

**Our ref:** AU010594

135 Abbott Street  
Cairns QLD 4870  
T +61 7 4031 1336

Date: 18 March 2024

Chief Executive Officer  
Mossman Shire Council  
PO Box 723  
Mossman QLD 4873

Attn: Neil Beck, Team Leader Planning

Dear Neil,

**47 Johnston Road, Mossman Gorge, MCU (Retirement Facility)  
Information request response (pursuant to Section 13 of the Development Assessment Rules)  
Your Ref: MCUC 2023\_5532/1**

We refer to Council's information request, dated 8 February 2024, for the development application over the above site.

Pursuant to sections 13.2 of the *Development Assessment Rules* we provide our response to this information request below.

In accordance with Section 13.3 of the *Development Assessment Rules*, we confirm that this letter and attachments constitute our response to Council's information request. Accordingly, we advise that you must proceed with assessment of this development application.

## Information request response

### 1 Road Widths

The plans indicate conflicting advice on the width of the east-west section of the internal road (northern end) with the road labelled as a 5.5m wide road and a 6.5m road in different plans. The Applicant is requested to amend the engineering plan(s) to provide a 6.5 m wide road carriageway for the entirety of the through road (potential connection road).

#### Response

Please find attached amended plans and engineering commentary.

Refer to **Attachment A – Information Request Response, Neon Consulting, 15 March 2024.**

### 2 Potential Access to Jack Street

Provide amended engineering plan(s) relocating the potential access to Jack Street adjacent the northeastern boundary of the site in order to minimise the impact of the potential connecting road on the reserve. A temporary turn around is to be accommodated in the design at the bend to form a Tee or Y turning head in the verge of the new internal road.

Our ref: AU010594

## Response

Please find attached amended plans. Please note that the extension of Jack Street is not part of this application and is provided as a potential future connection only.

Refer to **Attachment A – Information Request Response, Neon Consulting, 15 March 2024.**

### 3 6.0 metre minimum curvature

The Applicant is requested to assess whether a 6.0 metre minimum radius of curvature for the through road for the inside kerb line at the bend into the east west road and at the inside kerb line for the bend to the potential Jack Street/showgrounds can be provided.

## Response

Please find attached amended plans and engineering commentary.

Refer to **Attachment A – Information Request Response, Neon Consulting, 15 March 2024.**

### 4 3.0 metre radius of curvature

Concerns are raised regarding the 3.0 metre radius of curvature in the vicinity of the most southern internal road stub. The Applicant is requested to amend the engineering plan(s) to increase the kerb radius to a practical turning circle width.

## Response

Please find attached amended plans and engineering commentary.

Refer to **Attachment A – Information Request Response, Neon Consulting, 15 March 2024.**

### 5 Corner lot access driveways,

Clarify the safety and function of all corner lot access driveways, and provide confirmation that the horizontal geometry is in accordance with AS 2890.1:2004 Parking facilities – Off-street car parking.

## Response

The development has been designed such that the internal traffic ways are not public roads and are designed to be internal private accessways operating as shared surfaces. On this basis, the Australian Standard insofar as it relates to driveway access from a public road is not applicable.

As internal accessway aisles, the proposed development satisfies the requirements of the Australian Standard.

Refer to **Attachment A – Information Request Response, Neon Consulting, 15 March 2024** for further commentary.

### 6 B99 design vehicle

Amend the plans to enable a B99 design vehicle can turn-around at the end of all proposed road stubs without relying on driveways servicing the dwelling units. Vehicles performing a 3 point turn would be acceptable.

## Response

Please find attached amended plans and engineering commentary.

Refer to **Attachment A – Information Request Response, Neon Consulting, 15 March 2024.**

## 7 Driveway access or car parking spaces within the vicinity of the proposed Central Facilities buildings

The proposal plans don't provide driveway access or car parking spaces within the vicinity of the proposed Central Facilities buildings. Given the multi purpose function of this building including accommodation and office uses, it is suggested some parking opportunities should be located proximate to this building. In terms of central facilities, a communal outdoor seating area / BBQ facility would be a welcomed addition.

### Response

The development has been designed such that the internal traffic ways are not public roads and are designed to be internal private accessways operating as shared surfaces. The shared facilities are not a separate standalone use to the overall development and should not be considered in that context. Residents are to be encouraged to walk to the Central Facilities rather than drive private motor vehicles in an attempt to reduce vehicle movement throughout the site. In addition, it should be noted that the request of Council to increase the carriageway width to 6.5 metres will provide parking within the carriageway adjacent the central facilities.

Refer to **Attachment A – Information Request Response, Neon Consulting, 15 March 2024** for further commentary.

## 8 Updated local drainage catchment plan(s)

The Applicant is requested to provide updated local drainage catchment plan(s) and calculations of the site, noting the apparent catchment changes discharging North to the Showgrounds drains.

The additional information must consider the drainage impacts on downstream properties and the potential capacity upgrades to address the changed flows.

In particular, the plan(s) and drainage advice must address the following:

- a. All internal and external contributing catchment boundaries pre- and post-development focusing on the catchment to the underground pipes in the hospital grounds (eastern boundary of development site) and the additional catchment captured by the bund and directed to the showgrounds drain;
- b. The extent of the 100 year ARI flood event in relation to the site both pre- and post-development, including Lot 149 on SR587 (Mossman Hospital) and Lot 92 on SR81 (Showgrounds);
- c. Primary and secondary flow paths for the 5, 10 and 100 year ARI rainfall events;
- d. Identify any requirement for potential drainage easements, including the open drain along the northern boundary of the site, and open drain along the eastern boundary of the site;
- e. Provide advice on how the layout achieves lawful points of discharge. Officers note that stormwater runoff is proposed to be discharged to neighbouring lots, that is the open drain along the eastern site boundary (within Lot 149 on SR587) and open drain along the northern site boundary (within Lot 92 on SR81);
- f. Any impacts proposed to upgrade the existing open drains and at the drainage outlet to Marr Creek, including measures required to accommodate additional flows discharging at this point;
- g. Additional information and calculations to address the following:
  - i. Demonstrate the existing open channel and 2/600mm diameter RCP drainage path through the site provides sufficient capacity and achieves freeboard;
  - ii. Demonstrate the proposed earthworks bund achieves freeboard. Regard is to be given to the GHD investigation previously undertaken and referred to on the plans prepared by Neon Consulting and the more recent flood investigation undertaken by JBP in May 2022 for the Mossman River which has also been forward to Neon Consulting.
  - iii. Demonstrate the existing open drain along the northern boundary achieves freeboard.

### Response

Please refer to the attached amended plans and engineering commentary.

Refer to **Attachment A – Information Request Response, Neon Consulting, 15 March 2024**.

## 9 Setback is provided between the proposed bund extension and Hobby Shed

Confirm sufficient setback is provided between the proposed bund extension and Hobby Shed. The planning report suggest compliance is achieved with setback from the top of bank however the footprint of earthworks would suggest otherwise. Please review and provide details regarding setbacks and ability to maintain access along the creek corridor.

### Response

The top of bank to Marrs Creek is further than 10 metres separated from the location of the proposed bund and the hobby shed is located behind the proposed bund. Access along the creek corridor would not be affected by the proposed hobby shed or bund.

Refer to **Attachment A – Information Request Response, Neon Consulting, 15 March 2024** for further commentary.

## 10 Batter Stability

The plans indicate an approximate 1V:1.25H batter within the vicinity of cross section A, as shown on Drawing No. 021-2302-BE-0004 – Earthworks Plan. The Applicant is requested to confirm the stability of the Marr Creek batter.

### Response

Subsequent to the issue of a Development Permit for Material Change of Use and prior to the commencement of construction on the site, it will be necessary for the developer to obtain a Development Permit for Operational Works. As part of the application for operational works the batter stability and requirements can be addressed in detail.

In respect of this item of the information request it is proposed that the typical batter would have a 1 in 4 slope.

Refer to **Attachment A – Information Request Response, Neon Consulting, 15 March 2024** for further commentary.

## 11 Assessment of Existing Trees

Update the plan and bund cross sections to include the surveyed location of all existing trees adjacent or within the footprint of the Marr Creek earthworks bund and top of bank. Nominate the trees proposed to be removed and retained to facilitate construction of the earthworks bund.

### Response

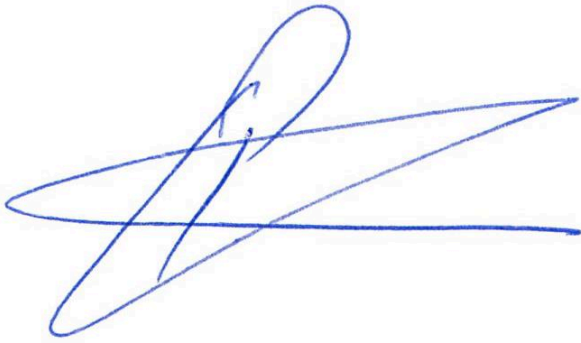
Please find attached updated plans showing the surveyed location of the existing trees on the site. One tree is identified for removal to facilitate the construction of the bund. It is not proposed to remove any additional trees to facilitate the development; however if this becomes necessary as part of the detailed design it will be addressed as part of the subsequent operational works application.

Refer to **Attachment A – Information Request Response, Neon Consulting, 15 March 2024** for further commentary.

We look forward to continuing working with you on this development. In the meantime, if you have any queries please contact the writer (contact details below).

**Our ref: AU010594**

Yours sincerely,  
for RPS AAP Consulting Pty Ltd

A handwritten signature in blue ink, consisting of several overlapping loops and a long horizontal stroke extending to the right.

**Patrick Clifton**

Senior Principal | Practice Leader - Planning, Cairns  
patrick.clifton@rpsgroup.com.au  
+61 7 4276 1017

Our ref: AU010594

## Attachment A

Information Request Response, Neon Consulting, 15 March 2024

15 March 2024

Attention: Patrick Clifton  
RPS  
135 Abbott Street  
Cairns QLD 4870  
Our reference: 021-2302

### **Information Request Response - 47 Johnston Road, Mossman .**

We refer to Cairns Regional Council's information request dated 8 February 2024 for the development of 47 Johnston Road, Mossman.

#### **Information Request**

- 1. The plans indicate conflicting advice on the width of the east-west section of the internal road (northern end) with the road labelled as a 5.5m wide road and a 6.5m road in different plans. The Applicant is requested to amend the engineering plan(s) to provide a 6.5 m wide road carriageway for the entirety of the through road (potential connection road).*

Please find attached plans showing the carriageway width including amendments for the 6.5m carriageway as requested.

- 2. The Provide amended engineering plan(s) relocating the potential access to Jack Street adjacent the northeastern boundary of the site in order to minimise the impact of the potential connecting road on the reserve. A temporary turn around is to be accommodated in the design at the bend to form a Tee or Y turning head in the verge of the new internal road.*

*Note: The determination of the alignment of the internal road and future connection through the adjoining reserve will be subject to further review and input from various stakeholders.*

The alternative location is shown on the plans. The connection is not part of this application but the location of a potential future connection is shown.

- 3. The Applicant is requested to assess whether a 6.0 metre minimum radius of curvature for the through road for the inside kerb line at the bend into the east west road and at the inside kerb line for the bend to the potential Jack Street/showgrounds can be provided*

Additional curvature has been provided to the inside bends of the road in the attached plans. Turn paths of design vehicles are also included.

- 4. Concerns are raised regarding the 3.0 metre radius of curvature in the vicinity of the most southern internal road stub. The Applicant is requested to amend the engineering plan(s) to increase the kerb radius to a practical turning circle width*

Additional curvature has been provided to the inside bends of the road in the attached plans. Turn paths of design vehicles are also included.

5. *Clarify the safety and function of all corner lot access driveways, and provide confirmation that the horizontal geometry is in accordance with AS 2890.1:2004 Parking facilities – Off-street car parking.*

The internal carriageways are not public roads and are considered access driveways and aisles under AS2890.1. Where possible the garages have been located to be accessed via the lower order aisles.

If the above reference is to the clause 3.2.3 and figure 3.1 of AS2890.1, the domestic driveways generally comply with these requirements despite however they are not accessing a road so it is not applicable. The only domestic driveway locations that would be within the exclusion zones are serving properties which would otherwise be denied access due to the physical impossibility of meeting the requirement.

6. *Concerns are raised regarding the 3.0 metre radius of curvature in the vicinity of the most southern internal road stub. The Applicant is requested to amend the engineering plan(s) to increase the kerb radius to a practical turning circle width*

Additional curvature has been provided to the inside bends of the road in the attached plans. Turn paths of design vehicles are also included.

7. *Amend the plans to enable a B99 design vehicle can turn-around at the end of all proposed road stubs without relying on driveways servicing the dwelling units. Vehicles performing a 3 point turn would be acceptable.*

Additional pavement has been provided to the inside bends of the road in the attached plans. Turn paths of design vehicles are also included.

8. *The proposal plans don't provide driveway access or car parking spaces within the vicinity of the proposed Central Facilities buildings. Given the multi purpose function of this building including accommodation and office uses, it is suggested some parking opportunities should be located proximate to this building. In terms of central facilities, a communal outdoor seating area / BBQ facility would be a welcomed addition.*

Additional carparking can be provided but it should be noted that by increasing the main access through the site to 6.5m wide this will also promote and allow parking within the access carriageway.

