

# Engineering Services Report

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**400 Wyatt Road Residential  
Development, Kagaru**

**Prepared for 400 Wyatt Pty Ltd**





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PROJECT MANAGEMENT  
FORENSIC & EXPERT SERVICES

| ISSUE | DATE       | ISSUE DETAILS | AUTHOR | CHECKED | APPROVED |
|-------|------------|---------------|--------|---------|----------|
| A     | 27.05.2026 | For EDQ Issue | JCH    | NM      | JCH      |
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# 1. Introduction

Ensilon Consulting has been commissioned by 400 Wyatt Pty Ltd to prepare an Engineering Services Report for a proposed residential subdivision development at 400 Wyatt Road, Kagaru (described as Lot 20 on SP 149887).

The application involves Reconfiguring a Lot – One (1) lot into 437 residential lots across seven (7) stages. This includes a balance lot for a local park and waterway/drainage dedications.

This report addresses issues relating to civil infrastructure for the development including; earthworks and retaining walls, roadworks, stormwater infrastructure, sewer infrastructure and water infrastructure. The focus of this report is the civil engineering works required to support the proposed residential subdivision.

The objective of this report is to demonstrate that the proposed development can be supported by the existing and/or proposed civil infrastructure and is compliant with the EDQ Greater Flagstone PDA Planning Scheme, Australian Standards and other relevant guidelines.



## 2. Site Characteristics

### 2.1 Location

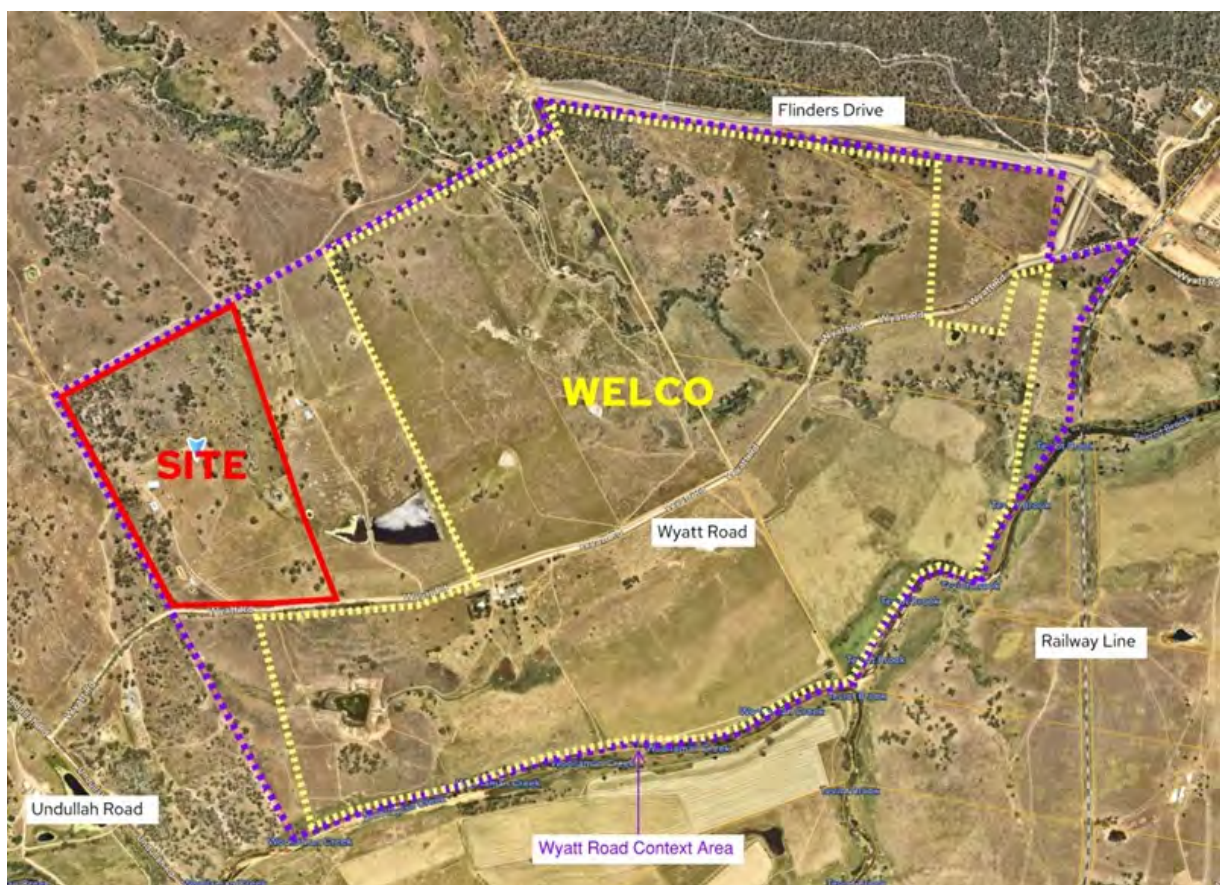
The proposed development is located on 400 Wyatt Road Kagaru. The site is located within the EDQ Greater Flagstone PDA and is situated approximately 12km west of Jimboomba. The sites within the Wyatt Road Context Plan Area.

