree Horizons Estate which is demonstrated through previous stages. The subdivision layout proposed offers a range of lot sizes that are intermingled to ensure that a variety of housing/lot combinations can be delivered to meet the needs of a diverse and changing population.

New road reserve areas are also proposed as part of this application. The new road reserve areas are to be constructed in accordance with the FNQROC Development Manual to allow for safe and efficient movement of vehicles, pedestrians and cyclists.

The configuration and size of the proposed residential allotments have been designed to provide sufficient area to accommodate a suitable building envelope, vehicle access and private open space. These proposed residential allotments also satisfy the Residential 1 minimum lot size criteria of 800m^2 prescribed for the subject development site. Therefore, it is considered that the proposed development is a suitable response to the site and environmental conditions.

3.2 SERVICES & INFRASTRUCTURE

All proposed allotments will have the ability to be adequately serviced with access to utilities such as Council's reticulated water supply, sewerage infrastructure, telecommunications, electricity and refuse collection.

3.2.1 Water Supply

The subject site will be connected to Council's reticulated water supply network. It is assumed that as Council has previously approved residential development over the site that Council is satisfied that the site can be serviced to the required standards. Documentation detailing the proposed design of the infrastructure will be prepared and made available during the operational works phase.

3.2.2 Sewerage Infrastructure

The subject site will be connected to Council's reticulated sewerage network. It is assumed that as Council has previously approved residential development over the site that Council is satisfied that the site can be serviced to the required standards. Documentation detailing the proposed design of the infrastructure will be prepared and made available during the operational works phase.

3.2.3 Stormwater Management

It is assumed that as Council has previously approved residential development over the site that Council is satisfied that onsite stormwater can be managed to the required standards. In summary, a combination of Water Sensitive Urban Drainage techniques will ensure that the quality of stormwater runoff from the proposed development will be improved before release, to such an extent that established water quality objectives are met. Documentation detailing the proposed design of the infrastructure will be prepared and made available during the operational works phase.

3.2.4 Traffic Management

It is assumed that as Council has previously approved residential development over the site that Council is satisfied that traffic movements can be managed to the required standards. The proposed development reflects the original road locations and it has been determined that the number of additional lots created by improved efficiency of design will not result in detrimental impacts on the estate's or the surrounding road network.

The proposed development reflects the anticipated road hierarchy for the area that will provide safe and efficient access for pedestrians, cyclists and public transport. No additional external road upgrade works are warranted as part of the development of Stages 4 & 7 based on the Traffic Impact Assessment prepared by Project Partners at *Appendix E*.

4.0 LEGISLATIVE FRAMEWORK

4.1 SUSTAINABLE PLANNING ACT 2009 CONSIDERATIONS

The purpose of the *Sustainable Planning Act 2009* (SPA) is to achieve ecological sustainability by coordinating planning at all levels of government and by managing the development process as well as the impact of the development.

The table below provides an overview of the legislative context of the development application under the provisions of the *Sustainable Planning Act 2009*.

Assessable Development	In accordance with Schedule 3 of the *Sustainable Planning Act 2009* the development proposed by this application is "assessable development", accordingly a development permit is necessary.
Assessment Manager	Pursuant to Schedule 6 of the *Sustainable Planning Regulation 2009* the Assessment Manager for this development application is Douglas Shire Council.
Level of Assessment	The Douglas Shire Planning Scheme identifies that the proposed development is Code Assessable development.
Public Notification	The application is Code Assessable, therefore, in accordance with section 295 of the *Sustainable Planning Act 2009* public notification is not required.

4.2 REFERRAL AGENCIES

Schedule 7 of the *Sustainable Planning Regulation 2009* outlines the triggers for the referral of the development application to other agencies.

The referral agencies for the development application are summarised in the following table.

Department of State Development Infrastructure and Planning (SARA)	The land subject to this application is within 25 metres of a State-controlled road and the total number of lots is increased.

The application will be referred to the abovementioned referral agency for assessment following receipt of the Acknowledgement Notice.

4.2.1 State Development Assessment Provisions

The State Development Assessment Provisions (SDAP) set out the matters of interest to the state for development assessment.

Table B.3 (Referral Agency Role) of SDAP identifies that an application for Reconfiguring a Lot when triggered for State-controlled road matters requires assessment against the following modules of SDAP Version 1.5:

- Module 1: Community amenity
  - 1.1 Managing noise and vibration impacts from transport corridors state code
  - 1.2 Managing air and lighting impacts from transport corridors state code

- Module 18: State transport infrastructure protection
  - 18.1 Filling, excavation and structures state code
  - 18.2 Stormwater and drainage impacts on state transport infrastructure state code

- Module 19: State Transport network functionality
  - 19.1 Access to state-controlled roads state code
  - 19.2 Transport infrastructure and network design state code

An assessment against relevant provisions of the abovementioned modules and codes are provided at *Appendix E* of this report.

5.0 THE PLANNING FRAMEWORK

5.1 DOUGLAS SHIRE PLANNING SCHEME

The Douglas Shire Planning Scheme was adopted by Douglas Shire Council on 21 August 2006, and commenced on 4 September 2006. The planning scheme provides a framework for establishing Council's planning intent for the interface between the development of the Shire and the management of the unique environmental resources on offer.

The table below provides an overview of the planning scheme applicable to the subject land and the proposed development provisions under the Douglas Shire Planning Scheme:

Locality	• Mossman and Environs Locality
Planning Area	• Residential 1
Overlays	• Acid Sulfate Soils Overlay • Natural Hazards Overlay

The Assessment Table for the Mossman and Environs Locality identifies an application for Reconfiguring a Lot within the Residential 1 Planning Area is Code Assessable. The Assessment Table also identifies that the proposed development is assessable against the following planning scheme codes:

Applicable Codes	• Mossman and Environs Locality Code • Residential 1 Planning Area Code • Acid Sulfate Soils Code • Natural Hazards Code • Reconfiguring a Lot Code

5.2 DESIRED ENVIRONMENTAL OUTCOMES

The Desired Environmental Outcomes (DEOs) are the basis of the Planning Scheme for Douglas Shire, providing the link between the *Integrated Planning Act 1997* and the measures of the Douglas Shire Council Planning Scheme.

The DEOs essentially represent what is sought to be achieved through the Douglas Shire Council Planning Scheme and generally relate to the environment that is defined broadly in the *Integrated Planning Act* to cover matters and conditions relating to the natural, built and human environments.

It is considered that the proposed development achieves the intent of the Douglas Shire Council Planning Scheme, as the development addresses and complies with the DEOs.

5.3 ASSESSMENT AGAINST APPLICABLE CODES

All aspects of the proposed development are considered to be generally consistent with the relevant acceptable solutions and/or performance criteria of each of the applicable codes identified above.

Where the development is considered not to comply with the acceptable measures, justification is provided in order to demonstrate the proposal's compliance.

An assessment against the applicable codes is provided below:

5.3.1 Mossman and Environs Locality Code

The Mossman and Environs Locality Code generally relates to the overall pattern of development to be achieved. The overall outcomes sought to be achieved by this code are able to be complied with by this development as it provides a high standard of residential amenity within an urban zone and serviced by a suitable level of services and facilities.

Specifically, the proposal achieves the following outcomes of the Code:

- The site is within an urban area and provides in sequence development;
- The proposal is at a scale and intensity expected within the Residential Planning Area;
- The proposal positively contributes to the pattern of development;
- The site is not subject to unacceptable risk from natural hazards which cannot be managed;
- The site is positioned to take advantage of the City's community facilities, including schools, open space networks, public transport, employment nodes and shopping.

The proposed development layout will ensure that all proposed allotments will have the ability to be adequately serviced with access to utilities such as Council's reticulated water supply, sewerage infrastructure, telecommunications, electricity and refuse collection.

The locality is a well-established residential area, generally comprising a mix of single detached residential dwelling developments together with associated supporting infrastructure. The proposed development is consistent with and maintains the local character of the area.

Overall it is considered that the proposed development achieves consistency with the applicable acceptable solutions and performance criteria of the Mossman and Environs Locality Code.

5.3.2 Residential 1 Planning Area Code

The subject land is wholly contained within the Residential 1 Planning Area. It is expected that land within this planning area is intended to comprise low density innovative housing, particularly in areas located within reasonable walking distance to public transport, shopping facilities, community facilities, employment nodes and open space.

The intent for this planning area is also to ensure that the configuration of new development maintains and enhances the residential character and amenity of established residential neighbourhoods.

The proposed development will provide a wider choice of future housing stock for the area and will deliver a residential outcome similar to that of earlier stages of development throughout the estate. Daintree Horizons Estate is located within close proximity to public transport, a range of commercial facilities and public open space areas.

The locality is a well-established residential area, generally comprising a mix of single detached residential dwellings developments together with associated supporting infrastructure. The proposed development is consistent with and maintains the local character of the area.

It is noted that the proposed residential allotments satisfy the preferred minimum allotment size criteria of 800m^2 prescribed in the Residential 1 Planning Area. The proposed allotments are of an adequate area and orientation to ensure that the future dwellings will be compatible with the desired character and amenity of the locality. The scale and density of the proposed development contributes to achieving a high standard of residential amenity.

The site is a part of the Daintree Horizons Estate which is an establishing residential estate, accordingly, each of the proposed allotments are capable of being connected to the required infrastructure.

Overall it is considered that the proposed development achieves consistency with the applicable acceptable measures and performance criteria of the Residential 1 Planning Area Code.

5.3.3 Acid Sulfate Soils Code

The purpose of the Acid Sulfate Soils Code is to ensure the disturbance of acid sulfate soils is avoided and that there are no significant environmental impacts from the release of contaminants.

Only minor excavation is expected as part of the proposed development, accordingly, it is not expected to encounter any acid sulfate material. The extent of excavation will be determined during the operational works stage of development.

Overall it is considered that the proposed development achieves consistency with the applicable acceptable measures and performance criteria of the Acid Sulfate Soils Code.

5.3.4 Natural Hazards Code

The Douglas Shire Planning Scheme Overlay Mapping identifies that the majority of the site is located in the Medium Risk Bushfire Hazard Area. Accordingly, assessment against the Natural Hazards Code is applicable. The Natural Hazards Code seeks to ensure that development minimises the potential adverse impacts of bushfire on people, property and the environment.

The proposed development is within an urban environment and therefore there is minimal threat of bushfire. It is also noted that the subject site is void of hazardous vegetation and is surrounded by existing residential housing.

The situation of the development site in an urban environment also ensures that there is adequate road access for firefighting or other emergency vehicles. As there is a reticulated water supply and provision will be made for hydrants in the estate access to water for firefighting purposes is readily available.

Overall it is considered that the proposed development achieves consistency with the applicable acceptable solutions and performance criteria of the Natural Hazards Code.

5.3.5 Reconfiguring a Lot Code

As previously detailed, the development of Stages 4 & 7 comprises 58 residential allotments which range in area between 800m^2 and 1,115m^2. The average lot size for the proposed development is approximately 860m^2. Furthermore, these proposed residential allotments also satisfy the Residential 1 minimum lot size criteria prescribed for the subject development site.

The varied sized allotments will contribute to a variety of residential choices available to residents. The range and mix of lot sizes proposed are consistent with the surrounding locality and provides opportunities for variety of house dwellings and household types.

The proposed subdivision layout also follows the existing pattern of development established within the surrounding area as well as accounting for existing site constraints and topography to ensure that a positive neighbourhood identity is maintained. Furthermore, the layout design ensures that lots are arranged in order to contribute towards the streetscape amenity and to ensure personal safety, traffic safety, property safety and security are offered.

Each of the proposed allotments will incorporate direct road frontage and access onto the proposed new internal roads. Safe and convenient vehicular access and parking is available to each of the proposed allotments within the development. Vehicular access can be constructed to each of the proposed allotments in accordance with the relevant standards to ensure that conflict with infrastructure and vehicular traffic are not encountered.

The proposed reconfiguration layout allows for the efficient expansion of existing urban development and infrastructure within the area.

Overall it is considered that the proposed development achieves consistency with the applicable acceptable measures and performance criteria of the Reconfiguring a Lot Code.

6.0 CONCLUSION

This report forms part of the development application, which seeks a Development Permit for Reconfiguring a Lot (1 lot into 58 residential lots, new road and balance land) on land described as Lot 113 on SP213765 located at Front Street, Mossman.

Site treatments are able to be managed by conditions. The proposal is considered a logical development given the site's inclusion within Daintree Horizons Estate. Furthermore, the development is generally in accordance with the provisions prescribed by the Douglas Shire Planning Scheme.

The following conclusions can be drawn from the above referenced planning aspects of the proposal:

- The proposal consists of creating a varied mix of future residential allotments and is a logical development for the site and locality;
- The proposed subdivision meets the relevant Performance Criteria as it is considered appropriate development within the Residential 1 Planning Area, while achieving consistency with the preferred minimum residential lot size of 800m^2;
- The proposed reconfiguring a lot addresses the elements of the Residential 1 Planning Area Code, Mossman and Environs Locality Code and Reconfiguring a Lot Code including each of the performance criteria and acceptable solutions;
- The proposal addresses the performance criteria and acceptable solutions of the applicable Overlay Codes;
- The proposed development is not expected to have an impact upon the character and visual amenity throughout the area;
- The subject site is located within an urban area that is adequately serviced with all capacity of essential infrastructure services including water supply, reticulated sewerage, stormwater drainage system, electricity and telecommunications;
- The proposal will not have a detrimental impact on the function of the future street and existing traffic network; and
- The proposed development is of a scale and nature that contributes to the proper and orderly development of the locality while respecting the character of the locality.

On balance, it is considered that the proposed development is an appropriate response to the site and, subject to the imposition of reasonable and relevant conditions, Council will be able to issue a development permit for Reconfiguring a Lot (1 lot into 58 residential lots, new road and balance land).

BRAZIER MOTTI
Ground Floor Woree Plaza 12-20 Toogood Road CAIRNS QLD 4870
PO Box 1185 CAIRNS QLD 4870

Phone: 07 4033 2377 **Fax**: 07 4033 2599 **Email:** cairns@braziermotti.com.au

Document Status

Development Application	Author	Reviewer	
	Name	Name	Date
31122-042-01	Charlton Best	Erin Berthelsen	January 2015

Appendix A

IDAS form 1—Application details

(*Sustainable Planning Act 2009* version 3.0 effective 1 July 2013)

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.

This form can also be completed online using MyDAS at www.dsdip.qld.gov.au/MyDAS

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)	Maxholl Pty Ltd			
For companies, contact name				
Postal address	C/- Brazier Motti Pty Ltd			
	PO Box 1185			
	Suburb	Cairns		
	State	QLD	Postcode	4870
	Country	Australia		
Contact phone number	(07) 4033 2377			
Mobile number (non-mandatory requirement)				
Fax number (non-mandatory requirement)	(07) 4033 2599			

Email address (non-mandatory requirement)	cns.planning @braziermotti.com.au
Applicant's reference number (non-mandatory requirement)	31122-042-01

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.)

Reconfiguring a Lot (1 Lot into 58 Lots, New Road & Balance Land)

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.)

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)			Front Street, Mossman	4873	113	SP213765	Douglas
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)			
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)

30.827 hectares

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

Sugarcane Farming/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	Brie Brie Estate Pty Ltd, D C Watson P/L, G Muntz P/L & Hugh Crawford P/L
I/We, the above-mentioned owner/s of the land, consent to the making of this application.	
Signature of owner/s of the land	J.G. WATSON (DIRECTOR) D.A. WATSON (DIRECTOR)
Date	5/1/2015

Table G	
Name of owner/s of the land	
☐ 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)

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. Note: this question does not apply for applications made online using MyDAS)

Description of attachment or title of attachment	Method of lodgement to assessment manager
Brazier Motti Report 31122-042-01	Over the counter

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 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.

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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 State Development, Infrastructure 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 3.0 effective 1 July 2013)

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.

This form can also be completed online using MyDAS at www.dsdip.qld.gov.au/MyDAS

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.)

- [x] 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	58			Balance Land

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

- [x] 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)

b) What is the total area of land to be contributed for community purposes? (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)	Daintree Horizons
b) What stage in the development does this table refer to?	Stages 4 & 7

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

58	
d) What is the total area of land for this stage? (square metres)	62,791 sqm
e) What is the total length of any new road to be constructed at this stage? (metres)	750 metres
f) What is the total area of land to be contributed for community purposes at this stage? (square metres)	N/A

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?

