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**From:** Billy Glover <billy.glover@cardno.com.au>  
**Sent:** Tuesday, 29 June 2021 5:19 PM  
**To:** CairnsSARA  
**Cc:** Anthony Westbury; Jenny Elphinstone; Enquiries; Rob Wheeler  
**Subject:** 2103-21727 SRA application correspondence  
**Attachments:** Q184103 - Letter - 2021 06 22.pdf; 2103-21727 SRA Advice notice.pdf

Att: Anthony Westbury

**RE: 2103-21727 SRA / ROL2021\_4012**

Hi Anthony,

Please find attached Traffic Engineering Technical Memorandum prepared by Cardno and dated 22 June 2021.

The attached memorandum is provided in response to SARA advice notice dated 12 April 2021, addressing SDAP State Code 1.

Furthermore, with regard to the timing of development, please see below development timing estimates and dependencies for Stage 2 development, noting these are estimates only and may be subject to changes. The below estimates coincide with the attached Traffic Engineering Technical Memorandum (Stage 2 assumed to be complete in 2022) demonstrating development will not exceed 5% of the base traffic for any movement in the design peak period in the year of opening each stage.

Development Timing (estimates)

**Stage 1**

Finalise Construction: July 2021  
Registered Titles: August 2021

**Stage 2**

Commence Construction: Early 2022  
Finalise Construction: Late 2022  
Registered Titles: Shortly after construction completion

**Stage 2 Dependencies**

The release of Stage 2 will be dependent on:

- Stage 1 lots completely sold out and settled
- Stage 2 approval and construction timeframes
- Weather factors/impacts during construction of Stage 2

Should you have any queries, please contact myself on the below.

Cc Jenny.Elphinstone@douglas.qld.gov.au; enquiries@douglas.qld.gov.au

Regards,

**Billy Glover**

PLANNER - TOWNSVILLE & CAIRNS  
CARDNO



Phone Direct +61 7 4034 0506

Address 15 Scott Street, Parramatta Park, Cairns, Queensland 4870 Australia

Email [billy.glover@cardno.com.au](mailto:billy.glover@cardno.com.au) Web [www.cardno.com](http://www.cardno.com)

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Cardno's management systems are certified to ISO9001 (quality) and AS4801/OHSAS18001 (occupational health and safety)

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**From:** No Reply <mydas-notifications-prod2@qld.gov.au>

**Sent:** Monday, 12 April 2021 2:29 PM

**To:** anthony.westbury@dsdilgp.qld.gov.au; Billy Glover <billy.glover@cardno.com.au>

**Subject:** 2103-21727 SRA application correspondence

Please find attached a notice regarding application [2103-21727 SRA](#).

If you require any further information in relation to the application, please contact the State Assessment and Referral Agency on the details provided in the notice.

*This is a system-generated message. Do not respond to this email.*

GE77-N



Email Id: RFLG-0421-0010-2845

Contact: Harj Singh

22 June 2021

Port Douglas Land Developments Pty Ltd  
C/o Cardno (Qld) Pty Ltd  
PO Box 1619  
**Cairns QLD 4870**

Attention: Billy Glover

Dear Billy,

**Cardno (Qld) Pty Ltd**

ABN 57 051 074 992

Level 11  
515 St Paul's Terrace  
Fortitude Valley QLD 4006  
Australia

**Phone +61 7 3369 9822**

**Fax +61 7 3369 9722**

[www.cardno.com](http://www.cardno.com)

**RE: NEW PORT ESTATE STAGE 2  
PHASE 2A: TRAFFIC ENGINEERING TECHNICAL MEMORANDUM**

## Introduction

Cardno Qld Pty Ltd (Cardno) has been engaged by Port Douglas Land Development Pty Ltd to provide traffic and transport engineering advice in relation to the proposed master planned residential development located in Craiglie, Port Douglas. The plan of the proposed development can be found in Appendix A.

The proposed development of the area will occur in stages. This letter assesses Stage 2 of the master planned development, which consists of approximately 35,000 sq.m developable area and 34 residential dwellings. The aim of this traffic statement is to address the following:

- > Traffic generated by the proposed Stage 2 development
- > Net increase in traffic generated by Stage 2 and whether the development triggers the 5% threshold
- > Expected impact on surrounding road network by net increase in traffic generation.