The land is currently zoned as Urban Living under the Greater Flagstone Development Scheme, with surrounding similar land uses. The surrounding area will be subject to intense residential within the next decade. The subject site is close the 280 Wyatt Road residential development (Welco) which is proceeding with its RaL application.

Refer to Figure 2.1 for an aerial image of the site and its location within the surrounding area.

### 2.2 Land Use

The current landuse is rural and each lot contains fences and small farm dams and existing rural residential dwellings and structures. Refer to Figure 2.1 for an aerial image of the site and the Detailed Survey attached in Appendix B for details.



**Figure 2.1 Development Site Location of 400 Wyatt Road (in red) and Aerial Image**

(Source: Nearmap 2026)

The proposed development is to reconfigure the existing land parcel into 437 urban residential lots. Development access will be initially via Wyatt Road.

Refer to the Proposed Development Layout documentation provided in Appendix A for details.

The proposed development layout and access road locations have factored in the requirements for future orderly development within the context of the surrounding area. Refer to Figure 2.2 which shows the layout of the proposed development in the context of the surrounding developments. A larger layout plan is located in Appendix A.

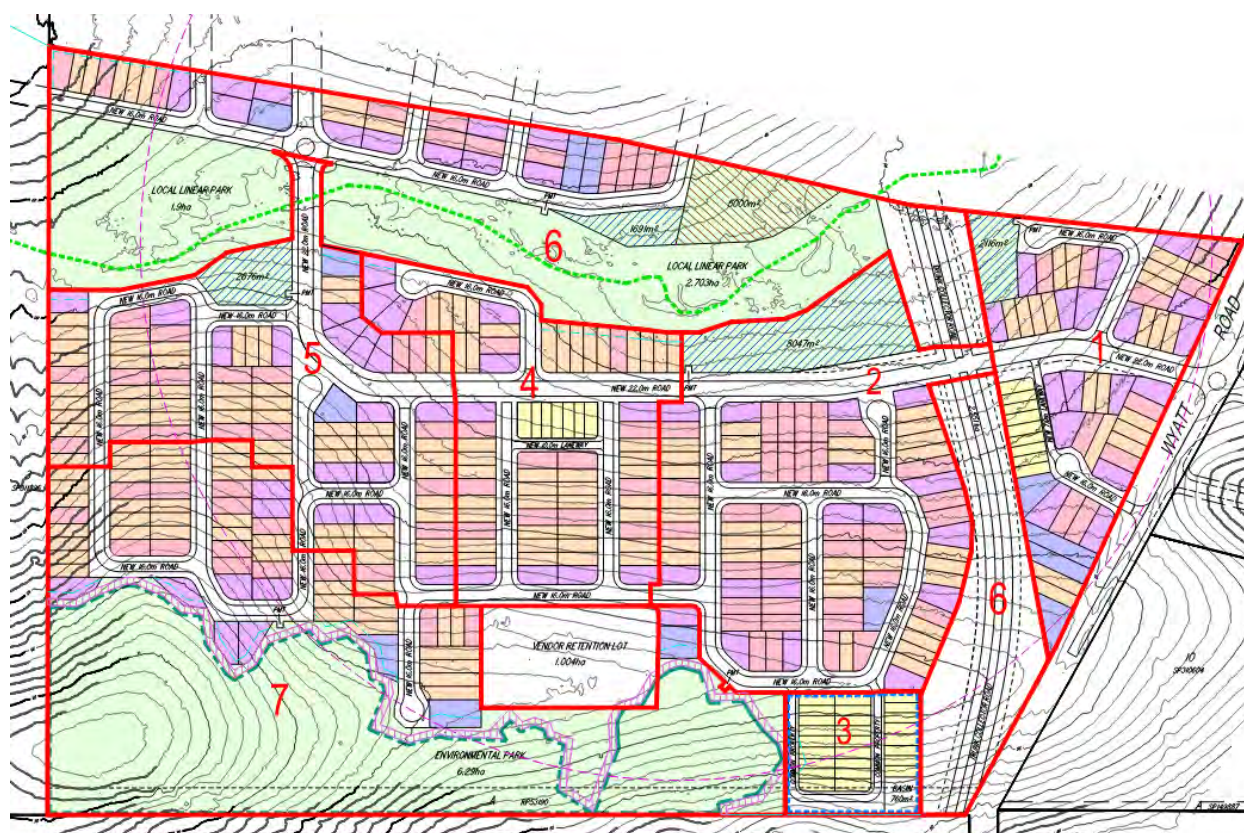
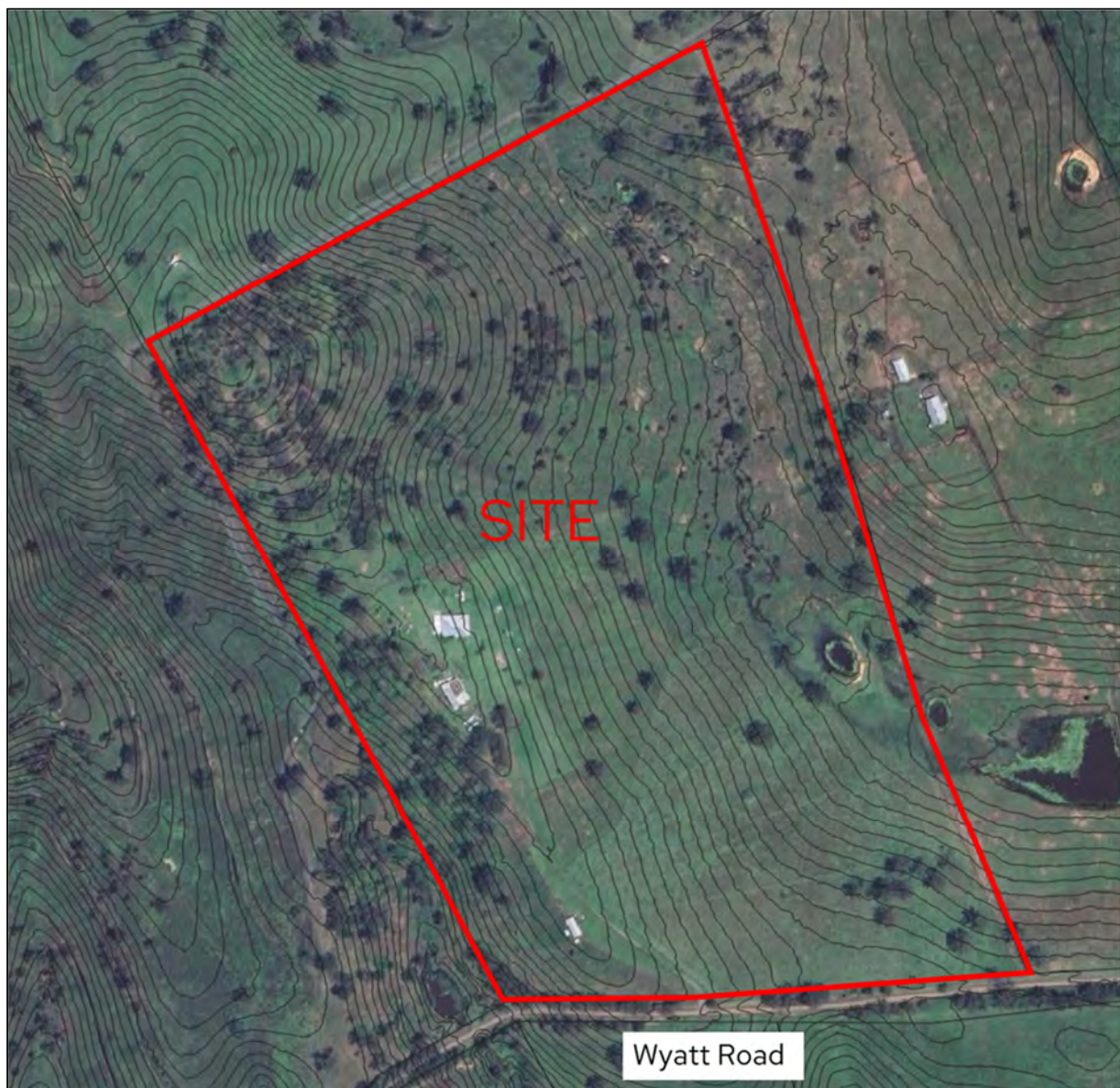


