

18th May 2026

OSE Reference: 25235

Chief Executive Officer
Douglas Shire Council
PO Box 723
Mossman Qld 4873

Attention: Neil Beck,

Re: OP 2026_5981/1 (1351631) – Subdivision for K.A.N. Developments Pty Ltd at Beor Street Craiglee – operational works application – Information request.

Dear Neil,

Following submission of the OWA application for the above project on the 10/02/2026, Council issued an information request dated 4th March 2026 with a number of design queries.

Following receipt of the RFI and discussions with Council, the engineering design has been revised and the number of lots reduced from 17 to 13 by amalgamating some of the lots. Many of the issues raised in the RFI related to the stormwater design and, as a result, the stormwater design was revised to eliminate the open concrete lined drains. Following these changes an amended operational works application is being lodged under separate cover.

Consequently, several of the items raised no longer apply and this is reflected in our response. We address the matters raised as follows using the numbering system in the RFI:

1. Engineering report:

An engineering report has been completed and is attached to the revised OWA application.

2. Conditions of the combined application decision notice:

Comments on each of the conditions of the combined notice have been provided as an appendix to the engineering report attached to the revised OWA application.

Stormwater items 3 to 14.

As a result of the revised design the open concrete lined drains have been eliminated. Many of these items no longer apply and have been addressed where required. We provide the following comments:

- The revised engineering drawings submitted with the amended OWA application now include pre-development and post development catchment plans and earthwork drawings showing finished contour levels and falls. The design ensures that no additional stormwater runoff is directed to the section of Beor Street that drains, via a stormwater system, to the north. As a result, there is no impact on this system and downstream analysis is not required. In this regard we refer Council to the stormwater section of our engineering report where we included a suggestion regarding roof water disposal from future buildings. We recommend that Council adopt this suggestion.

22nd May 2026

OSE Reference: 25235

Chief Executive Officer
Douglas Shire Council
PO Box 723
Mossman Qld 4873

Attention: Neil Beck

Re: CA 69 – Craiglee Business Park subdivision at Beor Street Craiglee for K.A.N. Developments Pty Ltd – Revised Operational works application – OP 2026_5891/1

Dear Neil,

We originally submitted an operational works application, for the above project, on the 10th of February 2026 further to Council issuing the original decision notice, reference CA 69 dated 13/8/2007.

Upon review of the application Council issued an RFI dated 4th of March 2026 to which we have responded under separate correspondence. As a result of the matters raised in the RFI and after discussions with Council Officers, the engineering design was amended to, in particular, remove the open concrete lined drains within the lots. The applicant also reduced the number of lots from 17 to 13 by amalgamating some the lots. These changes are detailed on the attached revised engineering documentation.

We now wish to lodge, for approval, a revised engineering design that considers issues raised in the RFI and the reduction on lot numbers. To assist Council to assess this revised design we attach the following:

- Revised DA form 1
- A PDF copy of the engineering drawings.
- An engineering report detailing the design considerations and water reticulation analysis.
- A document addressing the conditions of the combined application decision notice. This is attached to the engineering report in appendix B.

When Council review these documents, we wish to draw your attention to two matters in the stormwater section of the engineering report. One relates to the discharge of stormwater from the rooves of future buildings and the second discusses the need or otherwise for a GPT. We have not included a GPT at this stage for the reason outlined in the report, however, if Council determines that they require a GPT to be installed we request that this be made a condition of the operational works approval. We also remind Council that the required OWA application fees have already been paid.

We trust that the provision of these revised drawings, documents and reports is sufficient to enable you to complete the review process and issue the OWA. Please do not hesitate to contact this office should you require additional details or clarification of any item.

Yours Sincerely,



Alan McPherson
Senior Civil Engineer, RPEQ 809
OSE Group Pty Ltd

DA Form 1 – Development application details

Approved form (version 1.6 effective 2 August 2024) made under section 282 of the Planning Act 2016.

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

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

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

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

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

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

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

PART 1 – APPLICANT DETAILS

1) Applicant details	
Applicant name(s) <i>(individual or company full name)</i>	OSE Group
Contact name <i>(only applicable for companies)</i>	Alan McPherson
Postal address <i>(P.O. Box or street address)</i>	PO Box 809
Suburb	Edge Hill
State	Qld
Postcode	4870
Country	Australia
Contact number	0428772311
Email address <i>(non-mandatory)</i>	Alan.mcpherson@osegroup.com.au
Mobile number <i>(non-mandatory)</i>	0428772311
Fax number <i>(non-mandatory)</i>	
Applicant's reference number(s) <i>(if applicable)</i>	25235
1.1) Home-based business	
<input type="checkbox"/> Personal details to remain private in accordance with section 264(6) of <i>Planning Act 2016</i>	
2) Owner's consent	
2.1) Is written consent of the owner required for this development application?	
<input type="checkbox"/> Yes – the written consent of the owner(s) is attached to this development application	
<input checked="" type="checkbox"/> No – proceed to 3)	

PART 2 – LOCATION DETAILS

3) Location of the premises (complete 3.1) or 3.2), and 3.3) as applicable)				
<i>Note: Provide details below and attach a site plan for any or all premises part of the development application. For further information, see <u>DA Forms Guide: Relevant plans</u>.</i>				
3.1) Street address and lot on plan				
<input type="checkbox"/> Street address AND lot on plan (all lots must be listed), or <input checked="" type="checkbox"/> Street address AND lot on plan for an adjoining or adjacent property of the premises (appropriate for development in water but adjoining or adjacent to land e.g. jetty, pontoon. All lots must be listed).				
a)	Unit No.	Street No.	Street Name and Type	Suburb
			Beor Street	Craiglee
	Postcode	Lot No.	Plan Type and Number (e.g. RP, SP)	Local Government Area(s)
	4877			
b)	Unit No.	Street No.	Street Name and Type	Suburb
	Postcode	Lot No.	Plan Type and Number (e.g. RP, SP)	Local Government Area(s)
3.2) Coordinates of premises (appropriate for development in remote areas, over part of a lot or in water not adjoining or adjacent to land e.g. channel dredging in Moreton Bay)				
<i>Note: Place each set of coordinates in a separate row.</i>				
<input type="checkbox"/> Coordinates of premises by longitude and latitude				
Longitude(s)		Latitude(s)		Datum
				<input type="checkbox"/> WGS84 <input type="checkbox"/> GDA94 <input type="checkbox"/> Other: <input type="text"/>
<input type="checkbox"/> Coordinates of premises by easting and northing				
Easting(s)		Northing(s)		Datum
		<input type="checkbox"/> 54 <input type="checkbox"/> 55 <input type="checkbox"/> 56		<input type="checkbox"/> WGS84 <input type="checkbox"/> GDA94 <input type="checkbox"/> Other: <input type="text"/>
3.3) Additional premises				
<input type="checkbox"/> Additional premises are relevant to this development application and the details of these premises have been attached in a schedule to this development application <input checked="" type="checkbox"/> Not required				
4) Identify any of the following that apply to the premises and provide any relevant details				
<input type="checkbox"/> In or adjacent to a water body or watercourse or in or above an aquifer				
Name of water body, watercourse or aquifer:		<input type="text"/>		
<input type="checkbox"/> On strategic port land under the <i>Transport Infrastructure Act 1994</i>				
Lot on plan description of strategic port land:		<input type="text"/>		
Name of port authority for the lot:		<input type="text"/>		
<input type="checkbox"/> In a tidal area				
Name of local government for the tidal area (if applicable):		<input type="text"/>		
Name of port authority for tidal area (if applicable):		<input type="text"/>		

<input type="checkbox"/> On airport land under the <i>Airport Assets (Restructuring and Disposal) Act 2008</i>
Name of airport: <input type="text"/>
<input type="checkbox"/> Listed on the Environmental Management Register (EMR) under the <i>Environmental Protection Act 1994</i>
EMR site identification: <input type="text"/>
<input type="checkbox"/> Listed on the Contaminated Land Register (CLR) under the <i>Environmental Protection Act 1994</i>
CLR site identification: <input type="text"/>

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

Yes – All easement locations, types and dimensions are included in plans submitted with this development application

No

PART 3 – DEVELOPMENT DETAILS

Section 1 – Aspects of development

6.1) Provide details about the first development aspect
a) What is the type of development? <i>(tick only one box)</i>
<input type="checkbox"/> Material change of use <input type="checkbox"/> Reconfiguring a lot <input type="checkbox"/> Operational work <input type="checkbox"/> Building work
b) What is the approval type? <i>(tick only one box)</i>
<input checked="" type="checkbox"/> Development permit <input type="checkbox"/> Preliminary approval <input type="checkbox"/> Preliminary approval that includes a variation approval
c) What is the level of assessment?
<input checked="" type="checkbox"/> Code assessment <input type="checkbox"/> Impact assessment <i>(requires public notification)</i>
d) Provide a brief description of the proposal <i>(e.g. 6 unit apartment building defined as multi-unit dwelling, reconfiguration of 1 lot into 3 lots):</i>
13 lot industrial subdivision
e) Relevant plans <i>Note: Relevant plans are required to be submitted for all aspects of this development application. For further information, see DA Forms guide: Relevant plans.</i>
<input checked="" type="checkbox"/> Relevant plans of the proposed development are attached to the development application
6.2) Provide details about the second development aspect
a) What is the type of development? <i>(tick only one box)</i>
<input type="checkbox"/> Material change of use <input type="checkbox"/> Reconfiguring a lot <input type="checkbox"/> Operational work <input type="checkbox"/> Building work
b) What is the approval type? <i>(tick only one box)</i>
<input type="checkbox"/> Development permit <input type="checkbox"/> Preliminary approval <input type="checkbox"/> Preliminary approval that includes a variation approval
c) What is the level of assessment?
<input type="checkbox"/> Code assessment <input type="checkbox"/> Impact assessment <i>(requires public notification)</i>
d) Provide a brief description of the proposal <i>(e.g. 6 unit apartment building defined as multi-unit dwelling, reconfiguration of 1 lot into 3 lots):</i>
e) Relevant plans <i>Note: Relevant plans are required to be submitted for all aspects of this development application. For further information, see DA Forms Guide: Relevant plans.</i>
<input type="checkbox"/> Relevant plans of the proposed development are attached to the development application

6.3) Additional aspects of development
<input type="checkbox"/> Additional aspects of development are relevant to this development application and the details for these aspects that would be required under Part 3 Section 1 of this form have been attached to this development application
<input checked="" type="checkbox"/> Not required
6.4) Is the application for State facilitated development?
<input type="checkbox"/> Yes - Has a notice of declaration been given by the Minister?
<input checked="" type="checkbox"/> No

Section 2 – Further development details

7) Does the proposed development application involve any of the following?	
Material change of use	<input type="checkbox"/> Yes – complete division 1 if assessable against a local planning instrument
Reconfiguring a lot	<input type="checkbox"/> Yes – complete division 2
Operational work	<input checked="" type="checkbox"/> Yes – complete division 3
Building work	<input type="checkbox"/> Yes – complete <i>DA Form 2 – Building work details</i>

Division 1 – Material change of use

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

8.1) Describe the proposed material change of use			
Provide a general description of the proposed use	Provide the planning scheme definition <i>(include each definition in a new row)</i>	Number of dwelling units <i>(if applicable)</i>	Gross floor area (m ²) <i>(if applicable)</i>
8.2) Does the proposed use involve the use of existing buildings on the premises?			
<input type="checkbox"/> Yes			
<input type="checkbox"/> No			
8.3) Does the proposed development relate to temporary accepted development under the Planning Regulation?			
<input type="checkbox"/> Yes – provide details below or include details in a schedule to this development application			
<input type="checkbox"/> No			
Provide a general description of the temporary accepted development		Specify the stated period dates under the Planning Regulation	

Division 2 – Reconfiguring a lot

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

9.1) What is the total number of existing lots making up the premises?	
9.2) What is the nature of the lot reconfiguration? <i>(tick all applicable boxes)</i>	
<input type="checkbox"/> Subdivision <i>(complete 10)</i>	<input type="checkbox"/> Dividing land into parts by agreement <i>(complete 11)</i>
<input type="checkbox"/> Boundary realignment <i>(complete 12)</i>	<input type="checkbox"/> Creating or changing an easement giving access to a lot from a constructed road <i>(complete 13)</i>

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

\$1,225,000

PART 4 – ASSESSMENT MANAGER DETAILS

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

Douglas Shire Council

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

- Yes – a copy of the decision notice is attached to this development application
 The local government is taken to have agreed to the superseded planning scheme request – relevant documents attached
 No

PART 5 – REFERRAL DETAILS

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

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

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

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

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



<input type="checkbox"/> SEQ northern inter-urban break – community activity <input type="checkbox"/> SEQ northern inter-urban break – indoor recreation <input type="checkbox"/> SEQ northern inter-urban break – urban activity <input type="checkbox"/> SEQ northern inter-urban break – combined use <input type="checkbox"/> Tidal works or works in a coastal management district <input type="checkbox"/> Reconfiguring a lot in a coastal management district or for a canal <input type="checkbox"/> Erosion prone area in a coastal management district <input type="checkbox"/> Urban design <input type="checkbox"/> Water-related development – taking or interfering with water <input type="checkbox"/> Water-related development – removing quarry material (<i>from a watercourse or lake</i>) <input type="checkbox"/> Water-related development – referable dams <input type="checkbox"/> Water-related development – levees (<i>category 3 levees only</i>) <input type="checkbox"/> Wetland protection area
Matters requiring referral to the local government: <input type="checkbox"/> Airport land <input type="checkbox"/> Environmentally relevant activities (ERA) (<i>only if the ERA has been devolved to local government</i>) <input type="checkbox"/> Heritage places – Local heritage places
Matters requiring referral to the Chief Executive of the distribution entity or transmission entity: <input type="checkbox"/> Infrastructure-related referrals – Electricity infrastructure
Matters requiring referral to: <ul style="list-style-type: none"> • The Chief Executive of the holder of the licence, if not an individual • The holder of the licence, if the holder of the licence is an individual <input type="checkbox"/> Infrastructure-related referrals – Oil and gas infrastructure
Matters requiring referral to the Brisbane City Council: <input type="checkbox"/> Ports – Brisbane core port land
Matters requiring referral to the Minister responsible for administering the Transport Infrastructure Act 1994: <input type="checkbox"/> Ports – Brisbane core port land (<i>where inconsistent with the Brisbane port LUP for transport reasons</i>) <input type="checkbox"/> Ports – Strategic port land
Matters requiring referral to the relevant port operator, if applicant is not port operator: <input type="checkbox"/> Ports – Land within Port of Brisbane’s port limits (<i>below high-water mark</i>)
Matters requiring referral to the Chief Executive of the relevant port authority: <input type="checkbox"/> Ports – Land within limits of another port (<i>below high-water mark</i>)
Matters requiring referral to the Gold Coast Waterways Authority: <input type="checkbox"/> Tidal works or work in a coastal management district (<i>in Gold Coast waters</i>)
Matters requiring referral to the Queensland Fire and Emergency Service: <input type="checkbox"/> Tidal works or work in a coastal management district (<i>involving a marina (more than six vessel berths)</i>)

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

PART 6 – INFORMATION REQUEST

19) Information request under the DA Rules

- I agree to receive an information request if determined necessary for this development application
 I do not agree to accept an information request for this development application

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

- that this development application will be assessed and decided based on the information provided when making this development application and the assessment manager and any referral agencies relevant to the development application are not obligated under the DA Rules to accept any additional information provided by the applicant for the development application unless agreed to by the relevant parties
- Part 3 under Chapter 1 of the DA Rules will still apply if the application is an application listed under section 11.3 of the DA Rules or
- Part 2 under Chapter 2 of the DA Rules will still apply if the application is for state facilitated development

Further advice about information requests is contained in the [DA Forms Guide](#).

PART 7 – FURTHER DETAILS

20) Are there any associated development applications or current approvals? (e.g. a preliminary approval)

- Yes – provide details below or include details in a schedule to this development application
 No

List of approval/development application references	Reference number	Date	Assessment manager
<input type="checkbox"/> Approval <input checked="" type="checkbox"/> Development application	CA69	13/08/2007	Douglas Shire Council
<input type="checkbox"/> Approval <input type="checkbox"/> Development application	Amended DA Extension	08/05/2015 09/02/2024	Douglas Shire Council

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

- Yes – a copy of the receipted QLeave form is attached to this development application
 No – I, the applicant will provide evidence that the portable long service leave levy has been paid before the assessment manager decides the development application. I acknowledge that the assessment manager may give a development approval only if I provide evidence that the portable long service leave levy has been paid
 Not applicable (e.g. building and construction work is less than \$150,000 excluding GST)

Amount paid	Date paid (dd/mm/yy)	QLeave levy number (A, B or E)
\$		

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

- Yes – show cause or enforcement notice is attached
 No

23) Further legislative requirements

Environmentally relevant activities

23.1) Is this development application also taken to be an application for an environmental authority for an **Environmentally Relevant Activity (ERA)** under section 115 of the *Environmental Protection Act 1994*?

- Yes – the required attachment (form ESR/2015/1791) for an application for an environmental authority accompanies this development application, and details are provided in the table below
- No

Note: Application for an environmental authority can be found by searching “ESR/2015/1791” as a search term at www.qld.gov.au. An ERA requires an environmental authority to operate. See www.business.qld.gov.au for further information.

Proposed ERA number:		Proposed ERA threshold:	
Proposed ERA name:			

- Multiple ERAs are applicable to this development application and the details have been attached in a schedule to this development application.

Hazardous chemical facilities

23.2) Is this development application for a **hazardous chemical facility**?

- Yes – *Form 536: Notification of a facility exceeding 10% of schedule 15 threshold* is attached to this development application
- No

Note: See www.business.qld.gov.au for further information about hazardous chemical notifications.

Clearing native vegetation

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

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

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

Environmental offsets

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

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

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

Koala habitat in SEQ Region

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

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

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



Water resources

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

Yes – the relevant template is completed and attached to this development application and I acknowledge that a relevant authorisation or licence under the *Water Act 2000* may be required prior to commencing development

No

Note: Contact the Department of Resources at www.resources.qld.gov.au for further information.

DA templates are available from planning.statedevelopment.qld.gov.au. If the development application involves:

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

Waterway barrier works

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

Yes – the relevant template is completed and attached to this development application

No

DA templates are available from planning.statedevelopment.qld.gov.au. For a development application involving waterway barrier works, complete DA Form 1 Template 4.

Marine activities

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

Yes – an associated *resource* allocation authority is attached to this development application, if required under the *Fisheries Act 1994*

No

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

Quarry materials from a watercourse or lake

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

Yes – I acknowledge that a quarry material allocation notice must be obtained prior to commencing development

No

Note: Contact the Department of Resources at www.resources.qld.gov.au and www.business.qld.gov.au for further information.

Quarry materials from land under tidal waters

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

Yes – I acknowledge that a quarry material allocation notice must be obtained prior to commencing development

No

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

Referable dams

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

Yes – the 'Notice Accepting a Failure Impact Assessment' from the chief executive administering the *Water Supply Act* is attached to this development application

No

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



Tidal work or development within a coastal management district

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

- Yes – the following is included with this development application:
- Evidence the proposal meets the code for assessable development that is prescribed tidal work (*only required if application involves prescribed tidal work*)
 - A certificate of title

No

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

Queensland and local heritage places

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

Yes – details of the heritage place are provided in the table below

No

Note: See guidance materials at www.desi.qld.gov.au for information requirements regarding development of Queensland heritage places. For a heritage place that has cultural heritage significance as a local heritage place and a Queensland heritage place, provisions are in place under the Planning Act 2016 that limit a local categorising instrument from including an assessment benchmark about the effect or impact of, development on the stated cultural heritage significance of that place. See guidance materials at www.planning.statedevelopment.qld.gov.au for information regarding assessment of Queensland heritage places.

Name of the heritage place:

Place ID:

Decision under section 62 of the Transport Infrastructure Act 1994

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

Yes – this application will be taken to be an application for a decision under section 62 of the *Transport Infrastructure Act 1994* (subject to the conditions in section 75 of the *Transport Infrastructure Act 1994* being satisfied)

No

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

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

Yes – Schedule 12A is applicable to the development application and the assessment benchmarks contained in schedule 12A have been considered

No

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

PART 8 – CHECKLIST AND APPLICANT DECLARATION

24) Development application checklist

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

Yes

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

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

Yes

Not applicable

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

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

Yes

Relevant plans of the development are attached to this development application

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

Yes

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

Yes

Not applicable



Queensland
Government

25) Applicant declaration

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

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

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

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

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

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

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

Date received: Reference number(s):

Notification of engagement of alternative assessment manager

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

QLeave notification and payment

Note: For completion by assessment manager if applicable

Description of the work			
QLeave project number			
Amount paid (\$)		Date paid (dd/mm/yy)	
Date receipted form sighted by assessment manager			
Name of officer who sighted the form			

Basis of Design (Infrastructure Servicing)

Craiglee Business Park Subdivision at Beor Street Craiglee

Project No.: 25235 – May 2026



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APPENDICES

- Appendix A. Water reticulation analysis
- Appendix B Response to conditions of the combined decision notice

1. Introduction and Background

OSE Group have been engaged to undertake the engineering design and documentation for the Craiglee Business Park subdivision on lot 100 SP248126 located at Beor Street Craiglee and to submit details to the Douglas Shire Council for the purpose of obtaining operational works approval (OWA).

An engineering design was submitted to Council for OWA and Council issued an information request, reference OP 2026_5891/1, dated 4th March 2026. As a result of that RFI the engineering design has been amended, primarily to eliminate the open concrete drains, and revised plans prepared. The applicant has also reduced the number of allotments from 17 to 13.

Standard documentation provided with the original application still applies; however, DA Form 1 has been revised to for the reduced number of allotments and a revised set of engineering drawings have been prepared. The drawings contain or refer to the required specifications. The application fee has also been paid to Council

The purpose of this report is to provide comments and details of the revised design and considerations undertaken through the design process and to respond to several issues raised in the RFI and the engineering basis for the development. The following infrastructure services have been included:

- Bulk Earthworks
- Roadworks
- Stormwater drainage
- Water reticulation
- Sewer reticulation
- Power and communications

1.1 Existing site:

The site is located on the southern side of the existing constructed Beor Street, has an existing developed industrial area to the west, a park area to the east and farmland to the south. The site generally falls from west to east with levels varying from 6.4 to 5.2 AHD. It is bisected, from west to east, by an existing open earth drain. This drain collects surface water from the property and an underground stormwater system from the west, and discharges to an existing watercourse to the east. A portion of the property currently discharges surface flows to Beor and to the farmland.

There is a water course on the farmland to the south (close to the common property boundary) which drains an area of 106 hectares from the western foothills. This watercourse connects to the watercourse to the east. It bisects the southeastern corner of the site and has been excluded from the developed area.

2. Bulk Earthworks

To ensure that the site drains without impacting on the existing underground culvert system draining to the north, caters for the existing culvert discharge from the west and ensures future buildings are not impacted by 1% AEP overland flows, it is necessary to fill the site and design surface levels accordingly. As a result, a significant volume of imported fill is required to achieve this result. It is currently estimated that the fill required will be of the order of 20,000 cubm.

Imported fill will be of a suitable quality and, following stripping of areas to be filled, will be spread and compacted as specified in the engineering documentation. Stripped material will be stockpiled and respread over the fill as topsoil to encourage re-grassing of the fill areas.

3. Roadworks

Roadworks will be constructed as detailed on the engineering drawings and in accordance with FNQROC requirements. They generally comprise of a new road connecting to Beor Street and leading to two cul-de-sacs thus providing internal access to the allotments. Pavement widths, details and verge widths are detailed on the engineering drawings.

The design pavement was determined in accordance with the requirements of Austroads guide to pavement technology and based on an assumed CBR of 10 and an ESA of 10 to the fifth. The CBR of the subgrade material will be checked prior to construction to ensure it is within design parameters. The chosen pavement thickness is greater than that determined, however, we took into consideration both construction and typical industrial traffic loads.

4. Stormwater drainage

Following receipt of the RFI the overall drainage design was revised to address the primary issues raised by Council which were:

- To ensure there was no increase or impact on the capacity of the existing underground stormwater system that flows to the north from Beor Street.
- To eliminate the open lined concrete drains within easements in the allotments due to maintenance concerns.

The design has been modified to achieve this result. Pre and post catchment plans have been prepared and are included in the engineering drawings. Discharge to the Beor Street system has been retained at predevelopment levels. Whilst the design achieves this requirement, we raise our concern that following construction of future buildings on the lots facing Beor Street, there is no mechanism in place to ensure large amounts of roof water are not discharged to Beor Street. We suggest that Council require that a note be placed on the rate files that 80% of roof water from buildings on the Beor Street frontage be directed to the internal stormwater system. The applicant has no objection to this suggestion.

Hydraulic details of the internal stormwater system are shown on tables included within the engineering drawings. The outlet for the system, at the eastern end of the property has been set at RL 3.3 AHD. Investigation of all available information and storm tide assessments indicate that the outlet will not be submerged in major storm events.

Overland flow paths have been checked, and during the 1% AEP event, they will not impact buildings on the finished allotments. A plan showing the extent of the flow paths is included in the engineering drawings.

We have not included a GPT in the design and this can be included, as a revision, if Council require one to be installed. We raise this matter as many Local authorities are now dispensing with the use of GPT's and not requiring them in subdivisions. This has been adopted, we understand, primarily due to maintenance and service issues and concerns about standing water being retained in the units. Would Council please advise their current position on the installation of GPT's and, if required, we will modify the design to accommodate this requirement.

The existing open earth drain will eventually be filled, however, during construction it will be progressively filled to ensure surface water from the site is directed to the east.

5. Water reticulation

The internal reticulation has been designed based on commercial/industrial use. It comprises a 100mm dia ring main serving all the new allotments and is provided with the required valves, hydrants and fittings in compliance with FNQROC. The internal system is connected to the Council reticulation system via the existing service main on the southern side of Beor Street.

A network analysis has been carried out, and it indicates that reticulated water can be provided to all lots and hydrants at adequate pressure and flow. The network analysis is included in appendix A of this report.

6. Sewer Reticulation

The site is currently serviced by a gravity sewer main along the Beor Street frontage. The internal system comprises two 150mm sewer lines that connect to existing sewer manholes B5 and C5. Lots 1-3 will connect directly to the existing main via new connection branches. The remaining lots can connect to the new internal sewer lines.

The sewage demand was determined using the guidelines in the FNQROC development manual. From these guidelines, and assuming that the final use will be a mixture of commercial and light industrial use, we determined that each new lot was equivalent to 5 EDC's. On this basis the total demand is shown in the table below:

Table - Sewer Demand - EP Conversion Method

Criteria	Sewer Demand	Comment
Average Dry Weather Flow (ADWF)	49.1 kL	
Peak Wet Weather Flow (PWWF)	245.7 kL	=5 x ADWF
Peak Dry Weather Flow (PDWF)	208.8 kL	=4.25 x (EP) ^{-0.105}

7. Power and Telecommunications

Enquiries to the relevant providers indicate that both electrical power and telecommunications are available in Beor Street and can be made available subject to the normal commercial agreements with Ergon Energy and NBN. SPA Consulting are developing the design for these utilities and will be lodged with Council when completed. Initial design indicates that one or two padmounts will be required depending upon final calculations.



Appendix A. Water reticulation analysis



Water Supply Network Analysis

Proposed Craiglee Business Park Boer Street

Project No.: 25235

Document Control

Document:	25235 Basis of Design – Camp Tinaroo (Rev 01)
File Location:	"C:\Users\derom\OSE Group\Operations - Docs\Projects\2025\25235 Craiglee Business Park\Engineering\Water Supply Network\25285_Water Supply Network Analysis Craiglee (Rev 01).docx"
Project Name:	Proposed Subdivision of Camp Tinaroo – Lot 237 on NR3829
Project Number:	25235
Prepared For:	KAN Developments Pty Ltd

Revision History

Revision	Date	Prepared By	Reviewed By	Approved By
Final	19/05/2026	Peter De Roma		Peter De Roma

Company Details


Project Manager:	Peter De Roma
Signature:	
Address:	36 Abbott Street Cairns, QLD, 4870
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Email:	peter.deroma@osegroup.com.au

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APPENDICES

Appendix A. Proposed Water Supply Pipework Layout

1. Introduction and Background

OSE Group have been engaged to undertake the water supply network analysis for the proposed business park subdivision located at Craiglee off Boer Street.

The purpose of this report is to provide an assessment of available water supply flows and pressures to support the development.

The subdivision is located within the Douglas Shire Council (DSC) district in the suburb of Craiglee. Refer Figure 1 below.



Figure 1- Site Location

It is anticipated the development will include up to 13 industrial lots as shown in Figure 2 below.

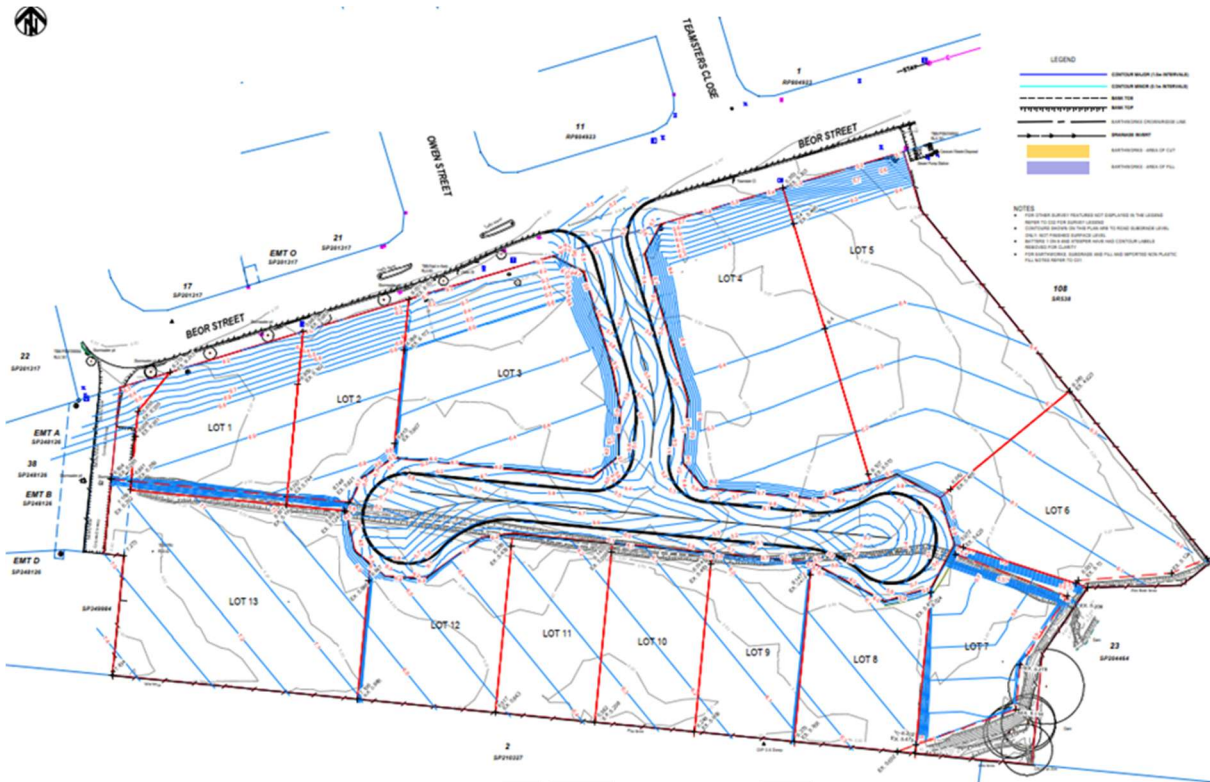


Figure 2 - Proposed subdivision layout

2. Water

2.1. Demand Calculations

The water demands have been calculated using the design parameters given in the FNQROC Development Manual for DSC. In the original Development approval for the Reconfiguration of a Lot, condition 36 - Water supply & Sewerage Headworks, it provides a total Equivalent Domestic Connection (EDC) contribution for water supply of 69 EDC. This was based on 19 lots. The current proposal is to reduce the number of lots to only 13. However, the total developable area remains the same. On this basis water supply demand has been assessed on a total of 69EDC and $69/13 = 5.3$ EDC per lot.

For an EDC associated with a residential development, a generation rate of 3.7 Equivalent Persons (EP) has been assumed. The Average Daily Demand for DSC is 500L/EP/day. Based on this generation the development will have a total equivalent EP of 255. Applying FNQROC D6 (Water Reticulation) the following design criteria is achieved.

Table 1 - Water Demand - EP Conversion Method

Criteria	Water Demand
Average Daily Consumption	127.6 kL
Mean Day Max Month	191.4 kL
Peak Day	287.1 kL
Peak Hour	26.8 kL/hr or 6.63 L/s

2.1.1. Pressure Parameters

Error! Reference source not found.2 outlines the proposed pressure parameters for the development.

Table 2 - Pressure parameters

Parameter	Average Daily Consumption
Minimum Pressure	22m at peak hour
Maximum Pressure	60m

2.1.2. Fire Fighting Parameters

Based on FNQROC the development would be categorised as industrial and as such, will be required to provide 30L/s for 4 hours, with a residual pressure of greater than 12m at the node and 6m elsewhere.