9. *The Applicant is requested to provide updated local drainage catchment plan(s) and calculations of the site, noting the apparent catchment changes discharging North to the Showgrounds drains. The additional information must consider the drainage impacts on downstream properties and the potential capacity upgrades to address the changed flows. In particular, the plan(s) and drainage advice must address the following:*

- a. *All internal and external contributing catchment boundaries pre- and post- development focusing on the catchment to the underground pipes in the hospital grounds (eastern boundary of development site) and the additional catchment captured by the bund and directed to the showgrounds drain;*

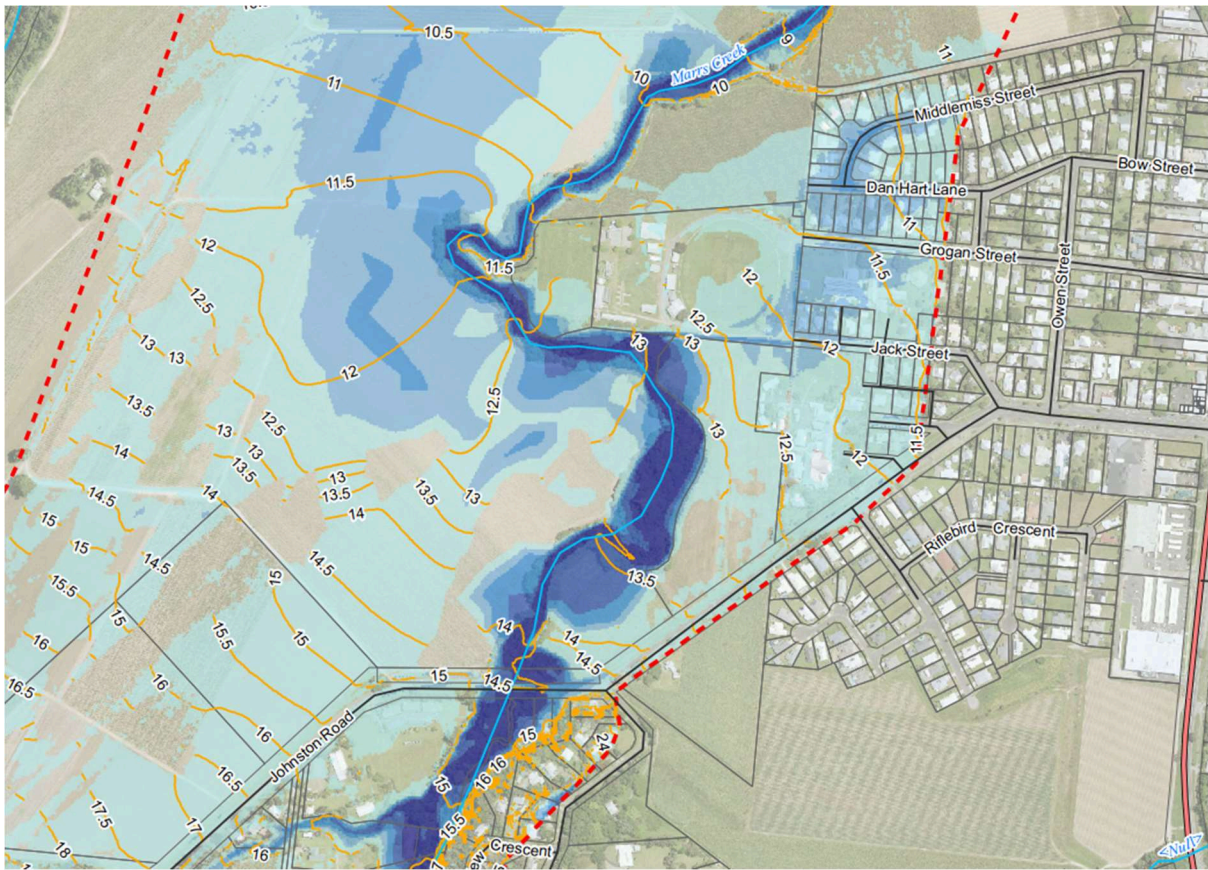
Additional catchment plans have been attached.



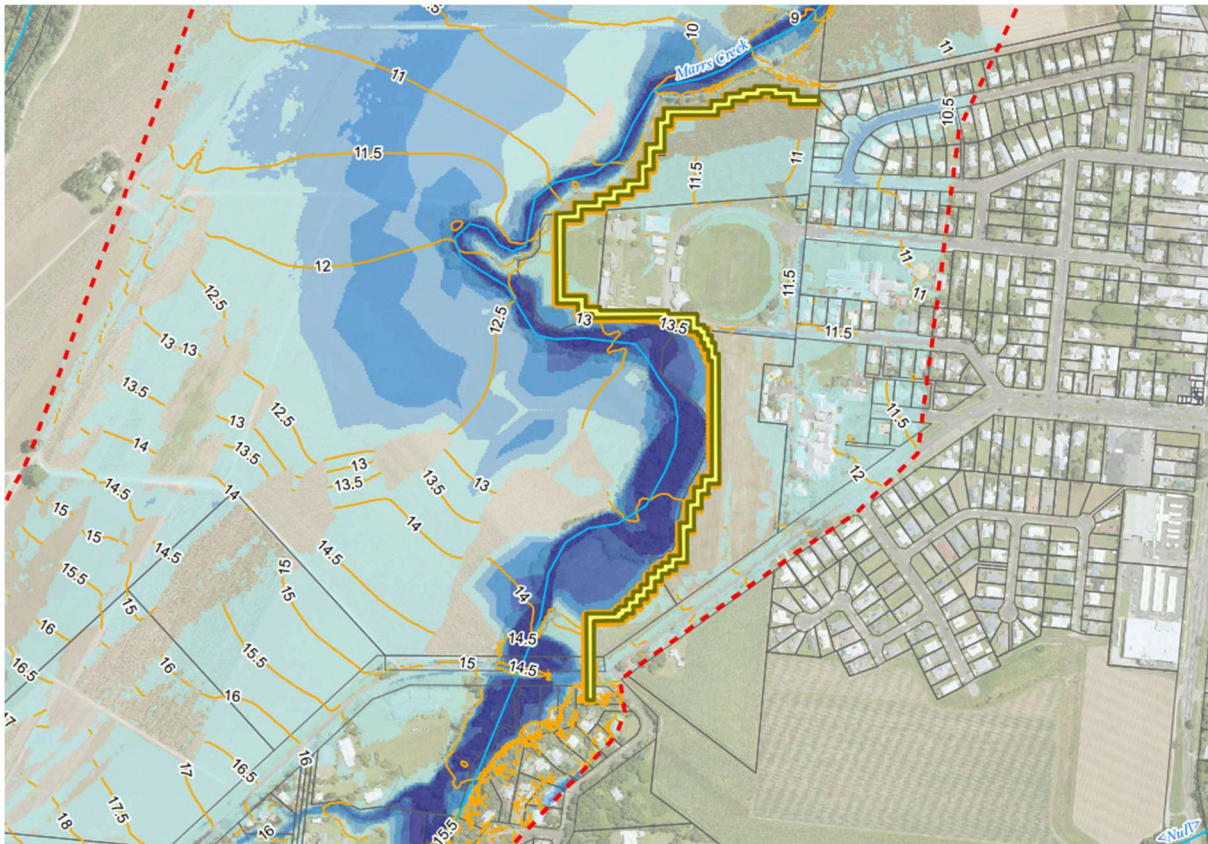
*b. The extent of the 100 year ARI flood event in relation to the site both pre- and post-development, including Lot 149 on SR587 (Mossman Hospital) and Lot 92 on SR81 (Showgrounds);*

The extent of flooding will be a combination of the GHD flood report extents as the southern half of the bund will be constructed however Marris Creek will still overtop from the northern boundary of this site and the Showgrounds and flood towards Mossman.

It is expected that this development and the bund will reduce the flooding to the hospital and south of Jack Street but flooding will still impact the showground and north of Jack Street. Areas of the Marris Creek top of bank north of the bund extension which are below RL 13m will overtop.



**Extract of 1% AEP Existing Case – Depth – Marris Creek Flood Study and Levee Design**



**Extract of 1% AEP Developed Case – Depth – MARRS CREEK Flood Study and Levee Design**

*c. Primary and secondary flow paths for the 5, 10 and 100 year ARI rainfall events;*

Flow paths are shown on the attached plans.

*d. Identify any requirement for potential drainage easements, including the open drain along the northern boundary of the site, and open drain along the eastern boundary of the site;*

It is recommended that easements are created for the existing stormwater paths identified to provide Council authority for maintenance and access. Exacting easement requirements will be shown as part of the operational works phase.

*e. Provide advice on how the layout achieves lawful points of discharge. Officers note that stormwater runoff is proposed to be discharged to neighbouring lots, that is the open drain along the eastern site boundary (within Lot 149 on SR587) and open drain along the northern site boundary (within Lot 92 on SR81);*

The layout satisfies criteria (i) of the lawful point of discharge in the Queensland Urban Drainage Manual 2017 (section 3.9) in that the site discharges to these locations in the current form and that the runoff from the development can be conveyed by the open drain and pipe work within these flow paths. The post development flow at Point A in a 1% AEP event will increase by 40L/s while Point B will decrease by 220L/s.

- f. Any impacts proposed to upgrade the existing open drains and at the drainage outlet to Marr Creek, including measures required to accommodate additional flows discharging at this point;*

No upgrades are required to accommodate the flows however it is recommended that an easement created at the northern boundary for the drain which takes stormwater from Jack Street to Marr Creek through Lot 92 on SR81

- g. Additional information and calculations to address the following:*
- i. Demonstrate the existing open channel and 2/600mm diameter RCP drainage path through the site provides sufficient capacity and achieves freeboard;*

The existing 2/600mm diameter RCP has capacity for 0.75m<sup>3</sup>/s, and has been noted on the catchment plans.

- ii. Demonstrate the proposed earthworks bund achieves freeboard. Regard is to be given to the GHD investigation previously undertaken and referred to on the plans prepared by Neon Consulting and the more recent flood investigation undertaken by JBP in May 2022 for the Mossman River which has also been forward to Neon Consulting.*

The bund levels and freeboard are from the reporting provided, in particular the GHD report and design of the bund. The more recent JBP reporting did not consider the bund construction i.e. Marrs Creek overtops and flows through Mossman. An extract of the 1% AEP map is shown below to highlight that the bund was not considered in the more recent reporting.



iii. *Demonstrate the existing open drain along the northern boundary achieves freeboard.*

Building pads for the dwellings are above the profile of the existing drain, generally being 200mm-500mm above with finished floor levels a further 150mm higher again. In the event that the existing drain overtops flows are conveyed north away from the proposed development. On this basis, freeboard to the dwellings is readily achievable.

10. *Confirm sufficient setback is provided between the proposed bund extension and Hobby Shed. The planning report suggest compliance is achieved with setback from the top of bank however the footprint of earthworks would suggest otherwise. Please review and provide details regarding setbacks and ability to maintain access along the creek corridor.*

The top of the bank in this area is much further than 10 metres away from the hobby shed. Due to the topography, the bund is set well bank from the top of the bank to minimise the height and volume of the bund construction. The below screen image shows the top of the bank, the vegetation line and the extent of the bund earthworks.



11. *The plans indicate an approximate 1V:1.25H batter within the vicinity of cross section A, as shown on Drawing No. 021-2302-BE-0004 – Earthworks Plan. The Applicant is requested to confirm the stability of the Marr Creek batter.*

This batter is the existing creek and not a constructed batter. The accuracy of the survey and stability of this slope can be further investigated for future applications. This can be conditioned to form part of an Operational Works application.

12. *Update the plan and bund cross sections to include the surveyed location of all existing trees adjacent or within the footprint of the Marr Creek earthworks bund and top of bank. Nominate the trees proposed to be removed and retained to facilitate construction of the earthworks bund.*

A plan showing the surveyed tree locations and the extent of earthworks is attached. One tree is shown as being removed due to the earthworks while the remainder are not impacted.

15 March 2024

Information Request Response- 47 Johnston Road, Mossman

Should you require any additional information, please do not hesitate to me on 0402 568 698 or the email address below.