Figure 2.2 Proposal Plan

## 2.3 Topography and Site Drainage

The site generally falls to the south at approximate grades of between 6-8% with occasional short slopes of between 2-3% near drainage lines. Given the undeveloped nature of the site, stormwater runoff follows the existing surface topography and generally discharges across the eastern boundary via a well defined watercourse, although a small segment of catchment discharges to the west and eventually flow to Wyatt Road. A number of small farm dams are located along minor watercourses. Figure 2.3 presents the topography of the site and surrounds via a contour map sourced from available LiDAR information.





**Figure 2.3 Development Site 400 Wyatt Road (in red) and Contour Map with 1 m contour intervals (Source: QSpatial 2026)**

### 3. Earthworks and Retaining Walls

Earthworks operations will be undertaken for the proposed residential subdivision to shape the site to suit the proposed road layout, create relatively flat pads for new allotments to facilitate future residential dwelling construction, and interface with neighbouring properties. Cut to fill operations, including decommissioning and filling the existing farm dams, will be utilised on-site to suit the proposed earthworks and lot reconfiguration. A geotechnical investigation report has been conducted and is located in Appendix D. The site also contains expansive clays and localised instances of slightly dispersive soil. Refer to the Preliminary Earthworks Drawings in Appendix C for details.

Earthworks will also be undertaken to create roads and verges. Refer to the Preliminary Earthworks Drawings in Appendix C for details. Dam removal is required for the earthworks and this will require the removal of silt and unsuitable materials. Earthwork operations for the proposed development will be carried out under Level 1 geotechnical supervision and testing in accordance with Australian Standard AS3798 Guidelines on Earthworks for Commercial and Residential Developments. Adjoining landowners and developers have been contacted to coordinate interfacing works at, or within, the adjoining properties.

Retaining walls will be provided as part of the development works where required to suit allotment benching and interfacing to adjoining private property. All retaining walls will be proprietary concrete sleeper walls. Retaining walls with heights of 1m or more will be structurally designed and certified. All retaining walls will be located within private property with the face of the walls sufficiently offset from any adjoining allotment boundaries to ensure that retaining walls are wholly contained within a single respective lot and do not span across common lot boundaries. Refer to the Preliminary Earthworks Drawings in Appendix C for details of retaining walls proposed. As shown on these Preliminary Earthworks Drawings, all retaining walls proposed have heights less than 2.5m and are predominantly less than 1.5m high. Instances of retaining wall heights greater than 1.5m are limited to only a few lots for short distances.