## Background

Cardno previously completed a Traffic Impact Assessment in 2019 assessing the proposed development against the requirements of the Douglas Shire Council (Council) Planning Scheme. The report specifically addressed Stage 1 and the Ultimate configuration of New Port Estate.

Stage 1 comprises of 32 lots, a drainage reserve and park area. In the ultimate form, the subdivision proposed to comprise 282 lots with various parks featured around the development. Since then, the newly developed plans indicate a reduction in the number of overall lots from 282 to 272.

An Advice Notice (AN) was issued for on the 12 April 2021 (Reference 2103-21727 SRA) for the Stage 2 development which proposes 34 residential lots and new internal roads. This letter is in response to the traffic engineering related to the traffic impact assessment items of SARA's Advice Notice. The relevant item has been reproduced below for ease of reference.

## IR Item 1

### **Issue:**

*In accordance with SDAP, State code 1: Development in state-controlled road environment, Performance outcome 20, it has not been adequately demonstrated that the existing Captain Cook Highway / Boer Street intersection can accommodate the accumulative traffic generation from Stage 1 and proposed Stage 2, without resulting in a worsening of operating conditions on the state-controlled road network.*

*The Traffic Impact Assessment (TIA) report prepared by Cardno, dated 16 October 2019, confirmed that the Stage 1 development (32 residential lots) would generate 27 vehicles per hour (vph) in the peak period. The 27vph is proportional to a 3.7% increase in traffic generation via the Captain Cook Highway / Boer Street intersection.*

*The proposed Stage 2 development proposes 34 residential lots. The accumulative traffic generation at the state-controlled intersection from both Stage 1 and proposed Stage 2 is expected to be above 5%.*

*In accordance with the Guide to Traffic Impact Assessment (GTIA), a development must not exceed 5% of the base traffic for any movement in the design peak periods in the year of opening of each stage.*

### **Action:**

*Provide the following:*

- *A TIA report in accordance with the GTIA with reference to section 6.4 of the GTIA.*
- *The TIA report must be prepared by a qualified professional and certified by a Registered Professional Engineer of Queensland (RPEQ).*
- *The TIA report is required to demonstrate compliance with PO20 – PO22 – Network Impacts of SDAP, State Code 1: Development in a state-controlled road environment.*

*The Department of Transport and Main Roads has advised to ensure the operating conditions of the state-controlled road network are maintained, the existing Captain Cook Highway / Boer Street intersection may be required to be upgraded to accommodate the accumulative traffic generation from the proposed development. The minimum upgrades required are likely to be a channelised right-turn (CHR) on Captain Cook Highway.*

## Proposed Development

The proposed Stage 2 development comprises of the following land use:

- > 34 residential lots

Refer to Appendix A for site specific information and boundary lines.

The proposed development is to take place as Stage 2 of the New Port Estate in Port Douglas. The site will gain access via Wabul Road, which leads onto the Captain Cook Highway / Milman Drive intersection. Figure 1-1 illustrates the proposed development location in relation to its site context.