2.2. Network Analysis

The Craiglee township and surrounds is serviced by an existing water supply pressure network. There is an existing 150 diameter water main located in Boer Street. It is proposed to connect a 100-diameter pipe network from the 150-diameter line located at the new intersection of the development to Boer Street and ring it back to connect with the 150-diameter main on the other side of the new road. The proposed water supply pipework layout is shown in Appendix A.

A network model analysis was undertaken using EPANet with the following background demand parameters as per the requirements under FNQROC:

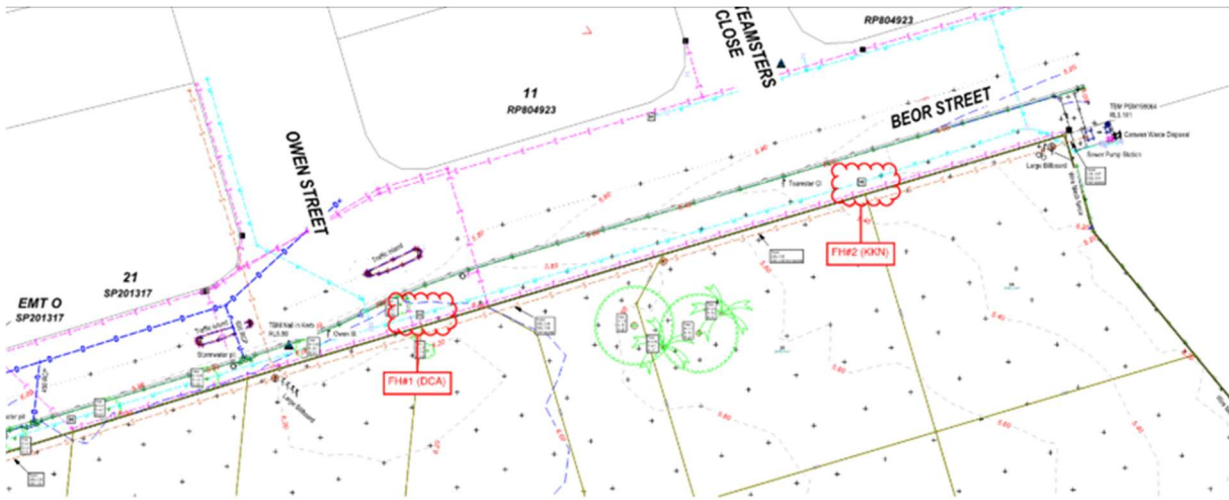
Fire Fighting Event

- 2/3 Peak Hour demand
- 30L/s for 4 hours at the worst-case node hydrant within the development

Normal Operating Conditions

- Peak Hour demand

The EPANet model was developed from the 150-diameter main based on boundary conditions set from hydrant testing undertaken by Gilboy Hydraulic Solutions. The results of the hydrant testing are shown below in Figure 3. To simulate the network, a pump has been installed on the supply line with a pump curve corresponding to hydrant testing results for Hydrant FH2.



Test 1 – FH 1 & FH 2 flowing at 2.5L/s increments simultaneously.

Fire Hydrant Test 1 (Simultaneous Flowing & Pressure)		
Location: Beor Street, Craigle		
Date: 16/04/2026	Time: 11:16am	
	FH #1 DCA	FH #2 KKN
Static	560 kPa	550 kPa
2.5 L/S	540 kPa	525 kPa
5 L/S	500 kPa	480 kPa
7.5 L/S	460 kPa	420 kPa
10 L/S	400 kPa	360 kPa
12.5 L/S	320 kPa	290 kPa
15 L/S	260 kPa	225 kPa
17.5 L/S	160 kPa	125 kPa
20 L/S	50 kPa	0 kPa
21 L/S	40 kPa	0 kPa
L/S	18L/S @ 200 kPa	15.5L/S @ 200 kPa
L/S	14L/S @ 350 kPa	11L/S @ 350 kPa

Test 2 - FH 1 flowing at 5L/s increments, FH 2 recording residual pressure only.

Fire Hydrant Test 2 (FH 1 Flow Only)		
Location: Beor Street, Craigle		
Date: 16/04/2026	Time: 11:23am	
	FH #1 DCA	FH #2 KKN
Static	580 kPa	560 kPa
5 L/S	510 kPa	525 kPa
10 L/S	480 kPa	550 kPa
15 L/S	350 kPa	475 kPa
20 L/S	300 kPa	460 kPa
25 L/S	200 kPa	410 kPa
27 L/S	60 kPa	360 kPa

Test 3 - FH 2 flowing at 5L/s increments, FH 1 recording residual pressure only.

Fire Hydrant Test 3 (FH 2 Flow Only)		
Location: Boer Street, Craiglee		
Date: 16/04/2026	Time: 11:28am	
	FH #1 DCA	FH #2 KKN
Static	520 kPa	560 kPa
5 L/S	560 kPa	540 kPa
10 L/S	520 kPa	475 kPa
15 L/S	500 kPa	400 kPa
20 L/S	460 kPa	290 kPa
25 L/S	400 kPa	110 kPa
27 L/S	380 kPa	50 kPa
24 L/S	420 kPa	200 kPa
17.5 L/S	480 kPa	350 kPa

Figure 3 - Results of hydrant testing

2.2.1. Fire Fighting Event

The analysis revealed the proposed development will not be compliant under firefighting events. This is not uncommon for industrial commercial developments due to the difficult requirement of achieving 30L/s from the hydrant. It is quite typical for these developments where firefighting cannot be achieved, that they be serviced by 'on lot' storage and booster pumps depending on the type of industrial development proposed for each lot. This will be governed by standard building regulations during the building approval process often requiring a hydraulic consultant to design on lot firefighting specific to the development.

2.2.2. Normal Operating Conditions

The analysis revealed for peak hour demands, the proposed development will be compliant with pressures far in excess of 22m, the worst case being approximately 50m within the development. With regard to how the development may affect the network outside of the proposed development, an examination of the response hydrant testing results suggests that the development demand of 6.63 L/s results in approximately 40 kPa residual drop against background static pressures of approximately 560 kPa. This suggests minimal impact to surrounding water supply pressure as a result of the new development. Refer to Figure 4 for network pressures at peak hour.

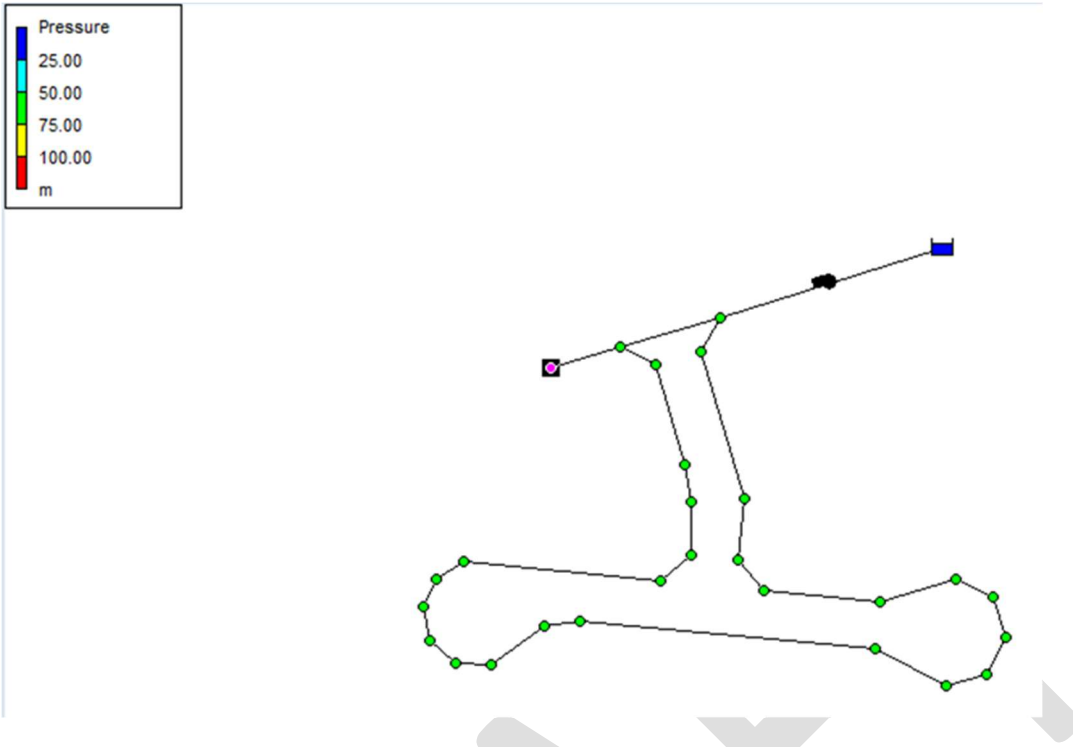
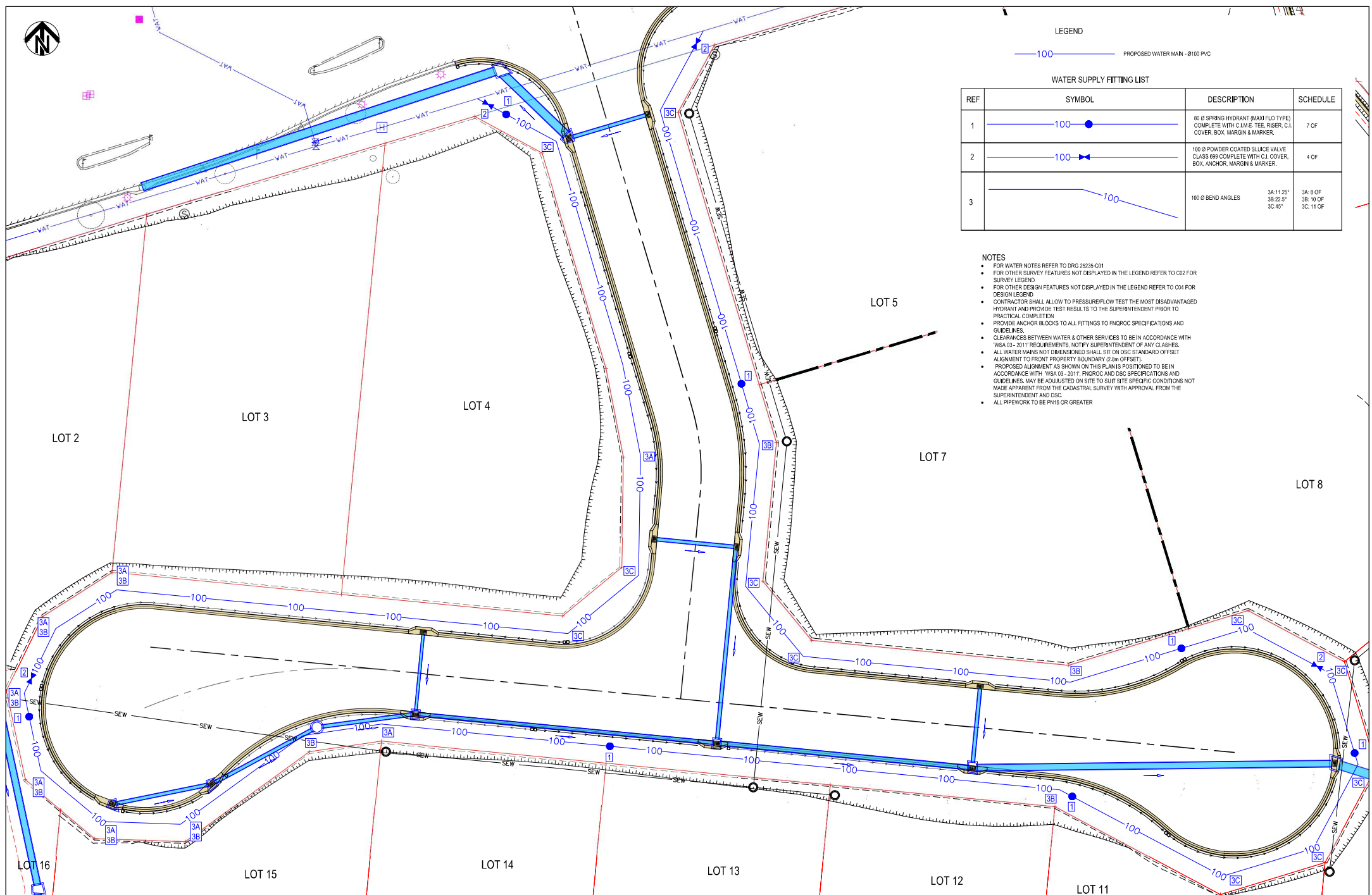


Figure 4 - Pressures at peak hour

3. Summary and Conclusion

The development consists of 13 industrial lots. Water Supply pressures have been analysed using EPAnet based on boundary conditions from hydrant testing conducted on the 150-diameter water pipe in Boer Street. The analysis suggests the development can be adequately serviced under peak hour demands for pressure and flow. However, firefighting will require individual on lot storage and booster pumping which can be designed and installed as part of the building approval process to suit each individual development.

Appendix A. Proposed Water Supply Pipework Layout



LEGEND

100 PROPOSED WATER MAIN - 8100 PVC

WATER SUPPLY FITTING LIST

REF	SYMBOL	DESCRIPTION	SCHEDULE
1	100 ●	80 Ø SPRING HYDRANT (MANI FLD TYPE) COMPLETE WITH C.I.M.E. TEST RISER, C.I. COVER, BOX, MARGIN & MARKER.	7 OF
2	100 >	100 Ø POWDER COATED SLUICE VALVE CLASS 600 COMPLETE WITH C.I. COVER, BOX, ANCHOR, MARGIN & MARKER.	4 OF
3	100 ~	100 Ø BEND ANGLES	3A: 11.25° 3B: 10 OF 3C: 11 OF

NOTES

- FOR WATER NOTES REFER TO DRG 25235-C01
- FOR OTHER SURVEY FEATURES NOT DISPLAYED IN THE LEGEND REFER TO C02 FOR SURVEY LEGEND
- FOR OTHER DESIGN FEATURES NOT DISPLAYED IN THE LEGEND REFER TO C04 FOR DESIGN LEGEND
- CONTRACTOR SHALL ALLOW TO PRESSURE/FLOW TEST THE MOST DISADVANTAGED HYDRANT AND PROVIDE TEST RESULTS TO THE SUPERINTENDENT PRIOR TO PRACTICAL COMPLETION.
- PROVIDE ANCHOR BLOCKS TO ALL FITTINGS TO FNQROC SPECIFICATIONS AND GUIDELINES.
- CLEARANCES BETWEEN WATER & OTHER SERVICES TO BE IN ACCORDANCE WITH 'WSA 03-2011' REQUIREMENTS. NOTIFY SUPERINTENDENT OF ANY CLASHES.
- ALL WATER MAINS NOT DIMENSIONED SHALL SIT ON DSC STANDARD OFFSET ALIGNMENT TO FRONT PROPERTY BOUNDARY (2.0m OFFSET).
- PROPOSED ALIGNMENT AS SHOWN ON THIS PLAN IS POSITIONED TO BE IN ACCORDANCE WITH 'WSA 03-2011', FNQROC AND DSC SPECIFICATIONS AND GUIDELINES. MAY BE ADJUSTED ON SITE TO SUIT SITE SPECIFIC CONDITIONS NOT MADE APPARENT FROM THE CADASTRAL SURVEY WITH APPROVAL FROM THE SUPERINTENDENT AND DSC.
- ALL PIPEWORK TO BE PN16 OR GREATER

A 23.01.26 FOR COUNCIL APPROVAL REV DATE REVISION NOTES	SCALE 1:500 Orig. Sheet A3 DO NOT SCALE DRAWINGS Scales Before Reduction 	DESIGNER Address: 35 ABBOTT ST, CARNS 4870 Email: edm@osegroup.com.au	CLIENT K.A.N. Developments Pty Ltd	PROJECT CRAIGLIE BUSINESS PARK BOER STREET - CRAIGLIE 4877	TITLE WATER RETICULATION PLAN		
				DRAWN: DM DESIGNED: DM	DRAWING CHECK: AMcP DESIGN REVIEW: AMcP	APPROVED: [Signature] DATE: -	SCALE: (Scale as shown) DRAWING NO: 25235-C025 REV: A



Appendix B. Response to conditions of the combined decision notice

Comments on each condition as requested in Council's RFI dated 4th March 2026
(Prepared by OSE Group in response to an RFI on 18th May 2026)

NB: Some of the conditions below relate to the establishment of a building use. The application conditions have been partly amended. The amended application now only involves the subdivision component; therefore, a number of conditions no longer apply, and this has been noted in the responses.

CONDITIONS OF APPROVAL

MATERIAL CHANGE OF USE (Intensive Animal Husbandry and Caretaker's Residence)

Plan of Development

1. The approved development and the conduct of the approved use, the carrying out of any works on the premises and the construction of any buildings on the premises associated with the development must generally be in accordance with the details of the application and the following approved Plan/s of Development:

Title	Plan No.	Date
Overall Site Plan	SD 01	Sept 06
Proposed Layout Plan	SD 02	Sept 06
Proposed Layout – Elevations, Sections, Images	SD 03	Sept 06

Except where such plans are modified by the terms of this approval.

Response to Condition 1

No Longer applies

Currency Period

- 2 This development approval lapses four (4) years after the day that the development approval takes effect, unless extended under Section 3.5.22 of the Integrated Planning Act 1997.

Response to Condition 2

Has been extended

Landscaping

3. The landscaping plan submitted with the proposed development referenced as:

Title	Plan No.	Date
Landscape Plan	SD 01	-

Has been approved, as part of this development, except where otherwise stated as a condition of this approval.

Response to Condition 3

No Longer applies

4. The owner/developer shall be responsible for all maintenance work for a period of twenty-four (24) months. Council will not accept the landscaping off maintenance until it meets the requirements of Council's Engineering Services.

Response to Condition 4

No Longer applies

5. Irrigation for external landscaping shall be transferred to Council's reticulated water system prior to landscaping being accepted as off maintenance.

Response to Condition 5

No Longer applies

Sewerage

6. No additional external structural loads are permitted to be applied to Council's existing sewer as a consequence of the approved development.

Response to Condition 6

Complies

7. Animal faeces are to be collected on site and disposed of in the general refuse.

Response to Condition 7

No Longer applies

8. No animal faeces are to be placed into the sewer.

Response to Condition 8

No Longer applies

Electricity and Telephone Services

9. All electrical lines along the full frontages of the subject site (unnamed proposed cul-de-sac) are to be placed underground. These works are to be undertaken by Ergon Energy at the developers/owners expense and are to be completed prior to commencement of the approved use.

Response to Condition 9

Complies

Stormwater

10. All stormwater run-off from non-permeable surfaces and roof areas occurring on the site must be collected within the premises and discharged to the legal and practical point of discharge which has been nominated as unnamed road. The approved use must not:
 - a) Interfere with the natural flow of stormwater;
 - b) Cause ponding of stormwater on adjoining properties.

Response to Condition 10

No Longer applies as no buildings are being constructed

Carparking

11. A carparking area with a minimum of sixteen (16) spaces shall be constructed, sealed, drained and line marked in accordance with the relevant Australian Standard, and the approved plan of development and maintained thereafter.

Response to Condition 11

No Longer applies

Refuse

12. A waste storage area is to be available on site in a location approved by the Manager Environmental Health Services. The storage area is to be of sufficient size to house all mobile garbage (wheelie) bins including recycling bins. The storage area is to be suitably paved, with a hose cock fitted in close proximity to the enclosure and drain to sewer via a legal sewer connection.

Response to Condition 12

No Longer applies

Compliance

13. All conditions shall be complied with prior to the occupancy of the building for the approved use or commencement of the approved use on the land. Any developer security, associated with this approval will not be released until all conditions of approval are complied with.

Response to Condition 13

No Longer applies

Construction Requirements

14. All construction works are to be carried out in compliance with the Environmental Protection (Water) Policy 1997 and the Environmental Protection Regulation 1998.

Response to Condition 14

Complies

15. Adequate facilities must be provided during construction to contain all site refuse. Facilities should be designed to prevent loose items of refuse being displaced by wind forces or being washed off site.

Response to Condition 15

No Longer applies

16. All liquid wastes generated during construction of the premises should be managed so that they are not permitted to enter a roadside gutter, stormwater drain or a water tank.

Response to Condition 16

No Longer applies

17. Waste solvents, solvent and acrylic based paints and waste water generated during construction must not be introduced to sewer or stormwater systems and should be disposed of using the services of a trade waste contractor or other approved disposal agency.

Response to Condition 17

No Longer applies

18. All sites are to be provided with sediment control measures to prevent any run-off of mud, silt or sand to stormwater. (Further advice on sediment control can be obtained by contacting Council's Environmental Health Services Section for a free booklet).

Response to Condition 18

Complies in relation to subdivision of lots

19. The applicant is to provide an Acoustic Report prepared by an Acoustic Engineer that demonstrates that measures proposed to be installed on the kennel site will be adequate to mitigate potential noise nuisance as defined by the Environmental Protection Regulation 1998.

Response to Condition 19

No Longer applies

RECONFIGURING A LOT

The Council Decision Notice for the Extension to the Currency Period dated 9 February 2024 approved the extension to 15 February 2028 for the Reconfiguring a Lot component as detailed below.

The extension of currency is approved for a further four years to the reconfiguration of a lot (1 into 17 lots) component and only to part of the land being Lot 100 on SP248126 up to and including the 15 February 2024 2028.

Condition 20 was amended on 8 May 2015 as part of a request to change conditions of approval.

Condition 20 is amended as follows:

20. Plan of Development

The approved plan of reconfiguration and carrying out of any works on the premises associated with this development must be in accordance with the following approved plan/s of reconfiguration.

Title	Plan No	Date
Proposal Plan (stage 2)	8294-40	21/9/06
<u>Reconfiguration of a Lot, Proposed Stage 2 Craiglie Business Park</u>	<u>RPS Drawing No. PR108905-17</u>	<u>31 July 2014</u>

Response to Amended Condition 20

Complies with drawing PR108905-17 except that the number of lots have been reduced from 17 to 13. Refer to the OWA submission and the associated engineering report.

Water Supply

21. The plans and specifications of the internal water supply must be submitted to Council at Operational Works application stage for this reconfiguration for review.

This system must make provision for services to the boundaries of all lots, including main works, envelope pipes at cross street services and valve and hydrant markers and be designed in accordance with the requirements of Planning Policy No.6 "Planning Scheme Policy No.6 "FNQROC Development Manual".

Response to Condition 21

Complies – refer to engineering drawings and report

22. The developer must provide a new water supply connection for proposed Lots 24 - 42. The design and specifications for the new connection must be submitted to Council for its approval prior to the lodgement of the Survey Plan for endorsement.

Response to Condition 22

No Longer applies as the lot numbers have been superseded. Connections will be provided to the new lots 1 – 13.

23. The developer is responsible for the external works to connect the site with Council's water supply at Beor Street.

Response to Condition 23

Complies – refer to engineering drawings and report

24. The developer shall be required to provide a 20mm diameter water service to the boundary of each lot to be created, together with the lodgment with Council of an amount equivalent to the cost of completing each service with a water meter. The service connection to the Council water main will remain closed until such time as the respective lot purchaser makes application to have the service operative. At this time, Council will install the water meter and turn the flow of water on through the service at no cost to the said lot purchaser.

The amount lodged by the applicant shall be placed in Council's Trust Fund and is to be utilised when applications are received from the allotment purchasers for a water service connection

Response to Condition 24

Connection provided; however, installation of meters would be part of the building process for future buildings on individual lots

Sewerage

25. The plans and specifications of the internal sewerage works must be submitted to Council at Operational Works application stage for approval.

Response to Condition 25

Complies – refer to engineering drawings submitted with OWA.

26. The developer must provide a new sewerage connection for proposed Lots 24 - 42. The design and specifications for the new connection must be submitted to Council for its approval prior to the lodgement of the Survey Plan for endorsement.

Response to Condition 26

Lots 24-42 no longer applicable. Sewer connections provided for revised lot 1-13

Electrical & Telephone Services

27. Prior to the approval of the Plan of Survey, the Developer must submit to Council a copy of a letter from Ergon Energy stating that satisfactory arrangements have been made for the provision of:
 - (a) an underground electrical supply to each lot; and
 - (b) street lighting in accordance with Council's adopted standards.
 - (c) locating of all above ground transformer cubicles clear of footpath and parkland areas.

Response to Condition 27

Will comply when survey plans are ready for submission to Council

28. Prior to the approval of the Plan of Survey, the Developer must submit to Council a copy of a letter from Telstra stating that satisfactory arrangements have been made for the provision of:
 - (a) an underground telephone service to each lot; and
 - (b) locating of all above ground switching station cubicles clear of footpath and parkland areas.

Response to Condition 28

Will comply when survey plans are ready for submission to Council. Note that NBN is now the provider.

Stormwater Drainage

29. The Developers are required to place pollution control devices in stormwater drains in accordance with the requirements of Planning Policy No.6 "Planning Scheme Policy No.6 "FNQROC Development Manual". The design and location of these devices must be submitted at Operational Works application stage.

Response to Condition 29

Refer to engineering report and OWA submission. Query raised regarding whether Council still require a gross pollutant trap for this project.

A new condition, 29A, is inserted after Condition 29 as follows:

8 May 2015

29A. Stormwater Drainage Design

Stormwater drainage from Lots 37 and 38 must be provided in a piped underground form beneath the easements and carriage way over Lot 37 to discharge onto Lots 36 and 39 (currently known as Lot 100 on SP248126) and to be disposed of to the satisfaction of the Chief Executive Officer.

Response to New Condition 29A

Lot references have been changed. Stormwater drainage has been provided in accordance with FNQROC and Council requirements. Refer to engineering drawings and report

Operational Works Development Permit

30. The developer must submit as part of an application for a Development Permit for Operational Works information and plans in accordance with Section AP1 "Application Procedures" of Planning Policy No.6 "Planning Scheme Policy No.6 "FNQROC Development Manual". Currency Period

Response to Condition 30

OWA submission made.

31. The development authorised by this Development Permit must cease at the expiration of four (4) years from the day that this Development Permit takes effect under the *Integrated Planning Act 1997* unless a detailed plan of survey has been lodged with Council for endorsement and all conditions of this approval complied with.

Response to Condition 31

Noted

Compliance with Conditions

32. The Plan of Survey with associated documents shall not be endorsed by Council until Conditions 20 to 38 have been complied with.

Response to Condition 32

Noted

Road Works

33. The developer must undertake the following works:

- (a) Internal
Provision is to be made for the following works in accordance with Planning Policy No.6 "Planning Scheme Policy No.6 "FNQROC Development Manual" for Industrial Access Roads.
- i. Unnamed Roads
- Kerb and channelling along the full length of the frontage;
 - Full width bitumen surface;
 - Footpaths;
 - Underground Drainage.
- (b) External
Provision is to be made for the following works external to the site in accordance with Planning Policy No.6 "Planning Scheme Policy No.6 "FNQROC Development Manual" for Industrial Collector Roads.
- i. Beor Street
- Kerb and channelling along the full length of the frontage;
 - Construction of road shoulders, to full width;
 - Footpaths;
 - Underground Drainage

The plans and specifications of the internal and external road works must be submitted to Council at Operational Works application stage for review.

Response to Condition 33

Condition 33 (a) has been complied with as detailed in the engineering drawings.
Condition 33 (b) no longer applies as these works have previously been completed.

A new Condition 33A is inserted after Condition 33 as follows:

8 May 2015

33A. The Applicant must provide six (6) car spaces in the area Easement C to the satisfaction of the Chief Executive Officer.

Response to Amended Condition 33A

No Longer applies

34. All damage to the road and/or road reserve adjacent to the site as a result of, or in connection with this development must be repaired by the developer, at their expense, prior to completion of works associated with the development.

Response to Condition 34

Noted and accepted. Suitable notes included in engineering drawings.

Environmental Management Plan

35. The Developer is to submit with the application for approval of Operational Works, an Environmental Management Plan (EMP) in accordance with the requirements of Planning Scheme Policy No.10 "Reports and Information the Council may Request". This EMP must detail the controls to be utilised to ensure that no environmental harm or nuisance is caused from the proposed use of the land and construction of the works.

Response to Condition 35

EMP no longer applies to this project. A erosion sediment control plan (ESC) has been prepared and included in the engineering plans.

Water supply & Sewerage Headworks

36. The developer/owner shall pay to the Council headworks contributions for water supply and sewerage in accordance with Council's Planning Scheme Policy No. 11 – Water Supply and Sewerage Headworks and Works External Contributions (The Policy). The contribution shall be calculated at the rate per Equivalent Domestic Connection (EDC) applicable at the time of payment in accordance with the policy.

The current number of EDC's for the approved use are:

Water Supply	69
Sewerage	69

Response to Condition 36

Noted

Street Tree Planting

37. The applicant is to undertake street tree planting in accordance with the requirements of the FNQ Development Manual.

Response to Condition 37

Street tree plan will be prepared and submitted to Council for approval

Condition 38 is amended as follows:

8 May 2015

38. Council acknowledges that with Stage One (1) of the proposal the applicant intends to provide a land component of 4000m² to the Paws and Claws organisation, together with \$200 000 worth of works in lieu and a monetary contribution equivalent to 9% of the total open space and recreation required for Stage One (1) and Stage Two (2) of the development.

With Stage 2 of the development the applicant is required to contribute the balance of the contribution 43.9% as land in the south-eastern portion of the site as indicated in the plan of development.

Council acknowledges that Park was provided (including the provision of upgrading works) through Stage 1 of the Industrial Estate and that provision is complimented with a financial deed of gift of \$200 000 to the Homeless Animal Society and Boarding Kennels Incorporated IA20194. These provisions of land, upgrading works and deed of gift satisfy the provision of Park and must be provided prior to the issue of a Compliance Certificate for the Plan of Survey.

Response to Amended Condition 38

We understand that the required park has been dedicated and finalised and that the financial component is no longer relevant. Council's confirmation that this is correct is sought.

ENVIRONMENTALLY RELEVANT ACTIVITY CONDITIONS

It is submitted that the ERA conditions are not applicable in this Instance, however, it is further submitted that the intent of these Conditions will be met by the OWA approval in compliance with Other relevant Council and State Authority requirements.

Advice from Jenny Elphinstone on 13 May 2025 advised that the ERA Conditions are likely to apply to the ROL component as this was the approach generally adopted by Council at the time.

SCHEDULE A – GENERAL CONDITIONS

- A1. The environmentally relevant activity must be constructed, operated and maintained in accordance with the plans, specifications and information submitted by the applicant which are approved by the Administering Authority as set out in the attached schedule to this development approval except that, in the event of an inconsistency arising between the application and the conditions of this development approval, the conditions of the development approval must apply.

Response to A1

No Longer applies

- A2. The holder of the development approval must no change the method of disposal or increase the amount of disposed waste under this development approval if the change is likely to increase.

Response to A2

No Longer applies

- A3. Contaminant must not be released to the environment other than in accordance with the development approval.

Response to A3

No Longer applies

- A4. The holder of the development approval must install and operate all works and control equipment, and take all measures, perform all acts and do all things necessary to ensure compliance with the conditions of the development approval.

Response to A4

No Longer applies

- A5. A copy of this development approval must be kept in a location readily accessible to personnel carrying out the activity.

Response to A5

Will comply

- A6. The holder of the development approval must ensure that those persons responsible for day-to-day operations at the approved place are familiar with the conditions of this development approval.

Response to A6

No Longer applies

- A7. Any record required to be kept as a condition of the development approval must be kept at the approved place and be available for examination by an authorised person.

Response to A7

No Longer applies

- A8. Copies of any record required to be kept by a condition of the development approval must be provided to any authorised person or the administering authority on request.

Response to A8

No Longer applies

SCHEDULE B – AIR DISCHARGE

- B1. Notwithstanding any other condition of the development approval, no odour determined by an authorised person to be noxious or offensive is to be released beyond the boundaries of the approved place.

Response to B1

No Longer applies

- B2. No release of contaminants, including but not limited to odour, dust, smoke, fumes, particulates and aerosols is to cause or likely to cause an environmental nuisance beyond the boundaries of the approved place.

Response to B2

No Longer applies

- B3. No incineration or open burning is to be carried out on the approved place

Response to B3

No Longer applies

SCHEDULE C – WATER DISCHARGE

- C1. Except as otherwise provided by the conditions of the water schedule of this development approval, the environmentally relevant activity must be carried out by such practical means, which may be necessary to prevent or minimise the release of contaminants to waters.

Response to C1

No Longer applies

- C2. Contaminants must not be directly or indirectly released from the approved place to any waters or the bed and banks of any waters (except as permitted under another schedule of this development approval)

Response to C2

No Longer applies

SCHEDULE D – STORMWATER MANAGEMENT

- D1. Except as provided by the conditions of the stormwater management schedule and the water schedule of this development approval, the environmentally relevant activity must be carried out by such practical means which may be necessary to prevent or minimise the contact of incident rainfall and stormwater runoff with wastes, contaminants or material to any stormwater drainage system, roadside gutter or water.