Site geotechnical investigations have been undertaken by Qualtest Pty Ltd and a report detailing the field investigations, testing and results, subsurface profile, construction trafficability, subgrade preparation, material usage and compaction procedures is attached in Appendix D. The geotechnical report by Qualtest Pty Ltd, identifies that through the implementation of proper construction practices satisfactory outcomes for the development can be achieved.

Given the site elevation, with surface levels above RL 40m AHD, the management of acid sulfate soils will not be required for earthworks on site.

## **4. Erosion and Sediment Control**

An Erosion and Sediment Control Plan will be prepared for the proposed development prior to construction commencing.

The Erosion and Sediment Control strategy for the works will identify potential environmental risks associated with the development. Specifically, water quality, erodible soils, and environmental impacts to adjoining land and existing roads will be addressed. These risks will be mitigated by designing in accordance with the IECA design guidelines, State Planning Policy for Water Quality, council guidelines, and implementation of approved site management measures at the time of construction.

Erosion and Sediment Control measures will be provided as appropriate during construction activities. These measures are likely to consist of diversion drains, temporary sediment basins, silt



fences, temporary construction entry/exit sediment traps, drainage inlet sediment traps, and check dams. Diversion drains will be designed to separate 'dirty water' from 'clean water' and appropriately manage the stormwater discharge during construction to minimise sediment laden runoff into the downstream receiving environment and waterway. Sediment fences will serve to trap sediment in minor storm events while rock check dams will act to reduce the velocity of stormwater runoff therefore reducing the transportation of 'dirty water'.

It is proposed that, during construction, disturbed areas will be stabilised as soon as practical during civil works to minimise exposure of these areas to 'dirty water' runoff. A sediment basin may be constructed at an appropriate location, potentially coinciding with the operational phase stormwater quality treatment basin, in accordance with best practice standards at the time of the engineering design so that sediment laden water can be captured and treated prior to discharge.

## 5. Roadworks

### 5.1 Existing Road Infrastructure

The development site, in its current form, is accessed from Wyatt Road. This road is currently unsealed with a 5.5m to 6.5m wide carriageway and is suitable for low volume site access.

Whilst not yet existing, EDQ are considering a development application for low density residential developments to the south and East (Welco). Contact has been made and coordination with the adjacent developer is ongoing to tie in roads, discharge points and services.

### 5.2 Proposed Road Infrastructure

Internal road infrastructure will be in the form of access streets generally comprising of 16.0m wide road reserves. These will be provided within the development to service the proposed residential allotments in accordance with EDQ standards. A neighborhood connection road network is envisaged, and this will be set at 22 m wide.

Spatial allowance has been made for a 4 lane arterial road based on the findings of the Wyatt Road realignment study. The allowance includes an allowance for 1 in 4 batters. A major signalised intersection will connect the development to the arterial road and spatial allowance for the necessary turn lane has been allowed for based on SIDRA analysis for the 2066 design year. Further details can be found in the accompanying Traffic Report.

The proposed access streets through the site will connect the development to the south and east with both access streets and neighborhood connector roads. All access streets proposed will be

provided with kerb and channel in accordance with EDQ requirements. Refer to the Preliminary Roadworks Layout Plans attached in Appendix C for details.

The internal road hierarchy, generally consists of access streets, has been adopted in accordance with the Greater Flagstone EDQ Planning Scheme and is sufficient to suit the proposed development and the future orderly development of the site surrounds as depicted in Figure 2.2.

Refer to the Preliminary Roadworks Plans attached in Appendix C for details of the turnaround areas. Vehicle Swept Path analyses, attached in Appendix C, have been completed to demonstrate that the turnaround areas proposed are sufficient to cater for a Refuse Collection Vehicles and Service Vehicles.

Road pavement design will be undertaken as part of the detailed design phase and during construction, subject to in-situ subgrade testing, and in accordance with LCC requirements. Road pavements will be provided with asphaltic concrete wearing surfaces. Additionally, pavement subgrades may be modified through in-situ lime stabilisation, in line with recommendations outlined in the geotechnical report to improve subgrade suitability for road pavement.