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	Over the counter

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	Over the counter
A statement addressing the relevant part(s) of the State Development Assessment Provisions (SDAP).	☑ Confirmed ☐ Not applicable	Over the counter
For an application involving assessable development in a wild river area		
Documentation that: • describes how the development to which the application relates is not prohibited development and • demonstrates how the proposed development will meet the requirements set out in the relevant wild river declaration and any applicable code mentioned in the relevant wild river declaration under the *Wild Rivers Act 2005*.	☐ Confirmed ☑ Not applicable	
A map showing the proposed location of the development in relation to any nominated waterways under the *Wild Rivers Act 2005* and wild river management areas. (a map may be produced digitally at www.ehp.qld.gov.au/wildrivers/wildrivers-map.php). Wild river management area means any of the following areas under the *Wild Rivers Act 2005*: • special floodplain management area • preservation area • high preservation area • floodplain management area • subartesian management area • designated urban area. Editor's note: A floodplain management area, subartesian management area or designated urban area may be over all or part of a high preservation area or preservation area. A subartesian management area or designated urban area may be over all or part of a special floodplain management area.	☐ 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.

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Date received | Reference numbers

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Department of State Development, Infrastructure and Planning
PO Box 15009 City East Qld 4002
tel 13 QGOV (13 74 68)
info@dsdip.qld.gov.au

www.dsdip.qld.gov.au

Appendix B

CURRENT TITLE SEARCH

DEPT OF NATURAL RESOURCES AND MINES, QUEENSLAND

Request No: 20017917
Search Date: 16/12/2014 14:14 **Title Reference: 50733238**
Date Created: 18/08/2008

Previous Title: 50676626

REGISTERED OWNER Interest

Dealing No: 711857525 14/08/2008

BRIE BRIE ESTATE PTY LTD	1/4
HUGH CRAWFORD PTY LTD	1/4
G MUNTZ PTY LTD	1/4
D C WATSON PTY LTD	1/4

AS TENANTS IN COMMON

ESTATE AND LAND

Estate in Fee Simple

LOT 113 SURVEY PLAN 213765
County of SOLANDER Parish of VICTORY
Local Government: DOUGLAS

EASEMENTS, ENCUMBRANCES AND INTERESTS

1. Rights and interests reserved to the Crown by
   Deed of Grant No. 20104049 (POR 2)

2. EASEMENT IN GROSS No 601420350 (N219573) 25/09/1940
   BURDENING THE LAND
   TO COUNCIL OF THE SHIRE OF DOUGLAS
   OVER EASEMENT A ON RP710474

3. MORTGAGE No 709084482 26/10/2005 at 11:45
   COMMONWEALTH BANK OF AUSTRALIA A.B.N. 48 123 123 124

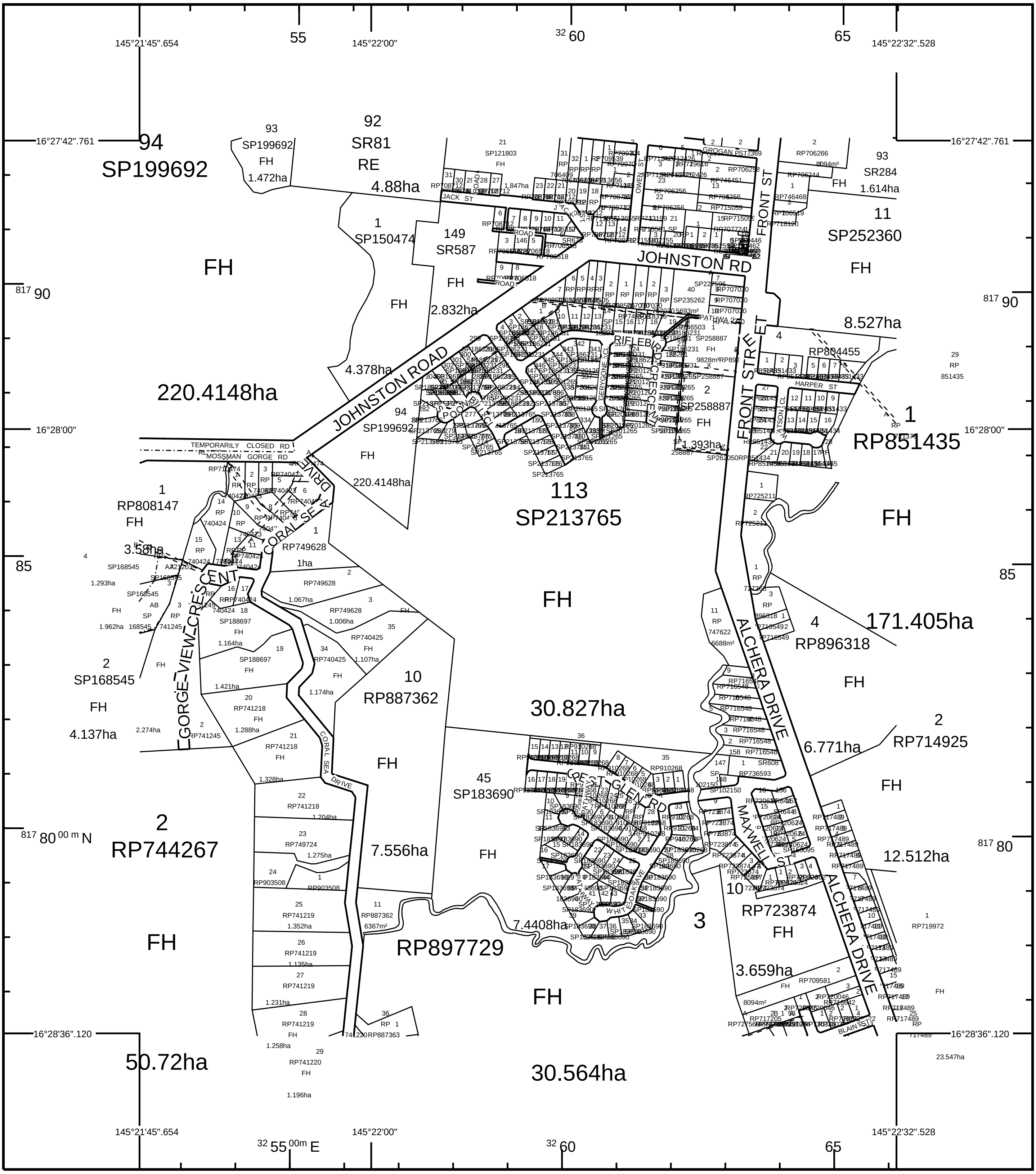
ADMINISTRATIVE ADVICES - NIL
UNREGISTERED DEALINGS - NIL

CERTIFICATE OF TITLE ISSUED - No

Caution - Charges do not necessarily appear in order of priority

** End of Current Title Search **

Requested By: D APPLICATIONS GLOBAL X



STANDARD MAP NUMBER	
7965-23221	

0 200 400 600 800 1000 m

HORIZONTAL DATUM:GDA94 ZONE:55 SCALE 1 : 10000

SmartMap

An External Product of
SmartMap Information Services

Based upon an extraction from the
Digital Cadastral Data Base

MAP WINDOW POSITION &
NEAREST LOCATION

145°22'09".091
16°28'09".441
MOSSMAN GORGE
1.07 KM

SUBJECT PARCEL DESCRIPTION

DCDB

Lot/Plan	113/SP213765
Area/Volume	30.827ha
Tenure	FREEHOLD
Local Government	DOUGLAS SHIRE
Locality	MOSSMAN
Parish	VICTORY
County	SOLANDER
Segment/Parcel	8810/153

CLIENT SERVICE STANDARDS

PRINTED (dd/mm/yyyy) 15/10/2014

DCDB 14/10/2014

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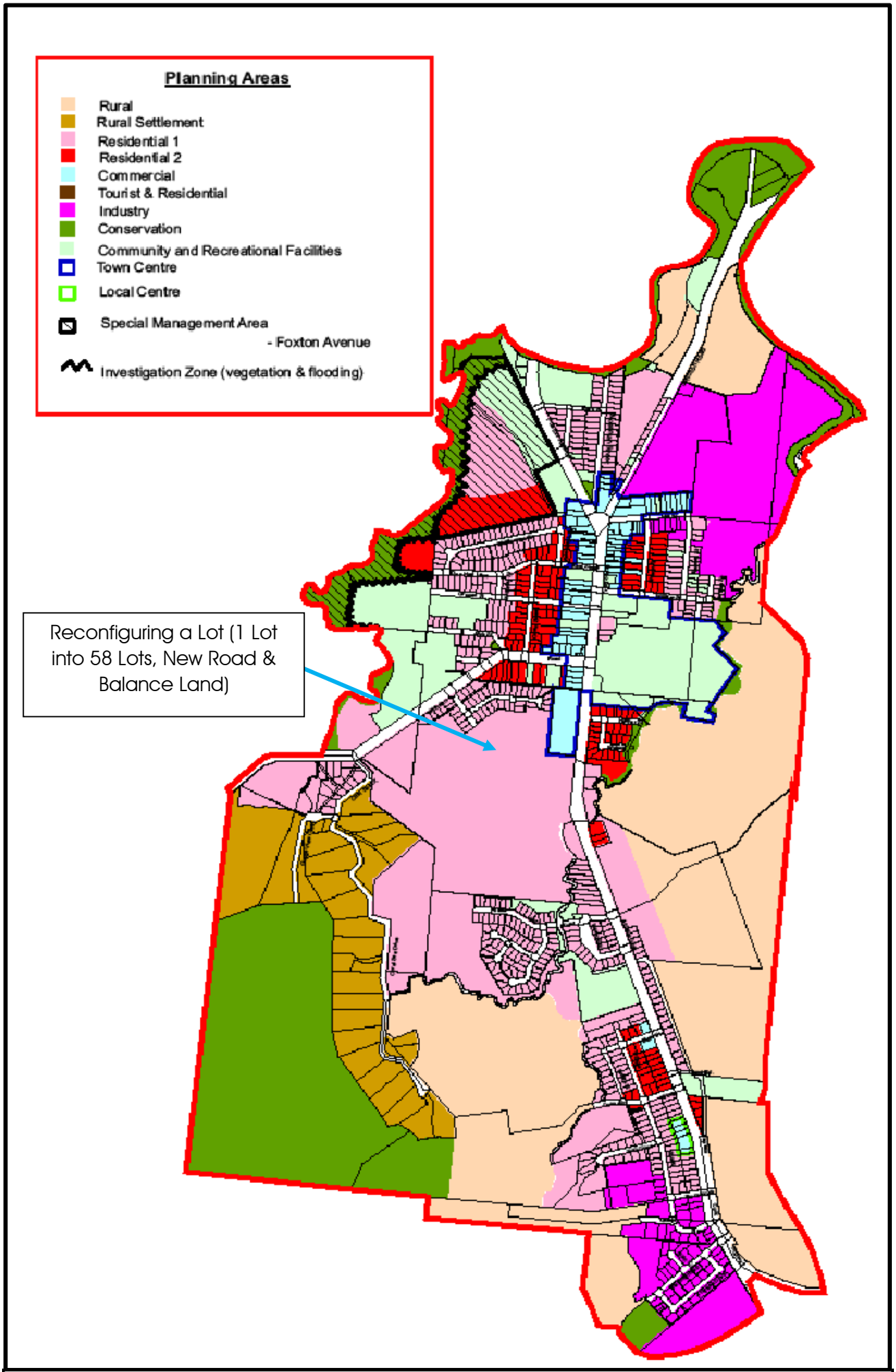
For further information on SmartMap products visit http://nrw.qld.gov.au/property/mapping/blinmap

GDA

Queensland Government

Appendix C



P.O. Box 357 Tel: (07) 4099 9450
Mossman, Qld., 4873 Fax: (07) 4098 2902

N W E S

Douglas Shire Council
Planning Areas
Mossman & Environs Locality

Date: August 2006
Author: GDK
Map No. M 1

Appendix D

PROPOSED
RECONFIGURATION

LOCALITY PLAN 0 100 200 Scale: 1:10,000 @ A1

0 30 60m

Johnston Road

Road

Johnston

Front Street

Captain Cook Highway

Coral Sea Dr.

STAGE 1

STAGE 2

STAGE 3

STAGE 4A

STAGE 4B

STAGE 4C

STAGE 5

STAGE 6

STAGE 7A

STAGE 7B

STAGE 7C

STAGE 8

STAGE 9

STAGE 10

STAGE 11

Open Space
4.6ha

Reserve
RP910268

Crest Glen Road

EMT B RP718316
EMT C RP746503

2 RP713129
1 RP749628
2 RP749628
3 RP749628
35 RP740425
10 RP887362
51 RP910267
10 RP891901

- STAGE 4A -

Stage Area	7103m²
Residential Area.....	5913m²
Total Residential.....	7
Average Lot Area.....	845m²
Total Length of New Road ...	80m

- STAGE 4B -

Stage Area	1.10 ha
Residential Area.....	8381m²
Total Residential.....	10
Average Lot Area.....	838m²
Total Length of New Road ...	175m

- STAGE 4C -

Stage Area	1.82 ha
Residential Area.....	1.58 ha
Total Residential.....	18
Average Lot Area.....	517m²
Total Length of New Road ...	125m

- STAGE 7A -

Stage Area	3098m²
Residential Area.....	2532m²
Total Residential.....	3
Average Lot Area.....	844m²
Total Length of New Road ...	40m

- STAGE 7B -

Stage Area	1.39 ha
Residential Area.....	1.04 ha
Total Residential.....	12
Average Lot Area.....	867m²
Total Length of New Road ...	180m

- STAGE 7C -

Stage Area	9490m²
Residential Area.....	6838m²
Total Residential.....	8
Average Lot Area.....	855m²
Total Length of New Road ...	150m

brazier motti
P 1300 267 878
W www.braziermotti.com.au
surveying | town planning | project management | mapping and GIS

Date: 11th November, 2014
Scale: 1:3,000 @ A1
Drawn: AJL
Job No: 31122/42-1
Plan No: 31122/119 A

Appendix E

Traffic Impact Assessment

Daintree Horizons – Stage 4 and 7

Reference Number: 627-001

For Maxholl Pty Ltd

9 December 2014

Prepared by:

Projex Partners Pty Ltd
ACN 153 518 971 ABN 62 153 518 971
Level 2, 9 Capital Place
Lake Kawana Business Village
BIRTINYA QLD 4575

Telephone: 07 5493 3649

DOCUMENT ISSUE RECORD

Revision Code	Date Revised	Revision Details	Author	Checked	Approved
A	10/12/2014	Initial Issue	TH	DJW	JRB

CONTENTS

Appendices

1 INTRODUCTION

Projex Partners have been engaged by Maxholl Pty Ltd to prepare a Traffic Impact Assessment to support the Reconfiguration of a Lot application for Stages 4 and 7 of the Daintree Horizons residential development. The development is located in Mossman at Lot 113 on SP213765. **Figure 1.1** below outlines Stage 4 and 7 of the development and the intersection to be assessed.

Stages 1, 2 and 3 of the development were constructed in 2005, 2006 and 2007 respectively. The original Development Approval required external works to be undertaken at the Captain Cook Highway and Johnston Road intersection as part of Stage 4. The extent of external works was not defined within the Development Approval. This Development Approval lapsed in 2008 and the intersection has since been upgraded by Council.

Brazier Motti (project planner) and Projex Partners met with the Department of Transport and Main Roads (TMR) on 13 November 2014 to discuss if further external works to the intersection would be required as part of the development of Stage 4 and 7. TMR requested that a traffic assessment be undertaken considering PM peak traffic to determine the development's impact on the intersection and advised that any upgrades required to mitigate unacceptable impacts would inform the Development Approval conditions.

The purpose of this report is to assess the impact of the development on the Captain Cook Highway and Johnston Road intersection and to assess if upgrades are warranted.

This assessment has been prepared in consideration of the TMR Guidelines for Assessment of Road Impacts of Development (2006) and Department of Main Roads Guide to Road Planning and Design Manual (2005).