Response to D1

No Longer applies

- D2. Any stormwater leaving the approved place shall contain no visible floating oil, grease, scum, litter or other matter.

Response to D2

No Longer applies

- D3. Any spillage of wastes, contaminants or other material must be cleaned up as quickly as practical. Such spillage must not be cleaned up by hosing, sweeping or otherwise releasing such wastes, contaminants or material to any stormwater drainage system, roadside gutter or water.

Response to D3

No Longer applies

- D4. All wastewater produced as a result of the environmentally relevant activity, including water produced from the washing of animals and animal accommodation is to be discharged to the sewer via an approved silt trap.

Response to D4

No Longer applies

SCHEDULE E – LAND APPLICATION

- E1. The environmentally relevant activity must be carried out by such practical means that may be necessary to prevent or minimise the release of contaminants to the land.

Response to E1

No Longer applies

SCHEDULE F – NOISE CONTROL

- F1. Except as otherwise provided by the condition of the Noise schedule of this development approval, the environmentally relevant activity must be carried out by such means that may be necessary to prevent or minimise the emission or noise.

Response to F1

No Longer applies

- F2. The emission of noise from the approved place must not result in offensive noise levels being emitted beyond the boundaries of the approved place, as determined by an authorised person.

Response to F2

No Longer applies

SCHEDULE G – WASTE MANAGEMENT

- G1. Waste must not be released to the environment or disposed contrary to the condition of this development approval.

Response to G1

No Longer applies

- G2. Waste must not be burnt or allowed to burn at the approved place or removed and burnt elsewhere.

Response to G2

No Longer applies

- G3. Where a recycling service is available, recyclable waste must not be deposited in the general waste stream.

Response to G3

No Longer applies

SCHEDULE H – SELF MONITORING

H1. All complaints received by the holder of this development approval of this environmentally relevant activity relating to operations at the approved place must be recorded in a logbook with the following details:

- Time and date of complaint;
- Contact details of the complainant;
- Response and investigation undertaken as a result of the complainant;
- Name of person responsible for investigating complaint; and
- Action taken as a result of the investigation of the complaint.

Response to H1

No Longer applies

H2. The complaints recorded required by condition H1 shall be maintained for a period of not less than 3 years.

Response to H2

No Longer applies

H3. As soon as practical after becoming aware of any emergency or incident which results in the release of contaminants not in accordance, or reasonably expected to be not in accordance with the condition of this development approval, the holder of this development approval, to their operator on site must notify the administering authority of the release by telephone or facsimile.

Response to H3

No Longer applies

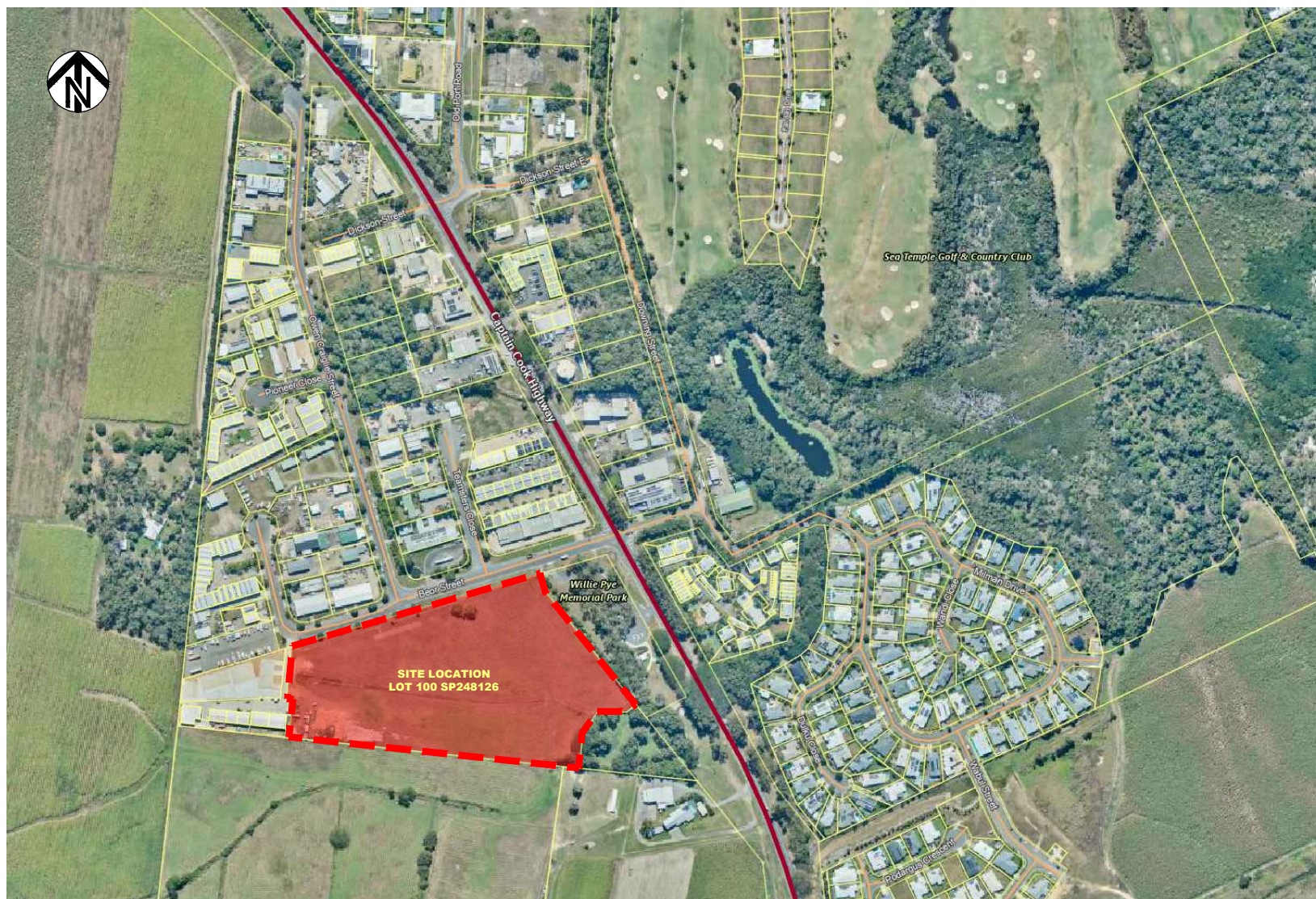
H4. The notification of emergencies or incidents as required by condition H3 must include but not limited to the following:

- The name of the holder of this development approval
- The location of the emergency of the incident
- The name and telephone number of the designated contact person
- The time of release
- The time the holder of the development approval became aware of the release
- The suspected cause of the release
- The environmental harm and or the environmental nuisance caused, threatened or suspected to be caused by the release
- Actions taken to prevent any further release and mitigate any environmental harm or environmental nuisance caused by the release

Response to H4

No Longer applies

CRAIGLIE BUSINESS PARK LOT 100 SP248126 INTO 13 LOTS BOER STREET - CRAIGLIE 4877



DRAWING INDEX

DWG No.	TITLE
C000	COVER SHEET, LOCALITY PLAN AND DRAWING INDEX
C001	ENGINEERING NOTES
C002	EXISTING FEATURES, PRE DEVELOPMENT STORMWATER CATCHMENT AND DEMOLITION PLAN
C003	EARTHWORKS PLAN
C004	ROADWORKS PLAN
C005	TYPICAL SECTIONS
C006	LONGITUDINAL SECTIONS - ROAD 1 AND ROAD 2
C007	CROSS SECTIONS ROAD 1 - SHEET 1 OF 2
C008	CROSS SECTIONS ROAD 1 - SHEET 2 OF 4
C009	CROSS SECTIONS ROAD 1 - SHEET 3 OF 4
C010	CROSS SECTIONS ROAD 1 - SHEET 4 OF 4
C011	CROSS SECTIONS ROAD 2 - SHEET 1 OF 4
C012	CROSS SECTIONS ROAD 2 - SHEET 2 OF 4
C013	CROSS SECTIONS ROAD 2 - SHEET 3 OF 4
C014	CROSS SECTIONS ROAD 2 - SHEET 4 OF 4
C015	KERB RETURN AND CUL DE SAC SETOUT PLAN
C016	FINISHED SURFACE LEVEL CONTOUR PLAN - CATCHMENT PLAN AND 1% AEP FLOODED WIDTHS
C017	STORMWATER PIT CHAMBER SETOUT AND DIMENSIONS
C018	DRAINAGE LONGSECTIONS - SHEET 1 OF 3
C019	DRAINAGE LONGSECTIONS - SHEET 2 OF 3
C020	DRAINAGE LONGSECTIONS - SHEET 3 OF 3
C021	DRAINAGE CALCULATION TABLES - 10% HYDROLOGY
C022	DRAINAGE CALCULATION TABLES - 10% HYDRAULICS
C023	DRAINAGE CALCULATION TABLES - 1% HYDROLOGY & HYDRAULICS
C024	SEWER RETICULATION PLAN
C025	SEWER LONGSECTIONS - SHEET 1 OF 2
C026	SEWER LONGSECTIONS - SHEET 2 OF 2
C027	WATER RETICULATION PLAN
C028	EROSION AND SEDIMENT CONTROL STRATEGY

B 21.05.26 DRAWING INDEX UPDATED A 23.01.26 FOR COUNCIL APPROVAL REV DATE REVISION NOTES	SCALE N/A DO NOT SCALE DRAWINGS Scales Before Reduction 	DESIGNER Address: 35 ABBOTT ST, CAIRNS 4870 Email: admin@osegroup.com.au	CLIENT MIDDIN PTY LTD	PROJECT CRAIGLIE BUSINESS PARK BOER STREET - CRAIGLIE 4877	TITLE COVER SHEET, LOCALITY PLAN AND DRAWING INDEX SCALE (Scale as shown) DRAWING No 25235-C00 REV B
				DRAWN DM DRAWING CHECK AMcP APPROVED DESIGNED DM DESIGN REVIEW AMcP DATE -	

SURVEY & EXISTING SERVICES

- HORIZONTAL DATUM IS MGA
- LEVEL DATUM IS AHD.
- REFER TO THE ORIGINAL SURVEY (RPS - PTD405516-1) FOR THE CONFORMATION OF SURVEY STATION SETOUT DETAILS INCLUDING LEVELS AND DATUMS.
- THE EXISTING SERVICES SHOWN ON THESE DRAWINGS ARE DERIVED FROM SURFACE SURVEY AND COUNCIL RECORDS AND MAY NOT REPRESENT THE EXISTING SERVICES PRESENT BELOW THE SURFACE.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO LOCATE ALL EXISTING SERVICES PRIOR TO ANY EXCAVATION, PARTICULARLY ON FOOTPATHS.
- ALL DAMAGE TO EXISTING SERVICES SHALL BE MADE GOOD TO THE SATISFACTION OF THE SUPERINTENDENT AND THE RELEVANT AUTHORITY, ALL AT THE CONTRACTORS EXPENSE. THE CONTRACTOR SHALL NOTIFY THE RELEVANT AUTHORITY IMMEDIATELY WHEN ANY DAMAGE OCCURS.
- THE LINE AND LEVEL OF EXISTING UNDERGROUND SERVICES SHALL BE DETERMINED BY THE CONTRACTOR AND THE ENGINEER SHALL BE NOTIFIED OF ANY POTENTIAL CLASHES WITH DESIGN STRUCTURES AND SERVICES PRIOR TO COMMENCING CONSTRUCTION.
- EXISTING OUTLET LEVELS OR CONNECTION LEVELS FOR ALL DESIGN STORMWATER AND SEWER SHALL BE CONFIRMED BY THE CONTRACTOR AND THE ENGINEER SHALL BE NOTIFIED OF ANY VARIATIONS PRIOR TO COMMENCING CONSTRUCTION.
- PRIOR TO THE COMMENCEMENT OF CONSTRUCTION THE CONTRACTOR IS TO ESTABLISH ON SITE THE EXACT POSITION OF ALL UNDERGROUND SERVICES IN THE PROPOSED WORKS AREA. METHODS FOR ACHIEVING THIS WILL INCLUDE BUT NOT BE LIMITED TO:
 - CAREFUL EXAMINATION OF THE CONTRACT DRAWINGS.
 - CONSULTATION WITH THE RELEVANT SERVICE AUTHORITIES.
 - COMPREHENSIVELY SCANNING THE AFFECTED AREAS WITH A CABLE DETECTOR AND MARKING ON THE GROUND THE POSITION OF ALL SERVICES.
 - HAND EXCAVATING TO EXPOSE ALL SUCH SERVICES WHICH MAY BE AFFECTED BY THE PROPOSED WORKS UNDER THE DIRECTION OF THE RELEVANT SERVICE AUTHORITY.
 - BEFORE YOU DIG AUSTRALIA
- THE CONTRACTOR SHALL BRING TO THE SUPERINTENDENT'S ATTENTION ANY DISCREPANCIES BETWEEN THE EXISTING SERVICES THUS IDENTIFIED AND DOCUMENTED SERVICES WHICH MIGHT AFFECT THE PROPOSED WORKS. APPROPRIATE MEASURES TO RESOLVE ANY CONFLICT WILL BE DOCUMENTED BY THE SUPERINTENDENT.

EARTHWORKS NOTES

- ALL FOOTPATHS SHALL BE GRASSED (DRILL SEEDED WITH APPROVED GRASS SPECIES) IN ACCORDANCE WITH LANDSCAPE SPECIFICATIONS, FERTILIZED AND MAINTAINED FOR THE REQUIRED MAINTENANCE PERIOD.
- ALL BARE EARTHWORKS AREAS (LOTS, DRAINS, PARKS, VERGES), SHALL BE GRASSED (DRILL SEEDED WITH APPROVED GRASS SPECIES) FOR SLOPES UP TO AND INCLUDING 1 ON 4, OR HYDROMULCHED FOR SLOPES GREATER THAN 1 ON 4. USE APPROVED SEED MIX AND MAINTAIN, WATER AND FERTILISE FOR MAINTENANCE PERIOD.
- CLEAR TREES, LARGE SHRUBS ETC FROM THE AREA OF LOTS AND ROAD RESERVES. ONLY FOR CONSTRUCTION OF ROADS AND SERVICES. AND EITHER REMOVE FROM SITE OR ALTERNATIVELY CHIP MULCH AND STOCKPILE FOR RE-USE IN LANDSCAPING. CONTRACTOR SHALL OBTAIN COUNCIL INSPECTION AND APPROVAL PRIOR TO COMMENCING ANY TREE AND VEGETATION CLEARING. ALL VEGETATION/CONSERVATION ZONES SHALL BE RETAINED AND SHALL BE ADEQUATELY FENCED/SEGREGATED PRIOR TO COMMENCING CONSTRUCTION.
- SLASH THE EARTHWORKS AREA. RAKE AND STOCKPILE CUT VEGETATION FOR RE-USE IN THE LANDSCAPING. CONTINUE SLASHING AND RAKING LOTS AND PARK AREAS AS NECESSARY AND AS INSTRUCTED BY THE SUPERINTENDENT DURING THE CONTRACT AND MAINTENANCE PERIOD TO KEEP GRASS TO A MAXIMUM 50MM TO 100MM HIGH.
- ALL GULLIES AND DEPRESSIONS REQUIRING FILLING SHALL BE CLEARED, GRUBBED AND CLEANED OUT OF SILT, BOULDERS, DEBRIS ETC TO PROVIDE A CLEAN, FIRM BASE PRIOR TO PLACING ANY FILL OR FILTER MATERIALS. COMPACT ALL NATURAL SUBGRADES WITH 6 TO 8 PASSES OF A 10 TONNE VIBRATING ROLLER PRIOR TO PLACING ANY FILL MATERIALS. PLACE SUBSOIL DRAINSMATS TO ENGINEERS APPROVALS AT THE BASE OF ALL SUCH FILLS AND OUTLET TO THE STORMWATER DRAINAGE SYSTEM. NOTIFY THE SUPERINTENDENT FOR AN INSPECTION PRIOR TO PLACING ANY FILL MATERIALS.
- WHERE FILL IS PLACED ON SLOPING EXISTING SURFACE, THE EXISTING SURFACE SHALL BE BENCHED AND THE BENCH COMPACTED TO 98% SRDD PRIOR TO PLACING THE FILL MATERIAL.
- ALL FILL DEPTHS GREATER THAN 600MM IS TO BE COMPLETED UNDER LEVEL 1 SUPERVISION TO AS 3798. ALL OTHER AREAS OF FILL TO BE COMPLETED UNDER LEVEL 2 SUPERVISION.
- REMOVE SURFACE ROCKS FROM THE LOTS, FOOTPATHS, VERGES AND PARKLAND AREAS. REUSE IN SCOUR PROTECTION. REMOVE EXCESS FROM SITE OR STOCKPILE AS DIRECTED. ALL COSTS TO BE INCLUDED IN CONTRACT LUMP SUM.
- THE CONTRACTOR SHALL ENSURE NO PONDING AREAS RESULT FROM THE EARTHWORKS OPERATION. ANY SUCH AREAS WHICH DEVELOP SHALL BE RECTIFIED AS DIRECTED BY THE SUPERINTENDENT. THE CONTRACTOR SHALL NOTIFY THE SUPERINTENDENT OF THE DEVELOPMENT OR EXISTENCE OF ANY SUCH PONDING AREAS.
- BATTERS IN EXCESS OF 1.5M HIGH SHALL BE ASSESSED AND REPORTED FOR STABILITY (DURING CONSTRUCTION) BY A GEOTECHNICAL ENGINEER APPROVED BY THE SUPERINTENDENT AND ENGAGED BY THE CONTRACTOR. COPIES OF REPORTS SHALL BE FORWARDED TO THE SUPERINTENDENT AND TO COUNCIL.
- THE CONTRACTOR SHALL CONSTRUCT TEMPORARY BERMS AT THE TOP OF ALL BATTERS TO DIRECT AND CONTROL RUNOFF TO A SINGLE LOCATION. THE DISCHARGE OVER THE BATTER SHALL BE THROUGH A STABILISED CHUTE ADDRESSED IN THE CONTRACTORS PLAN, E.G. REINFORCED TURF, GEOTEXTILE, CONCRETE OR SIMILAR.
- THE CONTRACTOR SHALL SET OUT (BY REGISTERED SURVEYOR) THE LOCATION OF ALL CUT BATTERS PRIOR TO COMMENCING THESE EARTHWORKS. HE SHALL ENGAGE A GEOTECHNICAL ENGINEER TO INSPECT, REPORT AND CHECK THE DESIGN PROFILE AND THE INSTU MATERIAL FOR LONG TERM STABILITY. DESIGN AMENDMENTS AND ANY RETAINING WALLS SHALL BE FINALIZED TO COUNCIL'S APPROVALS PRIOR TO COMMENCEMENT OF ANY OF THESE EARTHWORKS.
- THE CONTRACTOR SHALL ENSURE THE PROPOSED CONSTRUCTION EQUIPMENT TO BE USED ON THE SITE WILL NOT DAMAGE EXISTING UNDERGROUND INFRASTRUCTURE, IN PARTICULAR HEAVY EQUIPMENT TRAVERSING OVER A.C. MAINS WITH NOMINAL COVERS.

SUBGRADE AND FILL NOTES

- ROAD RESERVE AREA TO BE CLEARED AND GRUBBED OUT TO REMOVE TOPSOIL AND ORGANIC MATERIAL.
- WHERE NECESSARY APPROVED IMPORTED FILL TO BE SPREAD IN LAYERS NOT EXCEEDING 200mm AND COMPACTED USING VIBRATORY ROLLER TO 98% SRDD AT OPTIMUM MOISTURE CONTENT.
- ANY TREES TO BE REMOVED SHALL BE EXCAVATED AND THE HOLE FILLED WITH APPROVED IMPORTED FILL COMPACTED AS ABOVE.
- FILLING TO BE BROUGHT UP TO THE UNDERSIDE OF THE ROAD PAVEMENT AND TRIMMED TO THE DESIRED LEVELS.
- ALL SOFT SPOTS SHALL BE EXCAVATED BACK TO FIRM GROUND. THE BASE OF THE EXCAVATION COMPACTED AND BACKFILLED WITH APPROVED FILL AND COMPACTED AS PER ABOVE NOTES.
- ALL FILL SHALL BE TESTED FOR COMPACTION IN ACCORDANCE WITH AS 3798 AND FNQROC REQUIREMENTS.
- SUB-GRADE SHALL BE TRIMMED AND COMPACTED TO 98% SRDD (ASSUMED SOAKED CBR 10 MIN).
- THE CONTRACTOR SHALL CHECK THE PAVEMENT SUBGRADE CBR AND SUBMIT THE CBR TEST RESULTS TO THE SUPERINTENDENT. FOR CONFIRMATION OF PAVEMENT DESIGN, AT LEAST TWO WEEKS PRIOR TO THE PLACEMENT OF ANY GRAVEL. REFER SPECIFICATION FOR TEST FREQUENCY AND LOCATION.

CONSTRUCTION UNDER TRAFFIC

- THE CONTRACTOR SHALL PROVIDE A TRAFFIC MANAGEMENT PLAN IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR APPROVAL BY COUNCIL PRIOR TO THE PRESTART MEETING.

ROADWORKS NOTES

- TRAFFIC CONTROL DEVICES (ROAD EDGE GUIDE POSTS, SIGNS, ETC) SHALL BE SUPPLIED AND INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT ISSUE OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AS ISSUED BY THE DEPARTMENT OF TRANSPORT, QUEENSLAND.
- REFER TO THE "TYPE CROSS SECTIONS" DRAWING FOR PAVEMENT DETAILS DRG 25235-C05
- CONSTRUCTION AND INSTALLATION OF ALL WORKS AS DETAILED ON THIS DRAWING IS TO BE IN ACCORDANCE WITH THE PROCEDURES, SPECIFICATIONS AND DRAWINGS CONTAINED IN THE CURRENT ISSUE OF THE "REGIONAL DEVELOPMENT MANUAL" AS ISSUED BY FNQROC, AND TO THE REQUIREMENTS OF THE COUNCIL.
- THE CONTRACTOR SHALL LIAISE WITH THE RELEVANT AUTHORITIES TO CONFIRM THE LOCATION OF ALL EXISTING SERVICES, AND SHALL ARRANGE FOR THE REMOVAL OR RELOCATION OF ANY SERVICES WHICH WILL BE AFFECTED BY THE WORKS.
- THE CONTRACTOR/BUILDER SHALL OBTAIN COUNCIL APPROVALS PRIOR TO COMMENCING ANY CONSTRUCTION WORKS EXTERNAL TO THE SITE.
- THE CONTRACTOR SHALL REMOVE ALL EXISTING CONSTRUCTION, TREES, SERVICES ETC AS NECESSARY TO PERMIT CONSTRUCTION OF THE NEW WORKS.
- THE CONTRACTOR SHALL OBTAIN COUNCIL INSPECTIONS AND THEIR WITNESS TO TESTING PRIOR TO MAKING SEWERS AND WATER MAINS LIVE. A COPY OF COUNCIL'S INSPECTION CERTIFICATE SHALL BE PROVIDED TO THE SUPERINTENDENT PRIOR TO PRACTICAL COMPLETION.
- THE CONTRACTOR SHALL PROVIDE "AS CONSTRUCTED" DRAWINGS PREPARED BY A REGISTERED SURVEYOR IN ACCORDANCE WITH FNQROC TO THE SUPERINTENDENT PRIOR TO PRACTICAL COMPLETION.
- TREES ON THE SITE ARE TO REMAIN UNLESS NOTED OTHERWISE. PROTECTION OF EXISTING TREES SHALL BE IN ACCORDANCE WITH AS4970 – 2009 – PROTECTION OF TREES ON DEVELOPMENT SITES.
- THE CONTRACTOR SHALL COMPLY WITH ALL CONDITIONS OF THE COUNCIL'S DECISION NOTICE/NEGOTIATED DECISION NOTICE ISSUED FOR THE PROJECT – COPIES ARE AVAILABLE ON REQUEST.
- SUBSOIL FLUSH POINTS TO BE IN ACCORDANCE WITH FNQROC DWG No. S1095. WHERE FLUSH POINTS OCCUR AT STORMWATER PITS, ENSURE FLUSHING POINT IS PROVIDED INSIDE THE PIT TO THE DETAILS SHOWN ON FNQROC DWG No. S1095.
- PROVIDE SUBSOIL TAILS IN ACCORDANCE WITH FNQROC DRGS No. S1050 & S1055 TO UIS OF ALL KERB INLET PITS.

ASPHALT SURFACE (WHERE SPECIFIED)

- THE PAVEMENT SHALL BE BROOMED CLEAN AND SHALL BE DRY PRIOR TO APPLYING PRIME COAT.
- PRIME COAT SHALL BE APPLIED 48 HOURS PRIOR TO ASPHALT SEALING.
- APPLY 50mm OF APPROVED ASPHALT.
- THE PRIME COAT AND HOT MIX DESIGN SHALL BE SUPPLIED AND PLACED IN ACCORDANCE WITH COUNCIL DEVELOPMENT MANUAL REQUIREMENTS, WITH POLYMER ADDITIVES.

SEWERAGE RETICULATION

- ALL SEWER PIPES SHALL BE 150 DIA PVC, CLASS SEH, UNLESS NOTED OTHERWISE.
- ALL PCB'S SHALL BE OF TYPE AS NOTED SHALL BE IN ACCORDANCE WITH FNQROC DWG No S3005. ALL PCB'S SHALL BE PLACED CLEAR OF ANY EASEMENTS, AND WHERE PCB'S CROSS UNDER EASEMENTS OR BATTERS SHALL BE EXTENDED 1000mm BEYOND (AND CLEAR OF) THE EASEMENT OR BATTER. AN I.D. SHALL BE PROVIDED AT THE DOWNSTREAM END OF THE HOUSE DRAIN, WITHIN 1.0m OF THE BOUNDARY, TO DELINEATE THE END OF THE PROPERTY CONNECTION BRANCH (PCB).
- END CAPS SHALL BE PROVIDED AT ALL LINE ENDS WHERE MANHOLES ARE NOT TO BE CONSTRUCTED.
- WHERE MANHOLES OCCUR AT THE ENDS OF SEWER LINES, THE HOUSE CONNECTION BRANCH (PCB) IS TO BE CONNECTED DIRECTLY TO MANHOLE TO AVOID DRY MANHOLE SITUATIONS. REFER TO PLAN FOR PCB LOCATIONS.
- REFER TO THE SEWERAGE LONGITUDINAL SECTIONS FOR SEWER PIPE GRADES, INVERT LEVELS, STORMWATER CLASHES, ETC.
- CONSTRUCTION OF THE SEWERAGE RETICULATION SHALL BE IN ACCORDANCE WITH THE PROCEDURES, SPECIFICATIONS AND DRAWINGS INCLUDING REQUIREMENTS FOR "AS CONSTRUCTED" DRAWINGS AS CONTAINED IN THE CURRENT ISSUE OF THE "REGIONAL DEVELOPMENT MANUAL" AS ISSUED BY FNQROC, AND SHALL BE TO THE REQUIREMENTS OF THE COUNCIL.
- THE CONTRACTOR SHALL MAKE ALL APPLICATIONS AND PAY ALL FEES TO COUNCIL FOR THE SEWERAGE WORKS AND SHALL ARRANGE AND MANAGE COUNCIL'S INSPECTIONS AND TESTING OF THE WORKS. A COPY OF COUNCIL'S INSPECTION CERTIFICATE SHALL BE PROVIDED BY THE CONTRACTOR TO THE SUPER PRIOR TO PRACTICAL COMPLETION.

WATER RETICULATION NOTES

- VALVES AND HYDRANTS MUST BE LOCATED OPPOSITE BOUNDARY JUNCTIONS AND TRUNCATIONS.
- WATER SUPPLY FITTINGS ARE TO INCORPORATE SOCKETS WITH AN EFFECTIVE SEALING LENGTH EQUAL OR GREATER THAN THAT OF THE uPVC PIPE USED.
- ALIGNMENT OF WATER RETICULATION MAINS WITHIN ROAD RESERVES SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF DOUGLAS SHIRE COUNCIL.
- INSTALLATION OF VALVES AND FIRE HYDRANTS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE DOUGLAS SHIRE COUNCIL.
- ALL WORKS AND MATERIALS SHALL BE IN ACCORDANCE WITH FNQROC.
- FOR DETAILS FOR KERB AND PAVEMENT MARKINGS AND RETROREFLECTIVE MARKERS AT HYDRANTS REFER TO FNQROC STANDARD DRAWINGS S2005 AND S2010.
- THE CONTRACTOR SHALL MAKE ALL APPLICATIONS AND PAY ALL FEES TO COUNCIL FOR THE WATER SUPPLY WORKS AND SHALL ARRANGE AND MANAGE COUNCIL'S INSPECTIONS AND TESTING OF WORKS. A COPY OF THE COUNCIL'S INSPECTION CERTIFICATE SHALL BE PROVIDED BY THE CONTRACTOR TO THE SUPER PRIOR TO PRACTICAL COMPLETION.