Figure 1-1 Proposed Development Context

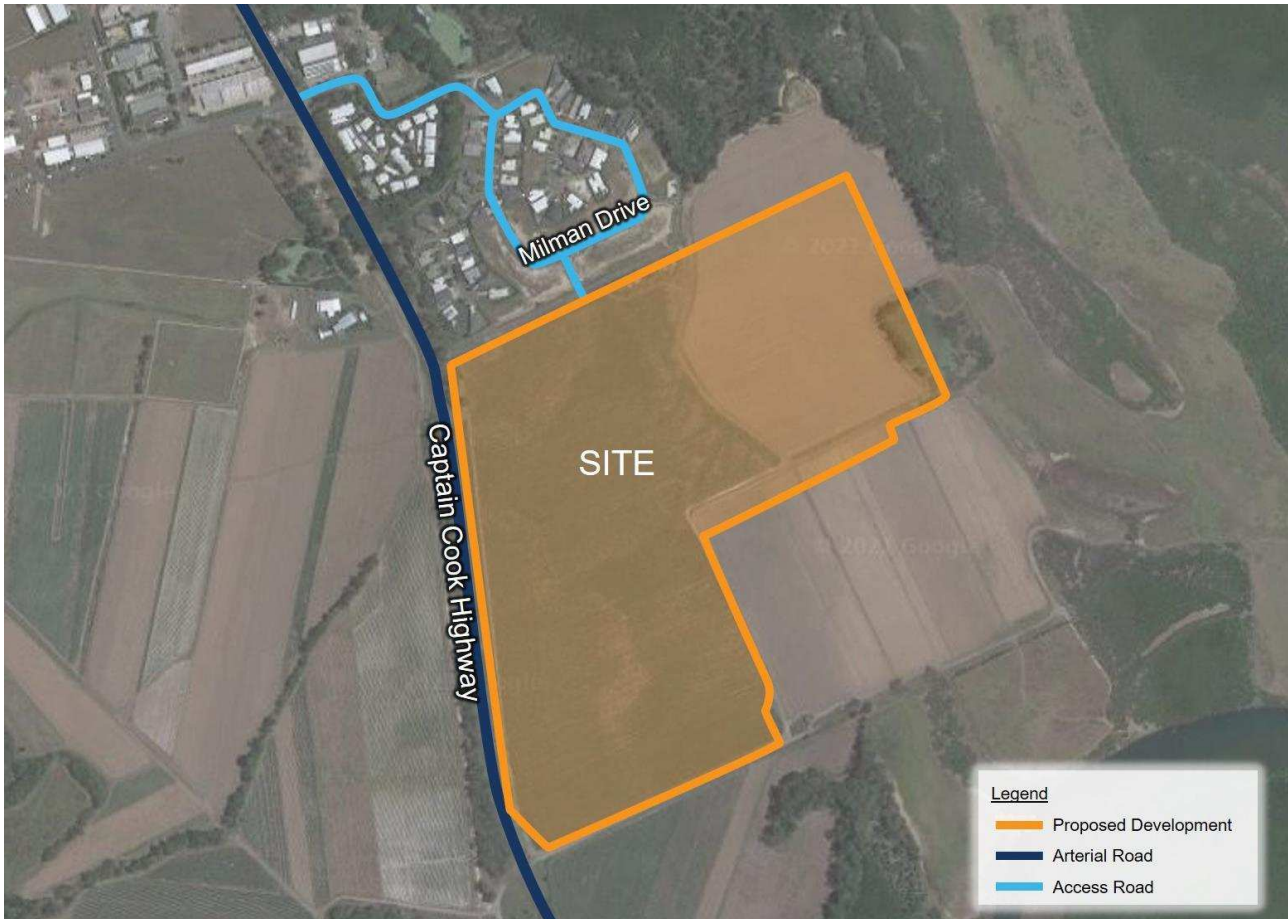


Source: Nearmap

## Road Hierarchy

The site has frontage along Captain Cook Highway to the west and connections to Milman Drive and Wabul Close to the north. The key roads related to the development are illustrated on Figure 1-2, with the key characteristics of these roads summarised in Table 1-1.

Figure 1-2 Existing Road Network



Source: Nearmap

Table 1-1 Local Road Network

Road	Authority	Classification	Posted Speed	Typical Form
Captain Cook Highway	TMR	Arterial Road	70km/h (Milman Drive intersection) 80/100km/h (Lot 2/SR431 Frontage)	Two lane two way, undivided, sealed
Milman Drive	Council	Access Road	50km/h	Two lane two way, undivided, sealed
Wabul Close	Council	Access Road	50km/h	Two lane two way, undivided, sealed

## Servicing Arrangement

Cardno has undertaken a swept path analysis to demonstrate the suitability of a Refuse Collection Vehicle (RCV) manoeuvring through the internal road network of the proposed development.

The swept path indicates that the RCV can safely and efficiently manoeuvre through the site. The detailed swept path drawings are attached in Appendix B.

It is noted that turnaround provisions for a refuse collection vehicle have not been provided as part of the Stage 2 subdivision, thus it is recommended that temporary turn treatments as part of the Stage 2 development as illustrated in Q184103-SK04-A.

## Trip Generation

The traffic impact assessment prepared by Cardno in 2019 outlined that at the construction of 270 lots, the operation of the Captain Cook Highway / Milman Drive intersection will exceed typical performance thresholds. As a result, it is expected that the provision of development lots up to 270 will not compromise the operation of the Captain Cook Highway / Milman Drive intersection. Considering the Stage 2 development is proposing 34 lots, it is expected that development traffic will be accommodated by the existing network.