Yours sincerely



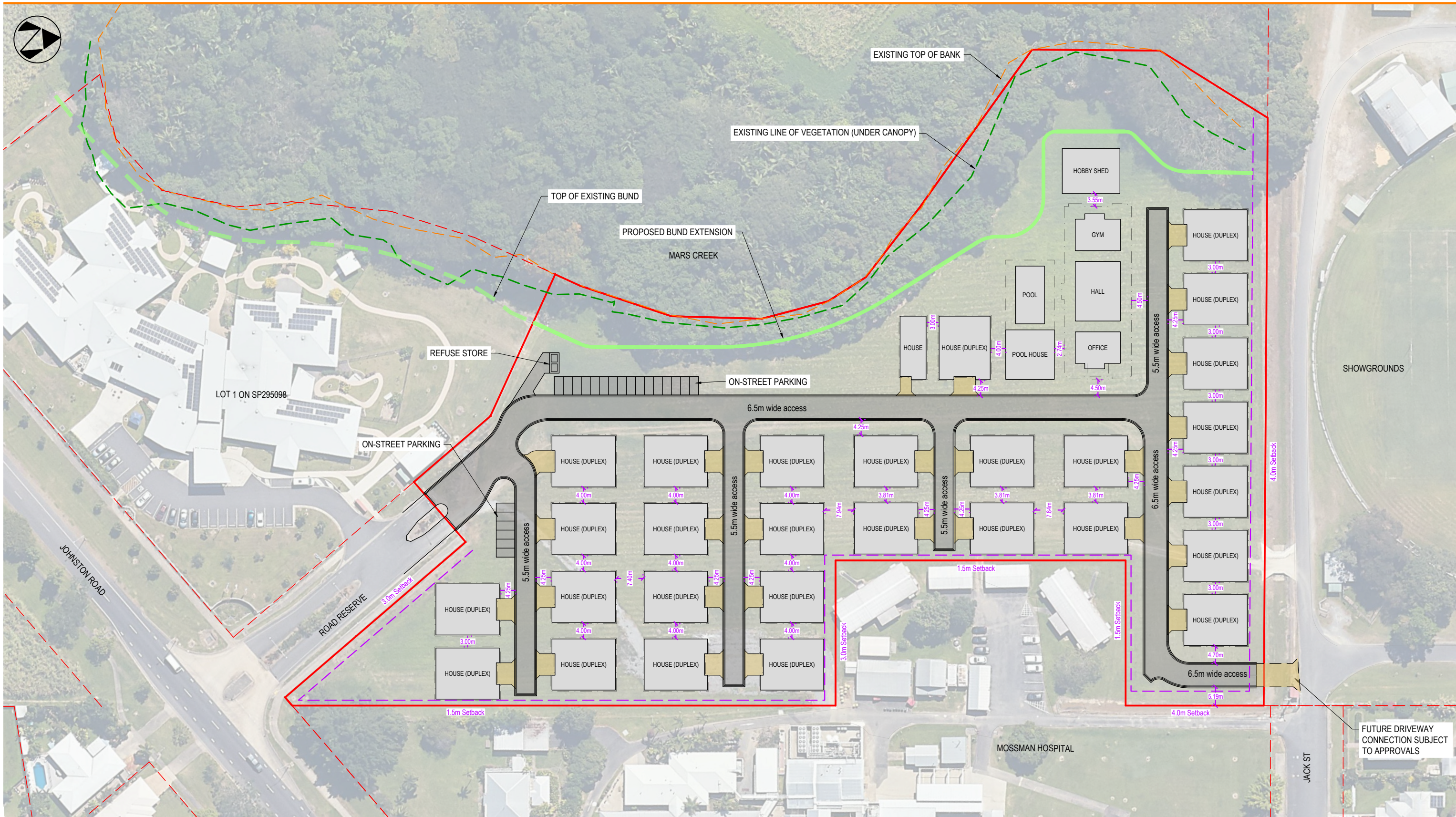
**Craig Caplick**

Principal Engineer | RPEng RPEQ 25102

craig@consultneon.com.au | 0402 568 698

## Attachments





**LEGEND**

- PROPOSED ROADS
- PROPOSED DRIVEWAYS
- PROPOSED DWELLINGS
- 4.0m Setback  
OR  
 4.00m
- OUTER MOST PROJECTION SETBACKS

C 15.03.24 LAYOUT REVISED FOR RFI  
 B 16.11.23 FUTURE ROAD CONNECTION REMOVED  
 A 6/09/2023 INITIAL ISSUE



COOLOOLA WATERS HOLDINGS PTY LTD

MOSSMAN RETIREMENT VILLAGE

SITE AND SETBACK PLAN

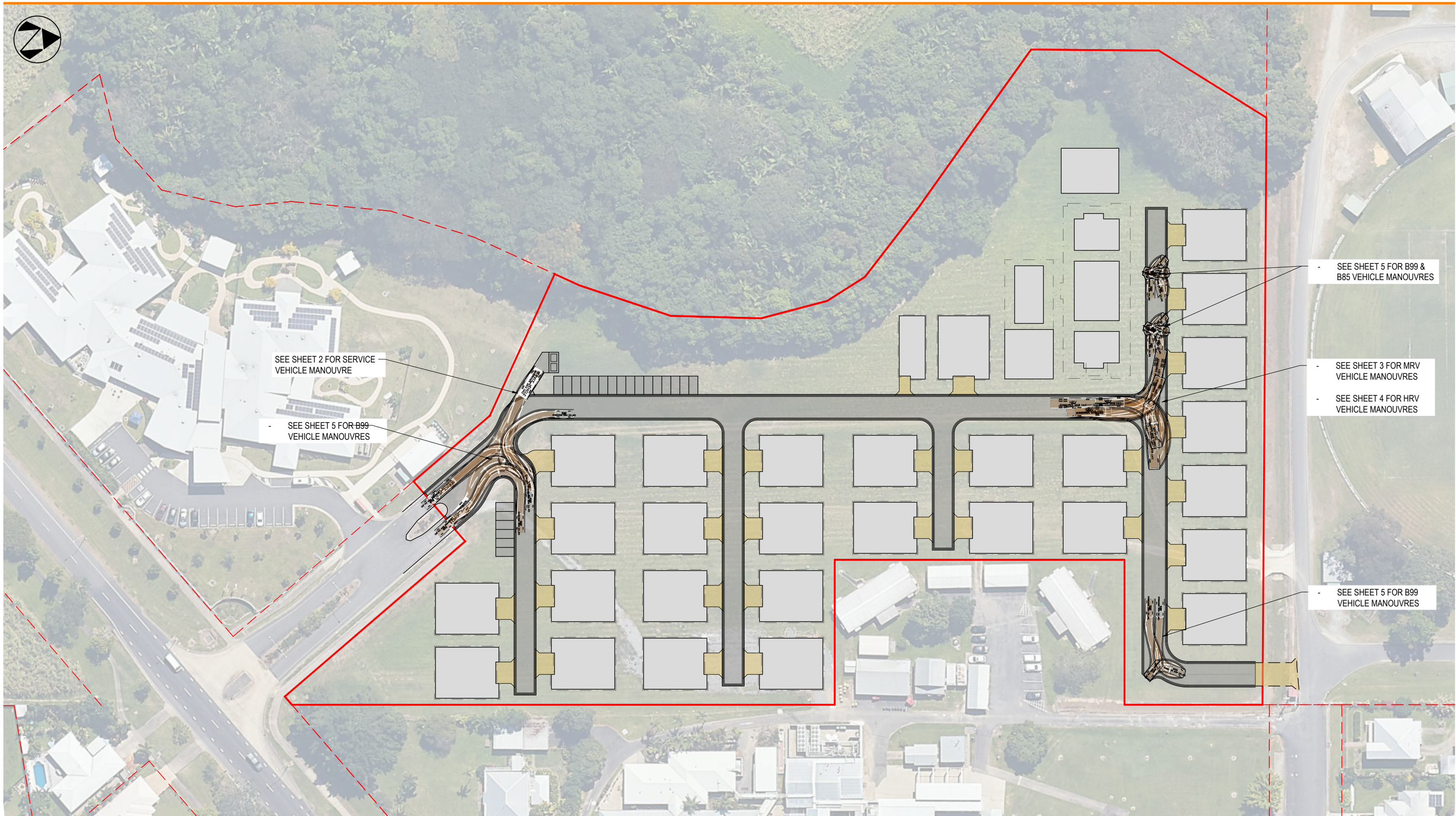
Rev Date Revision Notes

Drawn: PAM  
 Design: PAM  
 Check'd: CJC  
 Appr'd: CJC

A3 Full Size (Scale as shown)

021-2302-00-SK-0001

C



Rev	Date	Revision Notes
C	15.03.24	LAYOUT REVISED FOR RFI
B	16.11.23	FUTURE ROAD CONNECTION REMOVED
A	06.09.23	INITIAL ISSUE



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MOSSMAN RETIREMENT VILLAGE

TURN PATH ASSESSMENT  
OVERALL PLAN

Drawn	Design	Check'd	Appr'd
PAM	PAM	CJC	CJC

A3 Full Size (Scale as shown)

021-2302-00-SK-0051

C





Rev	Date	Revision Notes
C	15.03.24	LAYOUT REVISED FOR RFI
B	16.11.23	FUTURE ROAD CONNECTION REMOVED
A	06.09.23	INITIAL ISSUE



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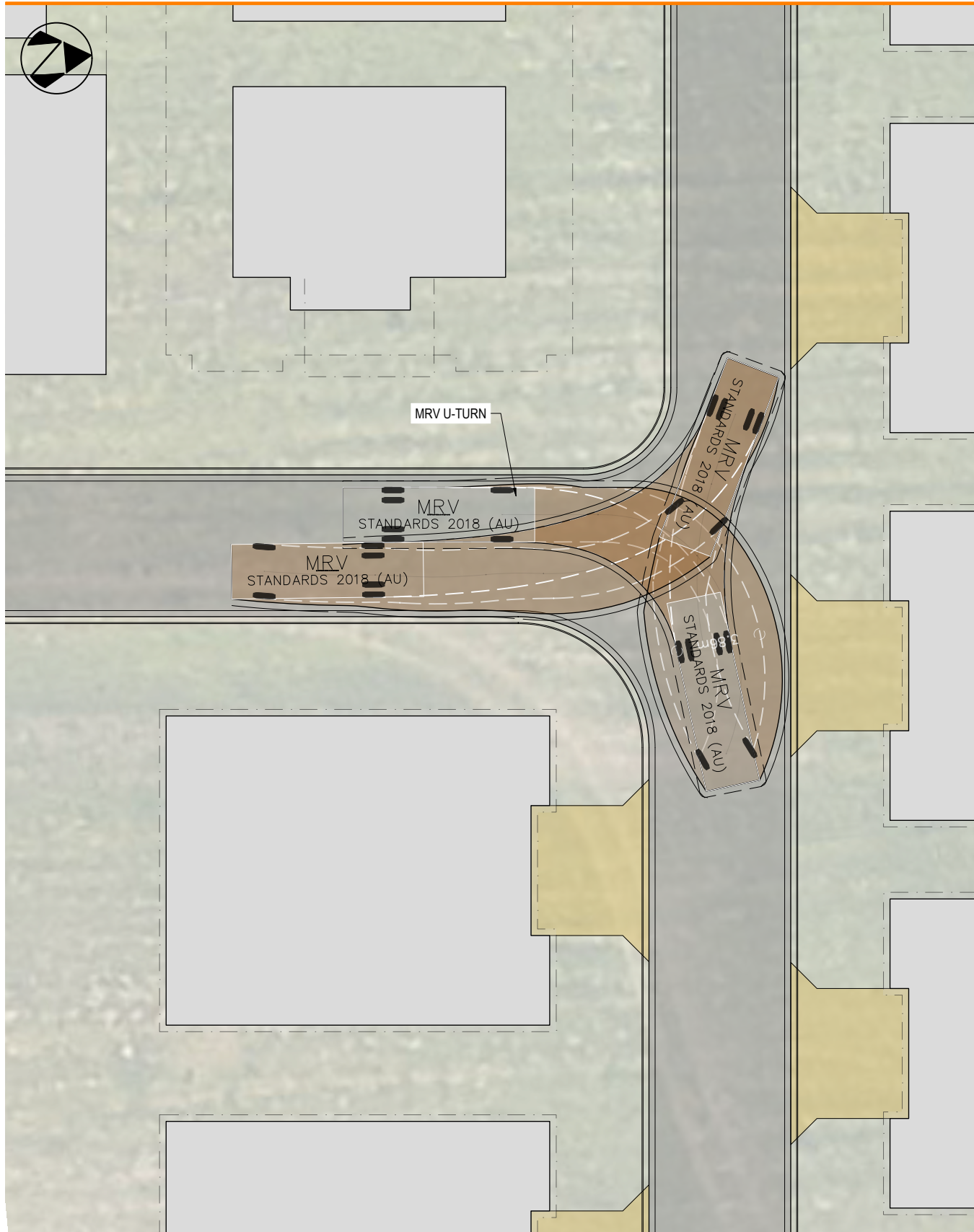
MOSSMAN RETIREMENT VILLAGE

TURN PATH ASSESSMENT  
SERVICE VEHICLE - REFUSE STORE

Drawn	Design	Check'd	Appr'd
PAM	PAM	CJC	CJC

A3 Full Size (Scale as shown)

021-2302-00-SK-0052 C



C	15.03.24	LAYOUT REVISED FOR RFI
B	16.11.23	FUTURE ROAD CONNECTION REMOVED
A	06.09.23	INITIAL ISSUE



Rev Date Revision Notes

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COOLOOLA WATERS HOLDINGS PTY LTD

MOSSMAN RETIREMENT VILLAGE

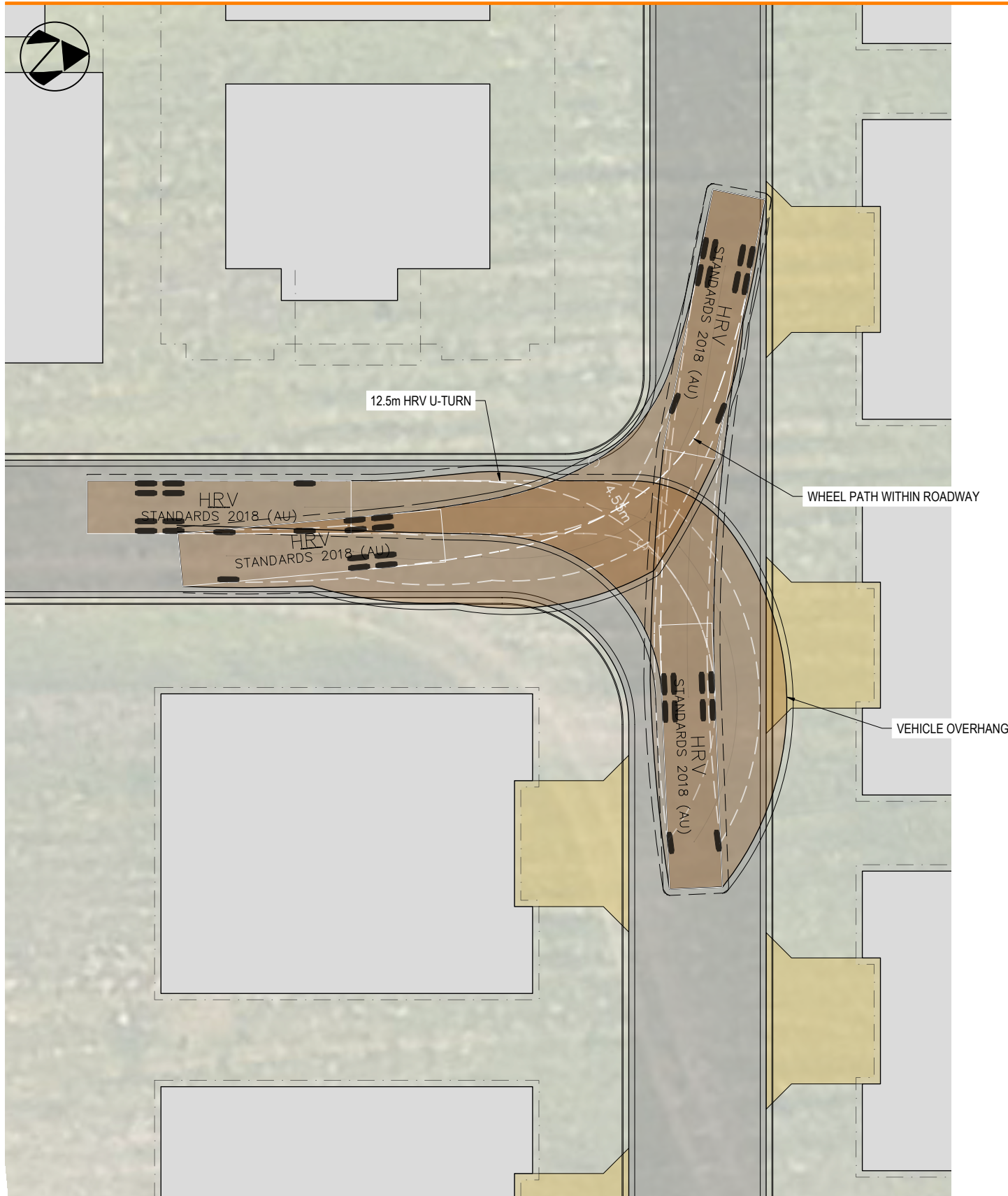
TURN PATH ASSESSMENT  
MRV MANOUVRES

Drawn	Design	Check'd	Appr'd
PAM	PAM	CJC	CJC

A3 Full Size (Scale as shown)