EROSION SEDIMENT CONTROL STRATEGY AND ENVIRONMENTAL PROTECTION

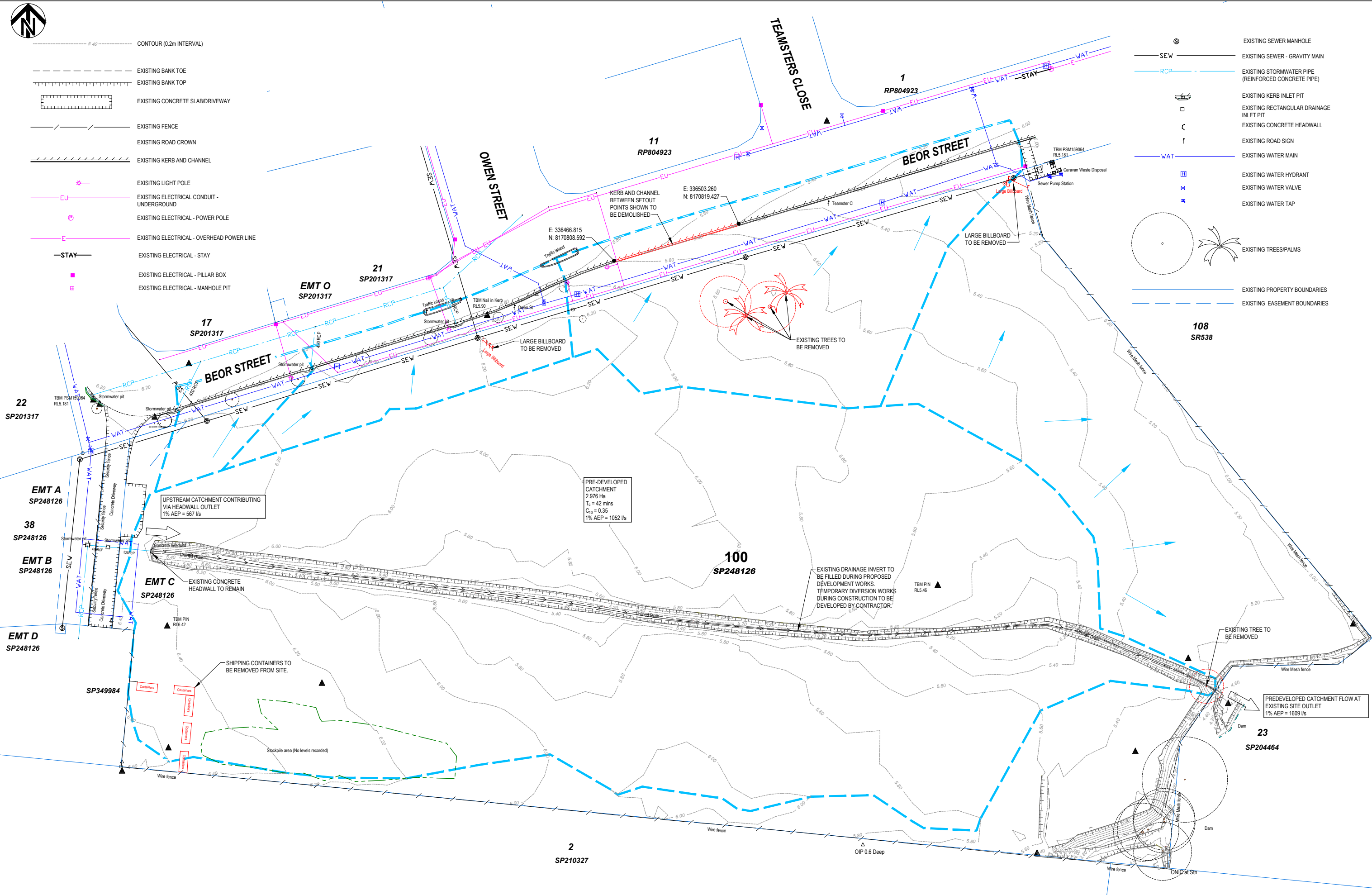
- THE CONTRACTOR SHALL BE RESPONSIBLE TO PROTECT AND PRESERVE THE NATURAL ENVIRONMENT AND SHALL AVOID ENVIRONMENTAL POLLUTION IN ACCORDANCE WITH THE ENVIRONMENTAL PROTECTION ACT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INCORPORATION OF APPROPRIATE CONTROL AND MANAGEMENT MEASURES CONFORMING TO THE REQUIREMENTS OF THE ACT AND THE RELEVANT AUTHORITIES.
- THE EROSION AND SEDIMENT CONTROL STRATEGY, SHOWN OR NOTED ON THESE DRAWINGS, HAS BEEN PROVIDED AS A GUIDE.
- THE CONTRACTOR SHALL PROVIDE AN EROSION SEDIMENT CONTROL PLAN (ESCP) FOR EACH PHASE OF HIS PROPOSED CONSTRUCTION PROGRAM AND WORK METHODS, AND IS WHOLLY RESPONSIBLE FOR THE IMPLEMENTATION, CONTROL AND MANAGEMENT OF SUCH PLAN.
- THE CONTRACTOR SHALL INSTALL ALL DEVICES/MEASURES NECESSARY TO COMPLY WITH THE PROVISIONS OF THE ESCP FNQROC DEVELOPMENT MANUAL, THE ENVIRONMENTAL PROTECTION ACT, AND COUNCIL REQUIREMENTS.
- THE ESCP SHALL INCLUDE SUCH MEASURES AS SHOWN ON THE STRATEGIC PLAN.
- "OSE GROUP" DO NOT ACCEPT RESPONSIBILITY FOR THE CONTRACTOR'S DESIGN & IMPLEMENTATION OF THEIR ESCP NOR THE CONSEQUENCES OF THEIR FAILURE TO APPLY ALL REASONABLE CONTROLS.
- ALL STORMWATER INLETS, TRENCHES, ETC. SHALL BE CONSTRUCTED IN SUCH A WAY AS TO PREVENT THE ENTRY OF SEDIMENT INTO THE STRUCTURE. IF IT IS NECESSARY TO DISCHARGE INTO SUCH INLETS THEN SUITABLE SILT TRAPS SHALL BE CONSTRUCTED UPSTREAM OF THE INLETS SUCH THAT OVERFLOW FROM TRAPS ENTERS THE DRAINS AFTER THE SEDIMENT HAS DROPPED OUT.
- ALL SEDIMENT CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL THE END OF THE MAINTENANCE PERIOD, UNLESS NOTED OTHERWISE. ALL SEDIMENT CONTROL DEVICES ARE TO BE FULLY MAINTAINED IN AN EFFECTIVE WORKING CONDITION DURING CONSTRUCTION AND THE MAINTENANCE PERIOD. THE CONTRACTOR SHALL ENSURE THAT ALL SEDIMENT CONTROL DEVICES ARE KEPT FREE OF SEDIMENT BUILD-UP.
- SEDIMENT FENCES SHALL BE INSTALLED SUCH THAT THE BASE OF THE FENCE IS PLACED 150MM MINIMUM BELOW GROUND LEVEL, AND ANCHORED SECURELY IN SUCH POSITION.
- ALL VEHICLE EXIT POINTS SHALL HAVE SHAKER GRIDS, WASH BAYS OR SIMILAR TO PREVENT VEHICLES FROM TRACKING SOIL AND MUD OFF SITE.
- ALL SOIL STOCKPILES SHALL BE PROTECTED AGAINST WIND EROSION BY COVERING AND AGAINST STORMWATER RUNOFF BY SILT FENCES AT THE DOWNHILL SLOPES. STOCKPILE LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR AND EROSION/CONTROL MEASURES IMPLEMENTED & MAINTAINED FOR THE LIFE OF THE STOCKPILE.
- THE CONTRACTOR SHALL INSTALL TURF STRIPS BEHIND ALL KERB & CHANNEL. ADJACENT CONCRETE INVERTS AND ALLOTMENT DRAINS ETC WHERE DIRTY WATER SHEET FLOWS INTO DRAINAGE COLLECTION SYSTEMS.
- DIVERT CLEAN WATER AROUND AREAS OF CONSTRUCTION.
- DRILL SEED ALL ROAD SHOULDERS, FOOTPATHS, DRAINS AND CUT BATTERS UP TO 1 ON 4 SLOPE WITH APPROVED GRASS SPECIES, FERTILIZED AND MAINTAIN FOR THE REQUIRED MAINTENANCE PERIOD
- HYDROMULCH ALL CUT AND FILL BATTERS STEEPER THAN 1 ON 4, WITH APPROVED SUITABLE GRASS SPECIES AND MAINTAIN FOR THE REQUIRED MAINTENANCE PERIOD
- THE CONTRACTOR SHALL CONSTRUCT TEMPORARY BERMS AT THE TOP OF ALL BATTERS TO DIRECT AND CONTROL RUNOFF TO A SINGLE LOCATION. THE DISCHARGE OVER THE BATTER SHALL BE THROUGH A STABILIZED CHUTE ADDRESSED IN THE CONTRACTORS PLAN, E.G. REINFORCED TURF, GEOTEXTILE, CONCRETE OR SIMILAR.
- ALL WORKS AND MATERIALS SHALL BE IN ACCORDANCE WITH FNQROC.

IMPORTED NON PLASTIC FILL

- AS METRIC SIEVE % PASSING BY WEIGHT

75mm	100
2.36mm	25 - 70
75um	2 - 30
- MINIATURE ABRASION LOSS PASSING 2.36mm 0 - 15
- LINEAR SHRINKAGE PASSING 4.25um 0 - 8
- MATERIAL RETAINED ON 2.36mm SIEVE SHALL CONSIST OF SOUND STONE
- SOAKED CBR 15 AT 98% MDD + OR - 2% OMC COMPACTION
- WHERE NECESSARY APPROVED IMPORTED FILL SHALL BE SPREAD IN LAYERS NOT EXCEEDING 200mm AND COMPACTED USING VIBRATORY ROLLER TO 100% MDD + OR - 2% OMC AT OPTIMUM MOISTURE CONTENT.
- ALL FILL SHALL BE TESTED FOR COMPACTION IN ACCORDANCE WITH AS 3798.
- THE EARTHWORKS CONTRACTOR SHALL VERIFY WITH CBR TESTS PER MATERIAL TYPE AND APPROVED BY THE EPC CONTRACTOR AND EPEC PROJECT MANAGER.
- FILL WITH DEPTH GREATER THAN 600mm SHALL BE SUPERVISED TO LEVEL 1 IN ACCORDANCE WITH AS 3798.

A 23.01.26 FOR COUNCIL APPROVAL	SCALE N/A	Orig. Sheet A3	DESIGNER  Address: 35 ABBOTT ST, CAIRNS 4870 Email: admin@osegroup.com.au	CLIENT MIDDIN PTY LTD	PROJECT CRAIGLIE BUSINESS PARK BOER STREET - CRAIGLIE 4877	TITLE ENGINEERING NOTES				
	DO NOT SCALE DRAWINGS	Scales Before Reduction				<table border="1"> <tr> <td>DRAWN DM</td> <td>DRAWING CHECK AMcP</td> <td rowspan="2">APPROVED</td> </tr> <tr> <td>DESIGNED DM</td> <td>DESIGN REVIEW AMcP</td> </tr> </table>	DRAWN DM	DRAWING CHECK AMcP	APPROVED	DESIGNED DM
DRAWN DM	DRAWING CHECK AMcP	APPROVED								
DESIGNED DM	DESIGN REVIEW AMcP									



B 21.05.26 DESIGN CHANGE & RESPONSE TO COUNCIL COMMENTS A 23.01.26 FOR COUNCIL APPROVAL REV DATE REVISION NOTES	SCALE 1:1000 DO NOT SCALE DRAWINGS Scales Before Reduction 	DESIGNER Address: 35 ABBOTT ST, CAIRNS 4870 Email: admin@osegroup.com.au	CLIENT MIDDIN PTY LTD	PROJECT CRAIGLIE BUSINESS PARK BOER STREET - CRAIGLIE 4877	TITLE EXISTING FEATURES, PREDEVELOPED STORMWATER CATCHMENT PLAN AND DEMOLITION PLAN
	DRAWN DM DESIGNED DM	DRAWING CHECK AMcP DESIGN REVIEW AMcP	APPROVED DATE -	SCALE (Scale as shown) DRAWING No 25235-C02	REV B



LEGEND

- BANK TOE
- BANK TOP
- EARTHWORKS CROWN/RIDGE LINE
- DRAINAGE INVERT
- PROPERTY BOUNDARIES PROPOSED
- EASEMENT BOUNDARIES PROPOSED
- PROPERTY BOUNDARIES - EXISTING
- PROPOSED LAYBACK KERB AND CHANNEL
REFER TO FNQROC STD DRG S1000 FOR PROFILE DIMENSIONS AND DETAILS
- PROPOSED SEWER MANHOLE
- SEW EXISTING GRAVITY SEWER
- SEW PROPOSED SEWER - 150Ø PVC (DI/CL UNDER ROAD CROSSINGS) - REFER TO C022 FOR SEWER RETICULATION PLAN
- PROPOSED STORMWATER HEADWALL - REFER TO PLAN C016 STORMWATER DRAINAGE NETWORK PLAN
- PROPOSED KERB INLET PIT (S) - FNQROC SAG AND PIT CHAMBER - REFER TO C016 STORMWATER DRAINAGE NETWORK PLAN

ROAD 1 CONTROL LINE SETOUT

CHAINAGE	COORDINATES		LEVEL	APPROACH BEARING	DEPARTURE BEARING	APPROACH RADIUS	DEPARTURE RADIUS
	EASTING	NORTHING					
0.000	336483.183	8170820.279	5.686		163°25'40.00"		
65.242	336501.792	8170757.747	5.826	163°25'40.00"	163°25'40.00"		34.750
78.652	336503.073	8170744.482	5.664	185°32'15.41"	185°32'15.41"		
108.912	336500.153	8170714.363	5.989	185°32'15.41"			

ROAD 2 CONTROL LINE SETOUT

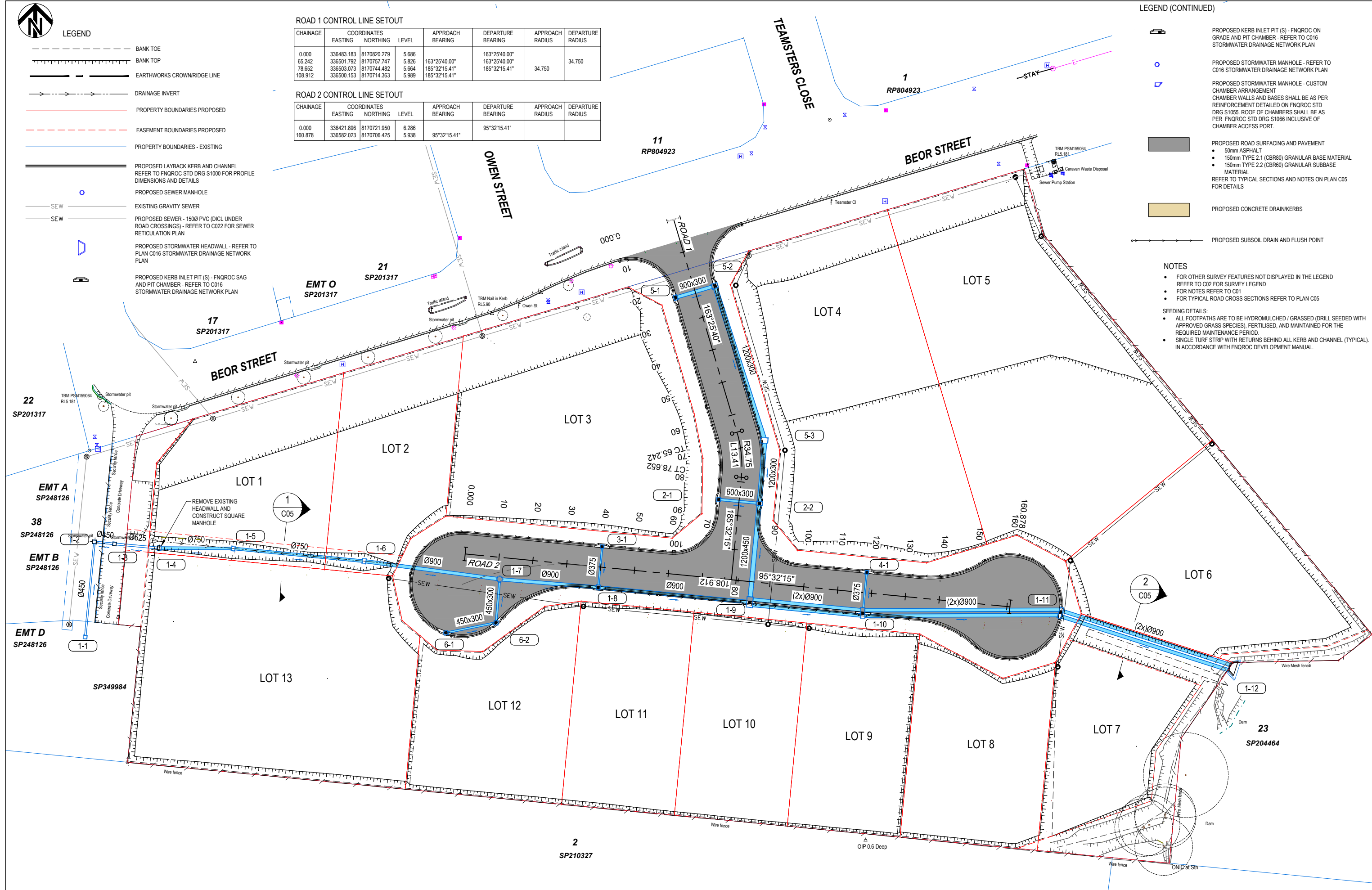
CHAINAGE	COORDINATES		LEVEL	APPROACH BEARING	DEPARTURE BEARING	APPROACH RADIUS	DEPARTURE RADIUS
	EASTING	NORTHING					
0.000	336421.896	8170721.950	6.286		95°32'15.41"		
160.878	336582.023	8170706.425	5.938	95°32'15.41"			

LEGEND (CONTINUED)

- PROPOSED KERB INLET PIT (S) - FNQROC ON GRADE AND PIT CHAMBER - REFER TO C016 STORMWATER DRAINAGE NETWORK PLAN
- PROPOSED STORMWATER MANHOLE - REFER TO C016 STORMWATER DRAINAGE NETWORK PLAN
- PROPOSED STORMWATER MANHOLE - CUSTOM CHAMBER ARRANGEMENT
CHAMBER WALLS AND BASES SHALL BE AS PER REINFORCEMENT DETAILED ON FNQROC STD DRG S1055. ROOF OF CHAMBERS SHALL BE AS PER FNQROC STD DRG S1066 INCLUSIVE OF CHAMBER ACCESS PORT.
- PROPOSED ROAD SURFACING AND PAVEMENT
 - 50mm ASPHALT
 - 150mm TYPE 2.1 (CBR80) GRANULAR BASE MATERIAL
 - 150mm TYPE 2.2 (CBR60) GRANULAR SUBBASE MATERIAL
 REFER TO TYPICAL SECTIONS AND NOTES ON PLAN C05 FOR DETAILS
- PROPOSED CONCRETE DRAINKERBS
- PROPOSED SUBSOIL DRAIN AND FLUSH POINT

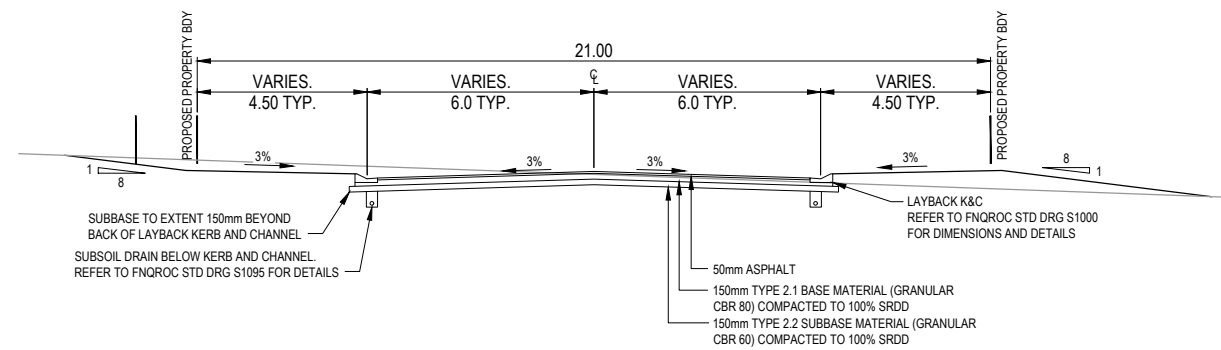
NOTES

- FOR OTHER SURVEY FEATURES NOT DISPLAYED IN THE LEGEND REFER TO C02 FOR SURVEY LEGEND
 - FOR NOTES REFER TO C01
 - FOR TYPICAL ROAD CROSS SECTIONS REFER TO PLAN C05
- SEEDING DETAILS:
- ALL FOOTPATHS ARE TO BE HYDROMULCHED / GRASSED (DRILL SEEDING WITH APPROVED GRASS SPECIES), FERTILISED, AND MAINTAINED FOR THE REQUIRED MAINTENANCE PERIOD.
 - SINGLE TURF STRIP WITH RETURNS BEHIND ALL KERB AND CHANNEL (TYPICAL) IN ACCORDANCE WITH FNQROC DEVELOPMENT MANUAL.



<p>SCALE 1:1000 DO NOT SCALE DRAWINGS Scales Before Reduction</p>	<p>DESIGNER</p> <p>Address: 35 ABBOTT ST, CAIRNS 4870 Email: admin@osegroup.com.au</p>	<p>CLIENT K.A.N. Developments Pty Ltd</p>	<p>PROJECT CRAIGLIE BUSINESS PARK BOER STREET - CRAIGLIE 4877</p>	<p>TITLE ROADWORKS PLAN</p> <p>SCALE (Scale as shown) DRAWING No 25235-C04 REV B</p>
<p>B 21.05.26 DESIGN CHANGE & RESPONSE TO COUNCIL COMMENTS A 23.01.26 FOR COUNCIL APPROVAL</p> <p>REV DATE REVISION NOTES</p>				

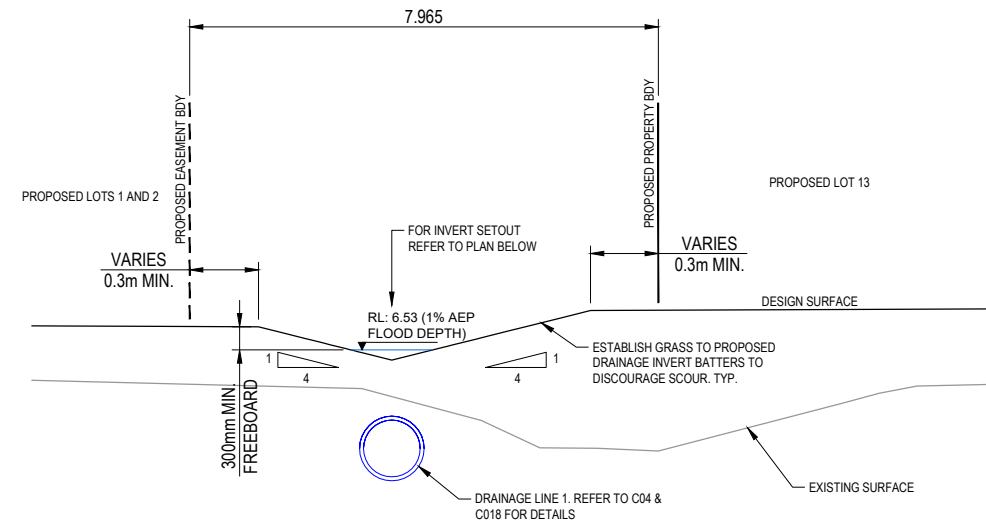
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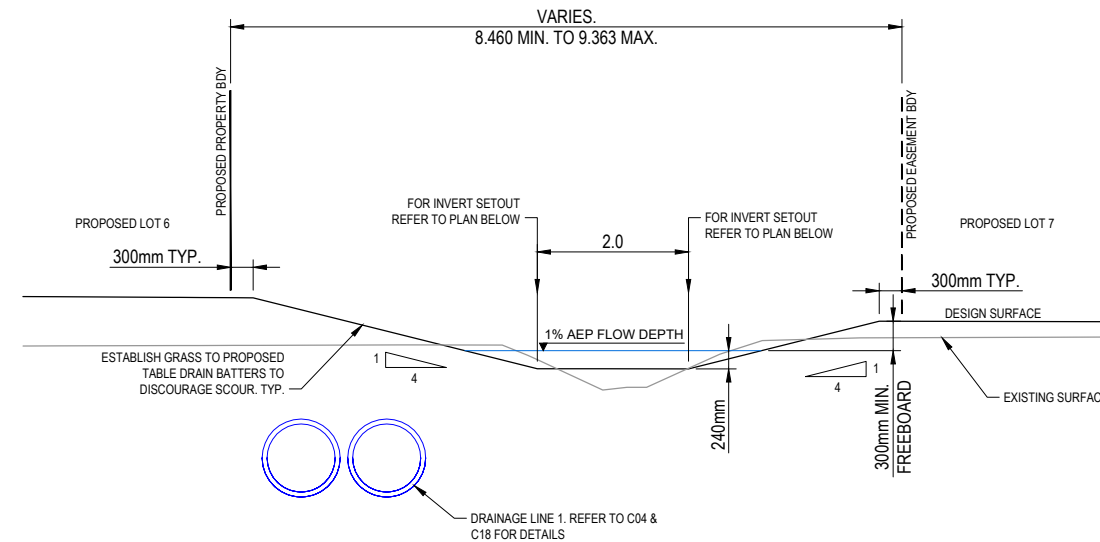
TYPICAL SECTION - ROAD 1 & 2
SCALE: 1:200

PAVEMENT DATA:

- 150mm TYPE 2.1 BASE COURSE (CBR 80) COMPACTED TO 100% SRDD.
- OVERLAYING 150mm TYPE 2.2 SUB-BASE COURSE (CBR 60) COMPACTED TO 100% SRDD.
- SUB-GRADE TO BE TRIMMED AND COMPACTED TO 98% SRDD. SUB-GRADE CBR TO BE CHECKED AND SUBMITTED TO ENGINEER FOR CONFIRMATION OF PAVEMENT DESIGN AND APPROVALS BY TABLELANDS REGIONAL COUNCIL. REFER TO SUBGRADE AND FILL NOTES C01.
- ASSUMED DESIGN SUBGRADE SOAKED CBR = 10 AT 98% SRDD.
- ASPHALT SURFACE (50mm)
- PRIME COAT - C170 BITUMEN 8% CUT BACK 0.8 litres/sq.m.
- ASPHALT - 48 HOURS MIN. AFTER PRIME COAT
- THE CONTRACTOR IS TO ENSURE THAT THE PAVEMENT COURSES ARE SET DOWN SUFFICIENTLY TO ALLOW FOR THE THICKNESS OF ASPHALT SURFACING.
- VERGE (FOOTPATH) CROSSFALLS NOT TO EXCEED THOSE SPECIFIED.



SECTION 1
NTS C04

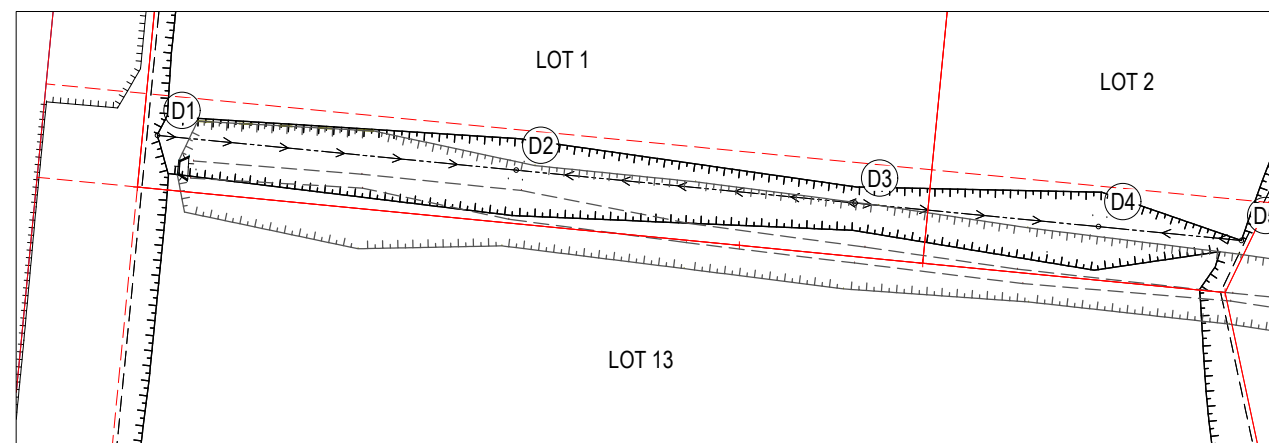


SECTION 2
NTS C04

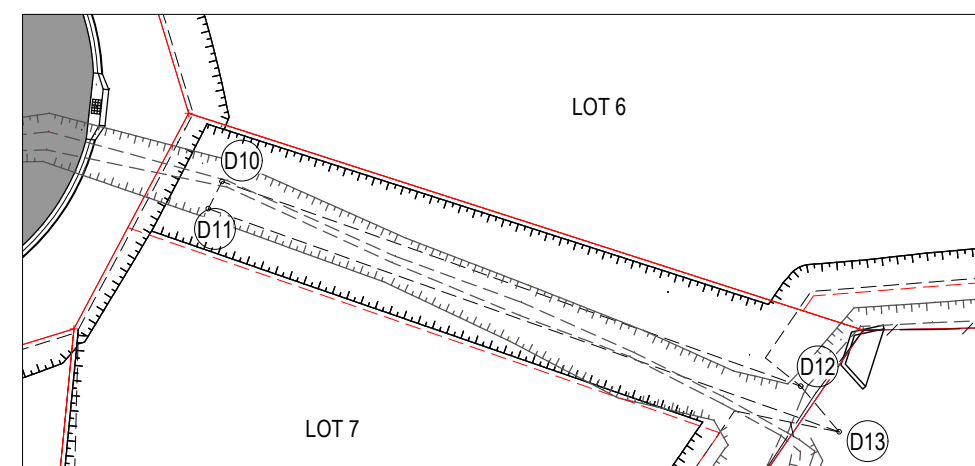
1% AEP: 1140.9 l/s

GRASS LINED DRAINS SETOUT

PT	EASTING	NORTHING	LEVEL
D1	336329.949	8170725.866	6.574
D2	336353.675	8170723.566	6.331
D3	336376.094	8170721.392	6.537
D4	336392.184	8170719.832	6.206
D5	336401.613	8170718.924	6.748
D10	336605.239	8170699.876	5.144
D11	336604.329	8170698.077	5.145
D12	336643.522	8170686.339	4.909
D13	336646.062	8170683.320	4.889



PLAN - GRASS LINED VEE DRAIN
WITHIN EASEMENT ALONG BDY OF LOTS 1, 2 & 13.
SCALE: 1:500
REFER TO SECTION 1 FOR DETAILS



PLAN - GRASS LINED TABLE DRAIN
WITHIN EASEMENT ALONG BDY OF LOTS 6 & 7
SCALE: 1:500
REFER TO SECTION 2 FOR DETAILS

SCALE 1:50

Orig. Sheet A3

DO NOT SCALE DRAWINGS

Scales Before Reduction

250 0 250 500 750 1000 1250 mm

REV	DATE	REVISION NOTES
B	21.05.26	DESIGN CHANGE & RESPONSE TO COUNCIL COMMENTS
A	23.01.26	FOR COUNCIL APPROVAL

SCALE 1:200

Orig. Sheet A3

DO NOT SCALE DRAWINGS

Scales Before Reduction

1 0 1 2 3 4 5 m

DESIGNER

OSE GROUP

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Email: admin@osegroup.com.au

CLIENT K.A.N. Developments Pty Ltd

PROJECT CRAIGLIE BUSINESS PARK
BOER STREET - CRAIGLIE 4877

DRAWN DM	DRAWING CHECK AMcP	APPROVED
DESIGNED DM	DESIGN REVIEW AMcP	DATE -

TITLE TYPICAL SECTIONS

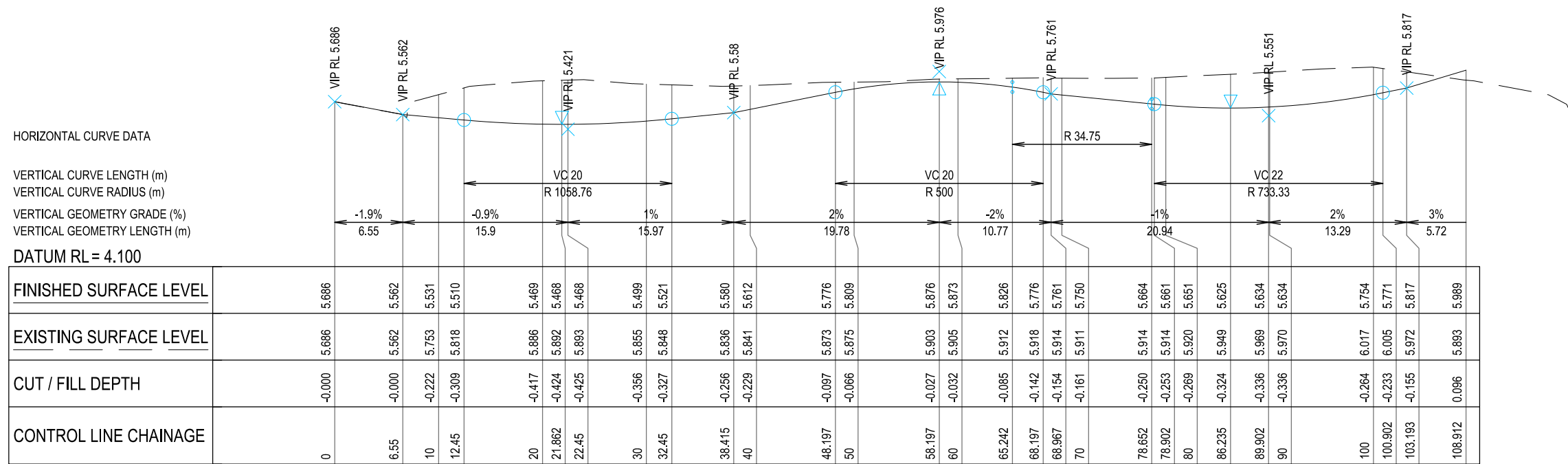
SCALE (Scale as shown)

DRAWING No 25235-C05

REV B

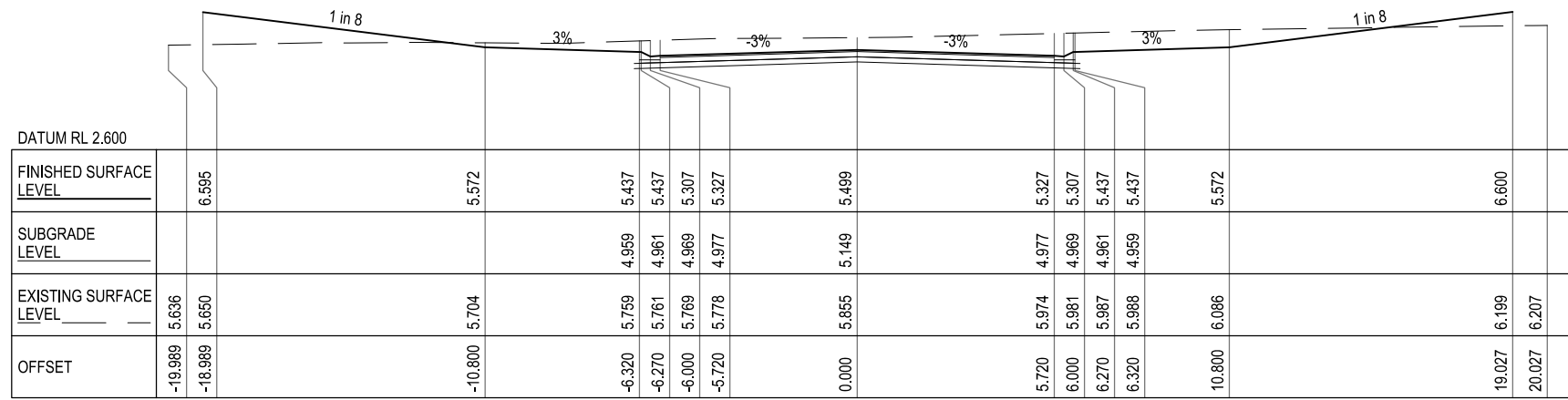


A3 SCALE: H 1:500, V 1:50
 LONGITUDINAL SECTION ROAD 2

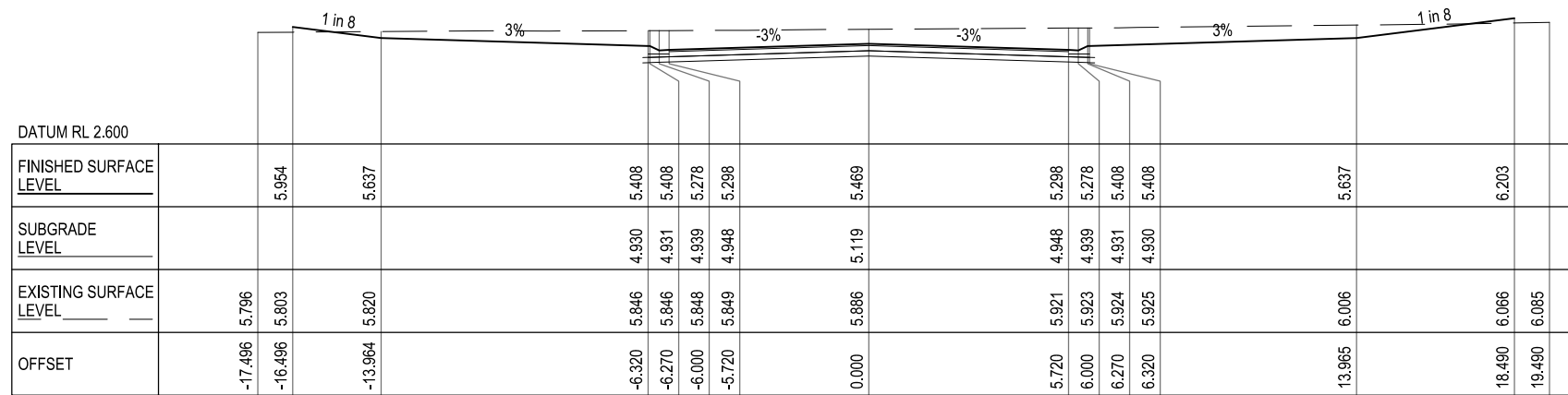


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 LONGITUDINAL SECTION ROAD 1