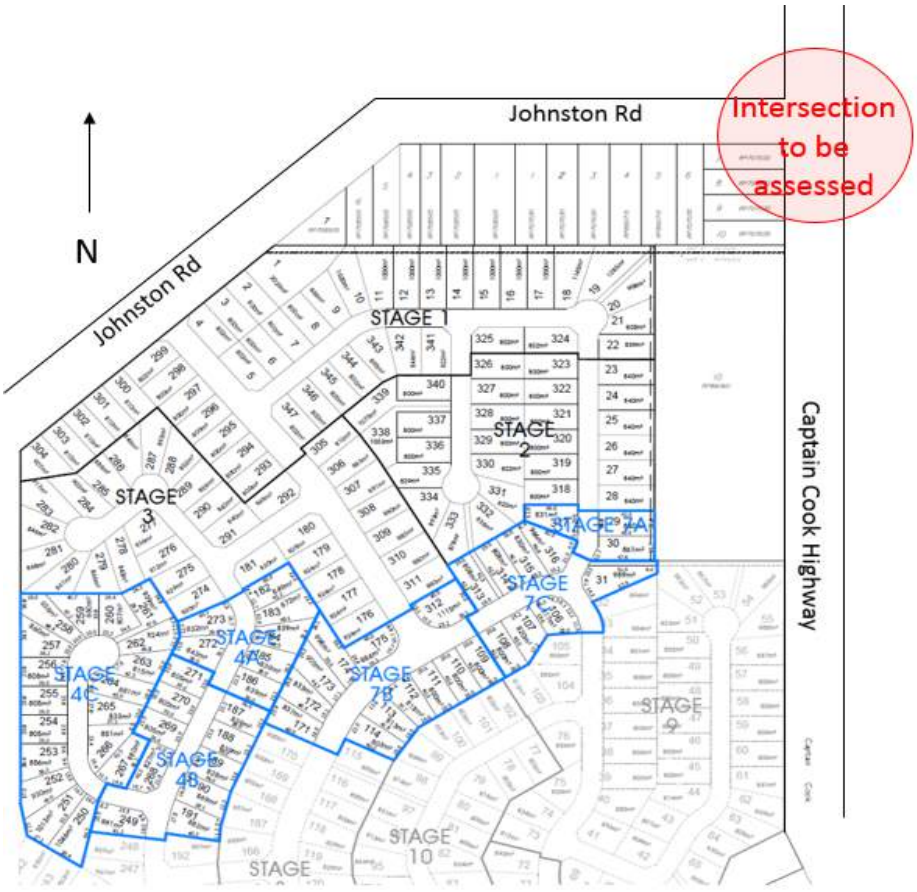


Figure 1-1 Proposed Development Layout

1.1 Methodology

This Traffic Impact Assessment has been prepared in consideration of the TMR Guidelines for Assessment of Road Impacts of Development in regard to traffic. The Guidelines Appendix B: Checklist – 2 – Issues Checklist for Other Development has been utilised to verify that the impact assessment responds to the following:

- Development Content;
- Development Proposal;
- Impact Assessment and Remedial Works Treatments;
- Intersection and Access.

Consistent with the Guidelines for Assessment of Road Impacts, the assessment has considered impacts of the development when the developed scenario is compared to the pre development scenario as required under Section 3.1 of the Guidelines for Assessment of Road Impact.

Future traffic growth has been conservatively adopted as 2% per annum in review of the Department of Transport and Main Roads segment reports for 2009 and 2012 which indicate a decrease in traffic volumes. Notwithstanding that traffic growth usually has some allowance for development traffic in background growth there has been no reduction in forecast development generated traffic. This approach supports a more conservative approach than otherwise. Refer to **Appendix A** for the 2009 and 2012 TMR Segment Reports (refer data for Parker Creek).

TMR were approached for intersection count data, however, no information was available at this location. A traffic count was therefore undertaken on 20 November 2014 between 2pm and 4pm to obtain peak traffic volumes at the intersection location during end of school. 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 which provides current data specific to the site.

The assessment methodology has been developed to support the practical comparison of the assessment scenarios (refer **Section 2** for Scenarios) recognising:

- The high function of the Captain Cook Highway;
- Current TMR planning for the Captain Cook Highway;
- Existing constraints at the intersections.

2 PROPOSED DEVELOPMENT

Stage 4 and 7 of the proposed development consist of an additional 58 residential lots. Construction of the development is expected to be complete by 2015. Refer **Appendix A** for the proposed development site layout.

A total of four scenarios has been analysed for the intersection in addition to the existing situation, based on varying traffic volumes resulting from the development and background traffic growth. The scenarios analysed are as follows:

- Existing situation – 2014 Traffic count;
- Scenario 1 – 2015 base case (no additional development);
- Scenario 2 – 2015 base case + Stage 4 and 7 of the development;
- Scenario 3 – 2025 base case (no additional development);
- Scenario 4 – 2025 base case + Stage 4 and 7 of the development.

2.1 Existing Situation

The AADT segment report data has been obtained from the Department of Transport and Main Roads (DTMR) for 2009 and 2012, however this information does not indicate the peak traffic volumes (refer **Appendix B** for AADT reports). Although there are guidelines for approximating the peak hour volume from AADT data, this is not always accurate. Therefore, a traffic count was undertaken during a school day between 2pm and 4pm to capture the afternoon peak hour and observe intersection performance. Traffic counts were conducted on 20th November 2014 with results presented in **Appendix B**.

The traffic volumes presented in **Appendix C** represent the total vehicles and do not separate light and heavy vehicles. The 2009 AADT segment report identifies a heavy vehicle content of 6.94% on the Captain Cook Highway and therefore 7% has been adopted on the north and south leg of the intersection. Johnston Road is a local major collector street for which no data is available on heavy vehicle content. Because of its lower hierarchical status, a lower heavy vehicle content of 5% has been assumed.

2.2 Scenario 1 – Base Case (2015)

The base case for this traffic impact assessment has been taken as the year which the development is intended to be complete (2015). A 2% compound growth rate for the area has been applied to the existing traffic count data (i.e. excluding development traffic) to approximate traffic volumes in 2015 along Johnston Road and the Captain Cook Highway.

2.3 Scenario 2 – Base Case + Development

Scenario 2 accounts for the additional traffic generated by the proposed development in addition to 2015 base case traffic volumes.

2.4 Scenario 3 – 10 year Outlook on Base Case (No Additional Development) – 2025

Scenario 3 excludes the traffic volume generated by the development and accounts for the estimated annual growth rate of 2%. This scenario is for comparative purposes to assess the performance of the intersection 10 years from the base case (2025). Calculations determining the resulting increase in traffic volume will be outlined in **Section 4**.

2.5 Scenario 4 – 10 year Outlook on Scenario 2 (With Development) – 2025

Scenario 4 analyses the performance of the intersection at the 10 year horizon (2025), accounting for traffic generated by the development and a 2% annual growth rate on existing traffic.

Appendix C outlines traffic volumes for the intersection for the above described scenarios.

3 EXISTING SITUATION

This section assesses the performance of the existing intersection on 2014 traffic counts.

3.1 Current TMR Planning and Existing Constraints

The current lane configuration on Captain Cook Highway provides 1 lane in both directions with approximately 1.5m wide sealed shoulders as illustrated in **Figure 3.1**. It is understood that TMR currently have no future planning along Captain Cook Highway in the vicinity of the Captain Cook Highway/Johnston Road intersection.

Figure 3-1 Aerial Image of Intersection Layout

The intersection is bounded by existing commercial development on the North West corner of the intersection, vacant land to the south west and Mossman High School to the East.

3.2 Parameters for Existing Intersection Performance Model (2014)

The Captain Cook Highway/Johnston Rd intersection has been modelled utilising SIDRA Intersection 6.0 to assess existing intersection performance. The intersection is sign controlled with Captain Cook Highway the major road and having right of way. The intersection is located approximately 204m north of the Captain Cook Highway/Harper Street signalised intersection which results in a platooning effect of

north bound traffic, providing increased opportunity for vehicles turning out of Johnston Rd. This behaviour was verified during a site visit conducted on 20 November 2014.

SIDRA allows a platooning effect to be applied to traffic and provides guidance on appropriate bunching factors based on the distance to the upstream intersections as outlined in **Figure 3.2**. The signalised intersection is located 204m south of the subject intersection and therefore a 15% bunching factor was applied to north bound traffic along the Captain Cook Highway.

Distance to upstream signals (m)	< 100	100-200	200-400	400-600	600-800	> 800
(ft)	< 350	350-700	700-1300	1300-2000	2000-2600	> 2600
Extra bunching (%)	25	20	15	10	5	0

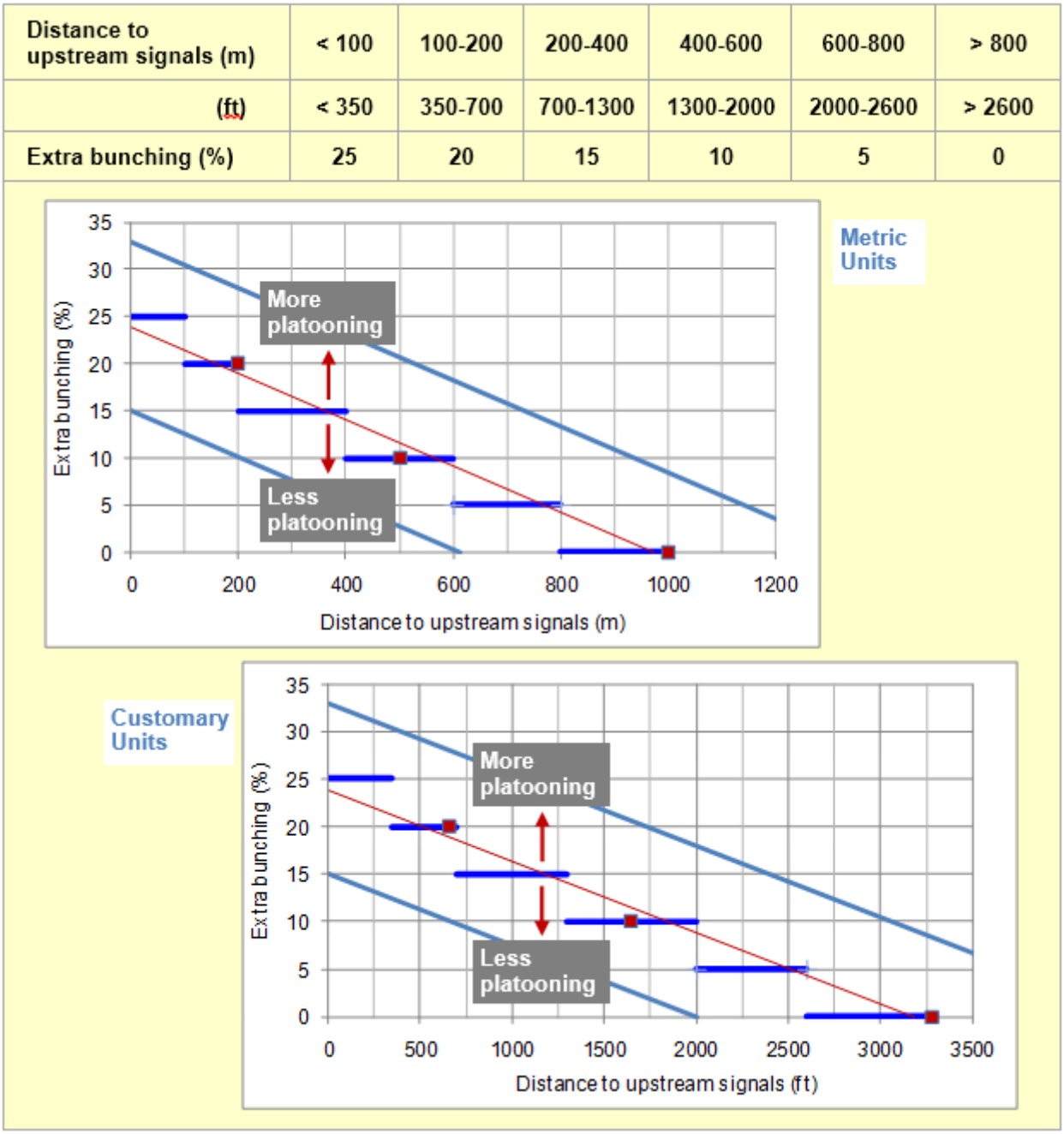


Figure 3-2 Bunching Factors Due to Upstream Intersections

The approach distance in SIDRA denotes the distance which vehicles have to accelerate from being stationary due to an upstream intersection or it may also be regarded as the available queuing length. Where the approach distance is excessive, 500m has been adopted. This has no impact on the analysis

compared to if a larger approach distance was adopted and queue lengths remained substantially less than the approach distance. The approach distances (excluding short and slip lanes) for the existing intersection were input into SIDRA as follows:

- Captain Cook Highway (south approach) – approach distance 200 metres;
- Captain Cook Highway (north approach) – approach distance 500 metres;
- Johnston Road (west approach) – approach distance 500 metres;

3.2.1 Stage 1 – Existing Intersection Geometry

The existing intersection is a sign controlled T-intersection with channelised right and left turn lanes provided on the Captain Cook Highway. A separate right turn short lane is provided for vehicles on Johnston Road. **Figure 3.3** illustrates the intersection layout at ground level.

Figure 3-3 Captain Cook Highway/Johnston Road T-intersection

Based on measurements obtained from Google Earth, the intersection has been configured in SIDRA as follows:

- Left turn lanes are provided for vehicles turning from:
  - Johnston Road into Captain Cook Highway northbound (full length lane);
  - Captain Cook Highway south approach into Johnston Road (channelised left turn lane approximately 50m long not including taper);
- Through lanes are configured as follows:
  - Captain Cook Highway – 1 x approach lane and exit lane;
- Right turn lanes are configured as follows:
  - Captain Cook Highway north approach into Johnston Road (approximately 25m not including taper);

- Johnston Road west into Captain Cook Highway southbound (approximately 50m long not including taper).

The intersection is located in a residential and commercial area with high pedestrian volume. The speed limit is 50km/hr as per the 2009 TMR segment report (refer **Appendix A**). However, the intersection is also in close proximity to Mossman High School and the site visit confirmed that the peak hour coincides with the times whereby the 40km/hr school zone speed limit is enforced. Consequently, a speed limit of 40km/hr has been adopted on all legs of the intersection for analysis.

Figures 3.4 and **3.5** illustrate the intersection as modelled in SIDRA with lane geometry specified and the existing traffic volumes for the PM peak periods. It should be noted that the two stages of the intersection have been connected in Network configuration.

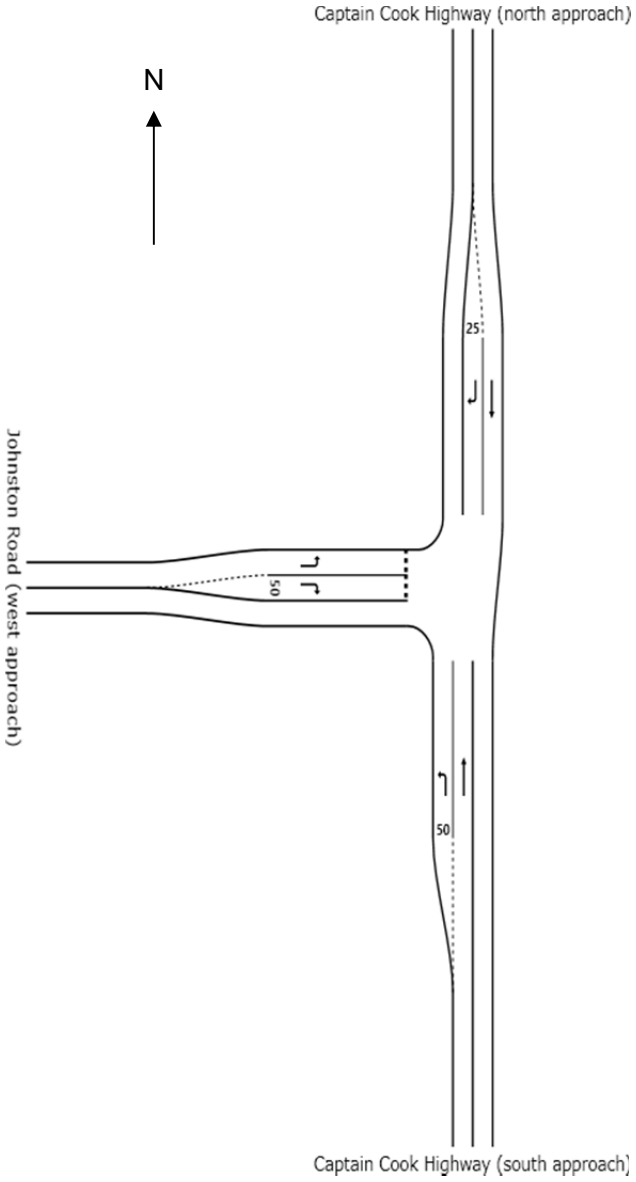


Figure 3-4 Intersection geometry

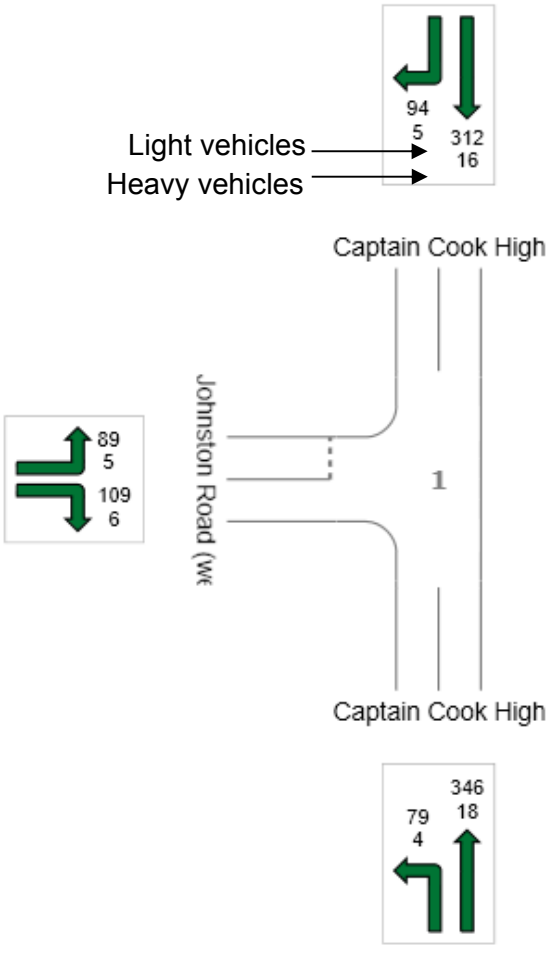


Figure 3-5 Peak Traffic volumes (light and Heavy vehicles)

Refer **Appendix D** for additional existing intersection outputs from SIDRA.