021-2302-00-SK-0053

C



Rev	Date	Revision Notes
C	15.03.24	LAYOUT REVISED FOR RFI
B	16.11.23	FUTURE ROAD CONNECTION REMOVED
A	06.09.23	INITIAL ISSUE



COOLOOLA WATERS HOLDINGS PTY LTD

MOSSMAN RETIREMENT VILLAGE

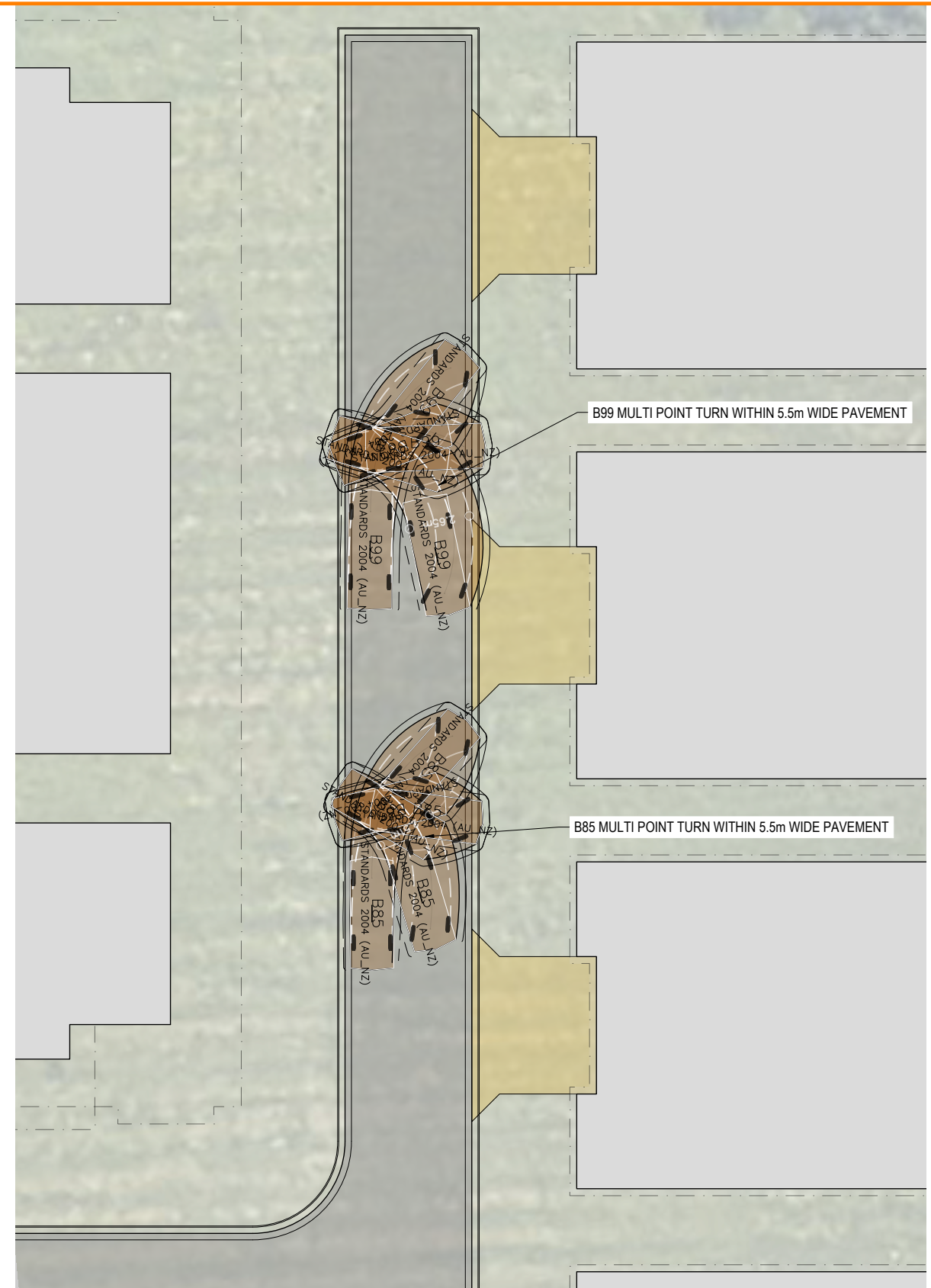
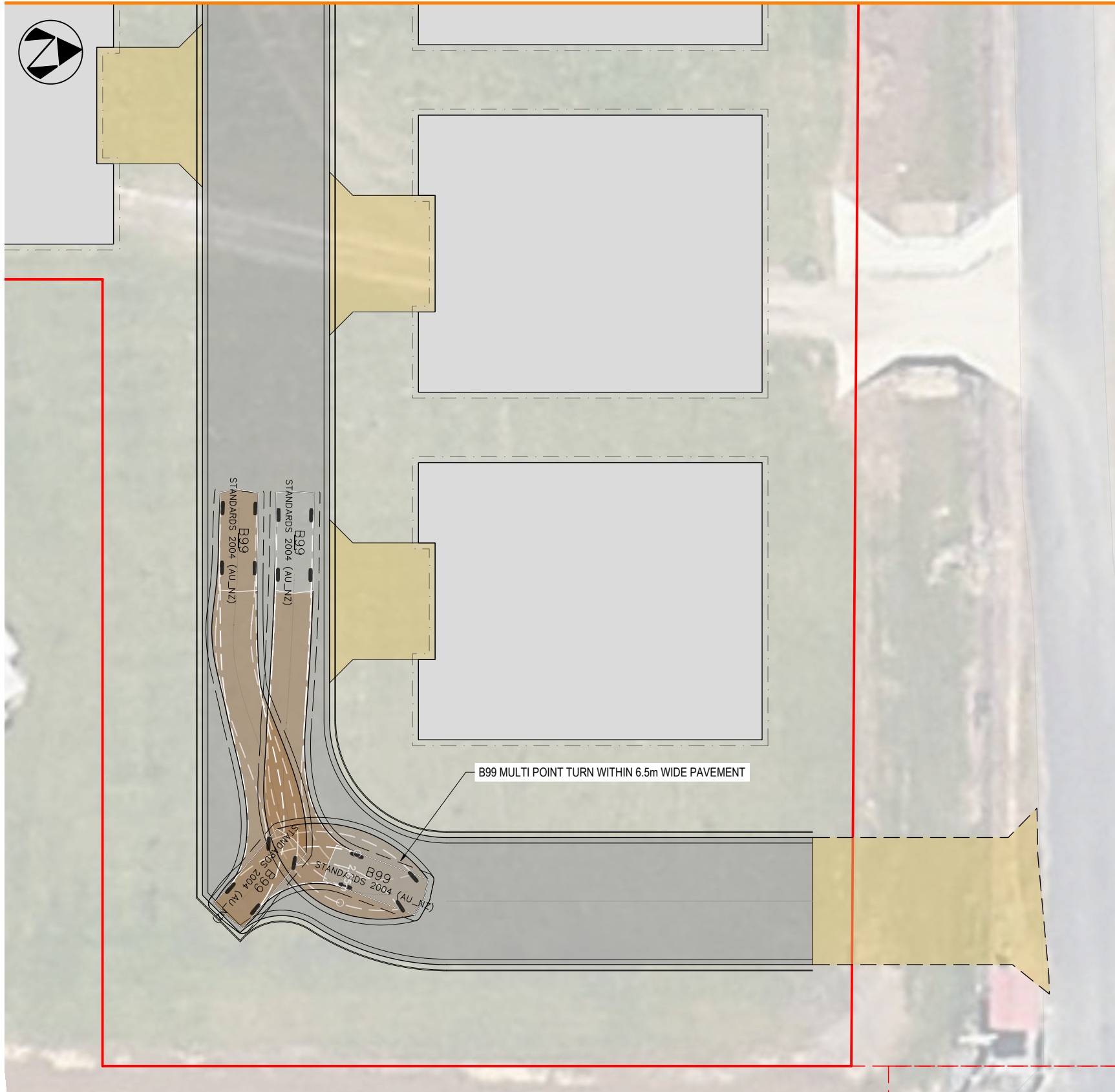
TURN PATH ASSESSMENT  
HRV MANOUVRES

Drawn	Design	Check'd	Appr'd
PAM	PAM	CJC	CJC

A3 Full Size (Scale as shown)

021-2302-00-SK-0054

C



Rev	Date	Revision Notes
C	15.03.24	LAYOUT REVISED FOR RFI
B	16.11.23	FUTURE ROAD CONNECTION REMOVED
A	06.09.23	INITIAL ISSUE



COOLOOLA WATERS HOLDINGS PTY LTD

MOSSMAN RETIREMENT VILLAGE

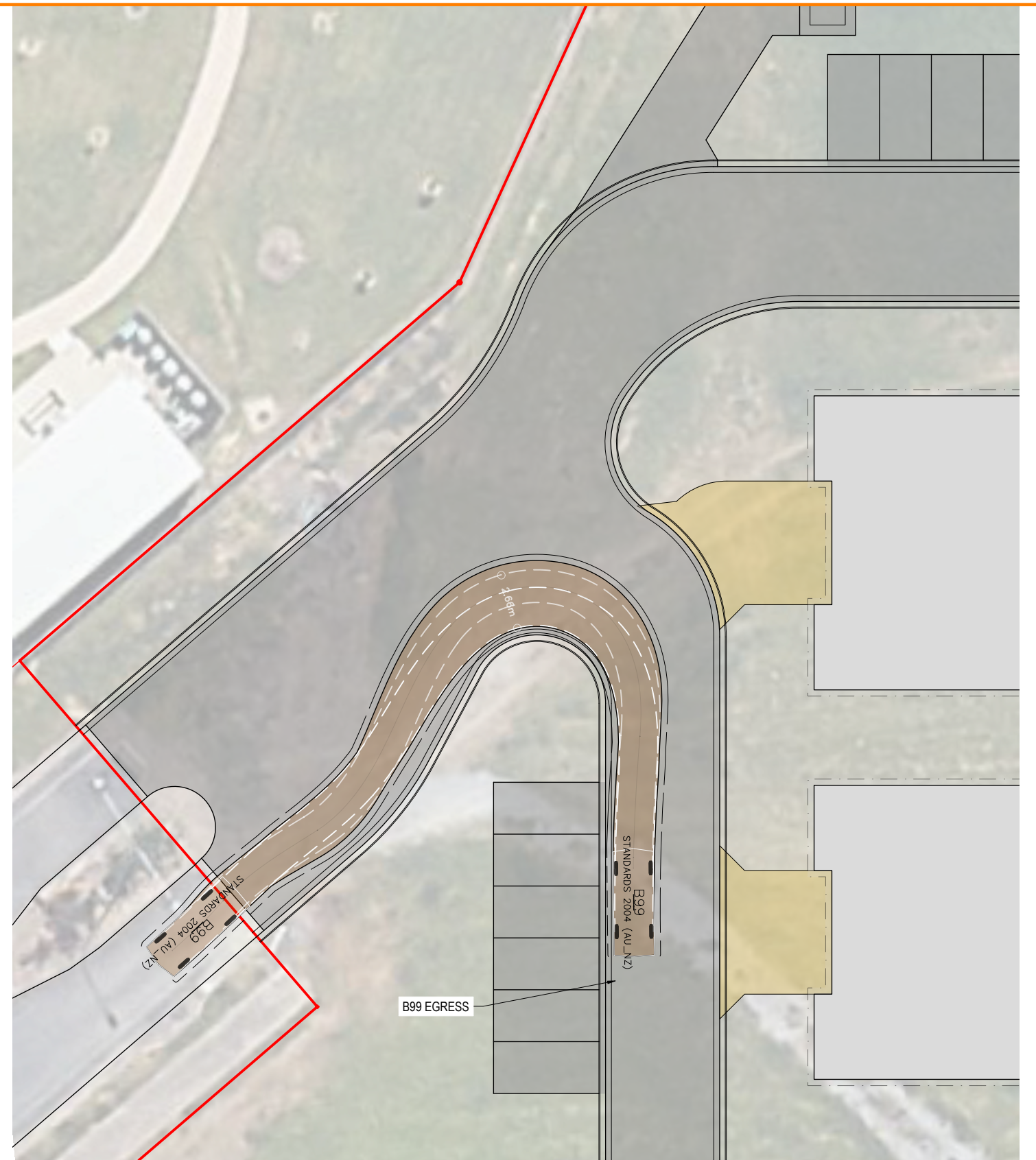
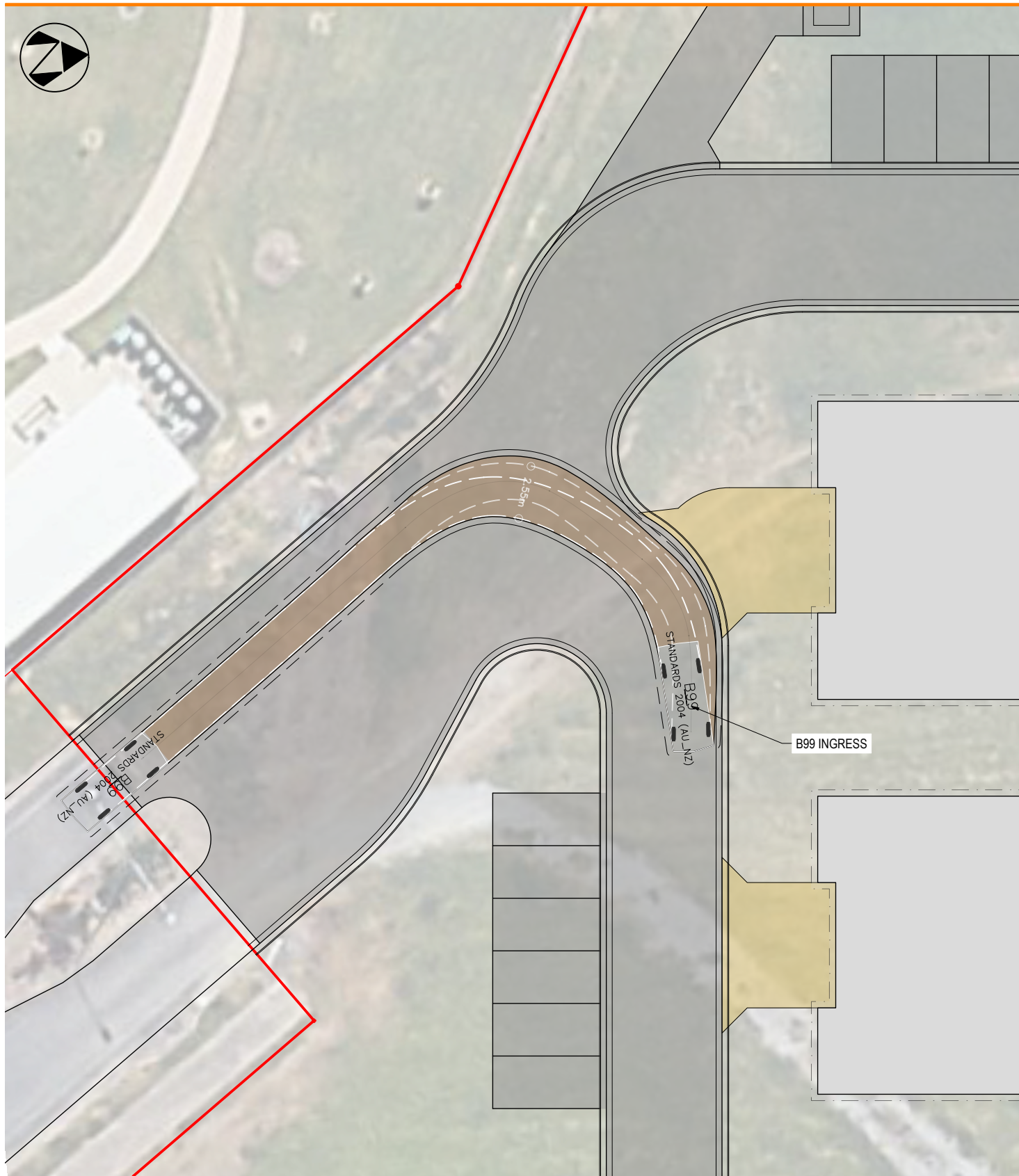
TURN PATH ASSESSMENT  
B99 MANOUVRES