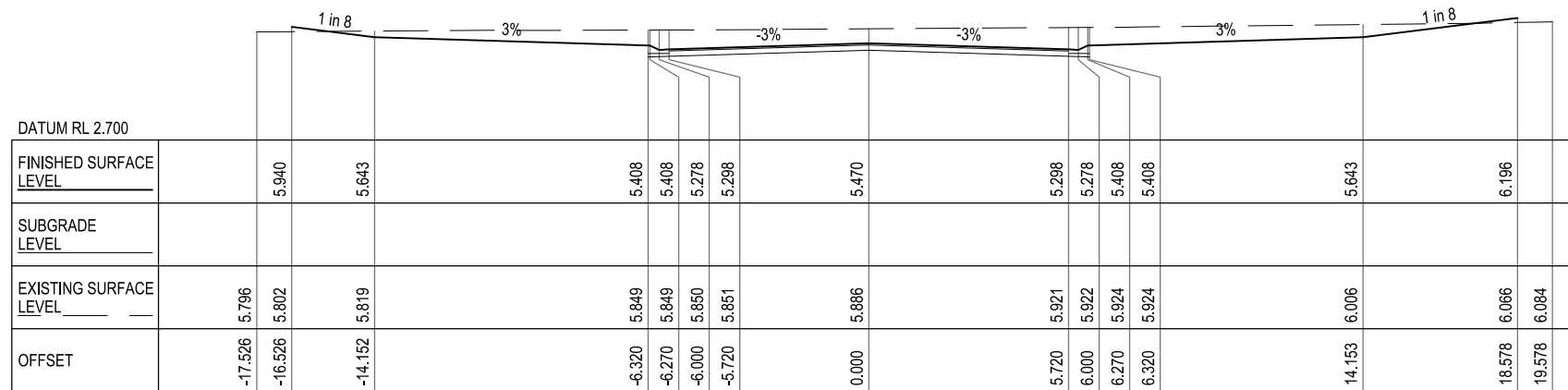
B 21.05.26 DESIGN CHANGE & RESPONSE TO COUNCIL COMMENTS A 23.01.26 FOR COUNCIL APPROVAL REV DATE REVISION NOTES	SCALE 1:500 H 1:50 V DO NOT SCALE DRAWINGS Scales Before Reduction 	DESIGNER Address: 35 ABBOTT ST, CAIRNS 4870 Email: admin@osegroup.com.au	CLIENT K.A.N. Developments Pty Ltd	PROJECT CRAIGLIE BUSINESS PARK BOER STREET - CRAIGLIE 4877	TITLE LONGITUDINAL SECTIONS ROAD 1 AND ROAD 2
	DRAWN DM DESIGNED DM	DRAWING CHECK AMcP DESIGN REVIEW AMcP	APPROVED DATE -	SCALE (Scale as shown) DRAWING No 25235-C06	REV B



CH 30.00



CH 20.00



CH 19.813

B 21.05.26 DESIGN CHANGE & RESPONSE TO COUNCIL COMMENTS
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REV DATE REVISION NOTES

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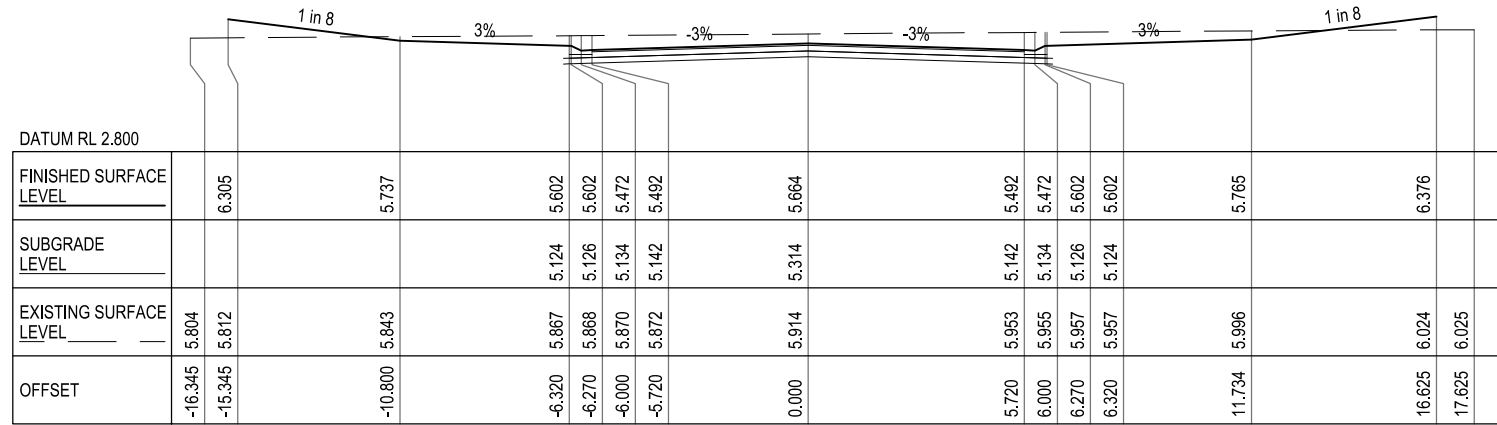
PROJECT CRAIGLIE BUSINESS PARK
 BOER STREET - CRAIGLIE 4877

DRAWN DM	DRAWING CHECK AMcP	APPROVED
DESIGNED DM	DESIGN REVIEW AMcP	DATE -

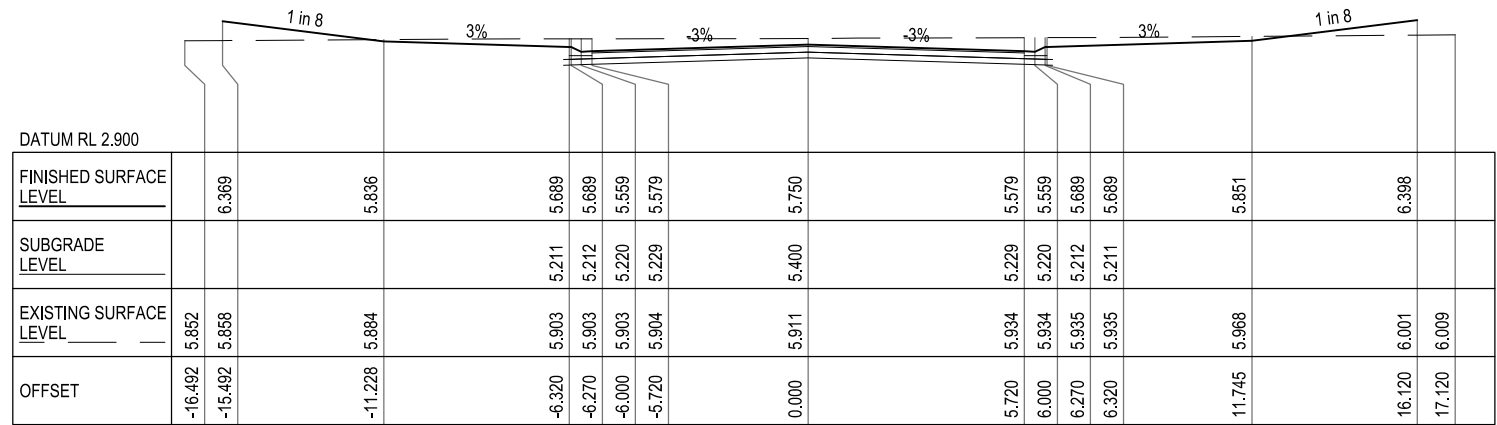
TITLE CROSS SECTIONS - ROAD 1
 SHEET 1 OF 4

SCALE (Scale as shown) DRAWING No 25235-C07

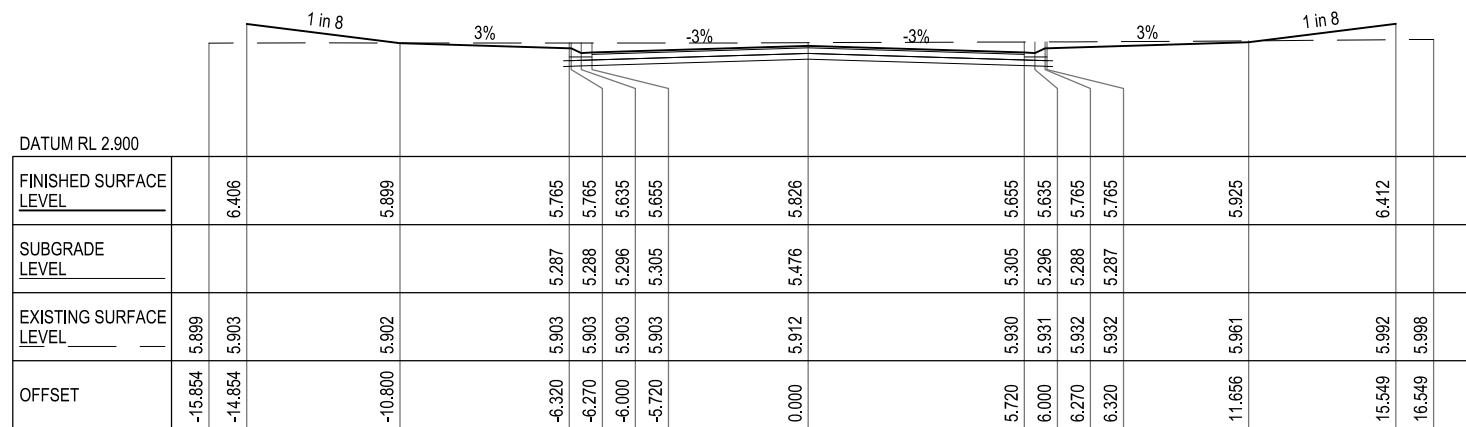
REV B



CH 78.652



CH 70.000



CH 65.242

B 21.05.26 DESIGN CHANGE & RESPONSE TO COUNCIL COMMENTS
A 23.01.26 FOR COUNCIL APPROVAL

REV DATE REVISION NOTES

SCALE 1:200
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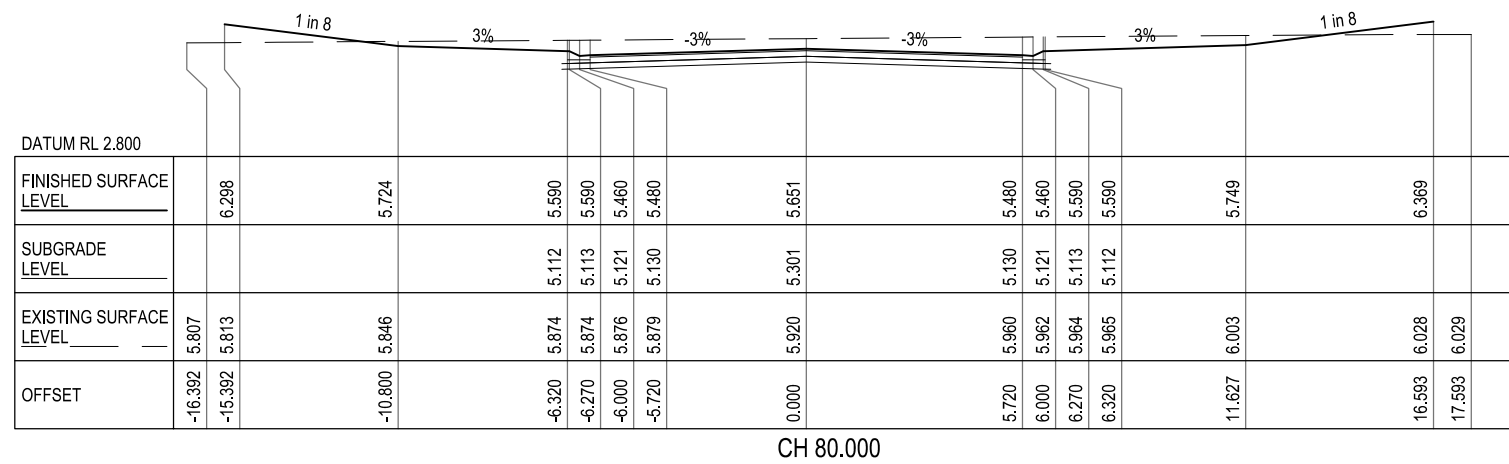
PROJECT CRAIGLIE BUSINESS PARK
BOER STREET - CRAIGLIE 4877

DRAWN DM	DRAWING CHECK AMcP	APPROVED
DESIGNED DM	DESIGN REVIEW AMcP	DATE -

TITLE CROSS SECTIONS - ROAD 1
SHEET 3 OF 4

SCALE (Scale as shown) DRAWING No 25235-C09

REV B



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 A 23.01.26 FOR COUNCIL APPROVAL

REV DATE REVISION NOTES

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DESIGNER



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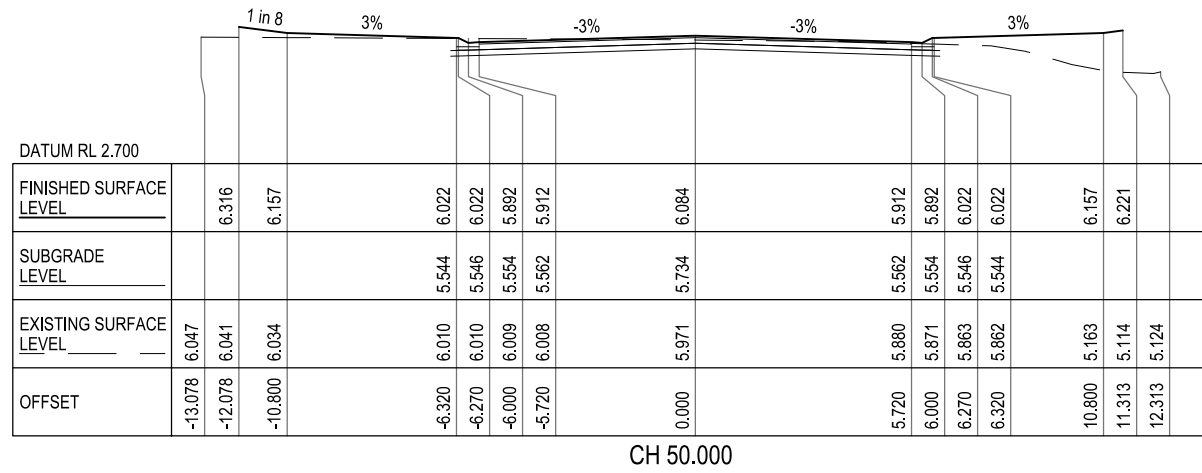
PROJECT CRAIGLIE BUSINESS PARK
 BOER STREET - CRAIGLIE 4877

DRAWN DM	DRAWING CHECK AMcP	APPROVED
DESIGNED DM	DESIGN REVIEW AMcP	DATE -

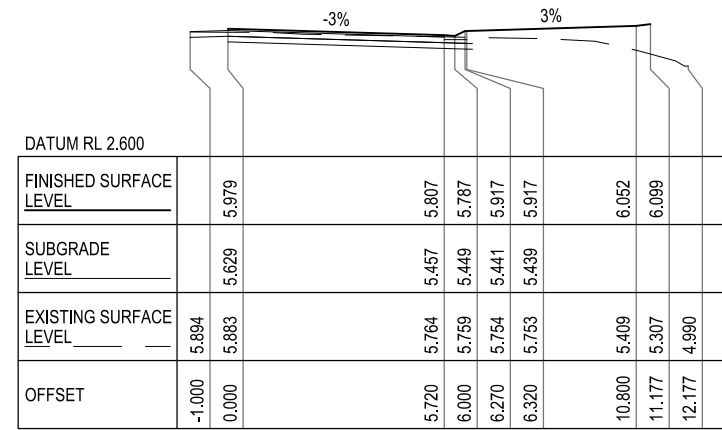
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 SHEET 4 OF 4

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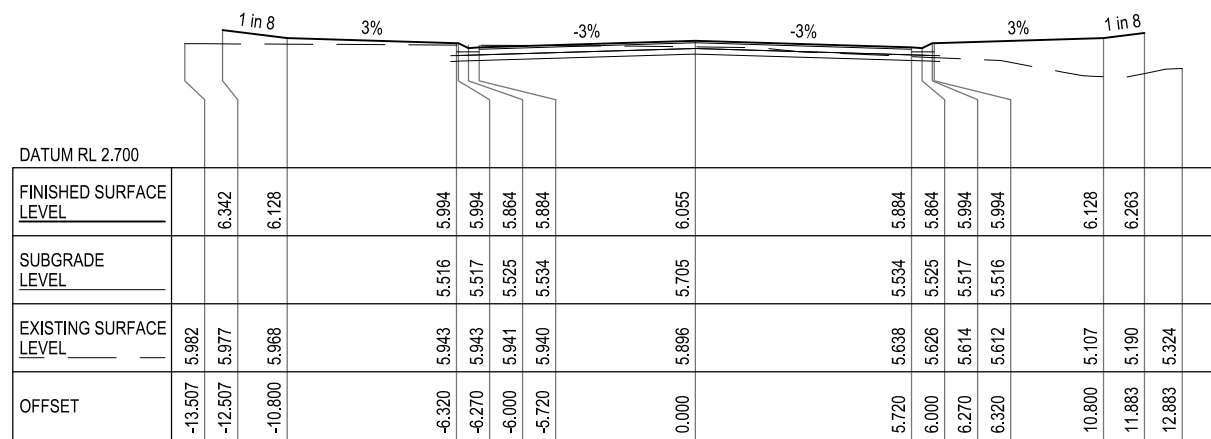
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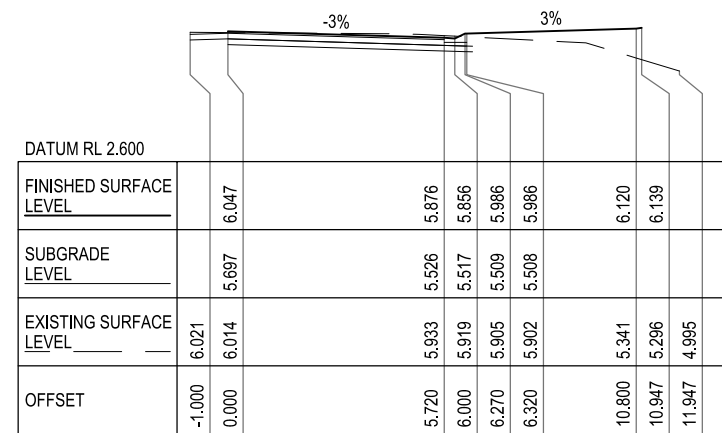
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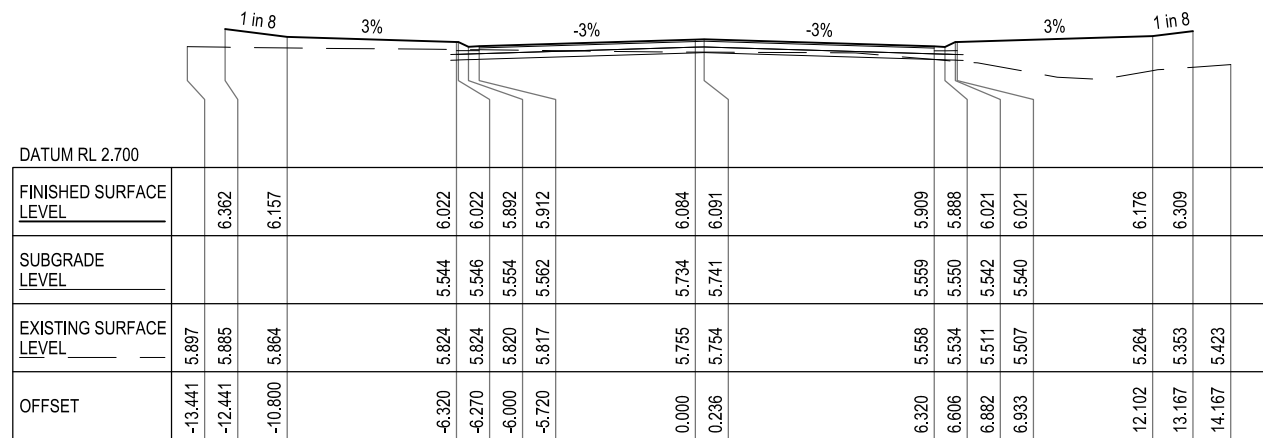
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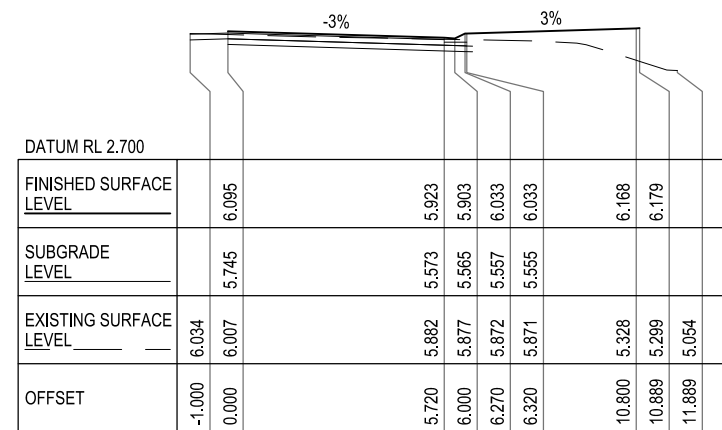
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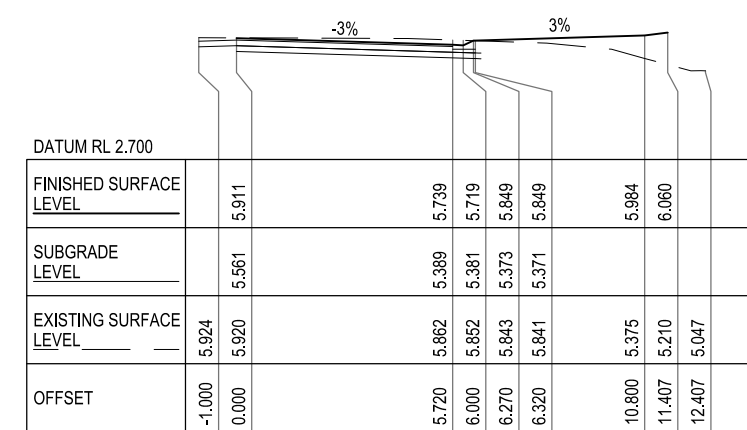
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CH 30.000



CH 60.000



CH 90.000

B 21.05.26 DESIGN CHANGE & RESPONSE TO COUNCIL COMMENTS
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Scales Before Reduction
1 0 1 2 3 4 5 m

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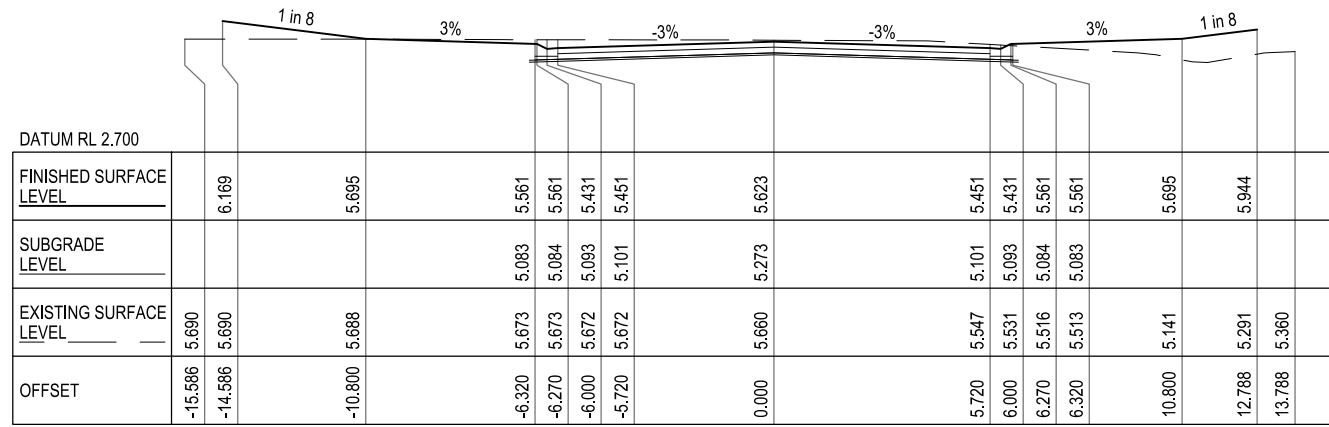
PROJECT CRAIGLIE BUSINESS PARK
BOER STREET - CRAIGLIE 4877

DRAWN DM
DESIGNED DM
DRAWING CHECK AMcP
DESIGN REVIEW AMcP
APPROVED
DATE -

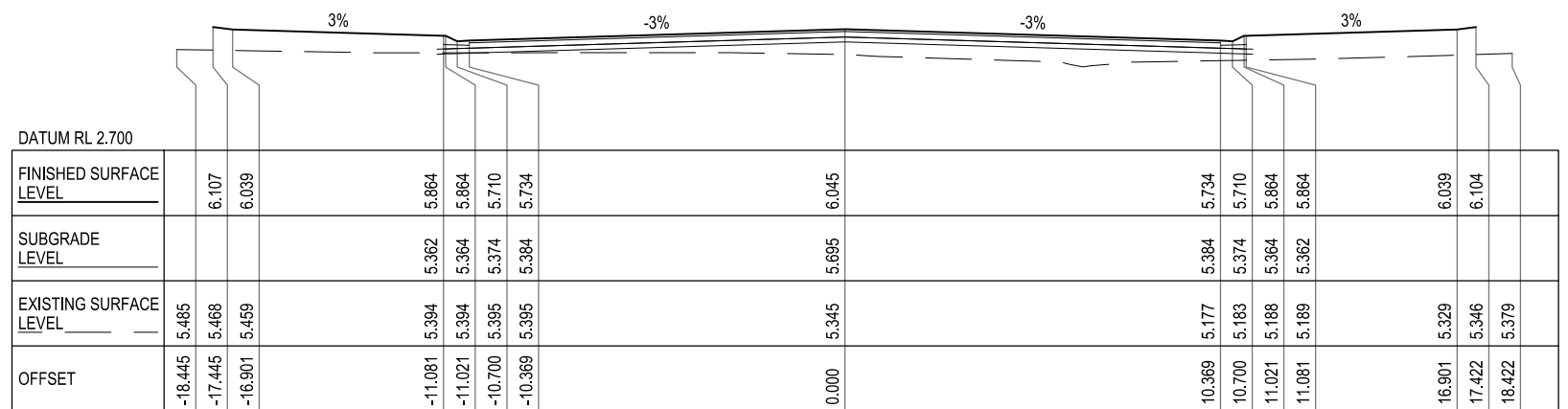
TITLE CROSS SECTIONS - ROAD 2
SHEET 2 OF 4

SCALE (Scale as shown) DRAWING No 25235-C012

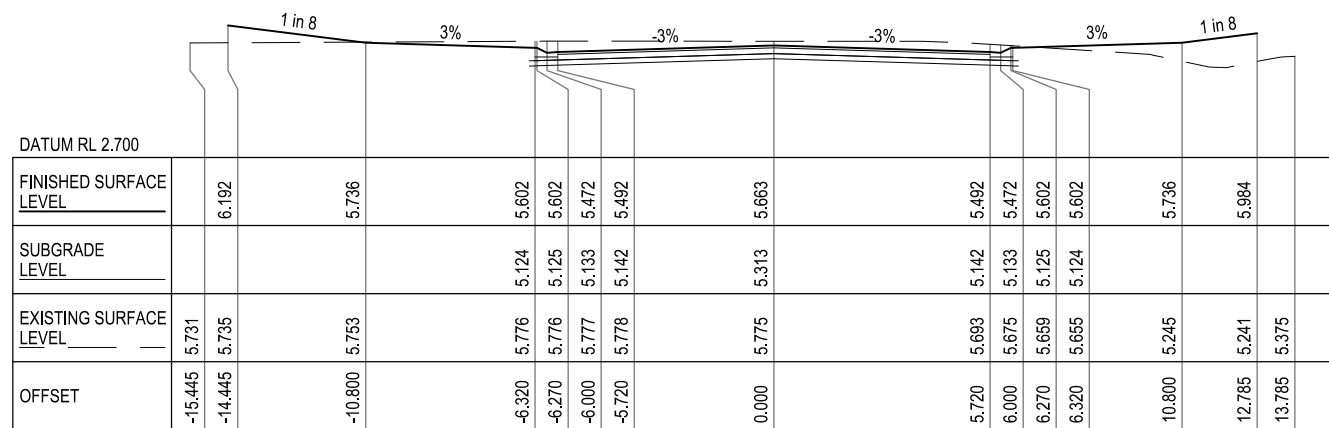
REV B



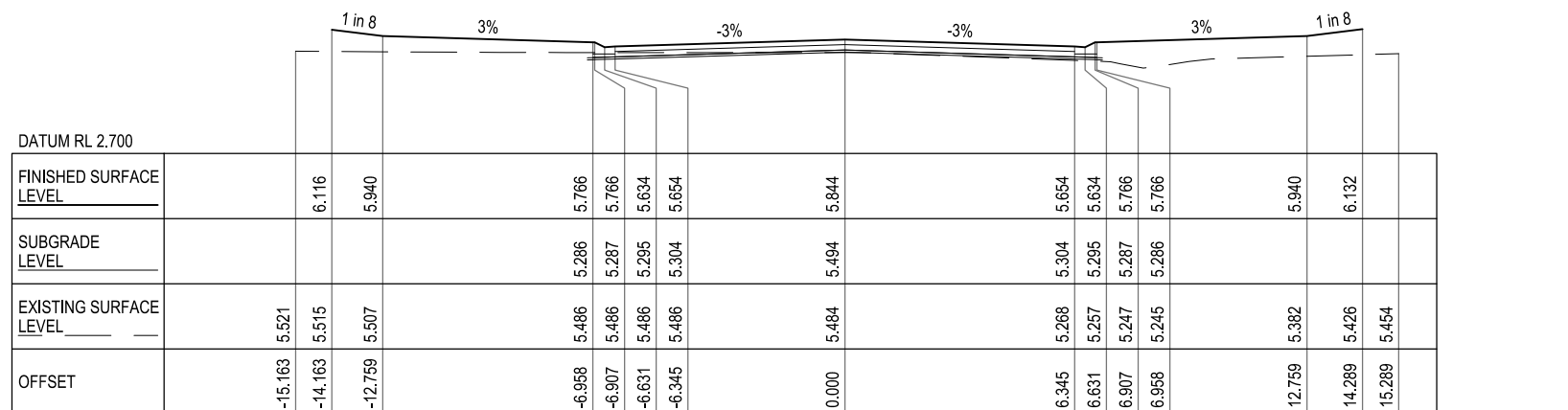
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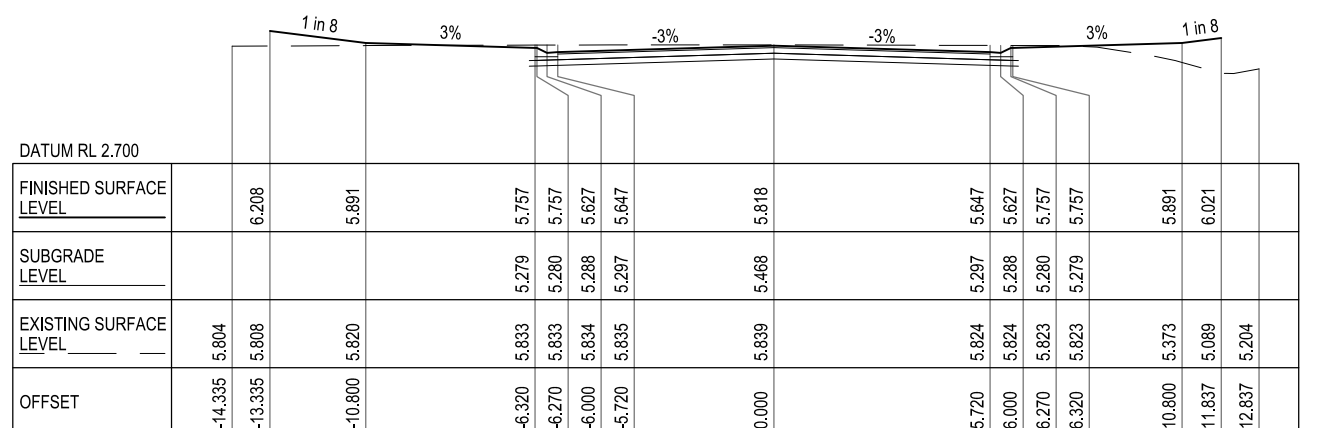
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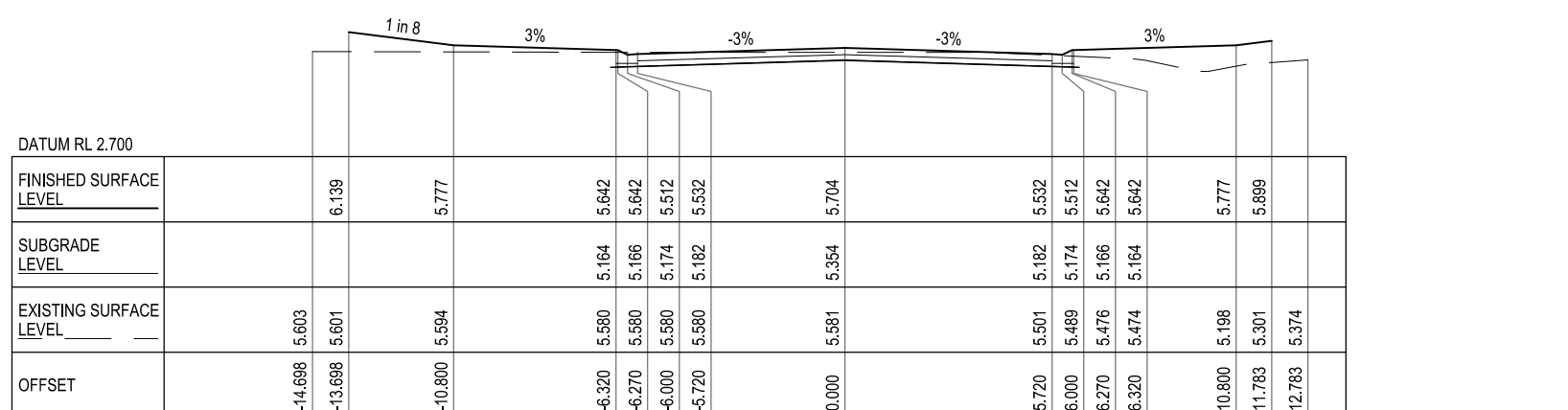
CH 110.000