3.3 Existing Intersection Operation (2014)

The key movements with regards to this traffic impact assessment have been identified as the right turn movements from Johnston Road and Captain Cook Highway north approach as these lanes have limited storage and are subject to longer delays due to oncoming traffic. These movements will indicate the impact of the development and will therefore be the focus of this report.

Under existing conditions, queue lengths for the right turn lane from Captain Cook Highway north approach are contained within the right turn slot (25m long). Incidental queue lengths have been calculated to be 3.5 metres in the PM peak hour with an average delay of 7.6 seconds.

The right turn lane from Johnston Road was also determined to have sufficient storage capacity to accommodate existing traffic volumes. As shown in **Appendix D**, the queue lengths associated with the right turn slot on Johnston Road have been calculated to be 11.0 metres during the PM peak hour with an average delay of 17.6 seconds.

Table 3.1 outlines the results obtained for the intersection with respect to average delay (seconds) and degree of saturation (%) for PM peak traffic volumes. These results form a calibrated SIDRA model for the existing traffic behaviour and overall intersection performance. Assessment of development scenarios will be compared to this data to determine the impact resulting from the additional traffic generated be the development.

Table 3.1 Existing Intersection Performance 2014

	PM Peak			
Movement	**Average Delay (sec)**	**Degree Saturation %**	**Queue Length (m)**	**Queue Capacity (m)**
Right turn from Captain Cook Highway	7.6	0.112	3.5	25
Right turn from Johnston Road	17.6	0.347	11.0	50
Overall Intersection	**3.5**	**0.347**	**N/A**	**N/A**

Refer to **Appendix D** for the complete summary of existing intersection performance from SIDRA.

4 DEVELOPMENT TRAFFIC GENERATION

4.1 Development Traffic Generation

The amount of traffic generated from the proposed development has been determined through peak hourly trip generation rates provided in the Department of Transport and Main Roads "Road Planning and Design Manual 2005 – Appendix 3A". The proposed development will consist of detached residential dwellings for which this manual provides two alternative peak rate values extracted from the New South Wales Roads and Traffic Authority publication (0.85 vehicles per hour) and Queensland Transport (0.80 vehicles per hour) publication. As shown in **Table 4.1**, the trip generation rate has been adopted as 0.85 vehicles per hour to support a conservative approach, providing a PM peak traffic volume of 49 vehicles per hour resulting from the development.

Table 4-1 Trip Generation Criteria

Development Type	Peak Hourly Vehicle Trips per dwelling	Number of dwellings	Peak Traffic Generated (vph)
Residential development	0.85	58	49

4.2 Development Traffic Distribution

Development traffic distribution has been approximated based on the distribution of existing traffic movements from the traffic survey into and out of Johnston Road. This was then applied to the development traffic volume to calculate the additional traffic for each turning movement.

Figure 4.1 illustrates the distribution of development generated traffic for the PM peak period. All development generated traffic are assumed to be light vehicles.

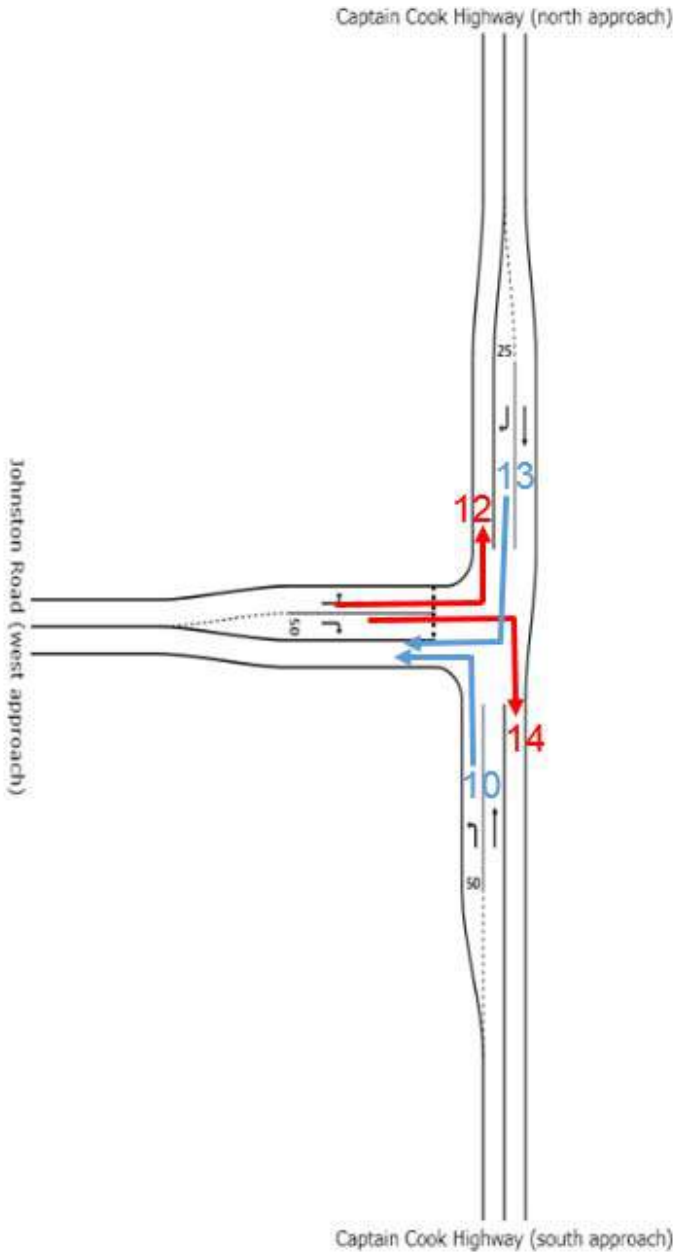


Figure 4.1 Distribution for New Development Traffic (PM peak hour)

5 TRAFFIC IMPACT ASSESSMENT SCENARIOS

This section assesses the performance of the intersection under the following scenarios:

- Scenario 1 – 2015 base case (no additional development);
- Scenario 2 – 2015 base case + Stage 4 and 7 of the development;
- Scenario 3 – 2025 base case (no additional development);
- Scenario 4 – 2025 base case + Stage 4 and 7 of the development.

5.1 Traffic Volumes

The total traffic volumes for each movement for all scenarios are summarised for the PM peak period for the intersection in **Table 5.1** (volumes indicates light and heavy vehicles combined). The letters L, T, R and U correspond to left, thru, right and U-turn movements specific to that approach.

Table 5-1 PM peak traffic movement volumes

Leg	Movement	Existing	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Captain Cook Highway- South (vph)	L	83	85	95	103	113
	T	364	372	372	453	453
	U	0	0	0	0	0
Johnston Rd- West (vph)	L	94	96	108	117	129
	R	115	117	131	143	157
	U	0	0	0	0	0
Captain Cook Highway- North (vph)	T	328	334	334	408	408
	R	99	101	114	123	136
	U	0	0	0	0	0

Table 5.1 demonstrates that for scenarios including development traffic (2 and 4), an additional 14 vehicles per hour can be expected to utilise the Johnston Road right turn facility and 13 vehicles per hour to use the Captain Cook Highway right turn facility which as noted previously are the critical turning movements.

Figures 5.1 and **5.2** allow comparison of traffic volumes to be observed between the pre and post development scenarios for the base case year and 10 year horizon respectively. The figures indicate the light and heavy traffic volumes.

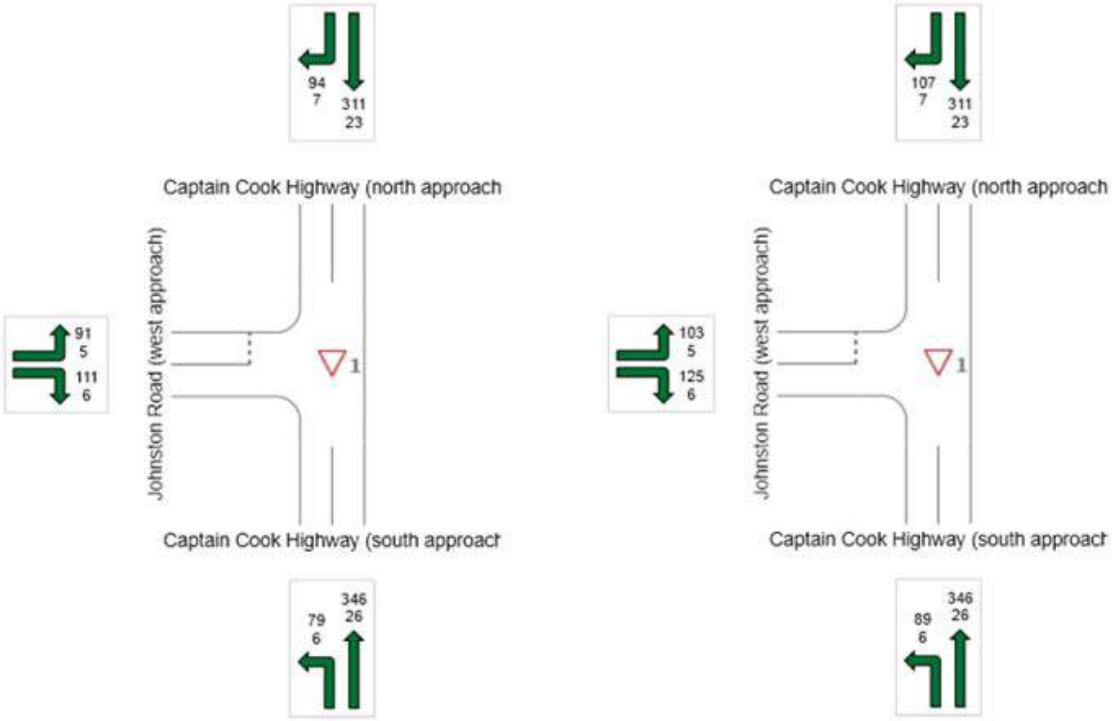


Figure 5-1 Scenario 1 and 2 – 2015 Pre and Post Development Scenarios Traffic Volume Comparison

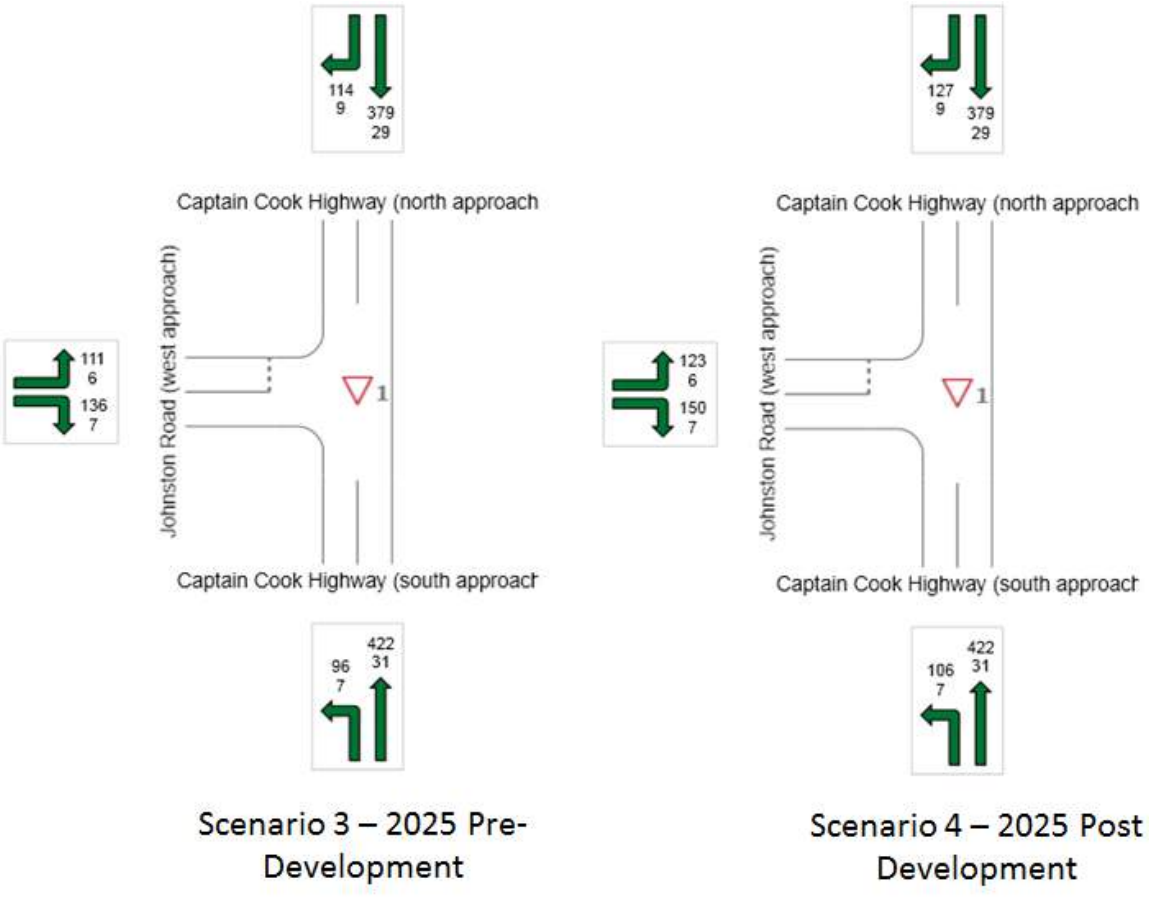


Figure 5-2 Scenario 3 and 4 – 2025 Pre and Post Development Scenarios Traffic Volume Comparison

5.2 Traffic Analysis

Table 5.2 provides a summary of the traffic analysis results for all scenarios analysed for the intersection during the PM peak period. Refer to **Appendix E** for the complete SIDRA output summaries.

Table 5-2 Peak Period- Summary of analysis results

Scenario	Average Delay (sec)	Degree Saturation %
Existing	3.5	0.347
1 – 2015 no dev.	3.6	0.363
2 – 2015 + dev.	4.1	0.422
3 – 2025 no dev.	5.2	0.615
4 – 2025 + dev.	6.0	0.691

The analysis indicates that the impact to the average delay of the intersection resulting from the development generated traffic are incidental with less than 1 second increase observed comparing pre and post development scenarios in 2025.

The degree of saturation of the intersection for the worst case scenario (10 year horizon + development) is 0.691 which indicates that the intersection has sufficient capacity for the additional traffic volume resulting from the development and background growth of the existing traffic.

Furthermore, analysis of the critical right turn movements from Johnston Road and Captain Cook Highway indicate that all existing turning facilities are sufficient for all scenarios assessed. This is further discussed in the following sections.

Captain Cook Highway- North Approach Right Turn

The performance of the right turn facility from Captain Cook Highway north approach for the PM peak period is presented in **Table 5.3**. The available storage length of this right turn facility is approximately 25 metres. Refer to **Appendix E** for the complete SIDRA output summaries for scenarios analysed.