The peak generation rates for the land uses have referenced the NSW Roads and Maritime Services (RMS) Guide to Traffic Generating Developments (August 2013 technical direction).

The traffic analysis will consist of two scenarios, the Stage 2 of development and the ultimate development. A summary of the peak trip generation has been summarised in Table 1-2.

Table 1-2 Adopted Trip Generation Rates

Scenario	Land Use	Development Yield	Trip Generation Rate		Trip Generation		Source
			AM	PM	AM	PM	
<b>Stage 1</b>	Low Density Residential	32 dwellings	0.85 trips per dwelling	0.85 trips per dwelling	27 vph	27 vph	RMS
<b>Stage 2</b>	Low Density Residential	34 dwellings	0.85 trips per dwelling	0.85 trips per dwelling	29 vph	29 vph	RMS
<b>Ultimate</b>	Low Density Residential	272 dwellings	0.85 trips per dwelling	0.85 trips per dwelling	231 vph	231 vph	RMS

As outlined in Table 1-2, it is estimated that Stage 1 of the development will generate 27 vph, Stage 2 of development will generate 29 vph and the ultimate development will generate 231 vph in the peak periods.

Table 1-3 below summarises the Stage 2 peak hour traffic generation.

Table 1-3 Peak Hour Traffic Generation – Stage 2

Scenario	AM	PM
<b>Stage 1</b>	27 vph	27 vph
<b>Stage 2</b>	29 vph	29 vph
<b>Ultimate</b>	231 vph	231 vph

As the Stage 1 and ultimate traffic generation was assessed as part of the 2019 Traffic Impact Assessment and the ultimate generation is less than what was previously assessed in the 2019 Traffic Impact Assessment, this report will focus on the Stage 2 development.

## Stage 2 Development Timing

The staging of the Stage 2 development has not been indicated by the client. Therefore, it has been assumed that Stage 2 will be complete in 2022. This is utilised in the operational assessment.

## Traffic Growth

Cardno has adopted a linear growth of 2% p.a to forecast potential future traffic demands at the key study intersection, in accordance with previous assessments. Based on previous experience in similar projects, Cardno believes this is an appropriate growth rate to adopt.

Applying the 2% p.a. growth rate to the 2019 background volumes, the 2022 volumes for the Captain Cook Highway / Milman Drive / Beor Street intersection were found and are shown in Table 1-4 below.

Table 1-4 Total Intersection Volume for Captain Cook Highway / Milman Drive / Beor Street

Year	Traffic Generation	
	AM	PM
<b>2022</b>	735	806

With regards to the increase in trips, the proportionate impact of the Stage 2 traffic generation has been calculated based on the total background trips for the year 2022. Considering Stage 2 will be delivered in 2022, by this time Stage 1 of the development will be constructed and operational. As a result, the Stage 1 trips will be considered existing trips and have been included in the background traffic. This is shown in Table 1-5 below.

Table 1-5 Stage 2 Traffic Generation Impact

Year	Trip Generation Rate	
	AM	PM
<b>Stage 2</b>	29	29
<b>2022 Background</b>	762	833
<b>Impact</b>	<b>+3.8%</b>	<b>+3.5%</b>

As indicated, the proposed Stage 2 development will result in a 3.8% increase in trips during the AM peak and a 3.5% increase in trips during the PM peak. As the impact is less than a 5% increase, the traffic impact is not considered to be significant and detailed analysis is not required.

## Summary

Cardno was engaged by Port Douglas Land Development Pty Ltd to provide traffic and transport engineering advice in relation to the proposed master planned residential development located in Craiglie, Port Douglas. This letter assesses the traffic generated by Stage 2 of the development and the expected impact on the surrounding network caused by this increase in traffic generation.

Upon review of the development plans and traffic generation analysis:

- > Stage 2 of the proposed development is comprised of 34 residential lots.
- > A swept path analysis has been undertaken with an RCV to demonstrate the suitability of an RCV manoeuvring through the proposed development. The design vehicle can safely and efficiently manoeuvre through the site.
- > The Stage 2 development plans do not provide turn around provisions for an RCV. Thus, it is recommended that temporary turnaround provisions are provided until the next stage of the development.
- > The additional trips generated by Stage 2 of the master planned residential development **would not** produce a significant increase in trips, as a maximum increase in trips of only 3.8% above the existing intersection volume is expected at most. Therefore, further traffic analysis is not considered to be required.