CH 140.000



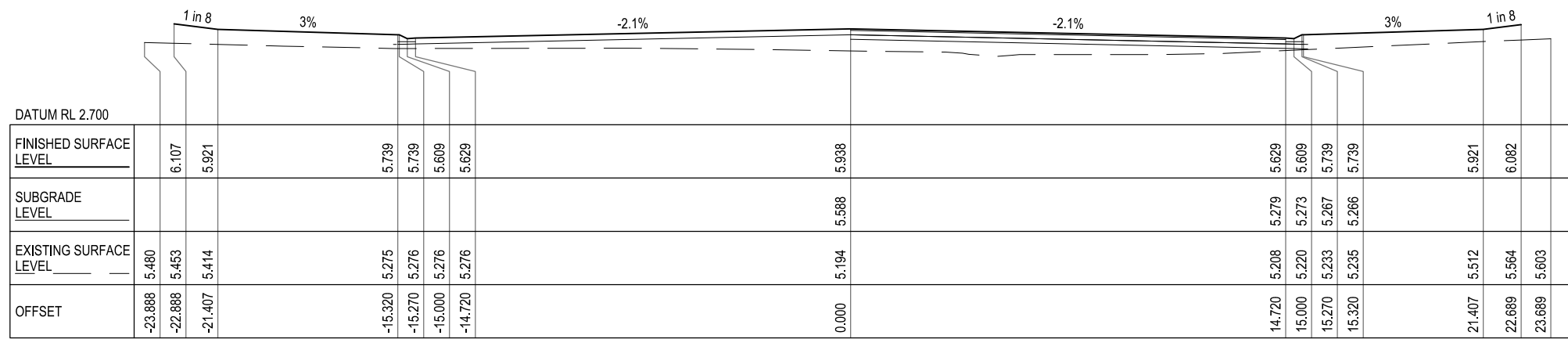
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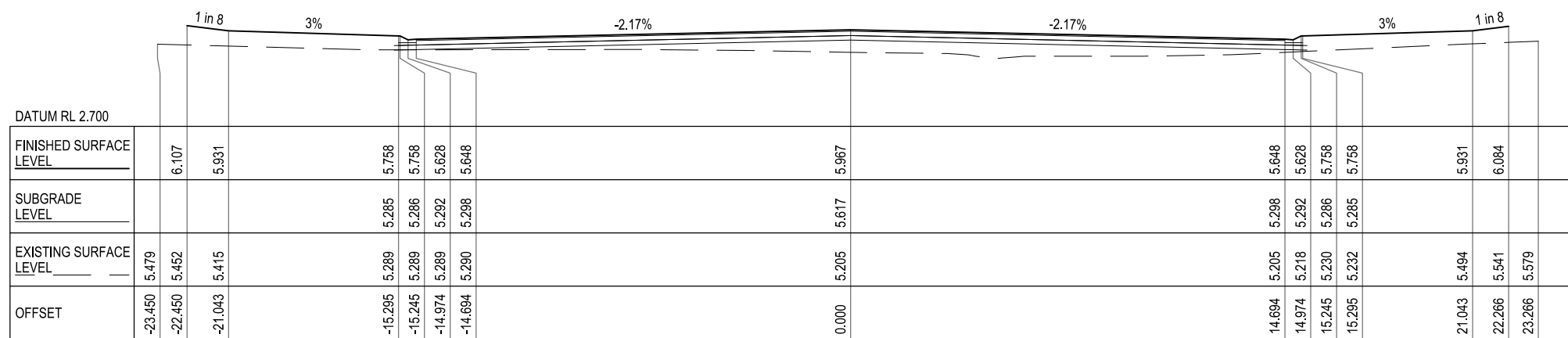
CH 130.000

B 21.05.26 DESIGN CHANGE & RESPONSE TO COUNCIL COMMENTS A 23.01.26 FOR COUNCIL APPROVAL REV DATE REVISION NOTES	SCALE 1:200 DO NOT SCALE DRAWINGS Scales Before Reduction 	Orig. Sheet A3	DESIGNER Address: 35 ABBOTT ST, CAIRNS 4870 Email: admin@osegroup.com.au	CLIENT K.A.N. Developments Pty Ltd	PROJECT CRAIGLIE BUSINESS PARK BOER STREET - CRAIGLIE 4877	TITLE CROSS SECTIONS - ROAD 2 SHEET 3 OF 4
	DRAWN DM	DRAWING CHECK AMcP	APPROVED DATE -	DESIGNED DM	DESIGN REVIEW AMcP	SCALE (Scale as shown)

22/05/2026 2:59:46 PM File: C:\OSE\OSE Group\Operations - Docs\Projects\2025\25235 Craiglee Business Park\Drawings\Working\25235_DESIGN.dwg



CH 160.878



CH 160.000

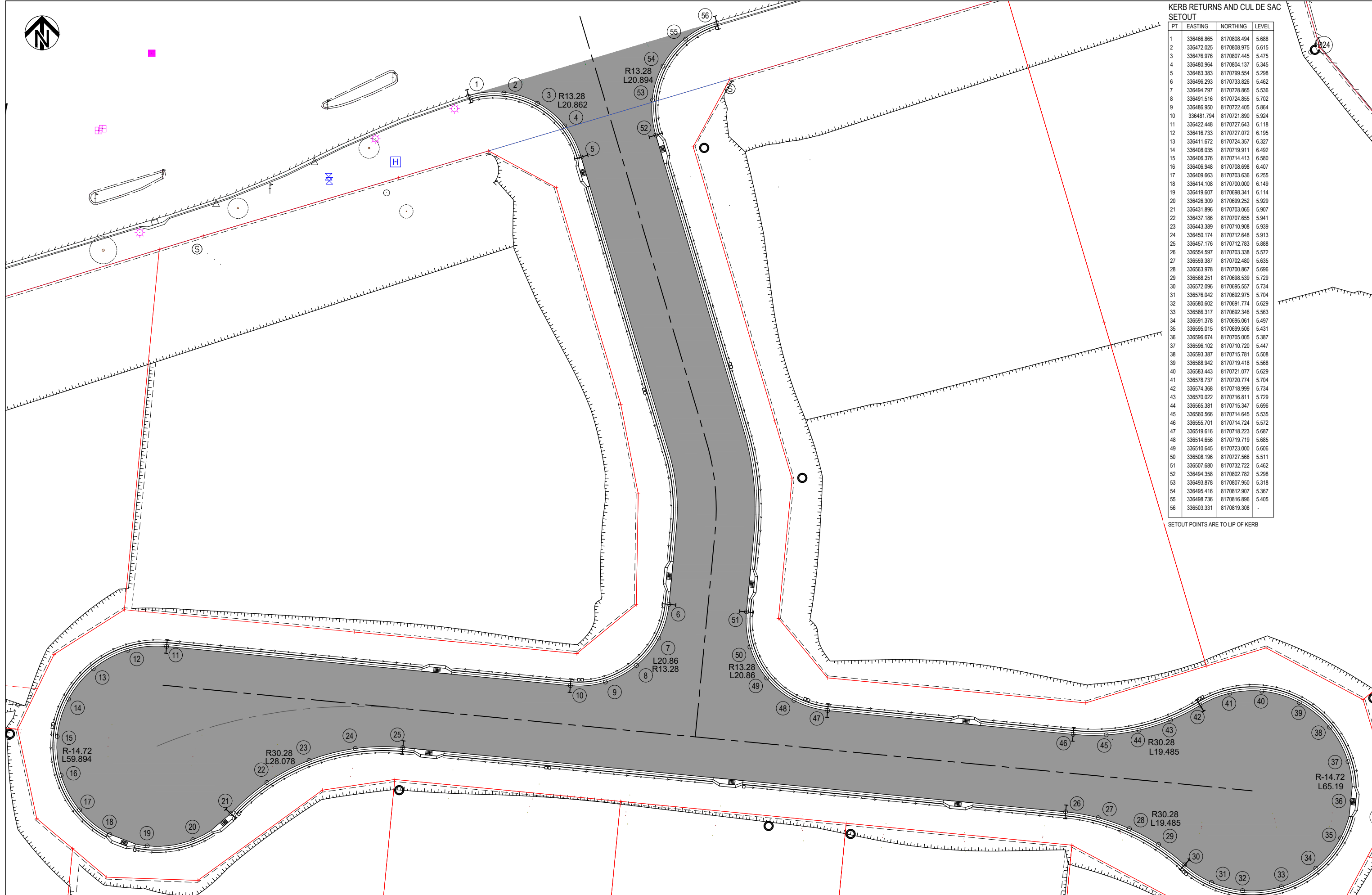
B 21.05.26 DESIGN CHANGE & RESPONSE TO COUNCIL COMMENTS A 23.01.26 FOR COUNCIL APPROVAL REV DATE REVISION NOTES	SCALE 1:200 DO NOT SCALE DRAWINGS Scales Before Reduction 	DESIGNER Address: 35 ABBOTT ST. CAIRNS 4870 Email: admin@osegroup.com.au	CLIENT K.A.N. Developments Pty Ltd	PROJECT CRAIGLIE BUSINESS PARK BOER STREET - CRAIGLIE 4877	TITLE CROSS SECTIONS - ROAD 2 SHEET 4 OF 4		
	DRAWN DM	DRAWING CHECK AMcP	APPROVED DATE -	DESIGNED DM	DESIGN REVIEW AMcP	SCALE (Scale as shown)	DRAWING No 25235-C014



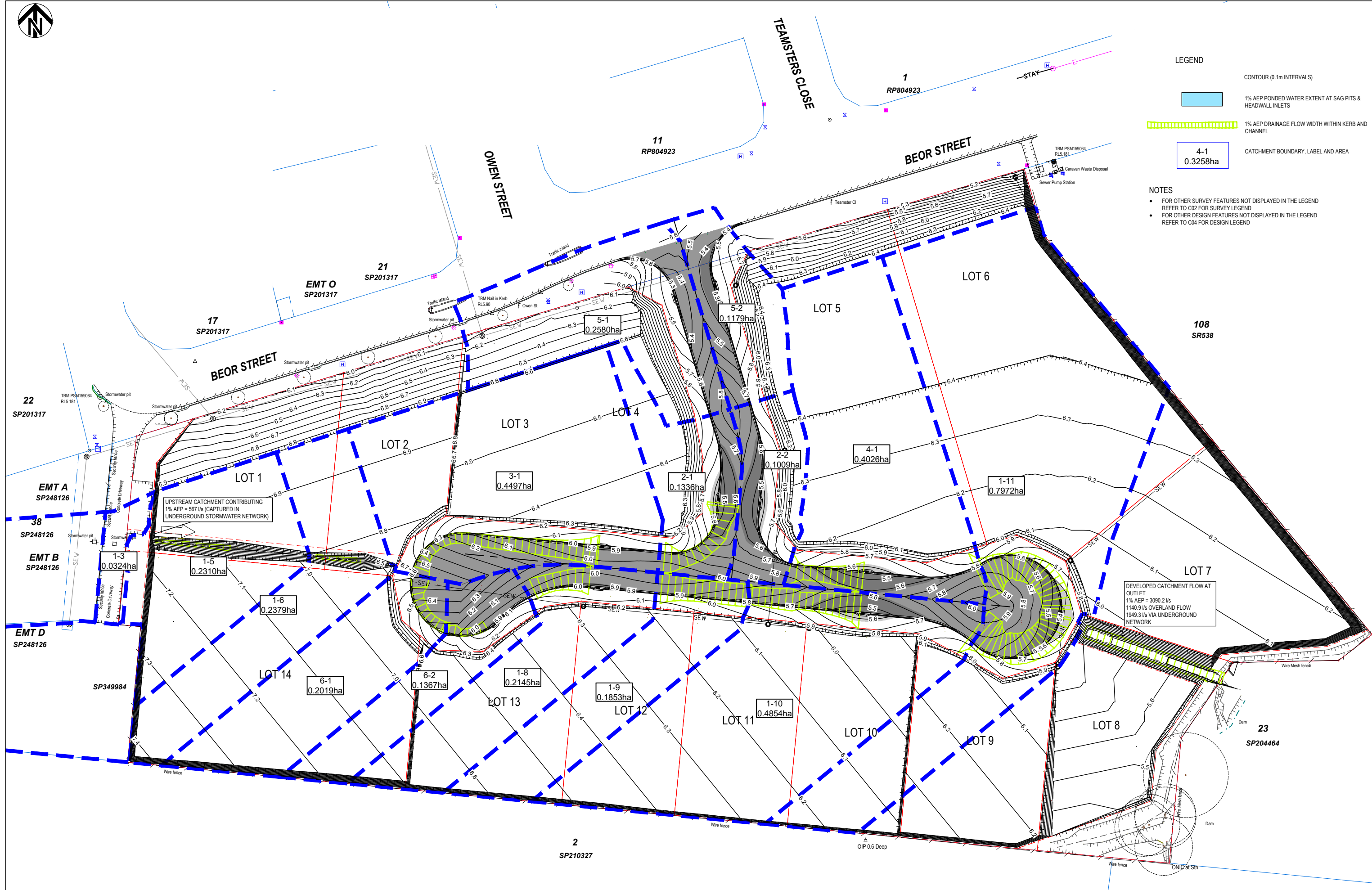
KERB RETURNS AND CUL DE SAC SETOUT

PT	EASTING	NORTHING	LEVEL
1	336466.865	8170808.494	5.688
2	336472.025	8170808.975	5.615
3	336476.976	8170807.445	5.475
4	336480.964	8170804.137	5.345
5	336483.383	8170799.554	5.298
6	336496.293	8170733.826	5.462
7	336494.797	8170728.865	5.536
8	336491.516	8170724.855	5.702
9	336486.950	8170722.405	5.864
10	336481.794	8170721.890	5.924
11	336422.448	8170727.643	6.118
12	336416.733	8170727.072	6.195
13	336411.672	8170724.357	6.327
14	336408.035	8170719.911	6.492
15	336406.376	8170714.413	6.580
16	336406.948	8170708.698	6.407
17	336409.663	8170703.636	6.255
18	336414.108	8170700.000	6.149
19	336419.607	8170698.341	6.114
20	336426.309	8170699.252	5.929
21	336431.896	8170703.065	5.907
22	336437.186	8170707.655	5.941
23	336443.389	8170710.908	5.939
24	336450.174	8170712.648	5.913
25	336457.176	8170712.783	5.888
26	336554.597	8170703.338	5.572
27	336559.387	8170702.480	5.635
28	336563.978	8170700.867	5.696
29	336568.251	8170698.539	5.729
30	336572.096	8170695.557	5.734
31	336576.042	8170692.975	5.704
32	336580.602	8170691.774	5.629
33	336586.317	8170692.346	5.563
34	336591.378	8170695.061	5.497
35	336595.015	8170699.506	5.431
36	336596.674	8170705.005	5.387
37	336596.102	8170710.720	5.447
38	336593.387	8170715.781	5.508
39	336588.942	8170719.418	5.568
40	336583.443	8170721.077	5.629
41	336578.737	8170720.774	5.704
42	336574.368	8170718.999	5.734
43	336570.022	8170716.811	5.729
44	336565.381	8170715.347	5.696
45	336560.566	8170714.645	5.535
46	336555.701	8170714.724	5.572
47	336519.616	8170718.223	5.687
48	336514.656	8170719.719	5.685
49	336510.645	8170723.000	5.606
50	336508.196	8170727.566	5.511
51	336507.680	8170732.722	5.462
52	336494.358	8170802.782	5.298
53	336493.878	8170807.950	5.318
54	336495.416	8170812.907	5.367
55	336498.736	8170816.896	5.405
56	336503.331	8170819.308	-

SETOUT POINTS ARE TO LIP OF KERB



B 21.05.26 DESIGN CHANGE & RESPONSE TO COUNCIL COMMENTS A 23.01.26 FOR COUNCIL APPROVAL	SCALE 1:500 DO NOT SCALE DRAWINGS Scales Before Reduction 2.5 0 2.5 5.0 7.5 10.0 12.5 m	DESIGNER Address: 35 ABBOTT ST. CARNS 4870 Email: admin@osegroup.com.au	CLIENT K.A.N. Developments Pty Ltd	PROJECT CRAIGLIE BUSINESS PARK BOER STREET - CRAIGLIE 4877	TITLE KERB RETURN AND CUL DE SAC SETOUT PLAN
	REV DATE REVISION NOTES	DRAWN DM DESIGNED DM	DRAWING CHECK AMcP DESIGN REVIEW AMcP	APPROVED DATE -	SCALE (Scale as shown) DRAWING No 25235-C015 REV B



LEGEND

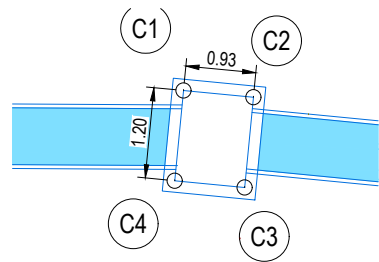
	CONTOUR (0.1m INTERVALS)
	1% AEP PONDED WATER EXTENT AT SAG PITS & HEADWALL INLETS
	1% AEP DRAINAGE FLOW WIDTH WITHIN KERB AND CHANNEL
	CATCHMENT BOUNDARY, LABEL AND AREA

- NOTES**
- FOR OTHER SURVEY FEATURES NOT DISPLAYED IN THE LEGEND REFER TO C02 FOR SURVEY LEGEND
 - FOR OTHER DESIGN FEATURES NOT DISPLAYED IN THE LEGEND REFER TO C04 FOR DESIGN LEGEND

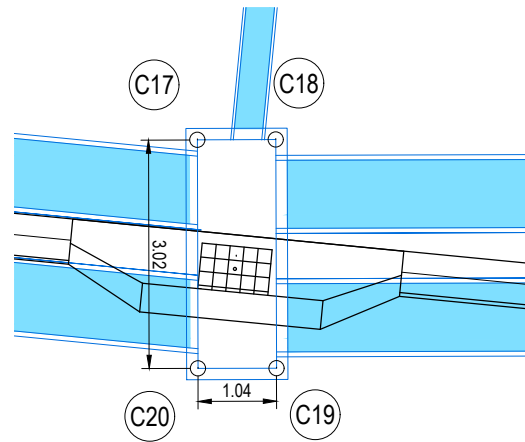
UPSTREAM CATCHMENT CONTRIBUTING 1% AEP = 567 l/s (CAPTURED IN UNDERGROUND STORMWATER NETWORK)

DEVELOPED CATCHMENT FLOW AT OUTLET
 1% AEP = 3090.2 l/s
 1140.9 l/s OVERLAND FLOW
 1949.3 l/s VIA UNDERGROUND NETWORK

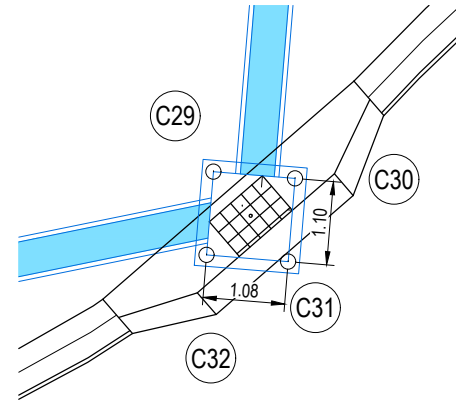
B 21.05.26 DESIGN CHANGE & RESPONSE TO COUNCIL COMMENTS A 23.01.26 FOR COUNCIL APPROVAL REV DATE REVISION NOTES	SCALE 1:1000 DO NOT SCALE DRAWINGS Scales Before Reduction 	DESIGNER Address: 35 ABBOTT ST, CAIRNS 4870 Email: admin@osegroup.com.au	CLIENT K.A.N. Developments Pty Ltd	PROJECT CRAIGLIE BUSINESS PARK BOER STREET - CRAIGLIE 4877	TITLE FINISHED SURFACE LEVEL CONTOUR PLAN CATCHMENT PLAN AND 1% AEP FLOODED WIDTHS
	DRAWN DM DESIGNED DM	DRAWING CHECK AMcP DESIGN REVIEW AMcP	APPROVED DATE -	SCALE (Scale as shown) DRAWING No 25235-C016	REV B



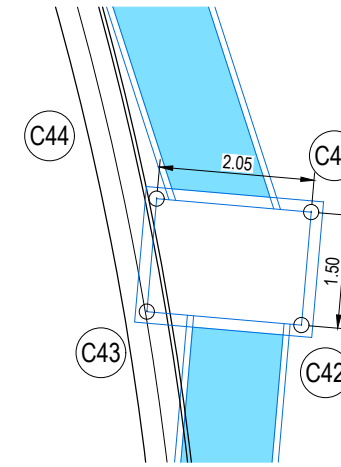
PLAN - KERB INLET PIT 1-5 (FIP TYPE B)
CUSTOM CHAMBER
SCALE: 1:100



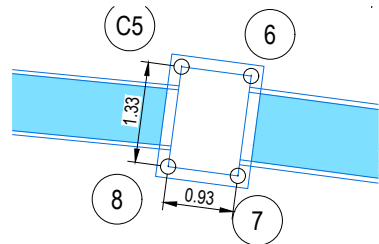
PLAN - KERB INLET PIT 1-10 (SAG)
CUSTOM CHAMBER
SCALE: 1:100



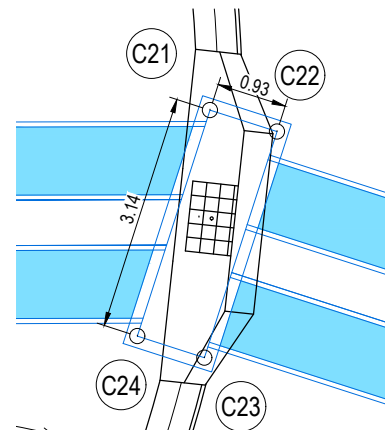
PLAN - KERB INLET PIT 6-2 (SAG)
CUSTOM CHAMBER
SCALE: 1:100



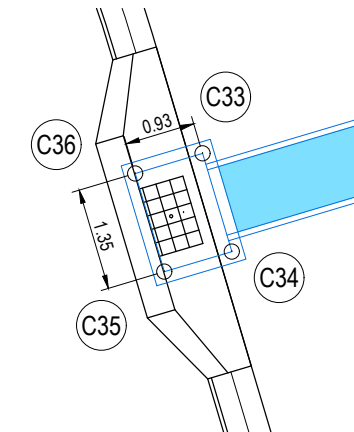
PLAN - KERB INLET PIT 5-3 (MH)
CUSTOM CHAMBER
SCALE: 1:100



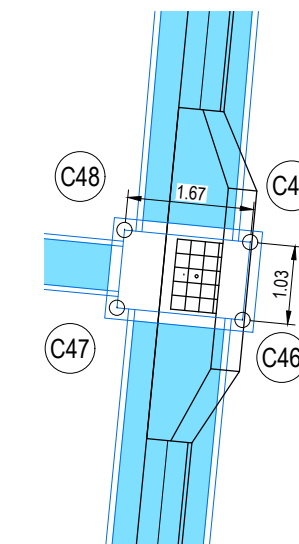
PLAN - KERB INLET PIT 1-6 (FIP TYPE B)
CUSTOM CHAMBER
SCALE: 1:100



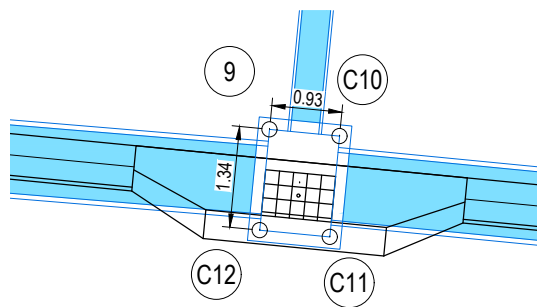
PLAN - KERB INLET PIT 1-11 (SAG)
CUSTOM CHAMBER
SCALE: 1:100



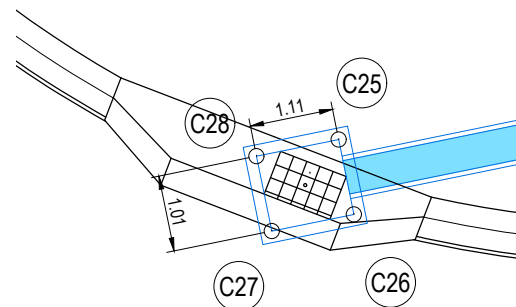
PLAN - KERB INLET PIT 5-1 (SAG)
CUSTOM CHAMBER
SCALE: 1:100



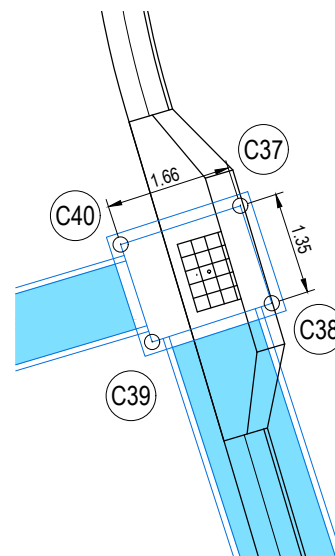
PLAN - KERB INLET PIT 5-4 (SAG)
CUSTOM CHAMBER
SCALE: 1:100



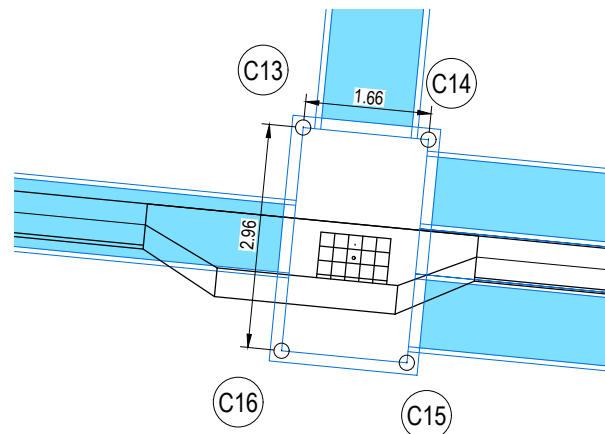
PLAN - KERB INLET PIT 1-8 (SAG)
CUSTOM CHAMBER
SCALE: 1:100



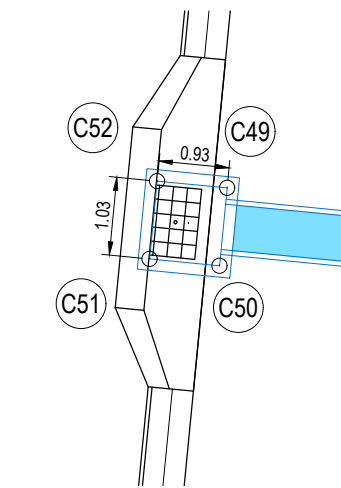
PLAN - KERB INLET PIT 6-1 (SAG)
CUSTOM CHAMBER
SCALE: 1:100



PLAN - KERB INLET PIT 5-2 (SAG)
CUSTOM CHAMBER
SCALE: 1:100



PLAN - KERB INLET PIT 1-9 (ON GRADE)
CUSTOM CHAMBER
SCALE: 1:100



PLAN - KERB INLET PIT 2-1 (SAG)
CUSTOM CHAMBER
SCALE: 1:100

INTERNAL STORMWATER
CHAMBER SETOUT*

PT	EASTING	NORTHING
C1	336353.267	8170724.185
C2	336354.193	8170724.095
C3	336354.077	8170722.902
C4	336353.152	8170722.992
C5	336391.811	8170720.554
C6	336392.733	8170720.431
C7	336392.557	8170719.111
C8	336391.635	8170719.234
C9	336460.618	8170712.837
C10	336461.544	8170712.747
C11	336461.414	8170711.415
C12	336460.489	8170711.504
C13	336504.861	8170709.367
C14	336506.517	8170709.207
C15	336506.231	8170706.257
C16	336504.575	8170706.417
C17	336538.268	8170706.128
C18	336539.307	8170706.131
C19	336539.316	8170703.109
C20	336538.278	8170703.106
C21	336597.805	8170706.255
C22	336597.805	8170705.971
C23	336596.844	8170702.982
C24	336595.959	8170703.266
C25	336416.640	8170699.377
C26	336416.841	8170698.387
C27	336415.754	8170698.166
C28	336415.552	8170699.156
C29	336430.452	8170702.305
C30	336431.531	8170702.216
C31	336431.440	8170701.115
C32	336430.361	8170701.204
C33	336484.012	8170798.089
C34	336484.398	8170796.791
C35	336483.507	8170796.526
C36	336483.121	8170797.823
C37	336495.838	8170801.649
C38	336496.255	8170800.360
C39	336494.672	8170799.848
C40	336494.255	8170801.137
C41	336510.854	8170755.977
C42	336510.725	8170754.483
C43	336508.681	8170754.660
C44	336508.810	8170756.154
C45	336509.236	8170737.249
C46	336509.136	8170736.220
C47	336507.475	8170736.381
C48	336507.574	8170737.410
C49	336496.927	8170738.442
C50	336496.827	8170737.413
C51	336495.901	8170737.503
C52	336496.001	8170738.532

NOTES

- *SETOUT POINTS ARE TOO INTERNAL WALL CORNERS. SETOUT HAS BEEN GIVEN AS A GUIDE AND MAY BE ADJUSTED TO SUIT PREVAILING SITE CONDITIONS UNDER DIRECTION OF THE SUPERINTENDENT
- CHAMBER WALLS AND BASES SHALL BE AS PER REINFORCEMENT DETAILED ON FNQROC STD DRG S1055.
- ROOF OF CHAMBERS SHALL BE AS PER FNQROC STD DRG S1066 INCLUSIVE OF CHAMBER ACCESS PORT.