Table 5-3 Captain Cook Highway north approach right turn facility- Queue lengths and average delay

Scenario	PM Peak			
	Average Delay (sec)	Degree of Saturation (%)	Queue length (m)	Queue capacity (m)
Existing	7.6	0.112	3.5	25
1 – 2015 no dev.	7.7	0.115	3.6	25
2 – 2015 + dev.	7.7	0.131	4.0	25
3 – 2025 no dev.	8.5	0.159	4.9	25
4 – 2025 + dev.	8.6	0.177	5.5	25

Referring to the results presented in **Table 5.3**, queue lengths are sufficiently contained within the turn slot provided on Captain Cook Highway north approach for all scenarios with a maximum queue length of 5.5 metres observed for Scenario 4 with a total capacity of 25m. Comparing Scenario 3 (2025 pre development) and 4 (2025 post development) indicates an increase of 0.6m in queue length and 0.1 second increase in average delay.

The degree of saturation for the worst case scenario (i.e. 2025 post development) for the right turn slot on Captain Cook Highway is 0.177 which indicates that there is sufficient capacity for the additional development traffic and 10 years growth of the existing traffic.

Therefore, it is demonstrated that the additional traffic generated by the development is not expected to significantly impact upon the performance of the right turn movement form the Captain Cook Highway north approach. Furthermore, the right turn facility on the Captain Cook Highway north approach is expected to accommodate queue lengths associated with the 10 year horizon, inclusive of development traffic and background growth of existing traffic.

Johnston Rd- West Approach Right Turn

Queue lengths and average delay results associated with the right movement from Johnston Rd west approach are presented in **Table 5.4**. In all scenarios, the SIDRA model indicates that the existing right turn lane accommodates all existing and future (10 year outlook) traffic volumes with or without the development. The available storage length of this right turn facility is approximately 50 metres.

Table 5-4 Johnston Rd west approach right turn facility- Queue lengths and average delay

Scenario	PM Peak			
	Average Delay (sec)	Degree of Saturation (%)	Queue length (m)	Queue capacity (m)
Existing	17.6	0.347	11.0	50
1 – 2015 no dev.	18.3	0.363	11.7	50
2 – 2015 + dev.	20.1	0.422	14.4	50
3 – 2025 no dev.	31.4	0.615	22.7	50
4 – 2025 + dev.	35.7	0.691	27.7	50

Referring to the results presented in **Table 5.4**, queue lengths are sufficiently contained within the turn slot provided on Johnston Road for all scenarios with a maximum queue length of 27.7 metres observed for Scenario 4 with a total capacity of 50m. Comparing Scenario 3 (2025 pre development) and 4 (2025 post development) indicates an increase of 5.0m in queue length and 4.3 seconds increase in average delay.

The degree of saturation for the worst case scenario (i.e. 2025 post development) for the right turn slot on Johnston Road is 0.691 which indicates that there is sufficient capacity for the additional development traffic and 10 years growth of the existing traffic.

Furthermore, the existing right turn slot is sufficient to accommodate queue lengths associated with existing and future traffic conditions, with or without traffic generated by the development. Therefore, it is recommended that the existing intersection layout is sufficient and will not require upgrading to accommodate the additional traffic generated by the proposed Stage 4 and 7 of the Daintree Horizons residential development.

6 SUMMARY

Projex Partners have been engaged by Maxholl Pty Ltd to prepare a Traffic Impact Assessment to support a Reconfiguration of a Lot application for Stage 4 and 7 of the Daintree Horizons residential development located in Mossman at Lot 113 on SP213765.

The traffic impact assessment utilised traffic count data obtained on the 20th November 2014 during the PM peak period which coincided with school finish times. Analysis of the Johnston Road/Captain Cook Highway intersection has been undertaken with the following scenarios:

- Existing situation – Traffic count data;
- Scenario 1 – 2015 base case (no development);
- Scenario 2 – 2015 base case + development;
- Scenario 3 – 2025 base case (no development);
- Scenario 4 – 2025 base case + development.

Comparative traffic impact analysis was undertaken utilising SIDRA Intersection 6.0.

The SIDRA model was calibrated using existing traffic count data to reflect site observations with respect to vehicle behaviour and intersection performance. As such, the intersection was modelled as a sign controlled T-intersection. A bunching factor was applied to northbound traffic (15%) on Captain Cook Highway to account for the signalised intersection situated 204 metres south.

The existing overall average delay for the intersection during the PM peak periods was determined by SIDRA to be 3.5 seconds.

A conservative approach has been adopted throughout the traffic impact assessment with a growth rate of 2% being applied to approximate future traffic volumes, despite Department of Transport and Main Road's traffic segment reports indicating a decrease in traffic volume between the years 2009 and 2012.

Furthermore, the higher traffic generation peak rate of 0.85 vehicles per hour per dwelling for detached residential dwellings was adopted from "Road Planning and Design Manual 2005 – Appendix 3A". Additional traffic volumes resulting from the development during the peak period were subsequently determined as follows:

- Left turn movement Captain Cook Highway south approach – 10 vehicles per hour;
- Left turn movement Johnston Road west approach – 12 vehicles per hour;
- Right turn movement Johnston Road west approach – 14 vehicles per hour;
- Right turn movement Captain Cook Highway north approach – 13 vehicles per hour.

The results of this analysis have demonstrated that the impact of the traffic generated by the development on the average delay, queue lengths and degree of saturation are incidental. Comparison of Scenario 3 and 4 illustrates an increase in average delay of less than 1 second and an overall degree of saturation of 0.691 for the worst case scenario indicating that there is sufficient capacity of the intersection for the additional traffic volumes and background growth of existing traffic.

The critical movements identified for this traffic impact assessment were the right turn facilities provided on Johnston Road and Captain Cook Highway north approach. Results have indicated that both turning facilities will sufficiently accommodate traffic generated by the development in addition to 10 years growth on existing traffic volumes with little impact on the average delay of these movements.

Based on the analysis undertaken with the 20 November 2014 traffic count data, the existing intersection layout is sufficient to accommodate queue lengths for all scenarios assessed with only incidental increase in movement delay times between the pre- and post-development scenarios. This indicates that no intersection upgrade works are warranted.

Appendix A

TMR Segment Report – 2009 and 2012

RP No.	SYMBOL	C'WAY	W	T	M	SIGNAGE	REFERENCE POINTS AND ROAD FEATURES	REF. No.	LOCALITY	PARISH	AADT 2009		ACCESS	STEWARD	SPEED	Gazettal CHAINAGE	Against GAZETTAL	CLASS	LOCAL	STATE	FED
		1					WARREN ST	# 235	PALM						80	24.886	50.045				
		1					BUCHAN ST (BUCHAN PT)	# 236								25.702	49.229				
		1					SUICIDE BEND									26.966	47.965				
		1					ELLIS BEACH VAN PARK		ELLIS BEACH						60	28.125	46.806				
		1					CASCADE CK CULVERT (6m) 3/1900 x 1130									28.370	46.561				
20A/12		1					S/ABUT SPRING CREEK CULVERT									28.595	46.336				
20A/13		1					S/ABUT SIMPSONS PT CULVERT									30.804	44.127				
		1					OLD SHIRE BOUNDARY - CAIRNS CITY / DOUGLAS								80	30.989	43.942				
		2					START C'WAY 2									31.822	43.109				
		3					START C'WAY 3									31.822	43.109				
		1					END C'WAY 2								100	32.369	42.562				
		1					END C'WAY3									32.409	42.522				
20A/14		1					S/ABUT CULVERT # 45/104 (11m) 5/2100 x 1500									33.595	41.336				
		1					CULVERT #45/118 (5m) 2/2100 x 1850	# 22957							80	35.200	39.731				
		1					PRIVATE ACCESS									35.462	39.469				
							WET TROPICS BOUNDARY									35.750	39.181				
		1					REDCLIFF POINT									35.785	39.146				
		1					RIFLE RANGE RD									37.829	37.102				
		1					CULVERT # 45/141	# 22955								37.837	37.094				
20A/15		1					S/ABUT CULVERT # 45/148 (15m) 7/2100 x 1200								100	38.612	36.319				
		1					TIN CREEK CULVERT # 45/154 (13m) 6/2100 x 2100	# 22954	WANGETTI	DULANBAN	5246	12.28%				39.735	35.196				
		1					QUAID RD									40.209	34.722				
		1					EVANS ST									40.492	34.439				
20A/16		1					S/ABUT HARTLEYS CK BRIDGE (41m)	# 7786							80	40.831	34.100				
		1					WANGETTI BEACH RD	# 237								40.932	33.999				
		1					REX LOOKOUT	# 236011							60	42.051	32.880				
		1					TURTLE COVE RESORT									44.967	29.964				
20A/17		1				X	TURTLE CREEK CULVERT # 45/210 (7m) 3/2100 x 2100	# 22952								45.007	29.924				
		1					WET TROPICS BOUNDARY									46.145	28.786				
		1					OAK BEACH RD									49.484	25.447				
20A/18		1				X	GRANTS CREEK CULVERT # 45/275 (13m) 4/3300 x 2700	# 22951								49.620	25.311				
		1					REYNOLDS RD	# 1055								49.978	24.953				
		1					TOLL GATE RD									51.628	23.303				
		1					CULVERT # 45/288 (3m) 1/2650 x 2750	# 22950	PEBBLY BEACH						80	51.780	23.151				
		1					PEBBLY BEACH DRIVE									52.114	22.817				
		1					WET TROPICS BOUNDARY									52.265	22.666				
		1					CULVERT # 45/292 (5m) 2/2100 x 1500	# 22949								52.275	22.656				
		1					WET TROPICS BOUNDARY									52.475	22.456				
		1					YULE POINT (SIGN)									52.760	22.171				
		1					SHERRINGTON RD									55.528	19.403				
		1					TREZISE RD	# 1056								55.750	19.181				
20A/19		1					S/ABUT MOWBRAY RIVER BRIDGE (72m)	# 7787							100	56.878	18.053				
		1					S/ABUT MOWBRAY RIVER BRIDGE OVERFLOW (24m)	# 7788								57.080	17.851				
		1					MOWBRAY RIVER RD	# 238								58.017	16.914				
		1					ANDREASSEN RD									58.159	16.772				
		1					CULVERT # 45/335 (5m) 2/2100 x 2750	# 22948							80	59.049	15.882				
		1					CRAIGLIE (SIGN)									59.158	15.773				
		1					BEOR ST		CRAIGLIE	SALISBURY						59.243	15.688				
		1					DICKSON ST / OLD PORT RD								70	59.639	15.292				
		1					PERMANENT TRAFFIC COUNT SITE - (800m STH OF PORT DOUGLAS RD)	# 110022								59.854	15.077				
20A/20		1					INT 20A / 6504 PORT DOUGLAS ROAD	# 132							80	60.666	14.265				
		1					FERRARO RD	# 1058								60.894	14.037				
		1					CREES CK CULVERT # 45/343 (6m) 3/2000 x 2100	# 24527								61.466	13.465				
		1					HERITAGE LANE									61.955	12.976				
		1					TRAM X'ING	# 77211								62.276	12.655				
		1					McCLELLAND RD									63.544	11.387				
20A/21		1				X	PACKERS CREEK CULVERT # 45/359 (5m) 4/1200 x 900									63.960	10.971				
		1					COOLALINGA DR	# 1059			5686	7.67%				64.636	10.295				
		1					COLENSO RD	# 1060								66.573	8.358				
		1					KILLAHOE DUMP RD									67.041	7.890				
		1					CULVERT # 45/368 (4m) 2/1800 x 2150	# 22947							100	67.436	7.495				
		1					COOYA BEACH T/O / BONNIE DOON RD	# 406								68.967	5.964				
		1					McCRAKEN RD									69.710	5.221				
		1					S/ABUT CASSOWARY CREEK BRIDGE (55m)	# 7789								70.052	4.879				
20A/22		1					INT 20A / 653 MOSSMAN - MT MOLLOY ROAD / TOLENTINI RD	# 104								70.665	4.266				
		1					TRAM X'ING	# 77411								70.679	4.252				
		1					S/ABUT SOUTH MOSSMAN RIVER BRIDGE (91m)	# 7790								71.352	3.579				
		1					TRAM X'ING	# 77511								71.732	3.199				
		1					SHANNONVALE ST	# 239							80	72.052	2.879				
		1					SAWMILL ST									72.169	2.762				
		1					QUAID ST									72.245	2.686				
		1					BERZINSKI ST									72.358	2.573				
		1					DOUGLAS SHIRE DEPOT RD									72.710	2.221				
		1					CONNOLLY ST	# 1061								72.757	2.174				
		1					DOUGLAS SHIRE DEPOT RD									72.823	2.108				
		1					BLAIN ST	# 1062							50	72.977	1.954				
		1					MAXWELL ST (STH)	# 514								73.305	1.626				
		1					FORREST GLEN RD (MAXWELL ST NTH)									73.442	1.489				
		1				X	PARKER CREEK CULVERT (9m) 3/3000 x 2400	# 2631								73.799	1.132				
		1					HARPER ST	# 1063								74.198	0.733				
		1					JOHNSTON RD (MOSSMAN GORGE)	# 240								74.405	0.526				
		1					GROGAN ST	# 1064								74.609	0.322				
		2&3					START C'WAY 2 & 3									74.630	0.301				
		3					WILLIAM ST									74.676	0.255				
		2					BOW ST	# 1065							60	74.757	0.174				
20A/24		2					MILL ST / 655 MOSSMAN - DAINTREE RD	# 106								74.931	0.000				

Traffic Analysis and Reporting System

AADT Segment Report

Road Section 20A - Captain Cook Highway (Cairns - Mossman)

Traffic Year 2012

Road Segments Summary - All Vehicles

Region	Segment Start TDist	Segment End TDist	Site	Site TDist	Description	AADT			VKT (Millions)			Data Year
						G	A	B	G	A	B	
203	0.000 km	1.690 km	111587	0.100 km	100m north of Florence St	13,586	12,109	25,695	8.38052	7.46944	15.84996	2011
203	1.690 km	2.430 km	111596	2.330 km	100M EAST OF ARTHUR ST	18,068	14,237	32,305	4.88017	3.84541	8.72558	2011
203	2.430 km	3.710 km	110013	3.500 km	Southern Abutment of Saltwater Ck Bridge	19,127	19,313	38,440	8.93613	9.02303	17.95917	2012
203	3.710 km	11.483 km	111601	6.700 km	Sth abut Barron River Bridge	14,334	15,582	29,916	40.66764	44.20839	84.87603	2010
203	11.483 km	12.940 km	110045	12.200 km	Avondale Ck, 700m sth of Kennedy Hwy	21,938	21,926	43,864	11.66674	11.66036	23.32709	2012
203	12.940 km	16.190 km	111619	13.900 km	100m north of Stanton Rd	16,583	17,090	33,673	19.67158	20.27301	39.94460	2011
203	16.190 km	21.320 km	110021	19.500 km	100m South of Deep Creek, Kewarra	8,828	8,788	17,616	16.52999	16.45509	32.98508	2012
203	21.320 km	24.450 km	111579	23.090 km	Delaneys Creek	6,341	6,258	12,599	7.24428	7.14945	14.39373	2012
203	24.450 km	60.810 km	110022	60.000 km	Craiglie, 800m South of Port Douglas Rd	2,821	2,794	5,615	37.43862	37.08029	74.51891	2012
203	60.810 km	70.801 km	111610	67.650 km	WiM Site Mossman South	2,763	2,756	5,519	10.07587	10.05035	20.12622	2011
203	70.801 km	74.931 km	111623	74.000 km	Parker Ck	3,604	3,574	7,178	5.43285	5.38763	10.82048	2012
								Totals	170.92439	172.60245	343.52684	

Road Segments Summary - Heavy Vehicles only

VKT totals are calculated only if traffic class data is available for all sites.