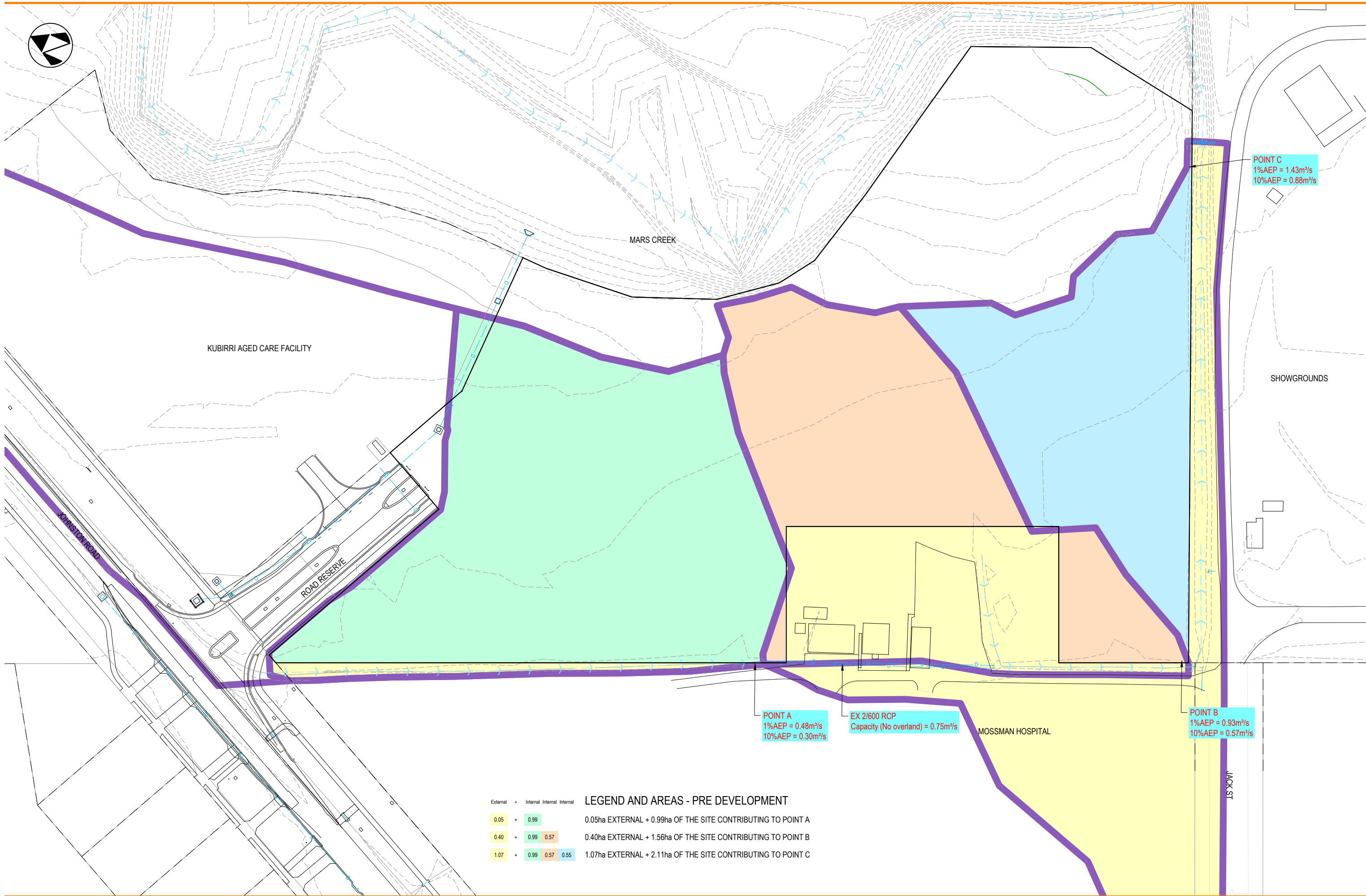
Drawn	Design	Check'd	Appr'd
PAM	PAM	CJC	CJC

A3 Full Size (Scale as shown)

021-2302-00-SK-0055

C





POINT C  
 1%AEP = 1.43m<sup>3</sup>/s  
 10%AEP = 0.88m<sup>3</sup>/s

MARS CREEK

KUBIRRI AGED CARE FACILITY

SHOWGROUNDS

JOHNSTON ROAD

ROAD RESERVE

POINT A  
 1%AEP = 0.48m<sup>3</sup>/s  
 10%AEP = 0.30m<sup>3</sup>/s

EX 2/600 RCP  
 Capacity (No overland) = 0.75m<sup>3</sup>/s

POINT B  
 1%AEP = 0.93m<sup>3</sup>/s  
 10%AEP = 0.57m<sup>3</sup>/s

MOSSMAN HOSPITAL

JACK ST

**LEGEND AND AREAS - PRE DEVELOPMENT**

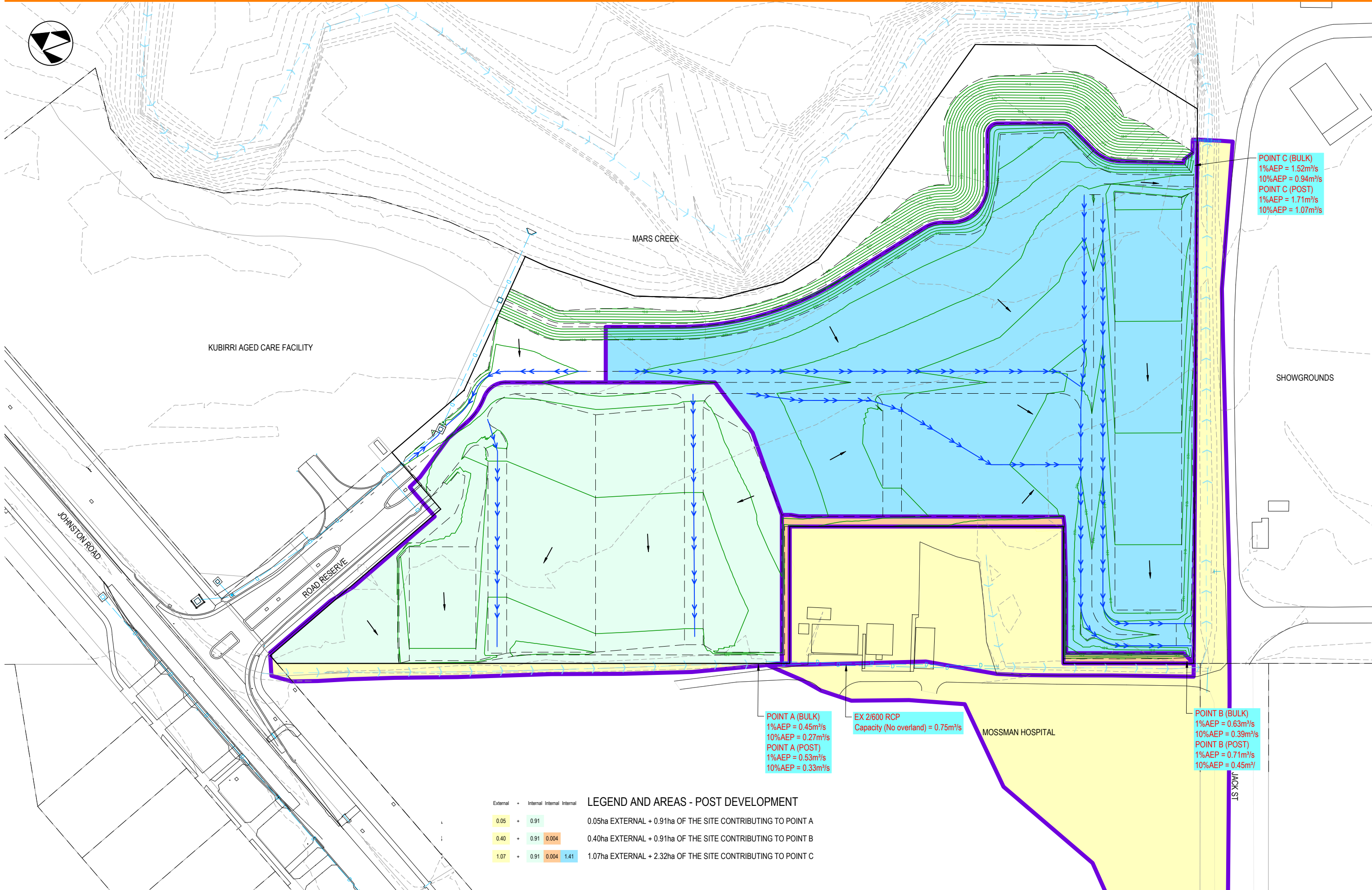
External	+	Internal	Internal	Internal	Description
0.05	+	0.99			0.05ha EXTERNAL + 0.99ha OF THE SITE CONTRIBUTING TO POINT A
0.40	+	0.99	0.57		0.40ha EXTERNAL + 1.56ha OF THE SITE CONTRIBUTING TO POINT B
1.07	+	0.99	0.57	0.55	1.07ha EXTERNAL + 2.11ha OF THE SITE CONTRIBUTING TO POINT C



COOLOOLA WATERS HOLDINGS PTY LTD

MOSSMAN RETIREMENT VILLAGE

CATCHMENT PLAN - EXISTING CASE



POINT C (BULK)  
 1%AEP = 1.52m<sup>3</sup>/s  
 10%AEP = 0.94m<sup>3</sup>/s  
 POINT C (POST)  
 1%AEP = 1.71m<sup>3</sup>/s  
 10%AEP = 1.07m<sup>3</sup>/s

POINT A (BULK)  
 1%AEP = 0.45m<sup>3</sup>/s  
 10%AEP = 0.27m<sup>3</sup>/s  
 POINT A (POST)  
 1%AEP = 0.53m<sup>3</sup>/s  
 10%AEP = 0.33m<sup>3</sup>/s

EX 2/600 RCP  
 Capacity (No overland) = 0.75m<sup>3</sup>/s

POINT B (BULK)  
 1%AEP = 0.63m<sup>3</sup>/s  
 10%AEP = 0.39m<sup>3</sup>/s  
 POINT B (POST)  
 1%AEP = 0.71m<sup>3</sup>/s  
 10%AEP = 0.45m<sup>3</sup>/s