On the basis of the above, Stage 2 of the proposed development is considered to be suitable from a traffic perspective. The increase in traffic generation will not have significant impact on the existing intersection volume, therefore no further traffic analysis is required.

## Conclusion

Based on the above review, Stage 2 of the proposed development is compliant with the following standards / reports:

- > Queensland Department of Transport and Main Roads (TMR), Guide to Traffic Impact Assessments (GTIA), 2017
- > PO20 – PO22 Network Impacts of SDAP, State Code 1: Development in a state-controlled road environment
- > Douglas Shire Council (Council), Planning Scheme 2018
- > FNQROC Regional Development Manual
- > Roads and Maritime Services (RMS), NSW Government, Guide to Traffic Generating Developments: Updated Traffic Surveys, August 2013
- > Cardno Traffic Impact Assessment for Craiglie Subdivision, Port Douglas (Q184103, dated 16 October 2019)

It is concluded that the increased traffic generation is deemed negligible on the existing intersection volume.

Should you have any questions regarding the above, please contact Harj Singh on 33102352.

Yours sincerely,

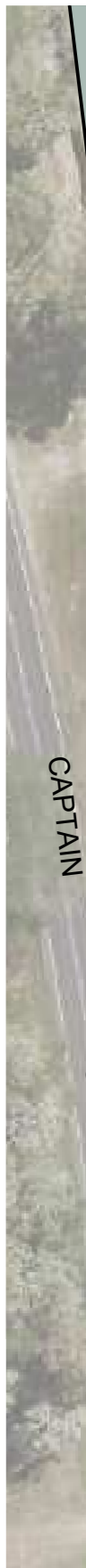


Harj Singh  
Senior Traffic Engineer (RPEQ 22364)  
for Cardno  
Direct Line: +61 7 33102352  
Email: harj.singh@cardno.com.au