Region	Segment Start TDist	Segment End TDist	Site	Site TDist	Description	HV AADT						HV VKT (Millions)			Data Year
						G		A		B					
						AADT	HV %	AADT	HV %	AADT	HV %	G	A	B	
203	0.000 km	1.690 km	111587	0.100 km	100m north of Florence St	679	5.00%	558	4.61%	1,237	4.81%	0.41884	0.34420	0.76304	2011
203	1.690 km	2.430 km	111596	2.330 km	100M EAST OF ARTHUR ST	920	5.09%	677	4.76%	1,597	4.94%	0.24849	0.18286	0.43135	2011
203	2.430 km	3.710 km	110013	3.500 km	Southern Abutment of Saltwater Ck Bridge	893	4.67%	892	4.62%	1,785	4.64%	0.41721	0.41674	0.83395	2012
203	3.710 km	11.483 km	111601	6.700 km	Sth abut Barron River Bridge	853	5.95%	850	5.46%	1,703	5.69%	2.42008	2.41157	4.83166	2010
203	11.483 km	12.940 km	110045	12.200 km	Avondale Ck, 700m sth of Kennedy Hwy										2012
203	12.940 km	16.190 km	111619	13.900 km	100m north of Stanton Rd	686	4.14%	658	3.85%	1,344	3.99%	0.81377	0.78055	1.59432	2011
203	16.190 km	21.320 km	110021	19.500 km	100m South of Deep Creek, Kewarra	531	6.01%	523	5.95%	1,054	5.98%	0.99427	0.97929	1.97356	2012
203	21.320 km	24.450 km	111579	23.090 km	Delaneys Creek	457	7.21%	463	7.40%	920	7.30%	0.52210	0.52895	1.05105	2012
203	24.450 km	60.810 km	110022	60.000 km	Craiglie, 800m South of Port Douglas Rd	272	9.64%	275	9.84%	547	9.74%	3.60982	3.64964	7.25946	2012
203	60.810 km	70.801 km	111610	67.650 km	WiM Site Mossman South	215	7.78%	210	7.62%	425	7.70%	0.78404	0.76581	1.54985	2011
203	70.801 km	74.931 km	111623	74.000 km	Parker Ck	291	8.07%	298	8.34%	589	8.21%	0.43867	0.44922	0.88789	2012
											Totals				

AADT Segment Report
Provides a summary of the traffic flow data collected at the related site within each AADT Segment of the Road Section.

AADT Segment
Is a subdivision of a Road Section. The boundaries of an AADT Segment are it's Start Point and End Point (or Start and End Through Distance (TDist)) within the Road Section. These distances are measured in kilometres from the begining of the Road Section in Gazettal Direction. AADT Segments are determined by the traffic volume, collected at a count Site, located within the limits of each AADT Segment.

Annual Average Daily Traffic (AADT)
Annual Average Daily Traffic (AADT) is the number of vehicles passing a point on a road in a 24 hour period, averaged over a calendar year.

Data Year
The most recent year traffic data was collected on an AADT Segment.

Gazettal Direction
The Gazettal Direction is the direction of the traffic flow. It can be easily recognised by referring to the name of the road eg. Road Section: 10A Brisbane - Gympie denotes that the gazettal direction is from Brisbane to Gympie.

- G Traffic flowing in Gazettal Direction
- A Traffic flowing against Gazettal Direction
- B The combined traffic flow in both Directions

Region
For administration purposes the Department of Transport and Main Roads has divided Queensland into 12 Regions.

Road Section
Is the Gazetted road from which the traffic data is collected. Each Road Section is given a code, allocated sequentially in Gazettal Direction. Larger roads are broken down into sections and identified by an ID code with a suffix for easier data collection and reporting (eg. 10A, 10B, 10C). Road Sections are then broken into AADT Segments which are determined by traffic volume.

Site
The physical location of a traffic counting device. Sites are located at a specified Through Distance along a Road Section.

Site TDist
The Through Distance in gazettal direction from the start of the Road Section at which the site is located.

Site Description
The description of the physical location of the traffic counting device.

Start and End Point
The unique identifier for the Through Distance along a Road Section.

Through Distance
The distance, in kilometres, from the beginning of the Road Section in Gazettal Direction.

Traffic Class
Is the 12 Austroads vehicle categories or classes into which vehicles are placed or binned. Traffic classes are formed in a hierarchical format.

Volume or All Vehicles
00 = 0A + 0B

Light Vehicles
0A = 1A
1A = 2A + 2B

Heavy Vehicles
0B = 1B + 1C + 1D
1B = 2C + 2D + 2E
1C = 2F + 2G + 2H + 2I
1D = 2J + 2K + 2L

The following classes are the categories for which data can be captured:

Volume
00 All vehicles.

2-Bin
0A Light vehicles
0B Heavy vehicles

4-Bin
1A Short vehicles
1B Truck or bus
1C Articulated vehicles
1D Road train

12-Bin
2A Short 2 axle vehicles
2B Short vehicles towing
2C 2 axle truck or bus
2D 3 axle truck or bus
2E 4 axle truck
2F 3 axle articulated vehicle
2G 4 axle articulated vehicle
2H 5 axle articulated vehicle
2I 6 axle articulated vehicle
2J B double
2K Double road train
2L Triple road train

Vehicle Kilometres Travelled (VKT)
Daily VKT is a measure of traffic demand and is the length of a section of road in kilometres multiplied by the AADT on it. The yearly VKT is the daily VKT multiplied by 365 days. The VKT in this report is the yearly VKT.

AADT Segment Summary - All Vehicles
The Total VKT can be used to gauge the demand on an entire Road Section.

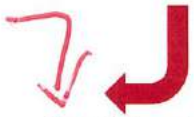
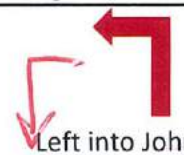
AADT Segment Summary - Heavy Vehicles only
A blank field indicates that vehicle classification data was not collected for this AADT Segment.

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

Light and Heavy Traffic Volumes

JOHNSTON ROAD/CAPTAIN COOK HIGHWAY - LIGHT AND HEAVY VEHICLE VOLUMES

Traffic Data - PM Peak 1445-1545	Captain Cook Highway (Southern Approach)						Johnston Rd (Western Approach)						Captain Cook Highway (Northern approach)					
	Left			Straight			Left			Right			Straight			Right		
	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**	Light	Heavy	**Total**
Existing Traffic	77	6	**83**	339	25	**364**	89	5	**94**	109	6	**115**	305	23	**328**	92	7	**99**
Base Case (opening year 2015)	79	6	**85**	346	26	**372**	91	5	**96**	111	6	**117**	311	23	**334**	94	7	**101**
Base Case + Development	89	6	**95**	346	26	**372**	103	5	**108**	125	6	**131**	311	23	**334**	107	7	**114**
Existing + 11 yr growth	96	7	**103**	422	31	**453**	111	6	**117**	136	7	**143**	379	29	**408**	114	9	**123**
Existing + 11 yr growth + development	106	7	**113**	422	31	**453**	123	6	**129**	150	7	**157**	379	29	**408**	127	9	**136**

Appendix D

Existing Intersection Performance (2014) – SIDRA Output

MOVEMENT SUMMARY

Site: Existing PM Peak Period

New Site
Giveway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Captain Cook Highway (south approach)											
1	L2	83	7.0	0.047	5.1	LOS A	0.0	0.0	0.00	0.54	33.4
2	T1	364	7.0	0.195	0.0	LOS A	0.0	0.0	0.00	0.00	40.0
Approach		447	7.0	0.195	0.9	NA	0.0	0.0	0.00	0.10	38.5
North: Captain Cook Highway (north approach)											
8	T1	328	7.0	0.176	0.0	LOS A	0.0	0.0	0.00	0.00	40.0
9	R2	99	7.0	0.112	7.6	LOS A	0.5	3.5	0.49	0.68	35.1
Approach		427	7.0	0.176	1.8	NA	0.5	3.5	0.11	0.16	38.7
West: Johnston Road (west approach)											
10	L2	94	5.0	0.104	6.8	LOS A	0.4	3.0	0.43	0.63	35.5
12	R2	115	5.0	0.347	17.6	LOS C	1.5	11.0	0.77	0.98	29.7
Approach		209	5.0	0.347	12.7	LOS B	1.5	11.0	0.62	0.82	32.0
All Vehicles		1083	6.6	0.347	3.5	NA	1.5	11.0	0.16	0.26	36.8

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Appendix E

Scenarios 1 to 4 – SIDRA Outputs

MOVEMENT SUMMARY

Site: Base Case + Development - PM Peak Period

New Site
Giveway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Captain Cook Highway (south approach)											
1	L2	95	6.3	0.053	5.0	LOS A	0.0	0.0	0.00	0.54	33.4
2	T1	372	7.0	0.199	0.0	LOS A	0.0	0.0	0.00	0.00	40.0
Approach		467	6.9	0.199	1.0	NA	0.0	0.0	0.00	0.11	38.4
North: Captain Cook Highway (north approach)											
8	T1	334	6.9	0.179	0.0	LOS A	0.0	0.0	0.00	0.00	40.0
9	R2	114	6.1	0.131	7.7	LOS A	0.5	4.0	0.50	0.69	35.0
Approach		448	6.7	0.179	2.0	NA	0.5	4.0	0.13	0.18	38.6
West: Johnston Road (west approach)											
10	L2	108	6.5	0.122	7.0	LOS A	0.5	3.5	0.44	0.64	35.4
12	R2	131	6.1	0.422	20.1	LOS C	2.0	14.4	0.81	1.03	28.7
Approach		239	6.3	0.422	14.2	LOS B	2.0	14.4	0.64	0.86	31.4
All Vehicles		1154	6.7	0.422	4.1	NA	2.0	14.4	0.18	0.29	36.3

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: Base Case - PM Peak Period

New Site
Giveway / Yield (Two-Way)
Design Life Analysis (Final Year): Results for 1 years

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Captain Cook Highway (south approach)											
1	L2	85	7.0	0.048	5.1	LOS A	0.0	0.0	0.00	0.54	33.4
2	T1	371	7.0	0.199	0.0	LOS A	0.0	0.0	0.00	0.00	40.0
Approach		456	7.0	0.199	0.9	NA	0.0	0.0	0.00	0.10	38.5
North: Captain Cook Highway (north approach)											
8	T1	335	7.0	0.179	0.0	LOS A	0.0	0.0	0.00	0.00	40.0
9	R2	101	7.0	0.115	7.7	LOS A	0.5	3.6	0.49	0.68	35.0
Approach		436	7.0	0.179	1.8	NA	0.5	3.6	0.11	0.16	38.7
West: Johnston Road (west approach)											
10	L2	96	5.0	0.107	6.8	LOS A	0.4	3.0	0.43	0.63	35.4
12	R2	117	5.0	0.363	18.3	LOS C	1.6	11.7	0.78	0.99	29.4
Approach		213	5.0	0.363	13.1	LOS B	1.6	11.7	0.63	0.83	31.8
All Vehicles		1105	6.6	0.363	3.6	NA	1.6	11.7	0.17	0.26	36.7

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 10yr horizon + Development - PM Peak Period

New Site
Giveway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Captain Cook Highway (south approach)											
1	L2	113	6.2	0.064	5.0	LOS A	0.0	0.0	0.00	0.54	33.4
2	T1	453	6.8	0.243	0.0	LOS A	0.0	0.0	0.00	0.00	40.0
Approach		566	6.7	0.243	1.0	NA	0.0	0.0	0.00	0.11	38.4
North: Captain Cook Highway (north approach)											
8	T1	408	7.1	0.219	0.0	LOS A	0.0	0.0	0.00	0.00	40.0
9	R2	136	6.6	0.177	8.6	LOS A	0.7	5.5	0.56	0.76	34.4
Approach		544	7.0	0.219	2.2	NA	0.7	5.5	0.14	0.19	38.4
West: Johnston Road (west approach)											
10	L2	129	4.7	0.159	7.5	LOS A	0.6	4.6	0.49	0.70	35.0
12	R2	157	4.5	0.691	35.7	LOS E	3.8	27.7	0.92	1.28	23.4
Approach		286	4.5	0.691	22.9	LOS C	3.8	27.7	0.73	1.01	27.5
All Vehicles		1396	6.4	0.691	6.0	NA	3.8	27.7	0.20	0.33	34.8

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 10yr horizon no development - PM Peak Period

New Site
Giveway / Yield (Two-Way)
Design Life Analysis (Final Year): Results for 11 years

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Captain Cook Highway (south approach)											
1	L2	103	7.0	0.058	5.1	LOS A	0.0	0.0	0.00	0.54	33.4
2	T1	453	7.0	0.243	0.0	LOS A	0.0	0.0	0.00	0.00	40.0
Approach		556	7.0	0.243	1.0	NA	0.0	0.0	0.00	0.10	38.5
North: Captain Cook Highway (north approach)											
8	T1	408	7.0	0.219	0.0	LOS A	0.0	0.0	0.00	0.00	40.0
9	R2	123	7.0	0.159	8.5	LOS A	0.7	4.9	0.55	0.75	34.5
Approach		531	7.0	0.219	2.0	NA	0.7	4.9	0.13	0.17	38.6
West: Johnston Road (west approach)											
10	L2	117	5.0	0.144	7.5	LOS A	0.6	4.1	0.49	0.69	35.0
12	R2	143	5.0	0.615	31.4	LOS D	3.1	22.7	0.90	1.19	24.6
Approach		260	5.0	0.615	20.6	LOS C	3.1	22.7	0.72	0.97	28.4
All Vehicles		1347	6.6	0.615	5.2	NA	3.1	22.7	0.19	0.30	35.4

Level of Service (LOS) Method: Delay (HCM 2000).
Vehicle movement LOS values are based on average delay per movement
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Appendix F

Extract Guidelines to Traffic Impact Assessment - Checklist

2. Issues checklist for other developments

	Generally required *	MR discretion
Development context		
site locality	X	
site access (existing use, location and layout)	X	
preferred land use	X	
adjacent land uses / approvals		X
description of road network (function, alignment, grade, lanes, intersections, median breaks, etc)	X	
existing traffic volumes (daily & peak)	X	
traffic growth trends	X	
speed environment / speed surveys		X
existing parking provision	X	
current Main Roads planning and RIP	X	
road hierarchy	X	
public transport network and services (existing and planned)	X	
pedestrian / bicycle facilities	X	
crash history		X
flood immunity of access route		X
existing pavement standard / condition		X
Development proposal		
proposed uses and scale (dwellings, rooms, floor area)	X	
operating hours, peaks	X	
number of employees / visitors	X	
travel demand management policies		X
site layout (including adjoining connections to properties and other roads)	X	
access form and location (queuing and storage)	X	
development staging	X	
traffic demand (vehicle / pedestrian / bicycle / public transport)	X	
stormwater and drainage works (internal)		X
stormwater and drainage works (external)	X	
construction traffic	X	
service vehicle arrangements (access and on-site manoeuvring areas etc)	X	
proposed parking provision	X	
trip distribution / assignment	X	
haulage routes (including vehicle type and operating times)		X
Impact assessment and remedial works treatments		
traffic operation (including pedestrian, cycle and public transport)	X	
road safety issues	X	
pavement and bridge impacts		X
changes to the road network or planning	X	
noise / hydraulic impacts on state-controlled roads		X
visual amenity and other environmental impacts	X	

* *Depending upon the size / location of the development proposal, Main Roads may reduce the number of issues to be considered in an RIA.*

Appendix F

Response column key:
☑ Achieved
P/S Performance solution
N/A Not applicable

1.1 Managing noise and vibration impacts from transport corridors state code

Table 1.1.2: Reconfiguring a Lot

Performance outcomes	Acceptable outcomes	Response	Comment
Future anticipated accommodation activity near a state-controlled road or type 1 multi-modal corridor			
PO1 Development involving land where a future anticipated accommodation activity is made exempt or self-assessable development under a local planning instrument is to achieve acceptable noise levels for residents and visitors by mitigating adverse impacts on the development site from noise generated by a state-controlled road or a type 1 multi-modal corridor.	**AO1.1** Land for a future anticipated accommodation activity exposed to noise from a state-controlled road or type 1 multi-modal corridor meets the following external noise criteria at the building envelope or if the building envelope is unknown, the deemed-to-comply setback distance for buildings stipulated by the local planning instrument or relevant building regulations#: (1) =57 dB(A) L_{10} (18 hour) free field (measured L_{90} (18 hour) free field between 6 am and 12 midnight =45 dB(A)) (2) =60 dB(A) L_{10} (18 hour) free field (measured L_{90} (18 hour) free field between 6 am and 12 midnight >45 dB(A)).	P/S	It is expected that given the positioning of the new stages of development being no closer to the state-controlled road than the existing stages within the estate, similar standards of noise mitigation will be imposed to ensure acceptable noise criteria levels for future residents are met.
Future anticipated accommodation activity near a railway with more than 15 passing trains per day or a type 2 multi-modal corridor			
PO2 Development involving land where a future anticipated accommodation activity is made exempt or self-assessable development under a local planning instrument is to achieve acceptable noise levels for residents and visitors by mitigating adverse impacts on the development site from noise generated by a railway with more than 15 passing trains per day or a type 2 multimodal corridor.	**AO2.1** Land for a future anticipated accommodation activity exposed to noise from a railway with more than 15 passing trains per day or a type 2 multi-modal corridor meets the following external noise criteria at the building envelope or if the building envelope is unknown, the deemed-to comply setback distance for buildings stipulated by the local planning instrument or relevant building regulations#: (1) =62 dB(A) L_{eq} (24 hour) free field (2) =84 dB(A) (single event maximum sound pressure level) free field.	N/A	The subject site is not located within close proximity to a railway corridor.
Future anticipated accommodation activity near a busway or light rail			
PO3 Development involving land where a future anticipated accommodation activity is made exempt or self-assessable development under a local planning instrument is to achieve acceptable noise levels by mitigating adverse impacts on the development site from noise	**AO3.1** Land for a future anticipated accommodation activity exposed to noise from a busway or light rail meets the following external noise criteria at the building envelope or if the building envelope is unknown, the deemed-to-comply setback distance for buildings stipulated by the local government planning instrument or building regulations#:	P/S	It is expected that given the positioning of the new stages of development being no closer to the state-controlled road than the existing stages within the estate, similar standards of noise mitigation will be imposed to ensure acceptable noise criteria levels for future residents are met.