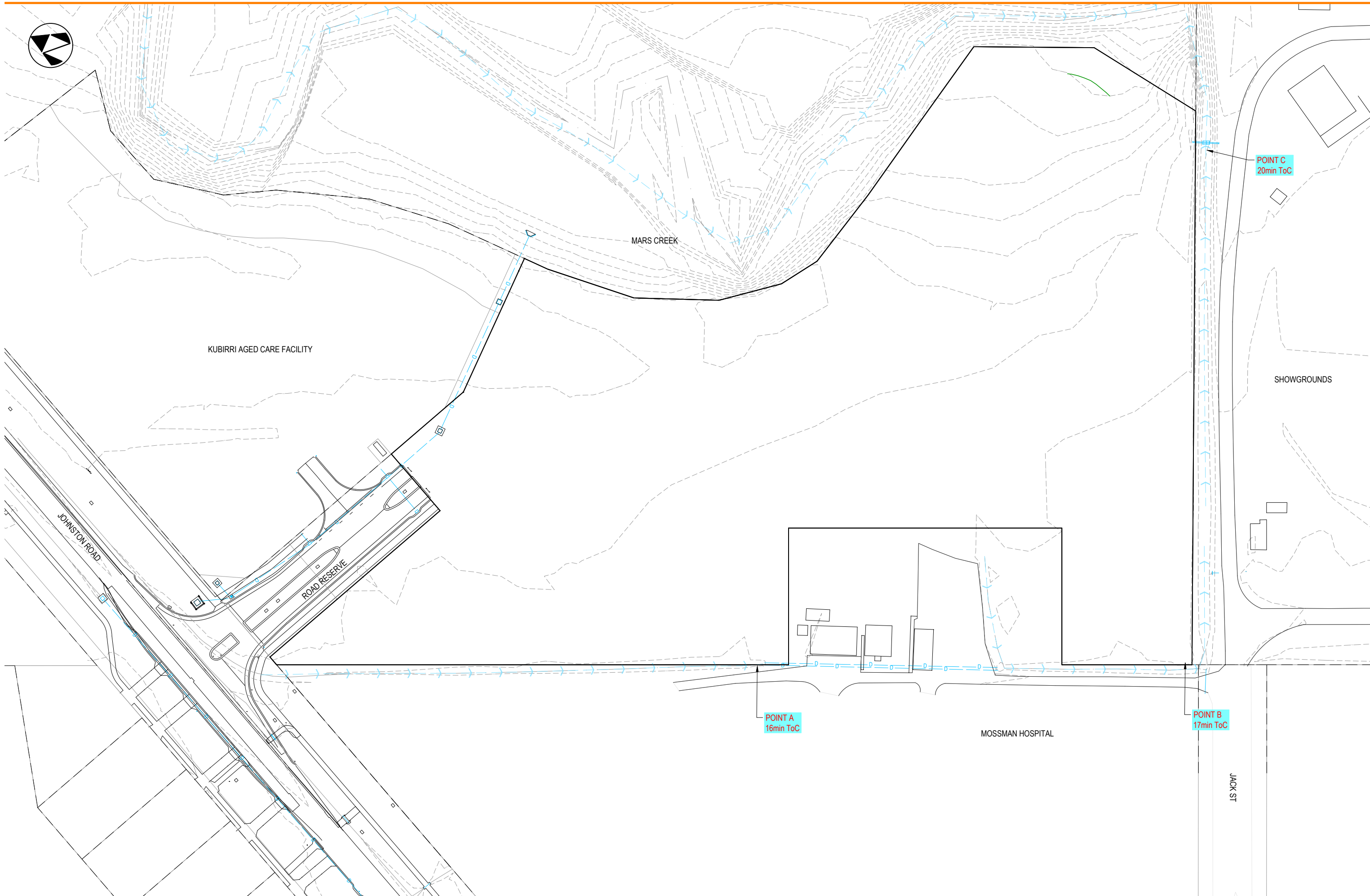
**LEGEND AND AREAS - POST DEVELOPMENT**

External	Internal	Internal	Internal	Description
0.05	0.91			0.05ha EXTERNAL + 0.91ha OF THE SITE CONTRIBUTING TO POINT A
0.40	0.91	0.004		0.40ha EXTERNAL + 0.91ha OF THE SITE CONTRIBUTING TO POINT B
1.07	0.91	0.004	1.41	1.07ha EXTERNAL + 2.32ha OF THE SITE CONTRIBUTING TO POINT C



COOLOOLA WATERS HOLDINGS PTY LTD

MOSSMAN RETIREMENT VILLAGE  
 CATCHMENT PLAN - PROPOSED CASE



COOLOOLA WATERS HOLDINGS PTY LTD

MOSSMAN RETIREMENT VILLAGE

CATCHMENT PLAN - TIME OF CONCENTRATION

Rev	Date	Revision Notes
A	15.03.24	RFI ISSUE

Drawn	Design	Check'd	Appr'd	RPEQ 25105	A3 Full Size (Scale as shown)
PAM	PAM	CJC	CJC	C.J.CAPLICK	15.03.24

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# BULK EARTHWORKS

## 47 JOHNSTON ROAD, MOSSMAN

### LOT 2 ON SP295098



**LOCALITY PLAN**  
N.T.S.

#### DRAWING INDEX

DRAWING No.	DRAWING TITLE
021-2302-BE-DRG-0001	LOCALITY PLAN
021-2302-BE-DRG-0002	PROJECT NOTES
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021-2302-BE-DRG-0004	EARTHWORKS PLAN
021-2302-BE-DRG-0005	TYPICAL SECTIONS AND DETAILS
021-2302-BE-DRG-0006	SITE BASED STORMWATER MANAGEMENT PLAN - PHASE 1: TOPSOIL STRIPPING
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021-2302-BE-DRG-0008	TREE RETENTION AND REMOVAL PLAN

#### FNQROC STANDARD DRAWINGS

DRAWING No.	DRAWING TITLE
S1000 - S1110	ROADWORKS AND DRAINAGE
S2000 - S2025	WATER
S3000 - S3015	SEWERAGE

#### INSTITUTE OF PUBLIC WORKS ENGINEERING AUSTRALIA STANDARD DRAWINGS

DRAWING No.	DRAWING TITLE
D-0040	SEDIMENT CONTROL DEVICES - SEDIMENT FENCE, ENTRY/EXIT SEDIMENT TRAP
D-0041	SEDIMENT CONTROL DEVICES - KERB AND FIELD INLETS, CHECK DAMS & STRAW BALE BANKS

## GENERAL ARRANGEMENT

### GENERAL

- G1. CONTRACTOR TO PROVIDE PUBLIC NOTIFICATION/SIGNS (REFER FNQROC DEVELOPMENT MANUAL CP1.11).
- G2. CLEARED VEGETATION SHALL BE MULCHED ON SITE BY THE CONTRACTOR.

### EXISTING SERVICES

- ES1. EXISTING SERVICES ARE PLOTTED FROM THE BEST INFORMATION AVAILABLE. NO RESPONSIBILITY IS TAKEN BY THE PRINCIPAL OR SUPERINTENDENT FOR THE ACCURACY AND COMPLETENESS OF THE INFORMATION SHOWN.
- ES2. 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.
- ES3. THE CONTRACTOR IS TO 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 CONFLICTS WILL BE DOCUMENTED BY THE SUPERINTENDENT.

### VEGETATION & CLEARING

- VC1. PRIOR TO THE REMOVAL OF ANY TREE. AN INSPECTION MUST BE CARRIED OUT OF ANY SIGNS OF PROTECTED WILDLIFE INCLUDING NESTS AND ANIMAL HABITATS. SHOULD ANY RECENT WILDLIFE ACTIVITY BE IDENTIFIED, REMOVAL OF THE TREE MUST NOT OCCUR UNTIL THE ANIMAL HAS VACATED THE AREA OF IMMEDIATE DANGER. IF THE ANIMAL DOES NOT MOVE FROM THE AREA OF DANGER, THE QUEENSLAND PARKS AND WILDLIFE MUST BE CONTACTED FOR ADVICE.
- VC1. AN ASSESSMENT IS TO BE UNDERTAKEN BY A SUITABLY QUALIFIED AND EXPERIENCED SPOTTER/CATCHER TO DETERMINE THE POSSIBLE PRESENCE OF NATIVE WILDLIFE. THE ASSESSMENT MUST INCLUDE THE IDENTIFICATION OF ANY BREEDING PLACES FOR ANY ENDANGERED/VULNERABLE OR NEAR THREATENED ANIMAL SPECIES, SPECIAL LEAST CONCERN OR COLONIAL BREEDING SPECIES PRIOR TO THE REMOVAL OF ANY TREE AND/OR VEGETATION AS PER THE REQUIREMENTS OF SECT. 332 OF THE NATURE CONSERVATION (WILDLIFE MANAGEMENT) REGULATION 2006 (CONDITION 59).
- VC2. COUNCIL MUST BE NOTIFIED TWO DAYS PRIOR TO THE PROPOSED DATE OF COMMENCEMENT OF ANY APPROVED VEGETATION CLEARING TO FACILITATE COMMUNITY AWARENESS OF SUCH WORKS.
- VC3. VEGETATION TO BE RETAINED MUST BE ADEQUATELY DEFINED BY FENCING, FLAGGING OR BARRIER MESH FOR PROTECTION PURPOSES PRIOR TO CONSTRUCTION COMMENCING ON SITE.
- VC4. A MINIMUM 2m WIDE BUFFER SHALL BE PROVIDED AROUND THE VEGETATION TO BE RETAINED. THIS BUFFER MUST CONSIST OF SUITABLE FENCING, FLAGGING OR BARRIER MESH TO ENSURE THAT MACHINERY, EQUIPMENT OR CONSTRUCTION MATERIALS ARE NOT STORED OR USED WITHIN THIS AREA. THIS BUFFER IS TO BE ESTABLISHED PRIOR TO THE COMMENCEMENT OF ANY WORKS ON SITE AND MUST BE MAINTAINED AT ALL TIMES FOR THE DURATION OF CONSTRUCTION.
- VC5. CLEARED VEGETATION TO BE MULCHED AND SPREAD OVER THE CLEARED AREA FOR EROSION AND SEDIMENT CONTROL OR LANDSCAPING PURPOSES.

## EARTHWORKS

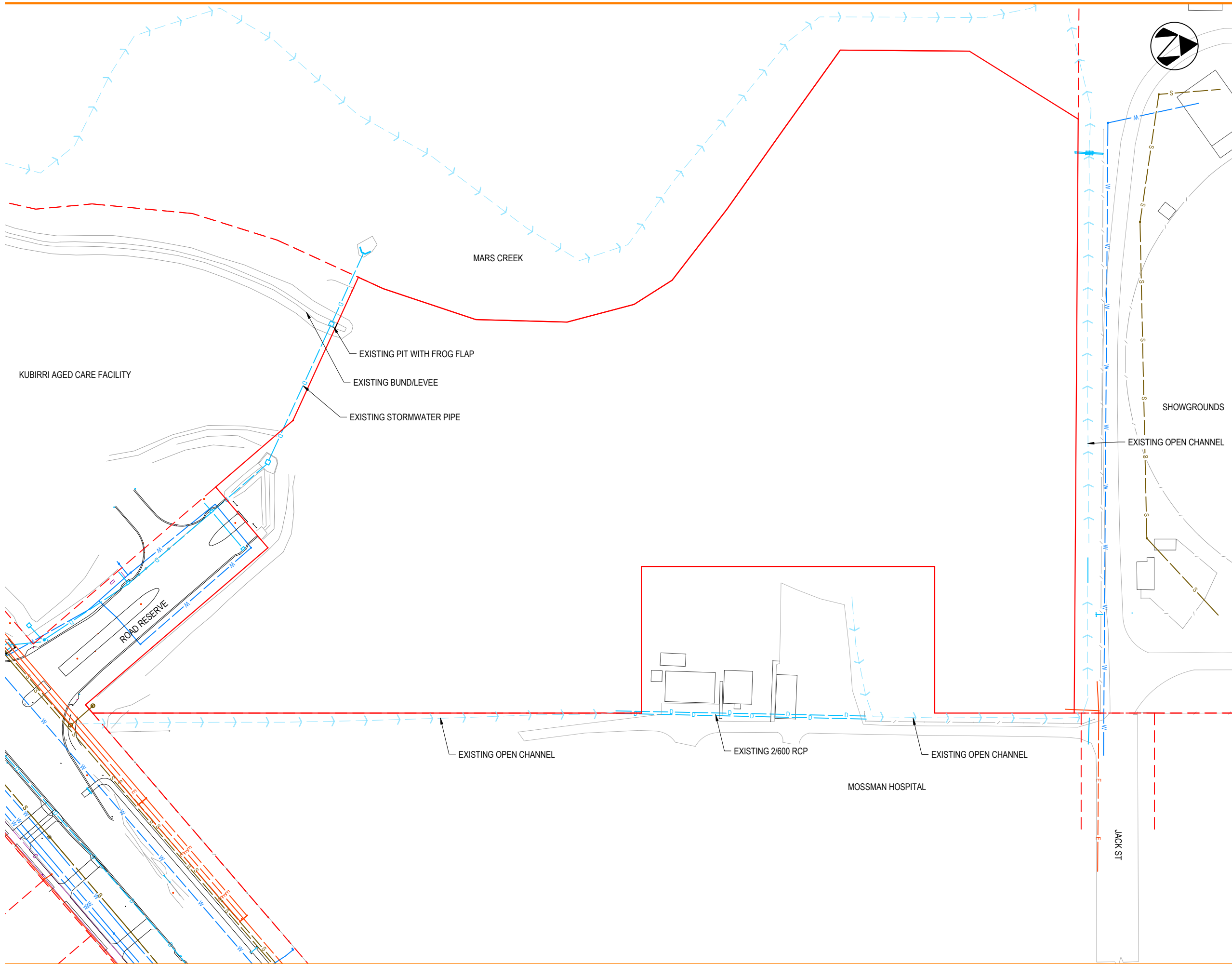
- E1. UNLESS NOTED OTHERWISE ALL BATTERS ARE TO BE 1 ON 2 OR FLATTER.
- E2. UPON COMPLETION, ANY BATTERS STEEPER THAN 1 IN 2 AND HIGHER THAN 1.5m SHALL REQUIRE CERTIFICATION BY A GEOTECHNICAL ENGINEER.