APPENDIX

A

DEVELOPMENT PLANS



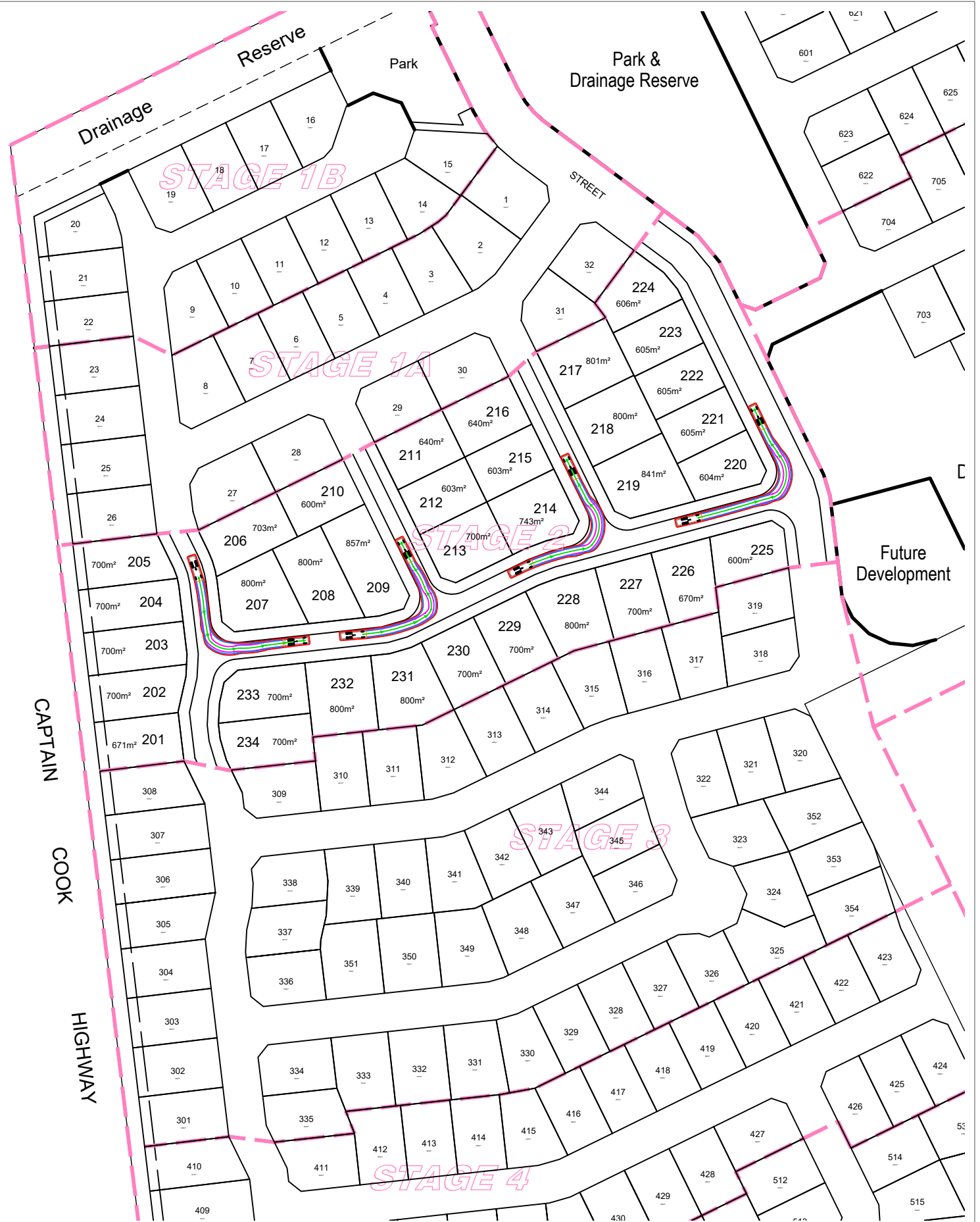
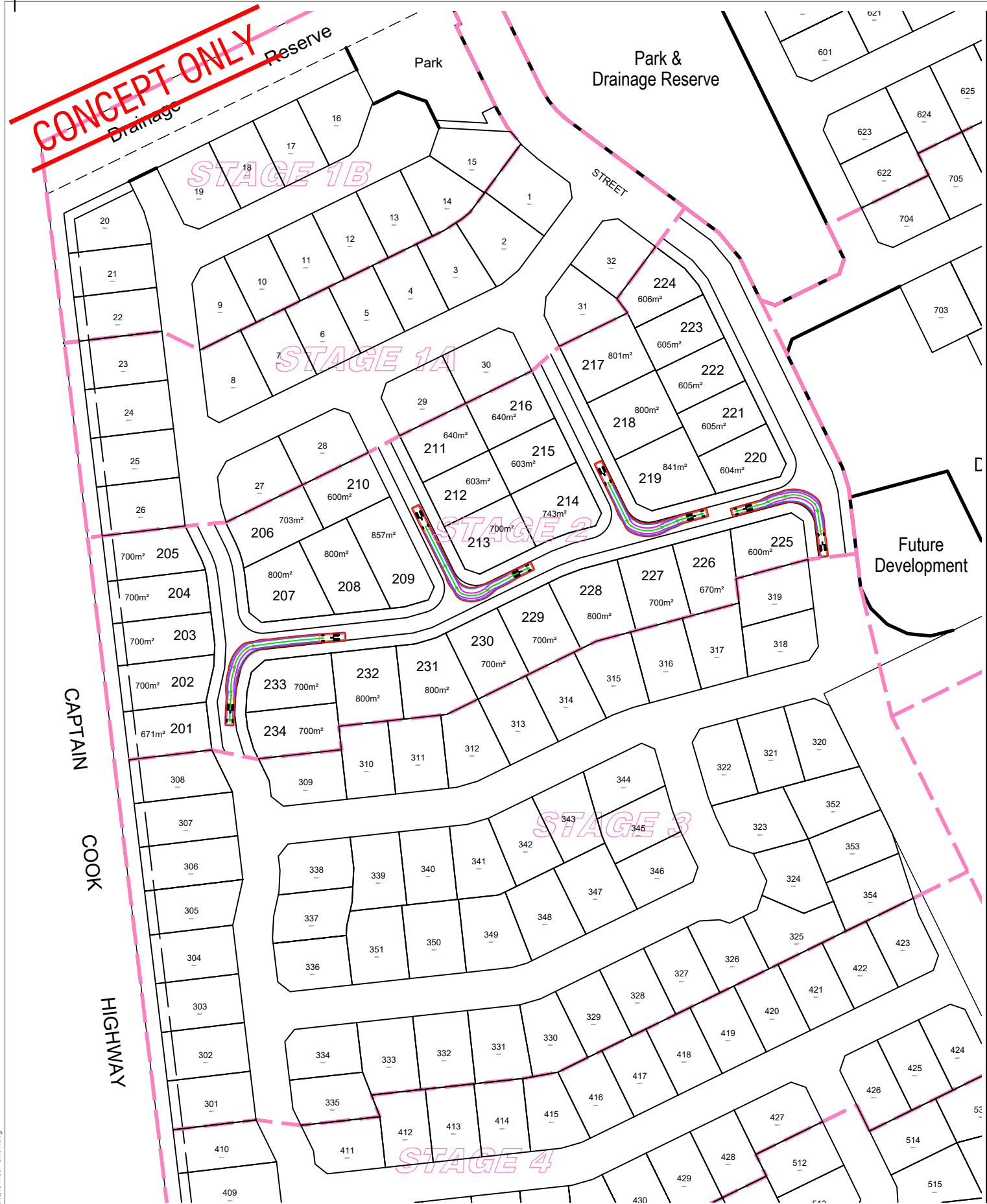
PORT DOUGLAS ESTATE  
CAPTAIN COOK HIGHWAY  
CRAIGLIE