Performance outcomes	Acceptable outcomes	Response	Comment
generated by a busway or light rail.	(1) =52 dB(A) L_{eq} (1 hour) free field (maximum hour between 6 am and 10 pm) (2) =47 dB(A) L_{eq} (1 hour) free field (maximum hour between 10 pm and 6 am) (3) =66 dB(A) L_{max} free field.		
Noise barriers or earth mounds			
PO4 Noise barriers or earth mounds erected to mitigate noise from transport operations and infrastructure are designed, sited and constructed to: (1) maintain safe operation and maintenance of state transport infrastructure (2) minimise impacts on surrounding properties (3) complement the surrounding local environment (4) maintain fauna movement corridors where appropriate	**AO4.1** Where adjacent to a state-controlled road or type 1 multi-modal corridor, noise barriers and earth mounds are designed, sited and constructed in accordance with Chapter 7 Integrated Noise Barrier *Transport Noise Management Code of Practice – Volume 1 Road Traffic Noise*, Department of Transport and Main Roads, 2013. OR	N/A	The proposal does not require the construction of a noise barrier or earth mound.
	AO4.2 Where adjacent to a railway or type 2 multi-modal corridor, noise barriers and earth mounds are designed, sited and constructed in accordance with *Civil Engineering Technical Requirement — CIVIL-SR-014 Design of noise barriers adjacent to railways*, Queensland Rail, 2011. OR	N/A	The proposal does not require the construction of a noise barrier or earth mound.
	AO4.3 No acceptable outcome is prescribed for noise barriers and earth mounds adjacent to a busway or light rail.	N/A	The proposal does not require the construction of a noise barrier or earth mound.

Response column key:
☑ Achieved
P/S Performance solution
N/A Not applicable

1.2 Managing air and lighting impacts from transport corridors state code

Table 1.2.1: Building work, material change of use and reconfiguring a lot

Performance outcomes	Acceptable outcomes	Response	Comment
Air quality			
PO1 Development involving sensitive development achieves acceptable levels of air quality for occupiers or users of the development by mitigating adverse impacts on the development from air emissions generated by state transport infrastructure.	**AO1.1** Every private open space and passive recreation area of an accommodation activity or residential care facility (other than a residential building) meet the air quality objectives in the *Environmental Protection (Air) Policy 2008* for the following indicators: (1) carbon monoxide (2) nitrogen dioxide (3) sulphur dioxide (4) photochemical oxidants (5) respirable particulate matter (PM10) (6) fine particulate matter (PM2.5) (7) lead (8) toluene (9) formaldehyde (10) xylenes. AND	P/S	Given the existing shopping centre and the large buffer area between the state-controlled road and the proposed stages of development, it is not considered that future residential uses will be affected from air emissions generated by state transport infrastructure.
	AO1.2 Every outdoor education area and passive recreation area of an educational establishment, childcare centre and hospital, meet the air quality objectives in the *Environmental Protection (Air) Policy 2008* for the following indicators: (1) carbon monoxide (2) nitrogen dioxide (3) sulphur dioxide (4) photochemical oxidants (5) respirable particulate matter (PM10) (6) fine particulate matter (PM2.5) (7) lead (8) toluene (9) formaldehyde (10) xylenes.	N/A	The proposal does not involve the establishment of an educational use or hospital upon the site.

Performance outcomes	Acceptable outcomes	Response	Comment
Lighting impacts			
PO2 Development involving an accommodation activity, residential care facility, or hospital achieves acceptable levels of amenity for residents and patients by mitigating lighting impacts from state transport infrastructure.	**AO2.1** Buildings for an accommodation activity, residential care facility (other than a residential building), or hospital are designed, sited and constructed to incorporate treatments to attenuate ingress of artificial lighting from state transport infrastructure during the hours of 10 pm – 6 am.	P/S	Given the existing shopping centre and the large buffer area between the state-controlled road and the proposed stages of development, it is not considered that future residential uses will be affected from lighting generated by state transport infrastructure.

Response column key:
☑ Achieved
P/S Performance solution
N/A Not applicable

18.1 Filling, excavation and structures state code

Table 18.1.1: All development

Performance outcomes	Acceptable outcomes	Response	Comment
All development			
PO1 Buildings, services, structures and utilities do not adversely impact on the safety or operation of: (1) state transport corridors (2) future state transport corridors (3) state transport infrastructure Editor's note: For a railway, *Section 3.2 – Structures, setbacks, utilities and maintenance* of the *Guide for development in a railway environment*, Department of Transport and Main Roads, 2014, provides guidance on how to comply with this performance outcome.	**AO1.1** Buildings, structures, services and utilities are not located in a railway, future railway land or public passenger transport corridor. AND	N/A	
	AO1.2 Buildings and structures are set back horizontally a minimum of three metres from overhead line equipment. AND	N/A	
	AO1.3 Construction activities do not encroach into a railway or public passenger transport corridor. AND	N/A	
	AO1.4 The lowest part of development in or over a railway or future railway land is to be a minimum of: (1) 7.9 metres above the railway track where the proposed development extends along the railway for a distance of less than 40 metres, or (2) 9.0 metres above the railway track where the development extends along the railway for a distance of between 40 and 80 metres. Editor's note: *Part A.10 – Clearances* of the *Guide for development in a railway environment*, Department of Infrastructure and Planning, 2010, provides guidance on how to comply with this acceptable outcome. AND	N/A	
	AO1.5 Existing authorised access points and access routes to state transport corridors for maintenance and emergency works are maintained. AND	N/A	
	AO1.6 Pipe work, services and utilities can be maintained	N/A	

Performance outcomes	Acceptable outcomes	Response	Comment
	without requiring access to the state transport corridor. AND		
	AO1.7 Pipe work, services and utilities are not attached to rail transport infrastructure. AND	N/A	
	AO1.8 Buildings and structures are set back a minimum of three metres from a railway viaduct. AND	N/A	
	AO1.9 Development below or abutting a railway viaduct is to be clear of permanent structures or any other activity that may impede emergency access or works and maintenance of rail transport infrastructure. Editor's note: Temporary activities below or abutting a railway viaduct could include, for example, car parking or outdoor storage.	N/A	
	AO1.10 Development above a railway is designed to facilitate ventilation as follows: (1) for development extending above a railway for a distance of less than 80 metres, gaps are provided to ensure natural ventilation, or (2) for development extending above a railway for a distance of more than 80 metres, ventilation shafts are provided.	N/A	
PO2 Development prevents unauthorised access to: (1) state transport corridors, (2) future state transport corridors, (3) state transport infrastructure, by people, vehicles and projectiles.	**AO2.1** Fencing is provided along the property boundary with the railway. Editor's note: Where fencing is provided it is to be in accordance with the railway manager's standards. AND	N/A	
	AO2.2 Accommodation activities with a publicly accessible area located within 10 metres from the boundary of a railway or 20 metres from the centreline of the nearest railway track (whichever is the shorter distance), include throw protection screens for the publicly accessible area as follows: (1) openings of no greater than 25 mm x 25 mm	N/A	

Performance outcomes	Acceptable outcomes	Response	Comment
	(2) height of 2.4 metres vertically above the highest toe hold if see-through, or 2 metres if non see-through. Editor's note: Expanded metal is considered see-through. AND		
	AO2.3 Development in or over a railway or future railway land includes throw protection screens. Editor's note: Throw protection screens in a railway or future railway land designed in accordance with the relevant provisions of the *Civil Engineering Technical Requirement CIVIL-SR-005 Design of buildings over or near railways*, Queensland Rail, 2011, and the *Civil Engineering Technical Requirement CIVIL-SR-008 Protection screens*, Queensland Rail, 2011, comply with this acceptable outcome. AND	N/A	
	AO2.4 Built to boundary walls and solid fences abutting a railway are protected by an anti-graffiti coating. AND	N/A	
	AO2.5 Road barriers are installed along any proposed roads abutting a railway. Editor's note: Road barriers designed in accordance with Queensland Rail *Civil Engineering Technical Requirement CIVIL-SR-007 Design and selection criteria for road/rail interface barriers* comply with this acceptable outcome. AND	N/A	
	AO2.6 Proposed vehicle manoeuvring areas, driveways, loading areas or carparks abutting a railway include rail interface barriers. Editor's note: A Registered Professional Engineer of Queensland (RPEQ) certified barrier design complies with this acceptable outcome.	N/A	
PO3 Buildings and structures in, over or below a railway or future railway land are able to sustain impacts to their structural integrity in the event of an impact from a derailed train.	**AO3.1** Buildings and structures, including piers or supporting elements, located in, over or below a railway or future railway land are designed and constructed in accordance with *AS5100 Bridge design*, *AS 1170 Structural design actions* and *Civil Engineering Technical Requirement CIVIL-SR-012 Collision protection of supporting elements*	N/A	

Performance outcomes	Acceptable outcomes	Response	Comment
	adjacent to railways, Queensland Rail, 2011. Editor's note: *Part A.9 – Collision protection* of the *Guide for development in a railway environment*, Department of Infrastructure and Planning, 2010, provides guidance on how to comply with this acceptable outcome.		
PO4 Buildings and structures in, over, below or within 50 metres of a state-controlled transport tunnel or a future state-controlled transport tunnel have no adverse impact on the structural integrity of the state-controlled transport tunnel.	**AO4.1** Development in, over, below or within 50 metres of a state-controlled transport tunnel or future state-controlled transport tunnel ensures that the tunnel is: (1) not vertically overloaded or affected by the addition or removal of lateral pressures (2) not adversely affected as a result of directly or indirectly disturbing groundwater or soil. Editor's note: To demonstrate compliance with this acceptable outcome, it is recommended that a Registered Professional Engineer of Queensland (RPEQ) certified geotechnical assessment, groundwater assessment and structural engineering assessment be prepared and submitted with the application.	N/A	
PO5 Development involving dangerous goods adjacent to a railway or future railway land does not adversely impact on the safety of a railway.	**AO5.1** Development involving dangerous goods, other than hazardous chemicals below the threshold quantities listed in table 5.2 of the *State Planning Policy guideline: State interest – emissions and hazardous activities, Guidance on development involving hazardous chemicals*, Department of State Development, Infrastructure and Planning, 2013, ensures that impacts on a railway from a fire, explosion, spill, gas emission or dangerous goods incident can be appropriately mitigated. Editor's note: To demonstrate compliance with this acceptable outcome, it is recommended that a risk assessment be undertaken in accordance with *Attachment 1: Risk assessment guide* of the *Guide for development in a railway environment*, Department of Infrastructure and Planning, 2010.	N/A	
PO6 Any part of the development located within 25 metres of a state-controlled road or future state-controlled road minimises the potential to distract drivers and cause a safety hazard.	**AO6.1** Advertising devices proposed to be located within 25 metres of a state-controlled road or future state-controlled road are designed to meet the relevant standards for advertising outside the boundaries of, but visible from, a state-controlled road, outlined within the *Roadside advertising guide*, Department of Transport and Main Roads, 2013.	N/A	
PO7 Filling, excavation and construction does not adversely impact on or compromise the safety or operation of:	**AO7.1** Filling and excavation does not undermine, cause subsidence of, or groundwater seepage onto a state transport corridor or future state transport corridor.	N/A	

Performance outcomes	Acceptable outcomes	Response	Comment
(1) state transport corridors, (2) future state transport corridors, (3) state transport infrastructure.	Editor's note: To demonstrate compliance with this acceptable outcome for a state-controlled road, it is recommended that a filling and excavation report assessing the proposed filling and excavation be prepared in accordance with the requirements of the *Road planning and design manual*, Department of Transport and Main Roads, 2013. Editor's note: If a development involves filling and excavation within a state-controlled road, an approval issued by the Department of Transport and Main Roads under section 33 of the *Transport Infrastructure Act 1994* may be required. AND		
	AO7.2 Development within 25 metres of a railway or public passenger transport corridor and involving excavation, boring, piling or blasting does not result in vibration impacts during construction or blasting which would compromise the safety and operational integrity of the railway or public passenger transport corridor. Editor's note: To demonstrate compliance with this acceptable outcome it is recommended that an RPEQ certified geotechnical report be prepared and submitted with the application. Editor's note: Development within 25 metres of a railway or public passenger transport corridor may require an RPEQ certified vibration monitoring plan for the construction phase of development as a condition of approval.	N/A	The subject site is not located within 25 metres of a railway.
PO8 Filling and excavation does not interfere with or impact on existing or future planned services or public utilities on a state-controlled road.	**AO8.1** Any alternative service and public utility alignment must satisfy the standards and design specifications of the service or public utility provider, and any costs of relocation are borne by the developer. Editor's note: An approval issued by the Department of Transport and Main Roads under section 33 of the *Transport Infrastructure Act 1994* may be required.	N/A	
PO9 Retaining or reinforced soil structures required to contain fill and excavation: (1) do not encroach on a state transport corridor (2) are capable of being constructed and maintained without adversely impacting a state transport corridor	**AO9.1** Retaining or reinforced soil structures (including footings, rock anchors and soil nails) are not located in a state transport corridor or future state transport corridor. AND	N/A	
	AO9.2 Retaining or reinforced soil structures in excess of an overall height of one metre abutting a state transport corridor are to be designed and certified by a structural	N/A	

Performance outcomes	Acceptable outcomes	Response	Comment
(3) are constructed of durable materials which maximise the life of the structure.	RPEQ. Editor's note: To demonstrate compliance with this acceptable outcome a RPEQ report should demonstrate that the works will not destabilise state transport infrastructure or the land supporting this infrastructure. AND		
	AO9.3 Retaining or reinforced soil structures that are set back less than 750 millimetres from a common boundary with a state-controlled road are certified by a structural RPEQ and designed to achieve a low maintenance external finish. AND	N/A	
	AO9.4 Retaining or reinforced soil structures adjacent to a state-controlled road, and in excess of an overall height of two metres, incorporate design treatments (such as terracing or planting) to reduce the overall height impact. AND	N/A	
	AO9.5 Construction materials of all retaining or reinforced soil structures have a design life exceeding 40 years, and comply with the specifications approved by a RPEQ. AND	N/A	
	AO9.6 Temporary structures and batters do not encroach into a railway.	N/A	
PO10 Filling and excavation does not cause siltation and erosion run-off from the property, or wind blown dust nuisance onto a state-controlled road.	**AO10.1** Compaction of fill is carried out in accordance with the requirements of *AS 1289.0 2000 – Methods of testing soils for engineering purposes*.	N/A	The subject stages of development are located a significant distance away from the Captain Cook Highway. Detailed works plans will be prepared and submitted as part of the Operational Works phase and will ensure that the safety and operation of the existing state infrastructure is not compromised.
PO11 Where the quantity of fill or excavated spoil material being imported or exported for a development exceeds 10 000 tonnes, and haulage will be on a state-controlled road, any impact on the infrastructure is identified and mitigation measures implemented.	**AO11.1** The impacts on the state-controlled road network are identified, and measures are implemented to avoid, reduce or compensate the effects on the asset life of the state-controlled road. Editor's note: It is recommended that a pavement impact assessment report be prepared to address this acceptable outcome. Guidance for preparing a pavement impact assessment is set out in *Guidelines for assessment of road impacts of development (GARID)*, Department of Transport and Main Roads, 2006.	P/S	It is not expected that significant quantities of borrow and spoil material will result from the construction works associated with Stages 4 & 7 of the estate. Detailed works plans will be prepared and submitted as part of the Operational Works phase and will ensure that the safety and operation of the existing state infrastructure is not compromised.
PO12 Filling and excavation associated	**AO12.1** Filling and excavation associated with the design	N/A	

Performance outcomes	Acceptable outcomes	Response	Comment
with providing a driveway crossover to a state-controlled road does not compromise the operation or capacity of existing drainage infrastructure.	of driveway crossovers complies with the relevant Institute of Public Works Engineering Australia Queensland (IPWEAQ) standards. Editor's note: The construction of any crossover requires the applicant to obtain a permit to work in the state-controlled road corridor under section 33 of the *Transport Infrastructure Act 1994* and a section 62 approval under the *Transport Infrastructure Act 1994* for the siting of the access and associated works.		
PO13 Fill material does not cause contamination from the development site onto a state-controlled road.	**AO13.1** Fill material is free of contaminants including acid sulphate content, and achieves compliance with *AS 1289.0 – Methods of testing soils for engineering purposes* and *AS 4133.0-2005 – Methods of testing rocks for engineering purposes*.	P/S	Any fill material required for the works will be screened from any contaminants.
PO14 Vibration generated through fill compaction does not result in damage or nuisance to a state-controlled road.	**AO14.1** Fill compaction does not result in any vibrations beyond the site boundary, and is in accordance with *AS 2436–2010 – Guide to noise and vibration control on construction, demolition and maintenance sites*.	P/S	Detailed works plans will be prepared and submitted as part of the Operational Works phase and will ensure that the safety and operation of the existing state infrastructure is not compromised.