## EROSION AND SEDIMENT CONTROL STRATEGY

- SC1. SEQUENCING OF CONTROL MEASURES
- INSTALL STABLE POINT OF ENTRY
  - INSTALL SILT FENCES
  - PROTECT TOPSOIL STOCKPILES
  - CONSTRUCT TEMPORARY SEDIMENT BASINS
  - INSTALL STORMWATER PIPES
  - IMPLEMENT PROTECTION MEASURES TO STORMWATER PITS
  - REVEGETATE BARE AREAS UPON COMPLETION OF EARTHWORKS
  - THE SEDIMENT CONTROL STRUCTURES ARE TO BE CLEANED & MAINTAINED AFTER EVERY SIGNIFICANT RAIN EVENT. ERODED SOILS SHALL BE STOCKPILED AS DIRECTED.
- SC2. THE AMOUNT OF DISTURBANCE TO EXISTING VEGETATION BE KEPT TO A MINIMUM.
- SC3. EXACT LOCATION OF SEDIMENT CONTROL STRUCTURES TO BE DETERMINED ON SITE BY COUNCIL & SUPERINTENDENT.
- SC4. STOCKPILE LOCATIONS TO BE AGREED WITH COUNCIL & THE SUPERINTENDENT. STOCKPILES TO BE PROTECTED VIA DIVERSION DRAIN ON THE UPSLOPE & SILT FENCE ON THE DOWNSLOPE.
- SC5. RETURNS IN SILT FENCE TO BE AT 20m INTERVALS WHEN INSTALLED ALONG THE CONTOUR. SPACING IS TO DECREASE TO 5-10m DEPENDING ON SLOPE IF THE SILT FENCE IS INSTALLED AT AN ANGLE TO THE CONTOUR. THE RETURN SHALL CONSIST OF EITHER:
- V-SHAPED SECTION EXTENDING AT LEAST 1.5m UP THE SLOPE; OR
  - SANDBAG OR ROCK/AGGREGATE CHECK DAM A MINIMUM OF 1/3 AND MAXIMUM OF 1/2 FENCE HEIGHT, AND EXTENDING AT LEAST 1.5m UP THE SLOPE.
- SC6. STORMWATER PIPES TO HAVE PIT PROTECTION MEASURES AS DETAILED IN FNQROC DEVELOPMENT MANUAL.
- SC7. ALL SEDIMENT CONTROL MEASURES TO BE IN ACCORDANCE WITH THE CONTRACTORS ESC PLAN.
- SC8. THE FOLLOWING REVEGETATION MEASURES ARE TO BE UNDERTAKEN IMMEDIATELY UPON COMPLETION OF EARTHWORKS.
- CUT & FILL BATTERS STEEPER THAN 1 IN 4 TO BE HYDROMULCHED.
  - VERGES & ALLOTMENTS TO BE GRASS SEEDED.
  - PLACE TURF STRIPS BEHIND ALL KERB LINES.
- SC9. REVEGETATION IS TO BE WATERED & MAINTAINED UNTIL GROWTH IS ESTABLISHED.
- SC10. CONTRACTOR MUST IMPLEMENT A SUITABLE DUST MANAGEMENT STRATEGY TO MINIMISE DUST NUISANCE ON ADJACENT PROPERTIES. DETAILS OF THE DUST MANAGEMENT STRATEGY TO BE INCORPORATED INTO EROSION AND SEDIMENT CONTROL STRATEGY.
- SC11. SEDIMENT BASIN
- INLET PROTECTION TO MINIMISE SCOUR & EVENLY DISTRIBUTE FLOW THROUGH BASIN.
  - A MARKER PEG SHOULD BE INSTALLED TO SHOW THE STORAGE DEPTH. SEDIMENT SHALL BE REMOVED FROM BASIN WHEN 30% STORAGE DEPTH IS ENCROACHED & APPROPRIATELY DISPOSED ON SITE BY RESPREADING IN AREAS OF NON-EROSIVE FLOWS.
- SC12. WATER QUALITY MONITORING SHOULD BE UNDERTAKEN DURING SIGNIFICANT RAINFALL EVENTS (I.E. > 10mm).
- SC13. DESIGN CRITERIA FOR CONTRACTOR'S EROSION & SEDIMENT CONTROL PLAN TO BE IN ACCORDANCE WITH SECTION CP1.05 OF THE FNQROC DEVELOPMENT MANUAL.

## SURVEY AND SETOUT

- SS1. SURVEY, DATUM, LEVELS & SERVICES HAVE BEEN DERIVED FROM RPS CAD FILE "132667-106-Original Marrs Creek Data merged with new data.dwg".
- SS2. DIGITAL CAD FILES OF THE CIVIL WORKS WILL BE PROVIDED FOR SETOUT PURPOSES.



**LEGEND**

- D EXISTING STORMWATER
- S EXISTING SEWER
- W EXISTING WATER
- C EXISTING COMMS
- E EXISTING ELECTRICAL



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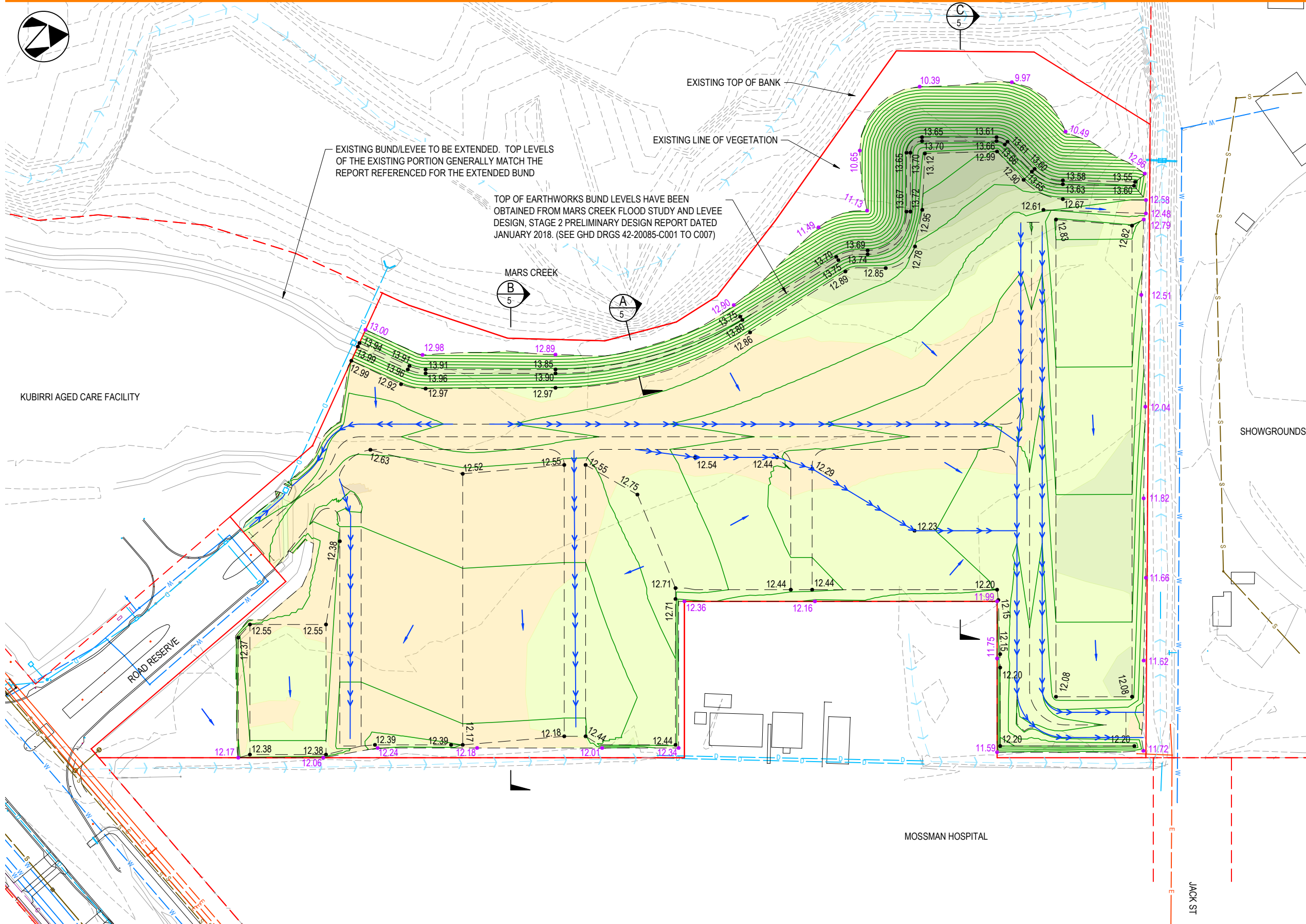
MOSSMAN RETIREMENT VILLAGE

GENERAL ARRANGEMENT

Rev	Date	Revision Notes
A	15.03.24	RFI ISSUE

Drawn	Design	Check'd	Appr'd	RPEC: 25105	A3 Full Size (Scale as shown)	021-2302-BE-0003	A
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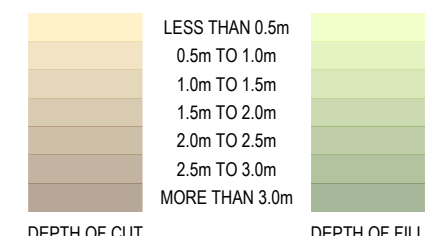
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EXISTING BUND/LEVEE TO BE EXTENDED. TOP LEVELS OF THE EXISTING PORTION GENERALLY MATCH THE REPORT REFERENCED FOR THE EXTENDED BUND

TOP OF EARTHWORKS BUND LEVELS HAVE BEEN OBTAINED FROM MARS CREEK FLOOD STUDY AND LEVEE DESIGN, STAGE 2 PRELIMINARY DESIGN REPORT DATED JANUARY 2018. (SEE GHD DRGS 42-20085-C001 TO C007)

**LEGEND - DEPTH OF EARTHWORKS**



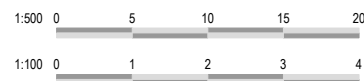
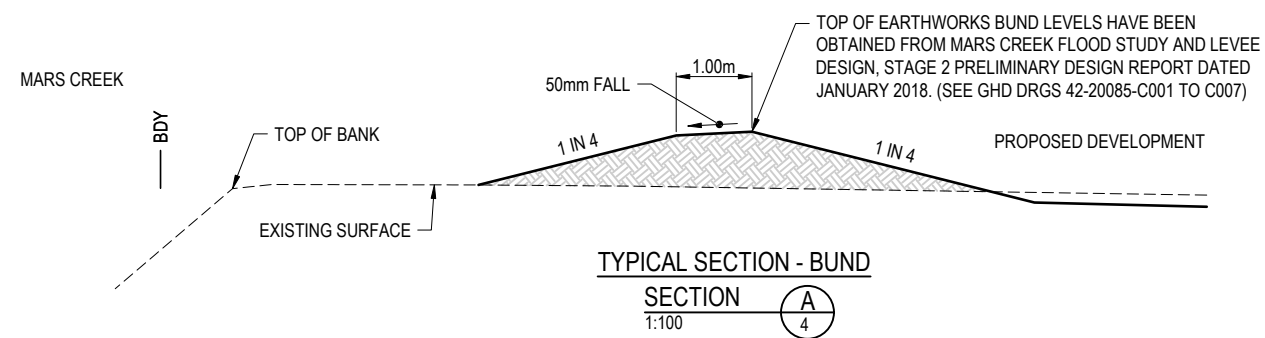
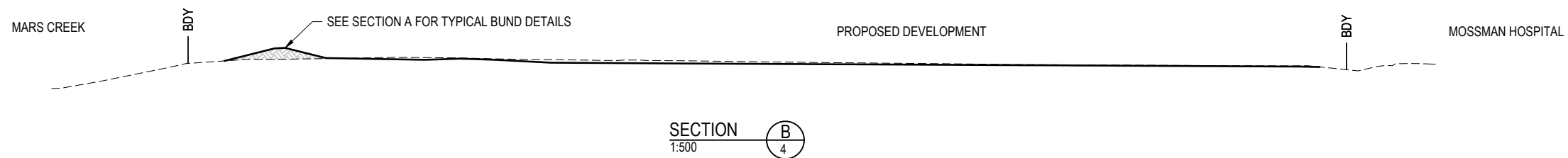
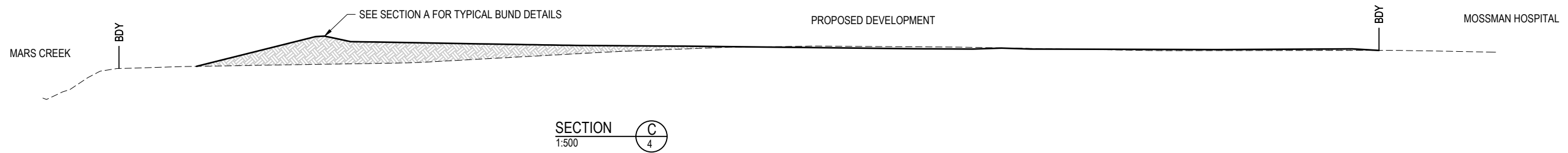
DEPTH OF CUT      DEPTH OF FILL