APPENDIX

# B

SWEPT PATH

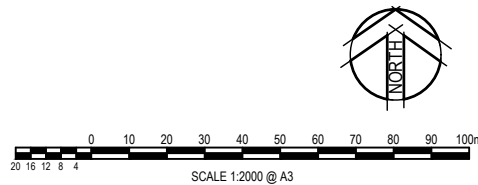


CAD File: G:\Q184103 - Craigie DA\Stage 2\CAD\Q184103 - SK01.dwg  
Imagery supplied by nearmap, May 2021

SWEPT PATH LEGEND	
	VEHICLE BODY
	FRONT TIRES
	VEHICLE PATH
	VEHICLE CLEARANCE (500mm)
	VEHICLE

TAPS Code Side Loader	
	Meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 39.9
Travel Height	: 4.0
Operating Height	: 4.50



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Cardno (Qld) Pty Ltd | ABN 57 051 074 992  
Level 11, 515 St Paul's Terrace  
Fortitude Valley, QLD 4006  
Tel: 07 3369 9822 Fax: 07 3369 9722  
Web: www.cardno.com.au

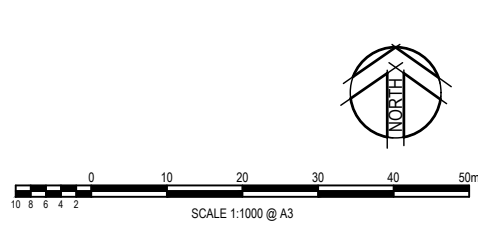
Port Douglas Land Developments			
Craigie DA Access Review RCV Swept Path			
Drawn J.Ting	Date 28/05/2021	Scale 1:2000	Size A3
Drawing Number Q184103 - SK03			Revision A



CAD File: G:\Q184103 - Craigie DA\Stage 2\CAD\Q184103 - SK01.dwg  
Imagery supplied by nearmap, May 2021

SWEEP PATH LEGEND	
	VEHICLE BODY
	FRONT TIRES
	VEHICLE PATH
	VEHICLE CLEARANCE (500mm)
	VEHICLE

	10.3
	1.5 5.50
TAPS Code Side Loader	
Meters	
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 39.9
Travel Height	: 4.0
Operating Height	: 4.50



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Level 11, 515 St Paul's Terrace  
Fortitude Valley, QLD 4006  
Tel: 07 3369 9822 Fax: 07 3369 9722  
Web: www.cardno.com.au

Port Douglas Land Developments			
Craigie DA			
Access Review			
RCV Sweep Path			
Drawn	Date	Scale	Size
J.Ting	28/05/2021	1:1000	A3
Drawing Number			Revision
Q184103 - SK04			A



SARA reference: 2103-21727 SRA  
Applicant reference: Q184103  
Council reference: ROL2021\_4012

12 April 2021

Port Douglas Land Developments Pty Ltd  
C/- Cardno  
Locked Bag 4006  
FORTITUDE VALLEY QLD 4006  
billy.glover@cardno.com.au

Attention: Billy Glover

Dear Sir/Madam

## **SARA advice notice – Stage 2 of New Port Estate, Captain Cook Highway, Craiglie**

(Advice notice given under section 35 of the Development Assessment Rules)

The State Assessment and Referral Agency (SARA) advises that your development application has not adequately demonstrated compliance with the State Development Assessment Provisions (SDAP).