REV	DATE	REVISION NOTES
B	21.05.26	DESIGN CHANGE & RESPONSE TO COUNCIL COMMENTS
A	23.01.26	FOR COUNCIL APPROVAL

22/05/2026 3:00:30 PM File: C:\OSE\OSE Group\Operations - Docs\Projects\2025\25235 Craiglee Business Park\Drawings\Working\25235_DESIGN.dwg

SCALE 1:100	Orig. Sheet A3
DO NOT SCALE DRAWINGS	
Scales Before Reduction	
500 0 500 1000 1500 2000 2500 mm	

DESIGNER



Address: 35 ABBOTT ST, CAIRNS 4870
Email: admin@osegroup.com.au

CLIENT K.A.N. Developments Pty Ltd

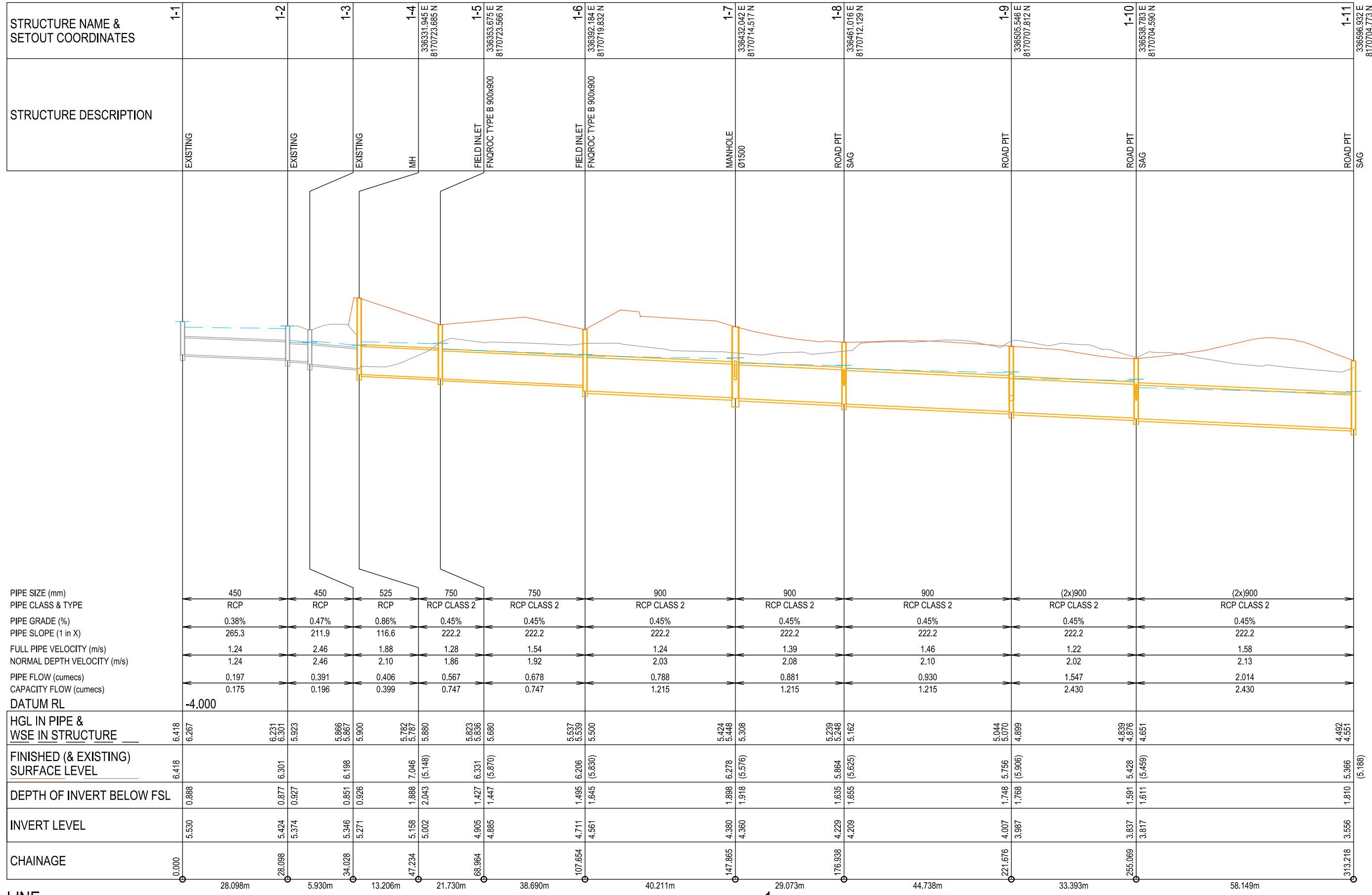
PROJECT CRAIGLEE BUSINESS PARK
BOER STREET - CRAIGLEE 4877

DRAWN DM	DRAWING CHECK AMcP	APPROVED
DESIGNED DM	DESIGN REVIEW AMcP	DATE -

TITLE STORMWATER PIT CHAMBER SETOUT AND DIMENSIONS

SCALE (Scale as shown) DRAWING No 25235-C017 REV B

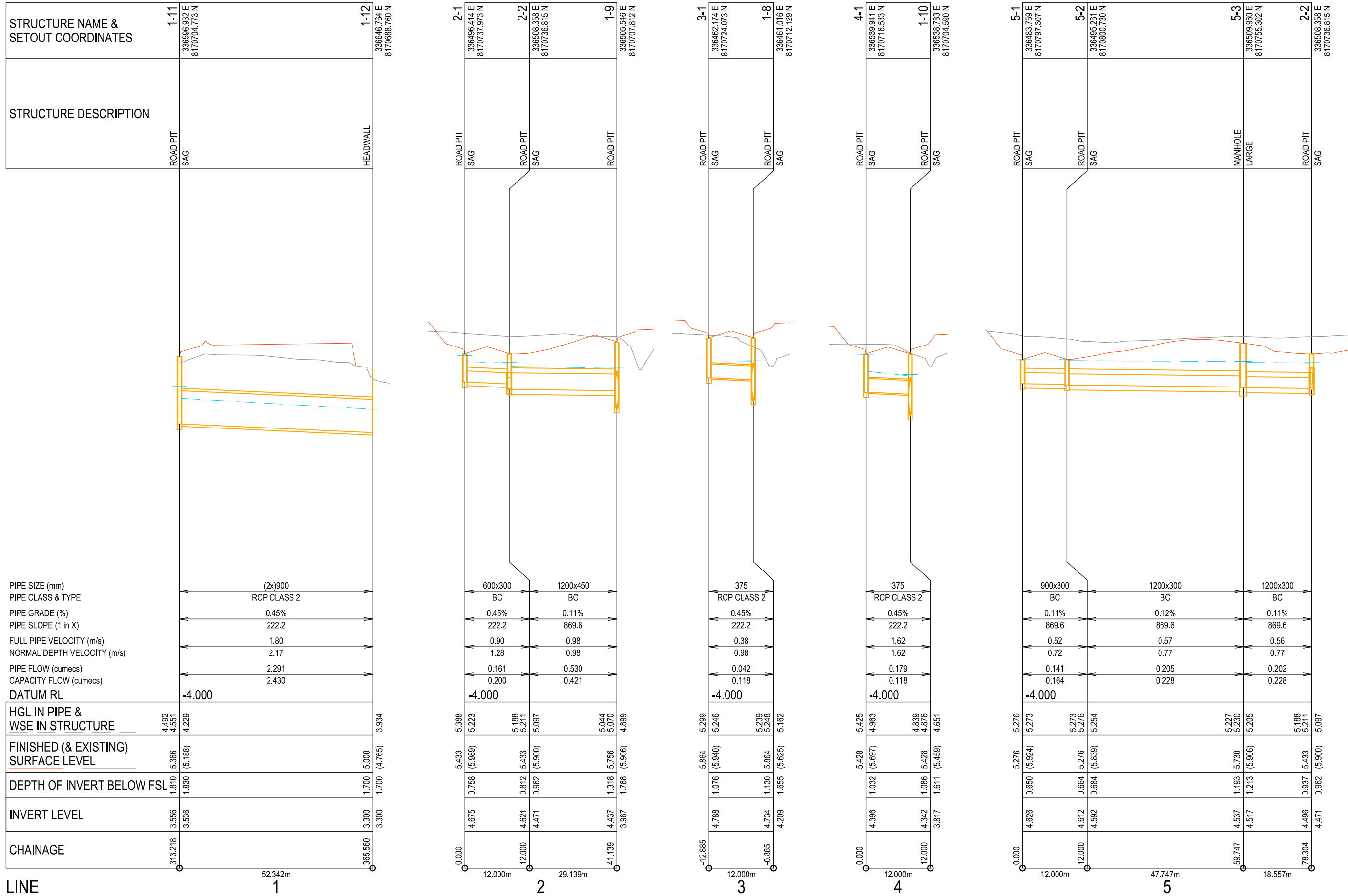
10% AEP STORM EVENT
 SETOUT COORDINATES SHOWN FOR ROAD PITS ARE ALONG KERB INVERT LINE
 SETOUT COORDINATES SHOWN FOR MANHOLES ARE TO CENTRE OF CHAMBER
 SETOUT COORDINATES SHOWN FOR HEADWALLS ARE TO CENTRE OF PIPE AT EXTENTS



LINE

B 21.05.26 DESIGN CHANGE & RESPONSE TO COUNCIL COMMENTS A 23.01.26 FOR COUNCIL APPROVAL	SCALE 1:100 DO NOT SCALE DRAWINGS Scales Before Reduction 	DESIGNER Address: 35 ABBOTT ST. CAIRNS 4870 Email: admin@osegroup.com.au	CLIENT K.A.N. Developments Pty Ltd	PROJECT CRAIGLIE BUSINESS PARK BOER STREET - CRAIGLIE 4877	TITLE DRAINAGE LONGSECTIONS - SHEET 1 OF 3
	REV DATE REVISION NOTES				

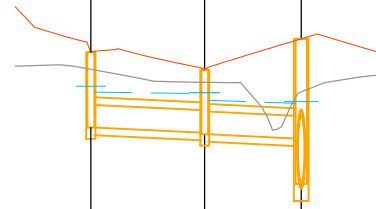
10% AEP STORM EVENT
 SETOUT COORDINATES SHOWN FOR ROAD PITS ARE ALONG KERB INVERT LINE
 SETOUT COORDINATES SHOWN FOR MANHOLES ARE TO CENTRE OF CHAMBER
 SETOUT COORDINATES SHOWN FOR HEADWALLS ARE TO CENTRE OF PIPE AT EXTENTS



B 21.05.26 DESIGN CHANGE & RESPONSE TO COUNCIL COMMENTS A 23.01.26 FOR COUNCIL APPROVAL	SCALE 1:100 DO NOT SCALE DRAWINGS Scales Before Reduction 	DESIGNER Address: 35 ABBOTT ST, CAIRNS 4870 Email: admin@osegroup.com.au	CLIENT K.A.N. Developments Pty Ltd	PROJECT CRAIGLIE BUSINESS PARK BOER STREET - CRAIGLIE 4877	TITLE DRAINAGE LONGSECTIONS - SHEET 2 OF 3

10% AEP STORM EVENT
 SETOUT COORDINATES SHOWN FOR ROAD PITS ARE ALONG KERB INVERT LINE
 SETOUT COORDINATES SHOWN FOR MANHOLES ARE TO CENTRE OF CHAMBER
 SETOUT COORDINATES SHOWN FOR HEADWALLS ARE TO CENTRE OF PIPE AT EXTENTS

STRUCTURE NAME & SETOUT COORDINATES	6-1 336416.242 E 8170698.776 N	6-2 336430.992 E 8170701.780 N	1-7 336432.042 E 8170714.517 N
STRUCTURE DESCRIPTION	ROAD PIT	ROAD PIT SAG	MANHOLE LARGE



PIPE SIZE (mm)	450x300	450x300	
PIPE CLASS & TYPE	BC	BC	
PIPE GRADE (%)	0.45%	0.45%	
PIPE SLOPE (1 in X)	222.2	222.2	
FULL PIPE VELOCITY (m/s)	0.52	0.89	
NORMAL DEPTH VELOCITY (m/s)	1.04	1.20	
PIPE FLOW (cumecs)	0.071	0.120	
CAPACITY FLOW (cumecs)	0.140	0.140	
DATUM RL	-4.000		
HGL IN PIPE & WSE IN STRUCTURE	5.651 5.573	5.555 5.567 5.466	5.424 5.448 5.308
FINISHED (& EXISTING) SURFACE LEVEL	6.102 (5.875)	5.870 (5.705)	6.278 (5.576)
DEPTH OF INVERT BELOW FSL	0.997	0.833 0.853	1.318 1.918
INVERT LEVEL	5.105	5.037 5.017	4.960 4.360
CHAINAGE	-19.608	-4.555	8.225

LINE 6
 15.053m 12.780m

REV	DATE	REVISION NOTES
B	21.05.26	DESIGN CHANGE & RESPONSE TO COUNCIL COMMENTS
A	23.01.26	FOR COUNCIL APPROVAL

SCALE 1:100
 DO NOT SCALE DRAWINGS
 Scales Before Reduction
 500 0 500 1000 1500 2000 2500 mm

DESIGNER

 Address: 35 ABBOTT ST, CAIRNS 4870
 Email: admin@osegroup.com.au

CLIENT K.A.N. Developments Pty Ltd

PROJECT CRAIGLIE BUSINESS PARK
 BOER STREET - CRAIGLIE 4877

DRAWN DM	DRAWING CHECK AMcP	APPROVED
DESIGNED DM	DESIGN REVIEW AMcP	DATE -

TITLE DRAINAGE LONGSECTIONS - SHEET 3 OF 3

SCALE (Scale as shown)	DRAWING No 25235-C020	REV B
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10% AEP EVENT HYDROLOGY

NODE	NODE	SETOUT	SETOUT	SETOUT	GRATE	CATCH	TC	CATCH	CATCH	TIME	INTENSITY	RUNOFF	AREA	FULL	FULL	FULL	PARTIAL	PARTIAL	PARTIAL	CATCHMENT	APPROACH	ROAD	FLOODED	FLOODED	FLOODED	ROAD	ROAD	MAX POND	CHOCKE	INLET	INLET	BYPASS	BYPASS	
NAME	TYPE	EASTING	NORTHING	RL	RL	ID	METHOD	LENGTH	SLOPE	TC	I	C	A	CA	SUM CA	QC=CA	CA	SUM CA	QC=CA	FLOW QC	FLOW QA	CAPACITY	DEPTH	WIDTH	VEL-DEP	GRADE	XFALL	DEPTH	FACTOR	CURVE NAME	FLOW QG	FLOW QB	NODE	
(-)	(-)	(M)	(M)	(M)	(M)	(-)	(-)	(M)	(%)	(MIN)	(MM/HR)	(-)	(HA)	(HA)	(HA)	(L/S)	(HA)	(HA)	(L/S)	(L/S)	(L/S)	(L/S)	(M)	(M)	(SQ.M/S)	(%)	(%)	(M)	(-)	(-)	(L/S)	(L/S)	(-)	
1-1	SAG FI SQR	336310.18	8170697.53	6.42	6.42	1P	BRANSBY WILLIAMS EQUATION	103.13	0.6	8.82	188.65	0.75	0.0624	0.0468	0.3414	178.9	0.0288	0.3234	196.9	196.9	196.9								1.00	SAG	196.9		-	
						1I	BRANSBY WILLIAMS EQUATION	77.25	0.7	5.43	219.17	0.90	0.3274	0.2947			0.2947																	
1-2	SAG FI SQR	336312.89	8170725.50	6.30	6.30	1I	BRANSBY WILLIAMS EQUATION	101.52	0.7	7.00	205.04	0.90	0.3960	0.3564	0.3564	203.0	0.3564	0.3564	203.0	203.0	203.0								1.00	SAG	203.0		-	
1-3	SAG FI SQR	336318.80	8170724.91	6.20	6.20	1P	DIRECT			5.00	223.00	0.75	0.0068	0.0051	0.0281	17.4	0.0051	0.0281	17.4	17.4	17.4	566.1	0.026					0.417	1.00	SAG	17.4		1-5	
						1I	DIRECT			5.00	223.00	0.90	0.0256	0.0230			0.0230																	
1-4	RD PIT	336331.94	8170723.69	7.03	6.08																0.0										0.0		-	
1-5	SAG RD PIT	336353.67	8170723.57	6.33	6.33	1P	DIRECT			5.00	223.00	0.75	0.0231	0.0173	0.2045	126.7	0.0173	0.2045	126.7	126.7	126.7	345.0	0.094					0.206	1.00	SAG	126.7		1-6	
						1I	DIRECT			5.00	223.00	0.90	0.2079	0.1871			0.1871																	
1-6	SAG RD PIT	336392.18	8170719.83	6.21	6.21	1P	DIRECT			5.00	223.00	0.75	0.0238	0.0178	0.2105	130.4	0.0178	0.2105	130.4	130.4	130.4	350.0	0.095					0.225	1.00	SAG	130.4		LOST	
						1I	DIRECT			5.00	223.00	0.90	0.2141	0.1927			0.1927																	
1-7	MH L	336432.04	8170714.52	6.28	6.28																													
1-8	SAG RD PIT	336461.02	8170712.13	5.86	5.86	1P	DIRECT			5.00	223.00	0.75	0.0214	0.0161	0.1898	117.6	0.0161	0.1898	117.6	117.6	166.0	42.4	0.042					0.042	1.00	SAG	42.4	123.6	1-9	
						1I	DIRECT			5.00	223.00	0.90	0.1930	0.1737			0.1737																	
1-9	RD PIT	336505.55	8170707.81	5.76	5.76	1P	DIRECT			5.00	223.00	0.75	0.0185	0.0139	0.1640	101.6	0.0139	0.1640	101.6	101.6	225.2	636.8	0.134	4.51	0.11	0.7	3.0		1.00	0.5G,3.3X	134.8	90.4	1-10	
						1I	DIRECT			5.00	223.00	0.90	0.1668	0.1501			0.1501																	
1-10	SAG RD PIT	336538.78	8170704.59	5.43	5.43	1P	DIRECT			5.00	223.00	0.75	0.0485	0.0364	0.4296	266.1	0.0364	0.4296	266.1	266.1	356.5	337.5	0.192					0.192	1.00	SAG	337.5	19.0	1-11	
						1I	DIRECT			5.00	223.00	0.90	0.4368	0.3932			0.3932																	
1-11	SAG RD PIT	336596.93	8170704.77	5.37	5.37	1P	DIRECT			5.00	223.00	0.75	0.0797	0.0598	0.7055	437.0	0.0598	0.7055	437.0	437.0	498.0	350.0	0.225					0.225	1.00	SAG	350.0	148.0	LOST	
						1I	DIRECT			5.00	223.00	0.90	0.7175	0.6457			0.6457																	
1-12	HW OUT	336646.76	8170688.76	5.00	5.00																													
2-1	SAG RD PIT	336496.41	8170737.97	5.43	5.43	1P	DIRECT			5.00	223.00	0.75	0.0134	0.0100	0.1182	73.2	0.0100	0.1182	73.2	73.2	277.3	161.4	0.191					0.191	0.48	SAG	161.4	116.0	2-2	
						1I	DIRECT			5.00	223.00	0.90	0.1202	0.1082			0.1082																	
2-2	SAG RD PIT	336508.36	8170736.81	5.43	5.43	1P	DIRECT			5.00	223.00	0.75	0.0101	0.0076	0.0893	55.3	0.0076	0.0893	55.3	55.3	171.3	337.2	0.110					0.191	1.00	SAG	171.3		4-1	
						1I	DIRECT			5.00	223.00	0.90	0.0908	0.0817			0.0817																	
3-1	SAG RD PIT	336462.17	8170724.07	5.86	5.86	1P	DIRECT			5.00	223.00	0.75	0.0450	0.0337	0.3980	246.5	0.0337	0.3980	246.5	246.5	246.5	42.4	0.042					0.042	1.00	SAG	42.4	204.1	2-1	
						1I	DIRECT			5.00	223.00	0.90	0.4047	0.3643			0.3643																	
4-1	SAG RD PIT	336539.94	8170716.53	5.43	5.43	1P	DIRECT			5.00	223.00	0.75	0.0403	0.0302	0.3563	220.7	0.0302	0.3563	220.7	220.7	220.7	178.6	0.192					0.192	0.53	SAG	178.6	42.1	1-11	
						1I	DIRECT			5.00	223.00	0.90	0.3623	0.3261			0.3261																	
5-1	SAG RD PIT	336483.76	8170797.31	5.28	5.28	1P	DIRECT			5.00	223.00	0.75	0.0258	0.0193	0.2283	141.4	0.0193	0.2283	141.4	141.4	141.4	337.4	0.100					0.191	1.00	SAG	141.4		-	
						1I	DIRECT			5.00	223.00	0.90	0.2322	0.2090			0.2090																	
5-2	SAG RD PIT	336495.26	8170800.73	5.28	5.28	1P	DIRECT			5.00	223.00	0.75	0.0118	0.0088	0.1043	64.6	0.0088	0.1043	64.6	64.6	64.6	194.9	0.063					0.119	1.00	SAG	64.6		-	
						1I	DIRECT			5.00	223.00	0.90	0.1061	0.0955			0.0955																	
5-3	MH L	336509.96	8170755.30	5.73	5.73																													
6-1	RD PIT	336416.24	8170698.78	6.10	6.10	1P	DIRECT			5.00	223.00	0.75	0.2001	0.1501	0.1517	94.0	0.1501	0.1517	94.0	94.0	94.0	3319.3	0.094	2.97	0.07	0.9	2.9		1.00	1G,3.3X	70.8	23.1	6-2	
						1I	DIRECT			5.00	223.00	0.90	0.0018	0.0016			0.0016																	
6-2	SAG RD PIT	336430.99	8170701.78	5.87	5.87	1P	DIRECT			5.00	223.00	0.75	0.0137	0.0102	0.1209	74.9	0.0102	0.1209	74.9	74.9	98.1	49.6	0.050					0.050	1.00	SAG	49.6	48.4	1-8	
						1I	DIRECT			5.00	223.00	0.90	0.1230	0.1107			0.1107																	

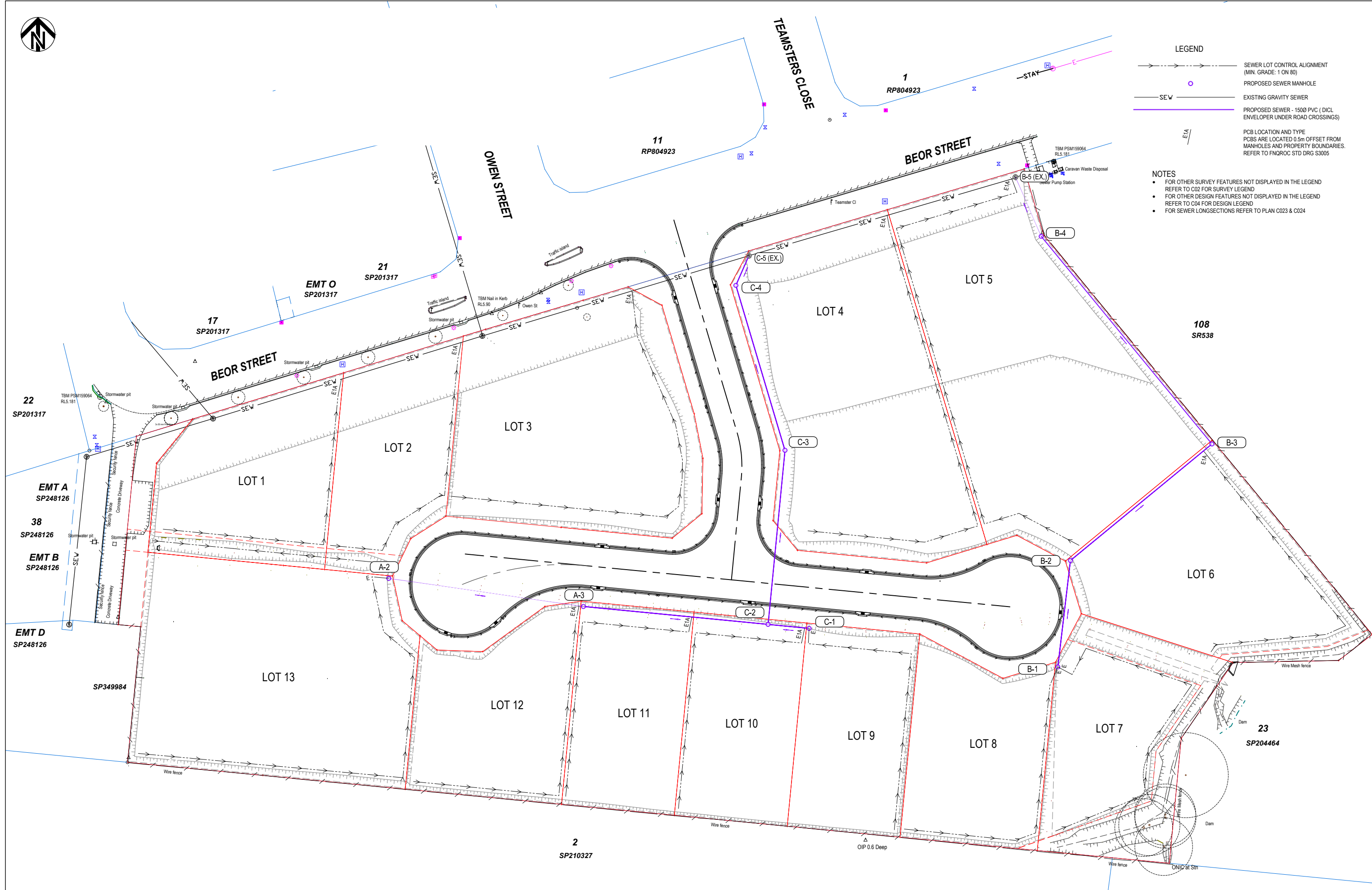
B 21.05.26 DESIGN CHANGE & RESPONSE TO COUNCIL COMMENTS A 23.01.26 FOR COUNCIL APPROVAL REV DATE REVISION NOTES	SCALE 1:100 DO NOT SCALE DRAWINGS Scales Before Reduction 	Orig. Sheet A3	DESIGNER Address: 35 ABBOTT ST. CAIRNS 4870 Email: admin@osegroup.com.au	CLIENT K.A.N. Developments Pty Ltd	PROJECT CRAIGLIE BUSINESS PARK BOER STREET - CRAIGLIE 4877	TITLE DRAINAGE CALCULATION TABLES - 10% HYDROLOGY
	DRAWN DM	DRAWING CHECK AMcP	APPROVED DATE -	SCALE (Scale as shown)	DRAWING No 25235-C021	REV B

1% AEP EVENT HYDROLOGY

NODE	NODE	SETOUT	SETOUT	SETOUT	GRATE	CATCH	TC	CATCH	CATCH	TIME	INTENSITY	RUNOFF	AREA	FULL	FULL	FULL	PARTIAL	PARTIAL	PARTIAL	CATCHMENT	APPROACH	ROAD	FLOODED	FLOODED	FLOODED	ROAD	ROAD	MAX POND	CHOKE	INLET	INLET	BYPASS	BYPASS	
NAME	TYPE	EASTING	NORTHING	RL	RL	ID	METHOD	LENGTH	SLOPE	TC	I	C	A	CA	SUM CA	QC=CA	CA	SUM CA	QC=CA	FLOW QC	FLOW QA	CAPACITY	DEPTH	WIDTH	VEL.DEP	GRADE	XFALL	DEPTH	FACTOR	CURVE NAME	FLOW QG	FLOW QB	NODE	
(-)	(-)	(M)	(M)	(M)	(M)	(-)	(-)	(M)	(%)	(MIN)	(MM/HR)	(-)	(HA)	(HA)	(HA)	(L/S)	(HA)	(HA)	(L/S)	(L/S)	(L/S)	(L/S)	(M)	(M)	(SQ.M/S)	(%)	(%)	(M)	(-)	(-)	(L/S)	(L/S)	(-)	
1-1	SAG FI SOR	336310.18	8170697.53	6.42	6.42	1P	BRANSBY WILLIAMS EQUATION	103.13	0.6	8.82	256.96	0.75	0.0624	0.0468	0.3414	243.7	0.0288	0.3234	266.8	266.8	266.8								0.50	SAG	266.8		-	
						1I	BRANSBY WILLIAMS EQUATION	77.25	0.7	5.43	296.98	0.90	0.3274	0.2947			0.2947																	
1-2	SAG FI SOR	336312.89	8170725.50	6.30	6.30	1I	BRANSBY WILLIAMS EQUATION	101.52	0.7	7.00	278.45	0.90	0.3960	0.3564	0.3564	275.7	0.3564	0.3564	275.7	275.7	275.7								0.50	SAG	275.7		-	
1-3	SAG FI SOR	336318.80	8170724.91	6.20	6.20	1P	DIRECT			5.00	302.00	0.75	0.0068	0.0051	0.0281	23.6	0.0051	0.0281	23.6	23.6	23.6	283.1	0.062					0.417	0.50	SAG	23.6		1-5	
						1I	DIRECT			5.00	302.00	0.90	0.0256	0.0230			0.0230																	
1-4	RD PIT	336331.94	8170723.69	7.03	6.08																0.0										0.0		-	
1-5	SAG RD PIT	336353.67	8170723.57	6.33	6.33	1P	DIRECT			5.00	302.00	0.75	0.0231	0.0173	0.2045	171.5	0.0173	0.2045	171.5	171.5	171.5	172.5	0.202					0.206	0.50	SAG	171.5		1-6	
						1I	DIRECT			5.00	302.00	0.90	0.2079	0.1871			0.1871																	
1-6	SAG RD PIT	336392.18	8170719.83	6.21	6.21	1P	DIRECT			5.00	302.00	0.75	0.0238	0.0178	0.2105	176.6	0.0178	0.2105	176.6	176.6	176.6	175.0	0.225					0.225	0.50	SAG	175.0	1.6	LOST	
						1I	DIRECT			5.00	302.00	0.90	0.2141	0.1927			0.1927																	
1-7	MH L	336432.04	8170714.52	6.28	6.28																													-
1-8	SAG RD PIT	336461.02	8170712.13	5.86	5.86	1P	DIRECT			5.00	302.00	0.75	0.0214	0.0161	0.1898	159.2	0.0161	0.1898	159.2	159.2	292.7	21.2	0.042					0.042	0.50	SAG	21.2	271.5	1-9	
						1I	DIRECT			5.00	302.00	0.90	0.1930	0.1737			0.1737																	
1-9	RD PIT	336505.55	8170707.81	5.76	5.76	1P	DIRECT			5.00	302.00	0.75	0.0185	0.0139	0.1640	137.6	0.0139	0.1640	137.6	137.6	409.1	636.8	0.166	6.67	0.15	0.7	3.0	0.80	0.5G,3.3X	157.8	251.2	1-10		
						1I	DIRECT			5.00	302.00	0.90	0.1668	0.1501			0.1501																	
1-10	SAG RD PIT	336538.78	8170704.59	5.43	5.43	1P	DIRECT			5.00	302.00	0.75	0.0485	0.0364	0.4296	360.3	0.0364	0.4296	360.3	360.3	611.6	168.8	0.192					0.192	0.50	SAG	168.8	442.8	1-11	
						1I	DIRECT			5.00	302.00	0.90	0.4368	0.3932			0.3932																	
1-11	SAG RD PIT	336596.93	8170704.77	5.37	5.37	1P	DIRECT			5.00	302.00	0.75	0.0797	0.0598	0.7055	591.8	0.0598	0.7055	591.8	591.8	1314.3	175.0	0.225					0.225	0.50	SAG	175.0	1139.3	LOST	
						1I	DIRECT			5.00	302.00	0.90	0.7175	0.6457			0.6457																	
1-12	HW OUT	336646.78	8170688.76	5.00	5.00																													-