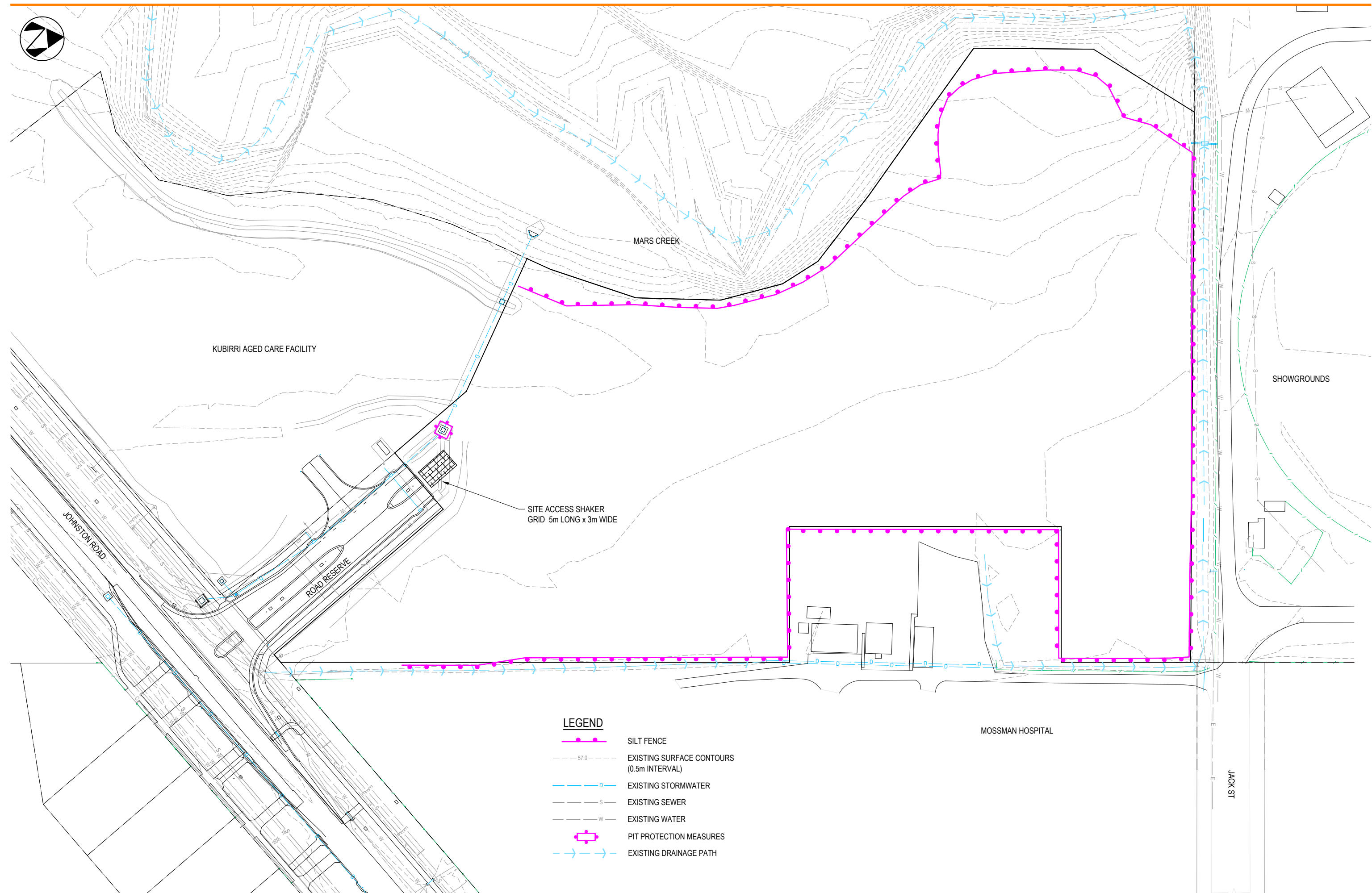
NOTE: DEPTHS ARE MEASURED BETWEEN EXISTING AND FINISHED SURFACES

**LEGEND**








- 18.70 FINISHED SURFACE LEVEL
- 18.68 NATURAL SURFACE LEVEL
- 57.0 — DESIGN SURFACE CONTOURS (0.2m INTERVAL)
- 57.0 — EXISTING SURFACE CONTOURS (0.5m INTERVAL)
- D — EXISTING STORMWATER PIPE
- >>> — EXISTING DRAINAGE PATH
- >>> — PROPOSED DRAINAGE PATH
- >>> — PROPOSED FALL OF SURFACE







**LEGEND**

-  SILT FENCE
-  EXISTING SURFACE CONTOURS (0.5m INTERVAL)
-  EXISTING STORMWATER
-  EXISTING SEWER
-  EXISTING WATER
-  PIT PROTECTION MEASURES
-  EXISTING DRAINAGE PATH



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MOSSMAN RETIREMENT VILLAGE

SITE BASED STORMWATER MANAGEMENT PLAN  
PHASE 1: TOPSOIL STRIPPING

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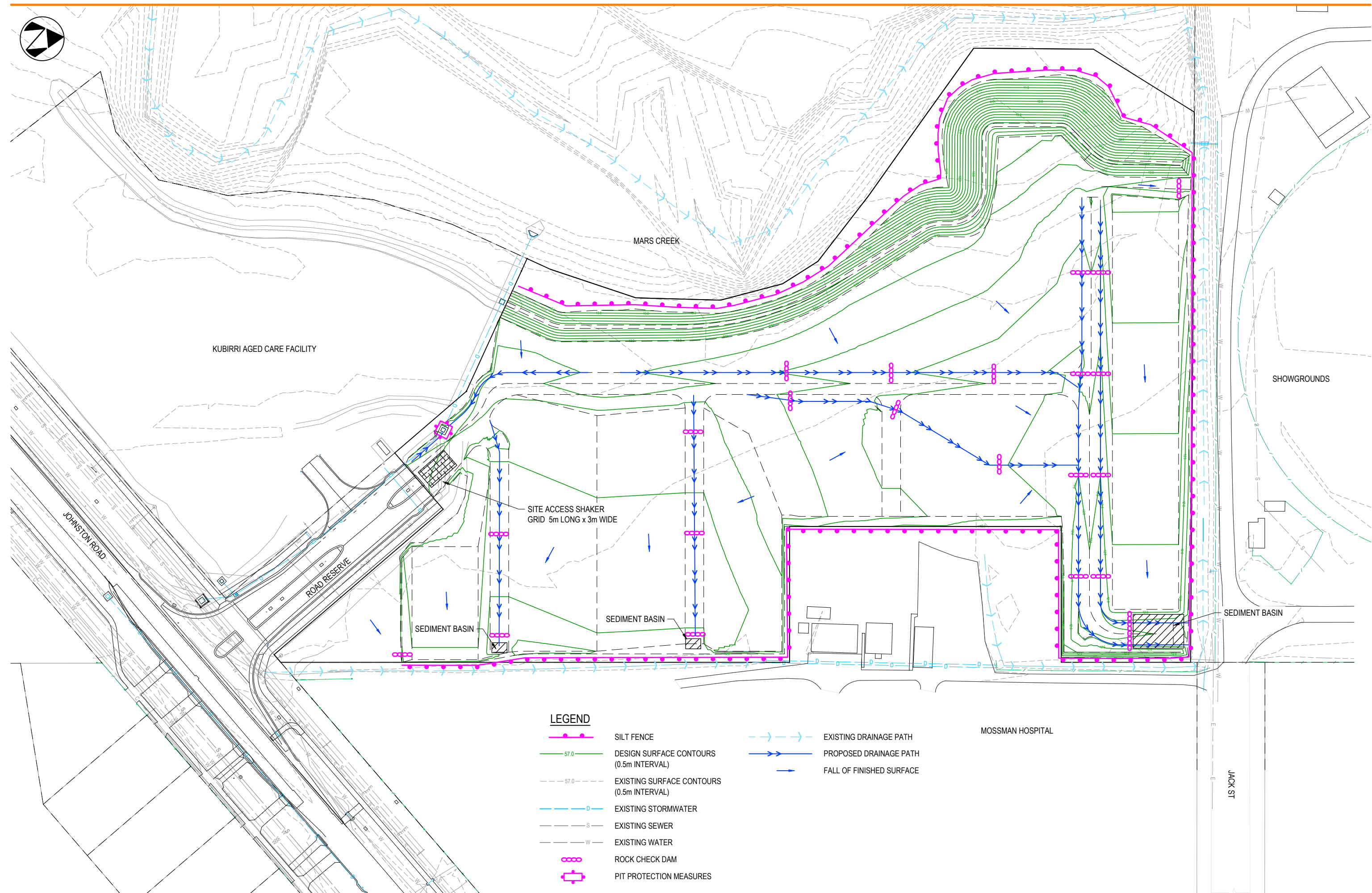
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**LEGEND**

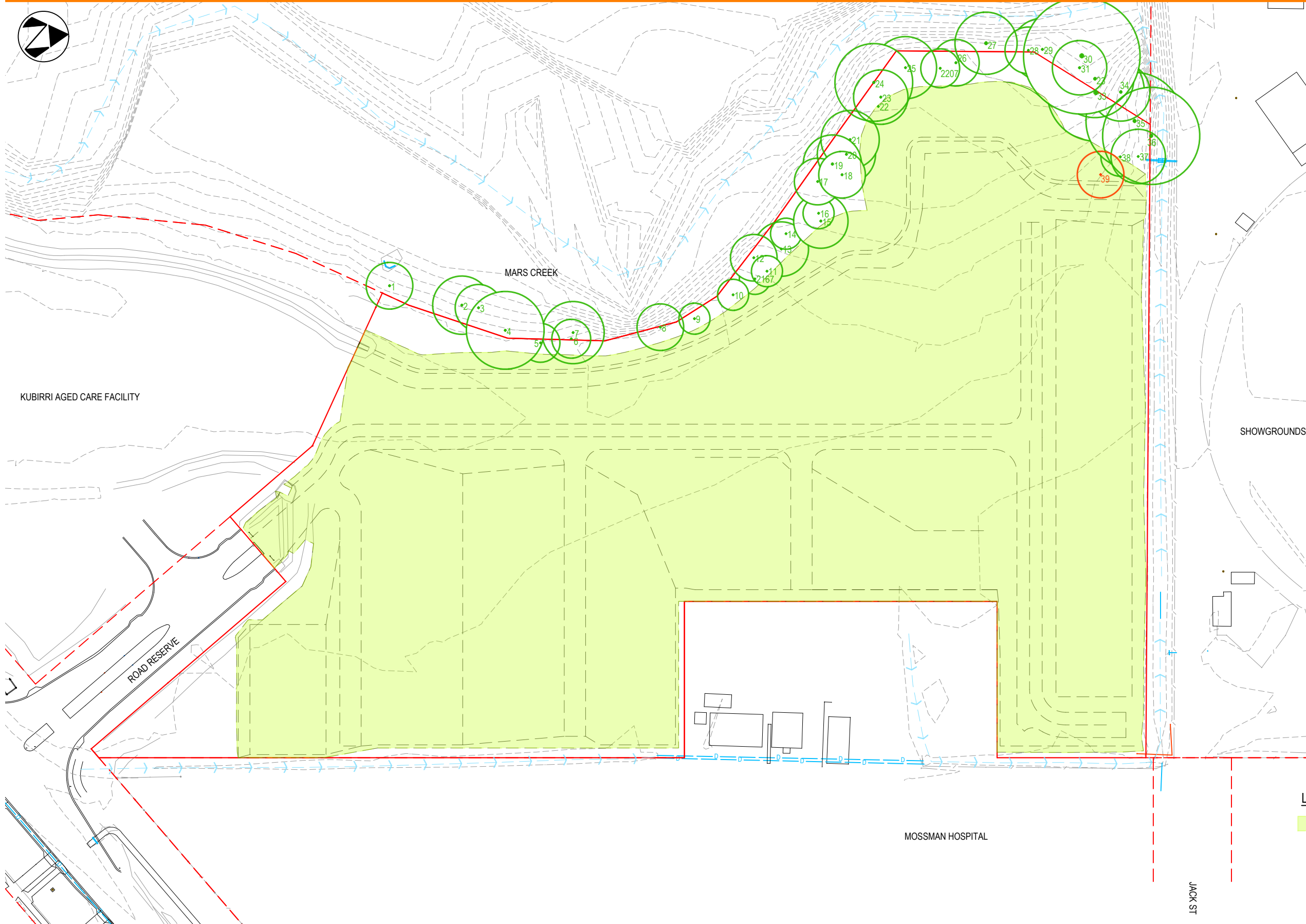
-  SILT FENCE
-  57.0 DESIGN SURFACE CONTOURS (0.5m INTERVAL)
-  57.0 EXISTING SURFACE CONTOURS (0.5m INTERVAL)
-  EXISTING STORMWATER
-  EXISTING SEWER
-  EXISTING WATER
-  ROCK CHECK DAM
-  PIT PROTECTION MEASURES
-  EXISTING DRAINAGE PATH
-  PROPOSED DRAINAGE PATH
-  FALL OF FINISHED SURFACE



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MOSSMAN RETIREMENT VILLAGE

SITE BASED STORMWATER MANAGEMENT PLAN  
PHASE 2: EARTHWORKS



**TREE SURVEY**

PT No.	TRUNK (DIA)	SPREAD (DIA)	HEIGHT	TREE
2167	0.3	8	10	Tree (unknown)
2207	0.5	10	20	Tree (unknown)
1	0.6	12	18	Melicope Elleryana
2	0.65	15	25	Melicope Elleryana
3	0.5	12	18	Melicope Elleryana
4	0.6	20	25	Melicope Elleryana
5	0.35	10	16	Melicope Elleryana
6	0.35	10	16	Rhus taitensis
7	0.5	16	25	Melicope Elleryana
8	0.5	12	18	Glochidian sp
9	0.4	8	14	Polyscias elegans
10	0.4	8	16	Acacia celsa
11	0.3	8	16	Acacia celsa
12	0.4	12	18	Rhus taitensis
13	0.3	14	16	Rhus taitensis
14	0.35	8	16	Melicope Elleryana
15	0.6	14	20	Acacia celsa
16	0.4	8	16	Macaranga tanarius
17	0.4	12	20	Elaeocarpus grandis
18	0.55	12	22	Acacia celsa
19	0.8	15	26	African Tulip (weed)
20	0.65	15	25	Acacia celsa
21	0.55	15	25	Melicope Elleryana
22	0.4	8	10	Acacia celsa
23	0.6	14	22	Acacia celsa
24	0.8	20	28	Cassia javanica(weed)
25	0.5	16	25	Melicope Elleryana
26	0.6	12	20	Macaranga tanarius
27	1.2	16	28	Melicope Elleryana
28	0.45	12	22	Cassia javanica(weed)
29	0.6	16	28	Mango
30	1.8	30	35	Raintree (weed)
31	0.7	14	25	Nauclea orientalis
23	1.1	20	35	Raintree (weed)
33	1.8	25	35	Raintree (weed)
34	1	15	22	Ficus benjamina
35	1.3	25	35	Mango
36	1.3	25	35	Terminalia microcarpa
37	0.35	14	18	Alphitonia excelsa
38	0.45	10	18	Alphitonia excelsa
39	0.35	12	14	Alphitonia excelsa

**LEGEND**

- EXTENT OF BULK EARTHWORKS
- EXISTING SURVEYED TREE TO REMAIN
- EXISTING SURVEYED TREE TO BE REMOVED



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MOSSMAN RETIREMENT VILLAGE

TREE RETENTION AND REMOVAL PLAN