SARA has reviewed your application material and the following issue with the proposed development has been identified:

<b>State code 1: Development in a state-controlled road environment</b>	
1.	<p><b><u>Issue:</u></b></p> <p>In accordance with SDAP, State code 1: Development in state-controlled road environment, Performance outcome 20, it has not been adequately demonstrated that the existing Captain Cook Highway / Boer Street intersection can accommodate the accumulative traffic generation from Stage 1 and proposed Stage 2, without resulting in a worsening of operating conditions on the state-controlled road network.</p> <p>The Traffic Impact Assessment (TIA) report prepared by Cardno, dated 16 October 2019, confirmed that the Stage 1 development (32 residential lots) would generate 27 vehicles per hour (vph) in the peak period. The 27vph is proportional to a 3.7% increase in traffic generation via the Captain Cook Highway / Boer Street intersection.</p> <p>The proposed Stage 2 development proposes 34 residential lots. The accumulative traffic generation at the state-controlled intersection from both Stage 1 and proposed Stage 2 is expected to be above 5%.</p>

	<p>In accordance with the <a href="#">Guide to Traffic Impact Assessment</a> (GTIA), a development must not exceed 5% of the base traffic for any movement in the design peak periods in the year of opening of each stage.</p> <p><b>Action:</b> Provide the following:</p> <ul style="list-style-type: none"> <li>• A TIA report in accordance with the GTIA with reference to section 6.4 of the GTIA.</li> <li>• The TIA report must be prepared by a qualified professional and certified by a Registered Professional Engineer of Queensland (RPEQ).</li> <li>• The TIA report is required to demonstrate compliance with PO20 – PO22 – Network Impacts of SDAP, State Code 1: Development in a state-controlled road environment.</li> </ul> <p>The Department of Transport and Main Roads has advised to ensure the operating conditions of the state-controlled road network are maintained, the existing Captain Cook Highway / Boer Street intersection may be required to be upgraded to accommodate the accumulative traffic generation from the proposed development. The minimum upgrades required are likely to be a channelised right-turn (CHR) on Captain Cook Highway.</p>
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**Please note that unlike an information request, assessment timeframes do not stop when advice is provided by SARA.**

### How to respond

It is recommended that you address these issues promptly and provide a response to SARA by **16 April 2021**. If you decide not to respond, your application will be assessed and decided based on the information provided to date.

Under the [Development Assessment Rules](#) (DA Rules), the issuing of advice does not stop the assessment timeframes. If you intend to provide additional information, it should be provided in a timely manner to allow sufficient time for the information to be considered. As such, you are strongly encouraged to consider using the 'stop the clock' provisions under s32 of the DA rules, to allow sufficient time for you to consider and respond to SARA's advice; and for SARA to consider any new or changed material provided.

If you wish to utilise the 'stop the clock' provisions, you should give notice to the assessing authority (assessment manager or referral agency) whose current period you wish to stop. This can be done through MyDAS2 or via correspondence.

You are requested to upload your response and complete the relevant tasks in [MyDAS2](#).

If you require further information or have any questions about the above, please contact Anthony Westbury, Planning Officer, on 40373215 or via email [CairnsSARA@dsdmip.qld.gov.au](mailto:CairnsSARA@dsdmip.qld.gov.au) who will be pleased to assist.

Yours sincerely



Joanne Manson  
A/Manager (Planning)

cc Douglas Shire Council, [enquiries@douglas.qld.gov.au](mailto:enquiries@douglas.qld.gov.au)

Development details	
Description:	Development permit      Reconfiguring a Lot (1 Lot into 34 Lots, New Road and Balance Lot).
SARA role:	Referral agency
SARA trigger:	Schedule 10, Part 9, Division 4, Subdivision 2, Table 1 (Planning Regulation 2017) <b>Reconfiguring a lot near a state-controlled road</b> Schedule 10, Part 9, Division 4, Subdivision 2, Table 3 (Planning Regulation 2017) <b>Reconfiguring a lot near a state-controlled road intersection</b>
SARA reference:	2103-21727 SRA
Assessment criteria:	<b>State code 1: Development in a state-controlled road environment</b>