18.2 Stormwater and drainage impacts on state transport infrastructure state code

Response column key:
☑ Achieved
P/S Performance solution
N/A Not applicable

Table 18.2.1: All development

Performance outcomes	Acceptable outcomes	Response	Comment
Stormwater and drainage management			
PO1 Stormwater management for the development must ensure there is no worsening of, and no actionable nuisance in relation to peak discharges, flood levels, frequency or duration of flooding, flow velocities, water quality, ponding, sedimentation and scour effects on an existing or future state transport corridor for all flood and stormwater events that exist prior to development, and up to a 1 per cent annual exceedance probability.	**AO1.1** The development does not result in stormwater or drainage impacts or actionable nuisance within an existing or future state transport corridor. Editor's note: It is recommended that basic stormwater information is to be prepared to demonstrate compliance with AO1.1. OR	P/S	Detailed works plans will be prepared and submitted as part of the Operational Works phase and will ensure that the safety and operation of the existing state infrastructure is not compromised from future anticipated stormwater drainage from the development site.
	AO1.2 A stormwater management statement certified by an RPEQ demonstrates that the development will achieve a no worsening impact or actionable nuisance on an existing or future state transport corridor. OR	P/S	Detailed RPEQ accredited work plans will be prepared and submitted as part of the Operational Works phase and will ensure that no worsening impact of stormwater drainage is observed from the development site onto an existing or future state transport corridor.
	AO1.3 A stormwater management plan certified by an RPEQ demonstrates that the development will achieve a no worsening impact or actionable nuisance on an existing future state transport corridor. OR	P/S	Detailed RPEQ accredited work plans will be prepared and submitted as part of the Operational Works phase and will ensure that no worsening impact of stormwater drainage is observed from the development site onto an existing or future state transport corridor.
	AO1.4 For development on premises within 25 metres of a railway, a stormwater management plan certified by an RPEQ demonstrates that: (1) the development will achieve a no worsening impact or actionable nuisance on the railway (2) the development does not cause stormwater, roofwater, ponding, floodwater or any other drainage to be directed to, increased or concentrated on the railway (3) the development does not impede any drainage, stormwater or floodwater flows from the railway (4) stormwater or floodwater flows have been designed to: (a) maintain the structural integrity of the light rail transport infrastructure (b) avoid scour or deposition (5) additional railway formation drainage necessitated by the development is located within the premises where	N/A	The subject site is not located within 25 metres of a railway.

Performance outcomes	Acceptable outcomes	Response	Comment
	the development is carried out (6) retaining structures for excavations abutting the railway corridor provide for drainage.		
Lawful point of discharge			
PO2 Stormwater run-off and drainage are directed to a lawful point of discharge to avoid adverse impacts on a future or existing state transport corridor.	**AO2.1** Where stormwater run-off is discharged to a state transport corridor, the discharge is to a lawful point of discharge in accordance with section 1.4.3 of the *Road drainage manual*, Department of Transport and Main Roads, 2010 and section 3.02 of *Queensland urban drainage manual*, Department of Energy and Water Supply, 2013. OR	P/S	Detailed works plans will be prepared and submitted as part of the Operational Works phase and will ensure that the safety and operation of the existing state infrastructure is not compromised from future anticipated stormwater drainage from the development site.
	AO2.2 For development on premises within 25 metres of a railway, approval from the relevant railway manager for the railway, as defined in the *Transport Infrastructure Act 1994,* schedule 6 has been gained to verify the lawful point of discharge for stormwater onto the railway. AND	N/A	The subject site is not located within 25 metres of a railway.
	AO2.3 Development does not cause a net increase in or concentration of stormwater or floodwater flows discharging onto the state transport corridor during construction or thereafter. AND	P/S	Detailed works plans will be prepared and submitted as part of the Operational Works phase and will ensure that the safety and operation of the existing state infrastructure is not compromised from future anticipated stormwater drainage from the development site.
	AO2.4 Development does not create any additional points of discharge or changes to the condition of an existing lawful point of discharge to the state transport corridor.	P/S	Detailed works plans will be prepared and submitted as part of the Operational Works phase and will ensure that the safety and operation of the existing state infrastructure is not compromised from future anticipated stormwater drainage from the development site.
Sediment and erosion management			
PO3 Run-off from upstream development is managed to ensure that sedimentation and erosion do not cause siltation of stormwater infrastructure in the state transport corridor.	**AO3.1** Development with a moderate to high risk of erosion incorporates erosion and sediment control measures. Editor's note: For a state-controlled road where a development has a moderate to high risk of erosion as per section 13.5 of the *Road drainage manual*, Department of Transport and Main Roads, 2010, an erosion and sedimentation control plan should be provided to support a stormwater management plan.	N/A	The subject site is generally flat and is not at risk of soil erosion.

Response column key:
☑ Achieved
P/S Performance solution
N/A Not applicable

19.1 Access to state-controlled roads state code

Table 19.1.1: All development

Performance outcomes	Acceptable outcomes	Response	Comment
Location of the direct vehicular access to the state-controlled road			
PO1 Any road access location to the state-controlled road from adjacent land does not compromise the safety and efficiency of the state-controlled road.	**AO1.1** Any road access location to the state-controlled road complies with a decision under section 62 of the TIA. OR	N/A	No additional road access points are proposed as part of this development.
	AO1.2 Development does not propose a new or temporary road access location, or a change to the use or operation of an existing permitted road access location to a state-controlled road. OR	N/A	No additional road access points are proposed as part of this development.
	AO1.3 Any proposed road access location for the development is provided from a lower order road where an alternative to the state-controlled road exists. OR all of the following acceptable outcomes apply	N/A	No additional road access points are proposed as part of this development.
	AO1.4 Any new or temporary road access location, or a change to the use or operation of an existing permitted road access location, demonstrates that the development: (1) does not exceed the acceptable level of service of a state-controlled road (2) meets the sight distance requirements outlined in Volume 3, parts 3, 4, 4A, 4B and 4C of the Road planning and design manual, 2nd edition, Department of Transport and Main Roads, 2013 (3) does not exceed the acceptable operation of an intersection with a state-controlled road, including the degree of saturation, delay, queuing lengths and intersection layout (4) is not located within and/or adjacent to an existing or planned intersection in accordance with Volume 3, parts 4, 4A, 4B and 4C of the Road planning and design manual, 2nd edition, Department of Transport and Main Roads, 2013 (5) does not conflict with another property's road access location and operation	N/A	No additional road access points are proposed as part of this development.

Performance outcomes	Acceptable outcomes	Response	Comment
	Editor's Note: To demonstrate compliance with this acceptable outcome, it is recommended a traffic impact assessment be developed in accordance with Chapters 1, 4, 6, 7, 8 and 9 of the Guidelines for assessment of road impacts of development (GARID), Department of Main Roads, 2006, and the requirements of Volume 3, parts 4, 4A, 4B and 4C of the Road planning and design manual, 2nd edition, Department of Transport and Main Roads, 2013, SIDRA analysis or traffic modelling. AND		
	AO1.5 Development does not propose a new road access location to a limited access road. Editor's note: Limited access roads are declared by the chief executive under section 54 of the TIA. Details can be accessed by contacting the appropriate DTMR regional office.	N/A	No additional road access points are proposed as part of this development.
Number of road accesses to the state-controlled road			
PO2 The number of road accesses to the state-controlled road maintains the safety and efficiency of the state-controlled road.	**AO2.1** Development does not increase the number of road accesses to the state-controlled road. AND	N/A	No additional road access points are proposed as part of this development.
	AO2.2 Where multiple road accesses to the premises exist, access is rationalised to reduce the overall number of road accesses to the state-controlled road. AND	N/A	No additional road access points are proposed as part of this development.
	AO2.3 Shared or combined road accesses are provided for adjoining land having similar uses to rationalise the overall number of direct accesses to the state-controlled road. Editor's note: Shared road accesses may require easements to provide a legal point of access for adjacent lots. If this is required, then the applicant must register reciprocal access easements on the titles of any lots for the shared access.	N/A	No additional road access points are proposed as part of this development.
Design vehicle and traffic volume			
PO3 The design of any road access maintains the safety and efficiency of the state-controlled road.	**AO3.1** Any road access meets the minimum standards associated with the design vehicle. Editor's note: The design vehicle to be considered is the same as the design vehicle set under the relevant local government	N/A	No additional road access points are proposed as part of this development.

Performance outcomes	Acceptable outcomes	Response	Comment
	planning scheme. AND		
	AO3.2 Any road access is designed to accommodate the forecast volume of vehicle movements in the peak periods of operation or conducting the proposed use of the premises. AND	N/A	No additional road access points are proposed as part of this development.
	AO3.3 Any road access is designed to accommodate 10 year traffic growth past completion of the final stage of development in accordance with GARID. AND	N/A	No additional road access points are proposed as part of this development.
	AO3.4 Any road access in an urban location is designed in accordance with the relevant local government standards or IPWEAQ R-050, R-051 , R-052 and R-053 drawings. AND	N/A	No additional road access points are proposed as part of this development.
	AO3.5 Any road access not in an urban location is designed in accordance with Volume 3, parts 3, 4 and 4A of the Road planning and design manual, 2nd edition, Department of Transport and Main Roads, 2013.	N/A	No additional road access points are proposed as part of this development.
Internal and external manoeuvring associated with direct vehicular access to the state-controlled road			
PO4 Turning movements for vehicles entering and exiting the premises via the road access maintain the safety and efficiency of the state-controlled road.	**AO4.1** The road access provides for left in and left out turning movements only. AND	N/A	No additional road access points are proposed as part of this development.
	AO4.2 Internal manoeuvring areas on the premises are designed so the design vehicle can enter and leave the premises in a forward gear at all times. Editor's note: The design vehicle to be considered is the same as the design vehicle set under the relevant local government planning scheme.	N/A	No additional road access points are proposed as part of this development.
PO5 On-site circulation is suitably designed to accommodate the design vehicle associated with the proposed land use, in order to ensure that there is no impact on the safety and efficiency of	**AO5.1** Provision of on-site vehicular manoeuvring space is provided to ensure the flow of traffic on the state-controlled road is not compromised by an overflow of traffic queuing to access the site in accordance with *AS2890 – Parking facilities*.	N/A	No additional road access points are proposed as part of this development.

Performance outcomes	Acceptable outcomes	Response	Comment
the state-controlled road**.**	AND		
	AO5.2 Mitigation measures are provided to ensure that the flow of traffic on the state-controlled road is not disturbed by traffic queuing to access the site.	N/A	No additional road access points are proposed as part of this development.
Vehicular access to local roads within 100 metres of an intersection with a state-controlled road			
PO6 Development having road access to a local road within 100 metres of an intersection with a state-controlled road maintains the safety and efficiency of the state-controlled road.	**AO6.1** The road access location to the local road is located as far as possible from where the road intersects with the state-controlled road and accommodates existing operations and planned upgrades to the intersection or state-controlled road. AND	N/A	No additional road access points are proposed as part of this development.
	AO6.2 The road access to the local road network is in accordance with Volume 3, parts 3, 4 and 4A of the Road planning and design manual, 2nd edition, Department of Transport and Main Roads, 2013, and is based on the volume of traffic and speed design of both the local road and intersecting state-controlled road for a period of 10 years past completion of the final stage of development. AND	N/A	No additional road access points are proposed as part of this development.
	AO6.3 Vehicular access to the local road and internal vehicle circulation is designed to remove or minimise the potential for vehicles entering the site to queue in the intersection with the state-controlled road or along the state-controlled road itself.	N/A	No additional road access points are proposed as part of this development.

Response column key:
☑ Achieved
P/S Performance solution
N/A Not applicable

19.2 Transport infrastructure and network design state code

Table 19.2.1: All development

Performance outcomes	Acceptable outcomes	Response	Comment
All state transport infrastructure – except state-controlled roads			
PO1 Development does not compromise the safe and efficient management or operation of state transport infrastructure or transport networks. Editor's note: To demonstrate compliance with this performance outcome, it is recommended that a traffic impact assessment be prepared. A traffic impact assessment should identify any upgrade works required to mitigate impacts on the safety and operational integrity of the state transport corridor, including any impact on a railway crossing. An impact on a level crossing may require an Australian Level Crossing Assessment Model (ALCAM) assessment to be undertaken.	No acceptable outcome is prescribed.	P/S	Detailed works plans will be prepared and submitted as part of the Operational Works phase and will ensure that the safety and operation of the existing state infrastructure is not compromised.
PO2 Development does not compromise planned upgrades to state transport infrastructure or the development of future state transport infrastructure in future state transport corridors. Editor's note: Written advice from DTMR advising that there are no planned upgrades of state transport infrastructure or future state transport corridors that will be compromised by the development, will assist in addressing this performance outcome.	**AO2.1** The layout and design of the proposed development accommodates planned upgrades to state transport infrastructure. AND	P/S	Detailed works plans will be prepared and submitted as part of the Operational Works phase and will ensure that the safety and operation of the existing state infrastructure is not compromised.
	AO2.2 The layout and design of the development accommodates the delivery of state transport infrastructure in future state transport corridors. Editor's note: To demonstrate compliance with this acceptable outcome, it is recommended that a traffic impact assessment be prepared.	P/S	Detailed works plans will be prepared and submitted as part of the Operational Works phase and will ensure that the safety and operation of the existing state infrastructure is not compromised.
State-controlled roads			
PO3 Development does not compromise the safe and efficient management or operation of state-controlled roads. Editor's note: A traffic impact assessment will assist in addressing this performance outcome.	No acceptable outcome is prescribed.	P/S	Detailed works plans will be prepared and submitted as part of the Operational Works phase and will ensure that the safety and operation of the existing state infrastructure is not compromised.
PO4 Development does not compromise planned upgrades of the state-controlled road network or delivery of future state-	**AO4.1** The layout and design of the development accommodates planned upgrades of the state-controlled road	P/S	Detailed works plans will be prepared and submitted as part of the Operational Works phase and will ensure that the safety and operation of the existing state infrastructure is not

Performance outcomes	Acceptable outcomes	Response	Comment
controlled roads. Editor's note: Written advice from DTMR that there are no planned upgrades of state-controlled roads or future state-controlled roads which will be compromised by the development will assist in addressing this performance outcome.	AND		compromised.
	AO4.2 The layout and design of the development accommodates the delivery of future state-controlled roads. Editor's note: To demonstrate compliance with this acceptable outcome, it is recommended that a traffic impact assessment be prepared.	P/S	Detailed works plans will be prepared and submitted as part of the Operational Works phase and will ensure that the safety and operation of the existing state infrastructure is not compromised.
PO5 Upgrade works on or associated with, the state-controlled road network are undertaken in accordance with applicable standards.	**AO5.1** Upgrade works for the development are consistent with the requirements of the *Road planning and design manual*, 2nd edition, Department of Transport and Main Roads, 2013. AND	N/A	No upgrade works associated with the functioning of the state-controlled road network are expected to be undertaken as part of this development.
	AO5.2 The design and staging of upgrade works on or associated with the state-controlled road network are consistent with planned upgrades.	N/A	No upgrade works associated with the functioning of the state-controlled road network are expected to be undertaken as part of this development.
PO6 Development does not impose traffic loadings on the state-controlled road network which could be accommodated on the local road network.	**AO6.1** New lower order roads do not connect directly to a state-controlled road. AND	N/A	No additional road access points are proposed as part of this development.
	AO6.2 The layout and design of the development directs traffic generated by the development to use lower order roads.	☑	The proposed layout has direct road connection onto the existing internal road network established as part of the earlier stages of development for the estate.