1% AEP EVENT HYDRAULICS

PIPE	PIPE	PIPE	PIPE	FULL PIPE	PIPE	PIPE	FULL-A REA	FULL-A REA	FULL-A REA	FULL-A REA	PART-A REA	PART-A REA	PART-A REA	PART-A REA	PEAK	NET BYPASS	PIPE	EXCESS PIPE	CAPACIT Y	Q/QCAP	FULL PIPE	NORM DEPTH	CRIT DEPTH	CAPACIT Y VEL	US NODE	PIPE	PIPE	DS NODE	COVER	COVER	PIPE	PIPE	US NODE	US NODE	PIPE	P'HEAD LOSS	WSE LOSS	PIPE	US NODE	PIPE	PIPE	DS NODE	HGL	HGL	F'BOARD		
ID	TYPE	LENGTH	SIZE	AREA AF	GRADE	GRADE	TCT	I	SUM CA	QC=CA	TCT	I	SUM CA	QC=CA	FLOW QRAT	FLOW QB	FLOW Q	FLOW QX	FLOW QCAP	RATIO	VEL VF=Q/A F	VEL VN=Q/A N	VEL VC=Q/A C	VCAP=Q CAP/AF	GRATE RL	US IL	DS IL	GRATE RL	LIMIT	MIN	DS BEND	DS DROP	KU	KW	V'HEAD	(KV.VH EAD)	(KW.VH EAD)	T'HEAD LOSS	HGL	US HGL	DS HGL	HGL	GRADE	GRADE	US		
(-)	(-)	(M)	(MM)	(SQ.M)	(%)	(1 IN)	(MIN)	(MM/HR)	(HA)	(L/S)	(MIN)	(MM/HR)	(HA)	(L/S)	(L/S)	(L/S)	(L/S)	(L/S)	(L/S)	(-)	(M/S)	(M/S)	(M/S)	(M/S)	(M)	(M)	(M)	(M)	(M)	(M)	(DEG)	(M)	(-)	(-)	(M)	(M)	(M)	(M)	(M)	(M)	(M)	(%)	(1 IN)	(M)			
1-1 TO 1-2	RCP	28.10	450	0.159	0.38	265.3	8.82	256.96	0.3414	243.7	5.43	296.98	0.3234	266.8	266.8	266.8	266.8	162.7	175.1	1.52	1.68	1.68	1.94	1.10	6.42	5.53	5.42	6.30	0.20	0.39	90.2	0.050	7.14		0.02	0.16		0.04	6.42	6.26	6.22	6.30	0.13	750.8	0.00		
1-2 TO 1-3	RCP	5.93	450	0.159	0.47	211.9	9.05	254.19	0.6978	492.7	7.00	278.45	0.6869	531.3	531.3	531.3	531.3	240.2	196.0	2.71	3.34	3.34	3.36	1.23	6.30	5.37	5.35	6.20	0.20	0.36	-0.4	0.075	1.96	2.41	0.17	0.34	0.41	0.06	6.30	5.89	5.83	5.83	1.04	96.0	0.00		
1-3 TO 1-4	RCP	13.21	525	0.216	0.86	116.6	9.10	253.61	0.7260	511.4	7.05	277.87	0.7151	551.9	551.9	551.9	551.9	398.5	1.38	2.55	2.55	2.65	1.84	6.20	5.27	5.16	6.08	0.20	0.57	-5.0	0.156	-0.19	0.33	-0.06	0.22	5.83	5.89	5.67	5.67	1.67	60.0	0.37					
1-4 TO 1-5	RCP	21.73	750	0.442	0.45	222.2	9.21	252.31	0.7260	508.8	7.16	276.57	0.7151	549.3	549.3	549.3	549.3	747.1	0.74	1.24	1.85	1.95	1.69	6.08	5.00	4.90	6.33	0.20	0.64	5.2	0.020			0.08		0.05	5.67	5.67	5.63	5.65	0.17	584.8	0.41				
1-5 TO 1-6	RCP	38.69	750	0.442	0.45	222.2	9.39	250.18	0.9304	646.6	7.34	274.43	0.9195	701.0	701.0	701.0	701.0	747.1	0.94	1.59	1.92	2.15	1.69	6.33	4.88	4.71	6.21	0.20	0.65	2.1	0.150	1.35	1.47	0.13	0.17	0.19	0.18	5.65	5.46	5.23	5.19	0.59	168.7	0.68			
1-6 TO 1-7	RCP	40.21	900	0.636	0.45	222.2	9.71	246.37	1.1410	780.9	7.66	270.63	1.1301	849.5	849.5	849.5	849.5	-1.6	847.9		1214.9	0.70	1.33	2.06	2.11	1.91	6.21	4.56	4.38	6.28	0.60	0.70	-2.9	0.020	0.66	0.69	0.09	0.06	0.06	0.14	5.19	5.12	5.06	5.08	0.16	617.6	1.02
1-7 TO 1-8	RCP	29.07	900	0.636	0.45	222.2	10.05	242.67	1.4136	952.9	6.66	282.44	1.3276	1041.6	1041.6	1041.6	1041.6	-135.1	906.5		1214.9	0.75	1.42	2.09	2.17	1.91	6.28	4.36	4.23	5.86	0.60	0.65	0.8	0.020	1.00	1.19	0.10	0.10	0.12	0.11	5.08	4.95	4.90	4.90	0.20	489.7	1.20
1-8 TO 1-9	RCP	44.74	900	0.636	0.45	222.2	10.29	241.08	2.0014	1340.3	6.90	279.58	1.9154	1487.5	1487.5	1487.5	1487.5	-585.8	901.7		1214.9	0.74	1.42	2.09	2.16	1.91	5.86	4.21	4.01	5.76	0.60	0.69	0.0	0.020	0.49	0.54	0.10	0.05	0.06	0.12	4.90	4.84	4.78	4.80	0.16	643.9	0.96
1-9 TO 1-10	RCP	33.39	(2X)900	1.272	0.45	222.2	10.66	238.61	2.7056	1793.3	7.27	275.18	2.6195	2002.3	2002.3	2002.3	2002.3	-402.4	1599.9		2429.8	0.66	1.26	2.04	2.07	1.91	5.76	3.99	3.84	5.43	0.60	0.65	-5.7	0.020	1.97	2.31	0.08	0.16	0.19	0.08	4.80	4.62	4.58	4.61	0.10	959.3	0.95
1-10 TO 1-11	RCP	58.15	(2X)900	1.272	0.45	222.2	10.94	236.78	3.4914	2296.3	6.55	283.70	3.2931	2595.1	2595.1	2595.1	2595.1	-724.1	1871.1		2429.8	0.77	1.47	2.11	2.20	1.91	5.43	3.82	3.56	5.37	0.60	0.67	18.0	0.020	1.31	1.57	0.11										



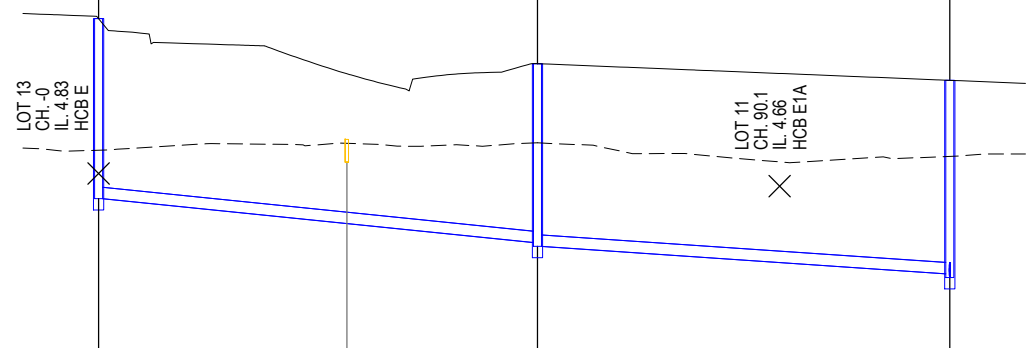
LEGEND

- SEWER LOT CONTROL ALIGNMENT (MIN. GRADE: 1 ON 80)
- PROPOSED SEWER MANHOLE
- EXISTING GRAVITY SEWER
- PROPOSED SEWER - 1500 PVC (DI CL ENVELOPER UNDER ROAD CROSSINGS)
- PCB LOCATION AND TYPE
PCBS ARE LOCATED 0.5m OFFSET FROM MANHOLES AND PROPERTY BOUNDARIES. REFER TO FNQROC STD DRG S3005

- NOTES**
- FOR OTHER SURVEY FEATURES NOT DISPLAYED IN THE LEGEND REFER TO C02 FOR SURVEY LEGEND
 - FOR OTHER DESIGN FEATURES NOT DISPLAYED IN THE LEGEND REFER TO C04 FOR DESIGN LEGEND
 - FOR SEWER LONGSECTIONS REFER TO PLAN C023 & C024

B 21.05.26 DESIGN CHANGE & RESPONSE TO COUNCIL COMMENTS A 23.01.26 FOR COUNCIL APPROVAL REV DATE REVISION NOTES	SCALE 1:1000 DO NOT SCALE DRAWINGS Scales Before Reduction 	DESIGNER Address: 35 ABBOTT ST, CAIRNS 4870 Email: admin@osegroup.com.au	CLIENT K.A.N. Developments Pty Ltd	PROJECT CRAIGLIE BUSINESS PARK BOER STREET - CRAIGLIE 4877	TITLE SEWER RETICULATION PLAN			
				DRAWN DM DESIGNED DM	DRAWING CHECK AMcP DESIGN REVIEW AMcP	APPROVED DATE -	SCALE (Scale as shown) DRAWING No 25235-C024	REV B

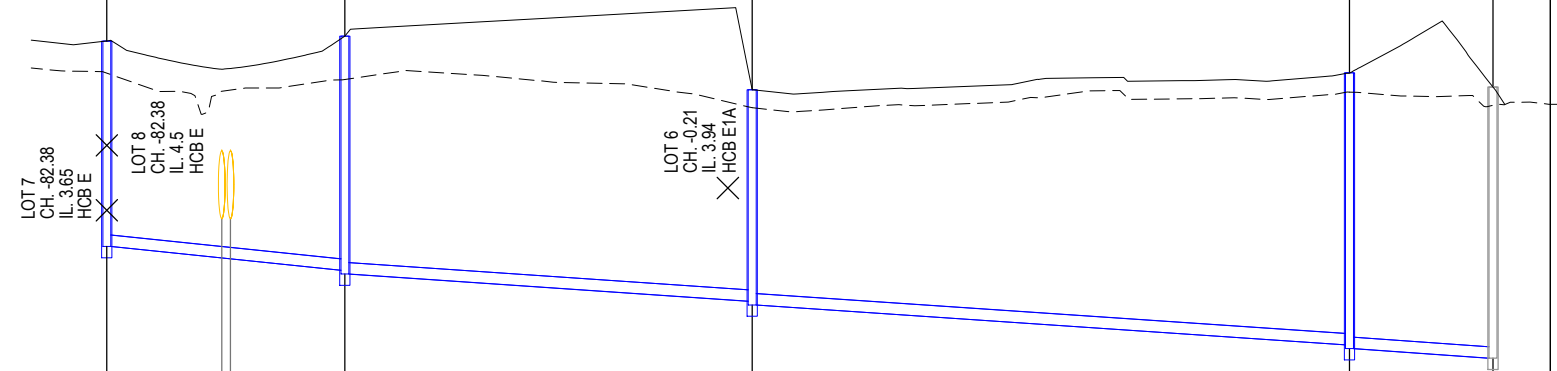
MAINTENANCE HOLE / SHAFT NAME	A-2	A-3	C-2
MH / MS COVER TYPE	CIRCULAR	CIRCULAR	CIRCULAR
MH / MS TYPE	MH	MH	MH
DS MH / MS DROP TYPE		TYPE A	TYPE A



DATUM RL	-1.000		
PROPERTY DESCRIPTION			
PIPE SIZE (mm), CLASS	150, uPVC SN10		150, uPVC SN10
GRADE (1 IN X)	100		150
LENGTH	58.069		54.553
EMBEDMENT TYPE			
FINISHED (& EXISTING) SURFACE LEVEL	6.876	6.280	6.059
DEPTH OF INVERT BELOW FSL	2.382	2.366	2.559
INVERT LEVEL	4.495	3.914	3.500
CHAINAGE	0.000	58.069	112.622

LINE A

MAINTENANCE HOLE / SHAFT NAME	B-1	B-2	B-3	B-4	B-5
MH / MS COVER TYPE	CIRCULAR	CIRCULAR	CIRCULAR	CIRCULAR	
MH / MS TYPE	MH	MH	MH	MH	MH (EX.)
DS MH / MS DROP TYPE		TYPE A	TYPE A	TYPE A	



DATUM RL	-2.000				
PROPERTY DESCRIPTION					
PIPE SIZE (mm), CLASS	150, uPVC SN10		150, uPVC SN10		150, uPVC SN10
GRADE (1 IN X)	100		150		150
LENGTH	31.497		53.881		18.998
EMBEDMENT TYPE					
FINISHED (& EXISTING) SURFACE LEVEL	5.883	5.949	5.239	5.463	5.275
DEPTH OF INVERT BELOW FSL	2.716	3.097	2.796	3.597	3.586
INVERT LEVEL	3.167	2.852	2.443	1.866	1.689
CHAINAGE	-82.377	-50.881	3.000	82.014	101.012

LINE B

SCALE 1:1000
 DO NOT SCALE DRAWINGS
 Scales Before Reduction
 0 5 10 15 20 25 m



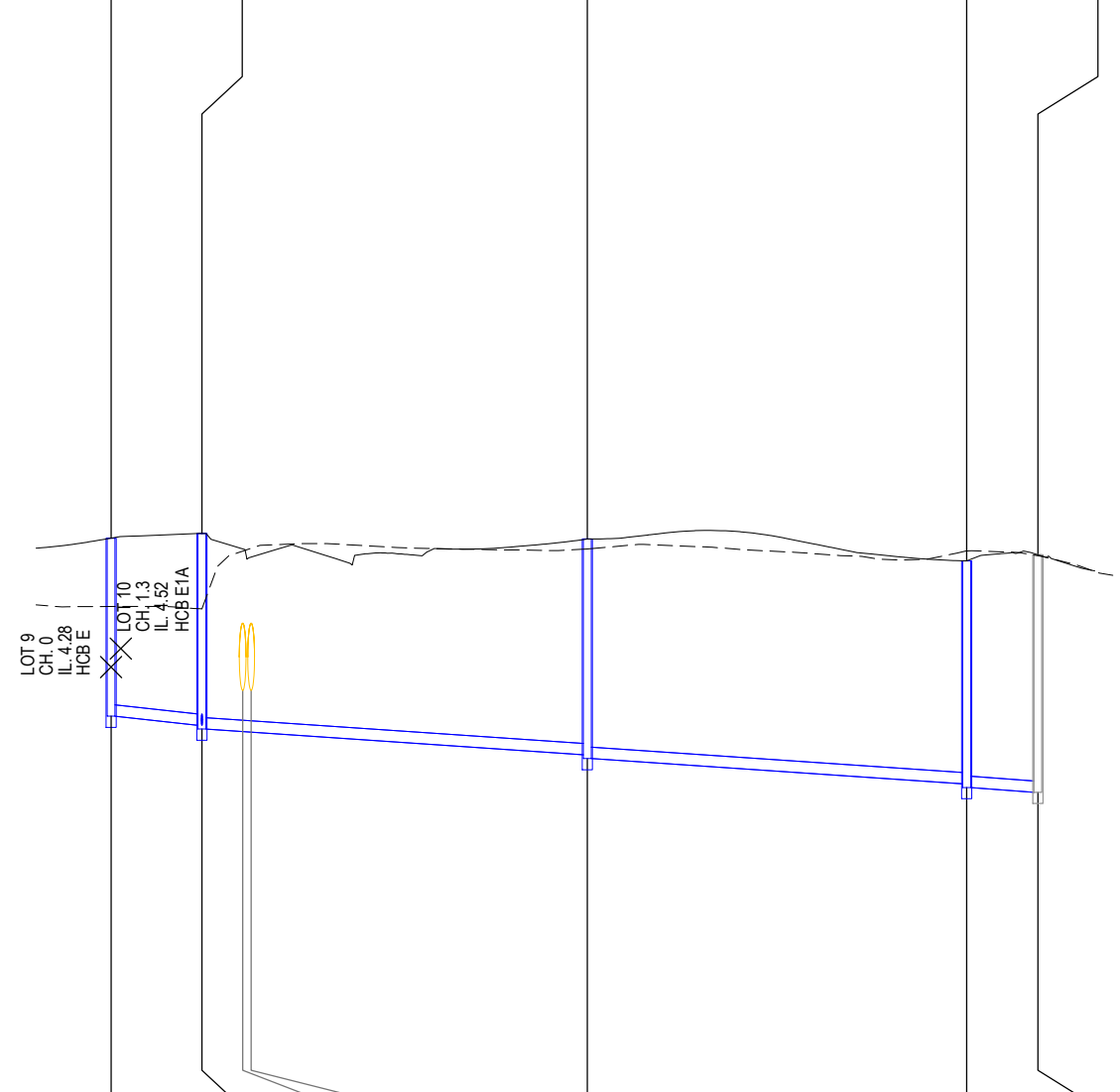
REV	DATE	REVISION NOTES
B	21.05.26	DESIGN CHANGE & RESPONSE TO COUNCIL COMMENTS
A	23.01.26	FOR COUNCIL APPROVAL

DESIGNER
 CLIENT K.A.N. Developments Pty Ltd
 PROJECT CRAIGLIE BUSINESS PARK
 BOER STREET - CRAIGLIE 4877
 TITLE SEWER LONGSECTIONS
 SHEET 1 OF 2

DRAWN DM	DRAWING CHECK AMcP	APPROVED
DESIGNED DM	DESIGN REVIEW AMcP	DATE -

SCALE (Scale as shown)	DRAWING No 25235-C025	REV B
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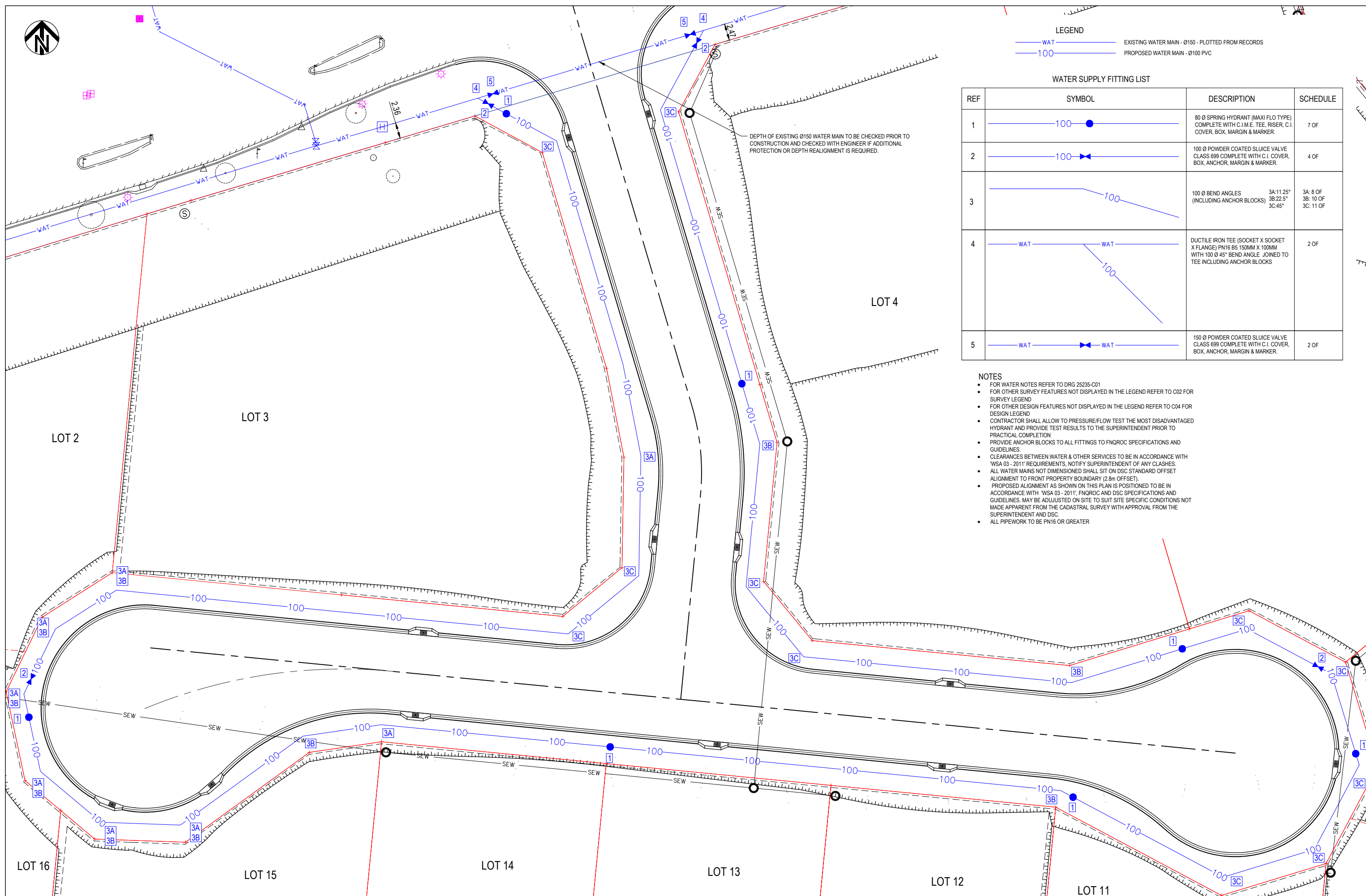
MAINTENANCE HOLE / SHAFT NAME	C-1	C-2	C-3	C-4	C-5
MH / MS COVER TYPE	CIRCULAR	CIRCULAR	CIRCULAR	CIRCULAR	
MH / MS TYPE	MH	MH	MH	MH	MH (EX)
DS MH / MS DROP TYPE		TYPE A	TYPE A	TYPE A	



DATUM RL	-2.000				
PROPERTY DESCRIPTION					
PIPE SIZE (mm), CLASS	150, uPVC SN10		150, uPVC SN10		150, uPVC SN10
GRADE (1 IN X)	100		150		150
LENGTH	12.114		51.394		9.497
EMBEDMENT TYPE					
FINISHED (& EXISTING) SURFACE LEVEL	5.995	5.995 (5.084)	6.059 (5.053)	5.995 (5.852)	5.691 (5.823)
DEPTH OF INVERT BELOW FSL	2.374	2.569 (2.609)	2.878 (2.928)	2.971 (3.021)	3.166 (3.166)
INVERT LEVEL	3.621	3.500 (3.450)	3.108 (3.068)	2.720 (2.670)	2.607 (2.607)
CHAINAGE	0.000	12.114	17.548 (17.900mm L 3.96)	114.098 (118.680 3.409)	123.595 (127.087)

LINE C

B 21.05.26 DESIGN CHANGE & RESPONSE TO COUNCIL COMMENTS A 23.01.26 FOR COUNCIL APPROVAL REV DATE REVISION NOTES	SCALE 1:1000 DO NOT SCALE DRAWINGS Scales Before Reduction 	DESIGNER Address: 35 ABBOTT ST, CAIRNS 4870 Email: admin@osegroup.com.au	CLIENT K.A.N. Developments Pty Ltd	PROJECT CRAIGLIE BUSINESS PARK BOER STREET - CRAIGLIE 4877	TITLE SEWER LONGSECTIONS SHEET 2 OF 2 SCALE (Scale as shown) DRAWING No 25235-C026
			DRAWN DM DRAWING CHECK AMcP APPROVED DESIGNED DM DESIGN REVIEW AMcP DATE -		REV B



LEGEND

- WAT ——— EXISTING WATER MAIN - Ø150 - PLOTTED FROM RECORDS
- 100 ——— PROPOSED WATER MAIN - Ø100 PVC

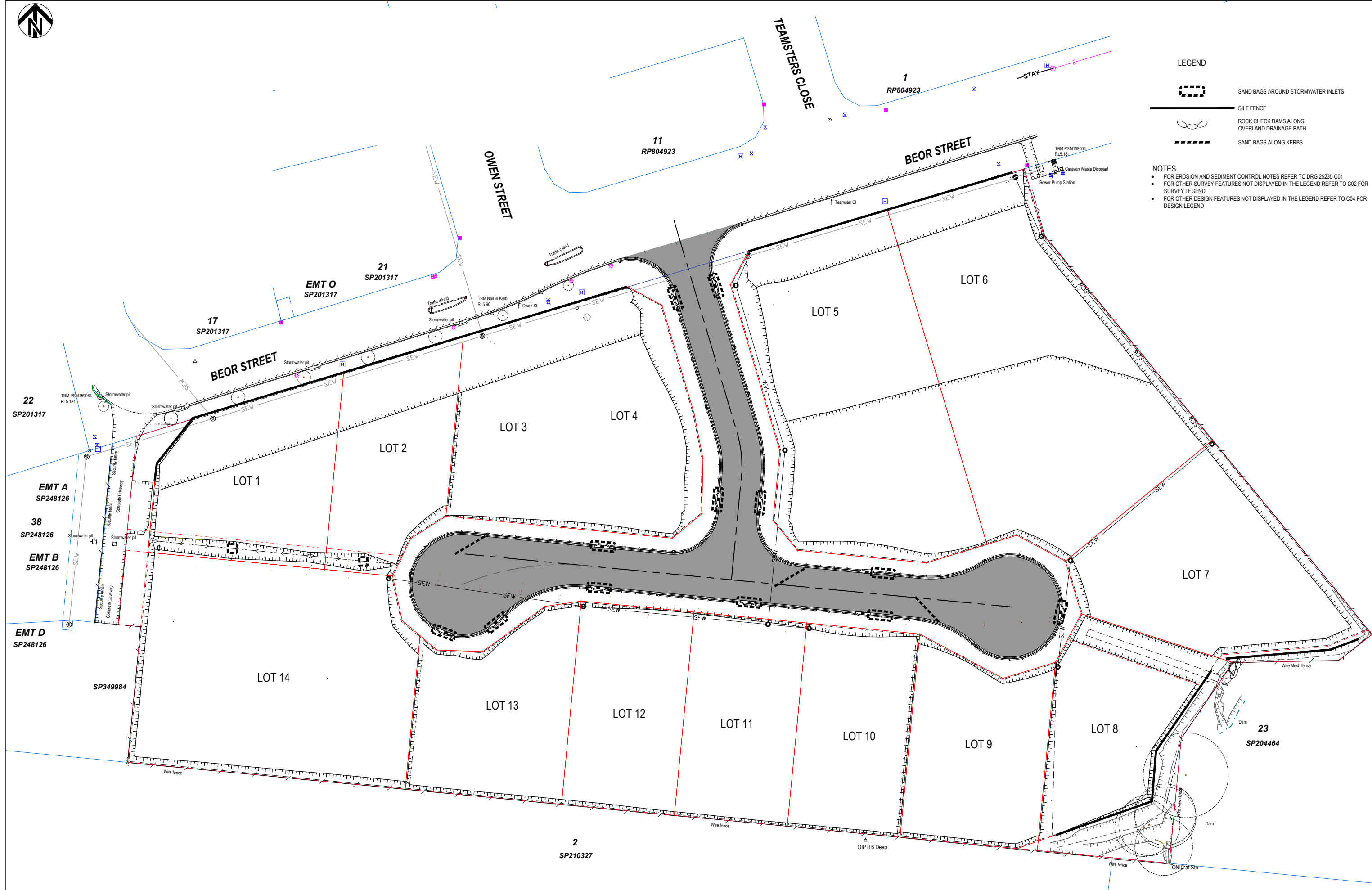
WATER SUPPLY FITTING LIST

REF	SYMBOL	DESCRIPTION	SCHEDULE
1		80 Ø SPRING HYDRANT (MAXI FLO TYPE) COMPLETE WITH C.I.M.E. TEE, RISER, C.I. COVER, BOX, MARGIN & MARKER.	7 OF
2		100 Ø POWDER COATED SLUICE VALVE CLASS 699 COMPLETE WITH C.I. COVER, BOX, ANCHOR, MARGIN & MARKER.	4 OF
3		100 Ø BEND ANGLES (INCLUDING ANCHOR BLOCKS) 3A: 11.25° 3B: 22.5° 3C: 45°	3A: 8 OF 3B: 10 OF 3C: 11 OF
4		DUCTILE IRON TEE (SOCKET X SOCKET X FLANGE) PN16 BS 150MM X 100MM WITH 100 Ø 45° BEND ANGLE JOINED TO TEE INCLUDING ANCHOR BLOCKS	2 OF
5		150 Ø POWDER COATED SLUICE VALVE CLASS 699 COMPLETE WITH C.I. COVER, BOX, ANCHOR, MARGIN & MARKER.	2 OF





NOTES

- FOR WATER NOTES REFER TO DRG 25235-C01
- FOR OTHER SURVEY FEATURES NOT DISPLAYED IN THE LEGEND REFER TO C02 FOR SURVEY LEGEND
- FOR OTHER DESIGN FEATURES NOT DISPLAYED IN THE LEGEND REFER TO C04 FOR DESIGN LEGEND
- CONTRACTOR SHALL ALLOW TO PRESSURE/FLOW TEST THE MOST DISADVANTAGED HYDRANT AND PROVIDE TEST RESULTS TO THE SUPERINTENDENT PRIOR TO PRACTICAL COMPLETION
- PROVIDE ANCHOR BLOCKS TO ALL FITTINGS TO FNQROC SPECIFICATIONS AND GUIDELINES
- CLEARANCES BETWEEN WATER & OTHER SERVICES TO BE IN ACCORDANCE WITH WSA 03 - 2011 REQUIREMENTS. NOTIFY SUPERINTENDENT OF ANY CLASHES.
- ALL WATER MAINS NOT DIMENSIONED SHALL SIT ON DSC STANDARD OFFSET ALIGNMENT TO FRONT PROPERTY BOUNDARY (2.8m OFFSET).
- PROPOSED ALIGNMENT AS SHOWN ON THIS PLAN IS POSITIONED TO BE IN ACCORDANCE WITH WSA 03 - 2011, FNQROC AND DSC SPECIFICATIONS AND GUIDELINES. MAY BE ADJUSTED ON SITE TO SUIT SITE SPECIFIC CONDITIONS NOT MADE APPARENT FROM THE CADASTRAL SURVEY WITH APPROVAL FROM THE SUPERINTENDENT AND DSC.
- ALL PIPEWORK TO BE PN16 OR GREATER

B 21.05.26 DESIGN CHANGE & RESPONSE TO COUNCIL COMMENTS A 23.01.26 FOR COUNCIL APPROVAL REV DATE REVISION NOTES	SCALE 1:500 DO NOT SCALE DRAWINGS Scales Before Reduction 	Orig. Sheet A3	DESIGNER Address: 35 ABBOTT ST, CAIRNS 4870 Email: admin@osegroup.com.au	CLIENT K.A.N. Developments Pty Ltd	PROJECT CRAIGLIE BUSINESS PARK BOER STREET - CRAIGLIE 4877	TITLE WATER RETICULATION PLAN
	DRAWN DM	DRAWING CHECK AMcP	APPROVED DATE -	SCALE (Scale as shown)	DRAWING No 25235-C027	REV B

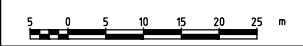



LEGEND

-  SAND BAGS AROUND STORMWATER INLETS
-  SILT FENCE
-  ROCK CHECK DAMS ALONG OVERLAND DRAINAGE PATH
-  SAND BAGS ALONG KERBS

NOTES

- FOR EROSION AND SEDIMENT CONTROL NOTES REFER TO DRG 25235-C01
- FOR OTHER SURVEY FEATURES NOT DISPLAYED IN THE LEGEND REFER TO C02 FOR SURVEY LEGEND
- FOR OTHER DESIGN FEATURES NOT DISPLAYED IN THE LEGEND REFER TO C04 FOR DESIGN LEGEND

B 21.05.26 DESIGN CHANGE & RESPONSE TO COUNCIL COMMENTS A 23.01.26 FOR COUNCIL APPROVAL REV DATE REVISION NOTES	SCALE 1:1000 DO NOT SCALE DRAWINGS Scales Before Reduction 	DESIGNER  Address: 35 ABBOTT ST, CAIRNS 4870 Email: admin@osegroup.com.au	CLIENT K.A.N. Developments Pty Ltd	PROJECT CRAIGLIE BUSINESS PARK BOER STREET - CRAIGLIE 4877	TITLE EROSION AND SEDIMENT CONTROL STRATEGY
	DRAWN DM	DRAWING CHECK AMcP	APPROVED DATE -	SCALE (Scale as shown)	DRAWING No 25235-C028

- Council requested an assessment confirming the requirements for a gross pollutant trap (GPT) at the end of the underground stormwater system. In our engineering report and the OWA submission, we raised a query asking Council if they still want a GPT installed as we have not included one in the design. After considering our query and, if Council decides to continue with the use of GPT's we can include one in the design and provide the required details. If one is required, then Council can make it a condition in the operational works approval.
- Items 5 to 13 no longer apply as they all relate to open drains that have been eliminated.
- In relation to item 14 we advise that the existing open drain will remain operative during construction and will be progressively filled as each section of the stormwater is constructed and can accommodate the designed flows.

Roadworks:

15 – Road grading has been amended in the revised design and ponding depths have been reduced to a maximum of 300mm.

16 – The revised layout reduces the number of lots, and all lots can be accessed via the internal road or from Beor Street in accordance with FNQROC requirements.

17 – Road pavement design details have been provided in the engineering report submitted with the amended operational works application.

18 – Typical cross section reviewed.

19 – Verge grades were originally shown at 2% to reduce the height of fill required. This has now been amended.

20 – Typical section of internal roads checked as requested.

Earthworks:

21 – fill levels and earthwork design have been amended from the original submission. All levels and contours are shown and open concrete lined drains eliminated. Therefore, sufficient levels are shown to ascertain freeboard levels.

Water Supply.

23 – A water reticulation network analysis has been completed and is included as an appendix in the engineering report submitted with the revised OWA application.

24 & 25 – Drawings have been amended to satisfy the requirement of these items.

We trust that the preceding response, together with the revised OWA application, provides Council with the information required to answer all queries.

We advise that we consider this to be a full response to Council's information request.

Yours Sincerely,



Alan McPherson
Senior Civil Engineer, RPEQ 809

OSE Group Pty Ltd