Temporary emergency access to the north (via Flinders Lakes) has been discussed with the adjoining Developer and discussions are ongoing.

## **6. Stormwater Drainage**

### **6.1 Existing Drainage Infrastructure**

The development site, in its current undeveloped form, contains no existing stormwater drainage infrastructure. Additionally, there is no existing stormwater drainage infrastructure in the immediate vicinity downstream of the site as the surrounding lots have not yet been developed.

Notwithstanding, as described above in this report, EDQ have received a development application for low density residential development to the south and east of the site. Stormwater discharge to this development will be coordinated by the adjacent developer and landowners.

Drainage along the verge of Wyatt Road currently consists of grass swales with property access culverts.

### **6.2 Proposed Drainage Infrastructure**

Stormwater drainage infrastructure will be provided as part of the development works, primarily comprising road drainage network infrastructure, and inter-allotment drainage for lots which fall to the rear, as required in accordance with EDQ requirements and the Queensland Urban Drainage

Manual (QUDM). Refer to Figure 6.1 and the Preliminary Roadworks and Drainage Drawings attached in Appendix C for details. Kerb adaptors will be provided to service individual lots where the proposed allotments fall towards their respective property frontages in accordance with EDQ requirements.

To treat stormwater, four (4) bioretention basins are planned adjacent to the linear park corridor through the site. To attenuate peak post-developed flows, an on-line detention culvert is proposed in Stage 5. It should be noted that whilst the regional catchment does not require peak flow attenuation, this is solely provided on this site due to the site discharging into 346 Wyatt Road. This arrangement may not be required in the future subject to securing a discharge consent agreement with 346 Wyatt Road.

The proposed drainage infrastructure will be designed to cater for the unmitigated upstream catchment flows originating from the west and north. In the interim, and proposed as part of the development works, cutoff drains will be installed along the boundaries to capture and convey stormwater flows to suitable lawful points of discharge points. Refer to the Preliminary Roadworks and Drainage Drawings attached in Appendix C.

The road drainage infrastructure proposed to service the development will drain towards new bioretention basins and ultimately discharge to the drainage reserve (to the south-east). A small catchment comprising of the proposed community titles site will directly discharge to Wyatt Road. This small catchment will be treated with a private water quality device. Refer to the Preliminary Roadworks and Drainage drawings attached in Appendix C.

Further details of stormwater quantity and quality management for the development site are provided in the Stormwater Management Plan (SMP) prepared by Ensilon Consulting. All drainage infrastructure proposed will undergo detailed design for Compliance Assessment/PCC approval and will be designed in accordance with EDQ requirements and QUDM.

## **7. Sewerage**

### **7.1 External Sewerage Infrastructure**

No sewer reticulation mains are located in the verge of Wyatt Road or within the site.

### **7.2 Proposed Internal Sewerage Infrastructure**

Whilst not clearly reflected in LCC mapping available as of the date of this report, sewer infrastructure is proposed to be constructed as part of the southern development. This will comprise of proposed gravity sewer mains and a proposed sewer pump station (Flinders 3C). Coordination of sewer servicing is currently being conducted with the adjacent developer to the south. It is expected that the SPS will be operational by 2029.



Sewerage reticulation infrastructure will be provided as part of the development works to service each of the proposed residential allotments in accordance with UU requirements.

The proposed sewer infrastructure will extend through the development, on standard EDQ alignments within the road reserves. The sewer infrastructure will be sized to cater for the future upstream developed catchment to enable future orderly development of the site surrounds.

For proposed allotments which fall to the rear, sewer infrastructure will be provided in the rear of the lots. The proposed sewer for Stage 1 will connect to the proposed gravity sewer manhole located within Welco Precinct 3, along Wyatt Road, and will be installed as part of the Stage 1 works. The proposed sewer for future stages will connect into this system.

Refer to the Preliminary Services Layouts drawings attached in Appendix C for details.

## **8. Water**

### **8.1 Existing Water Infrastructure**

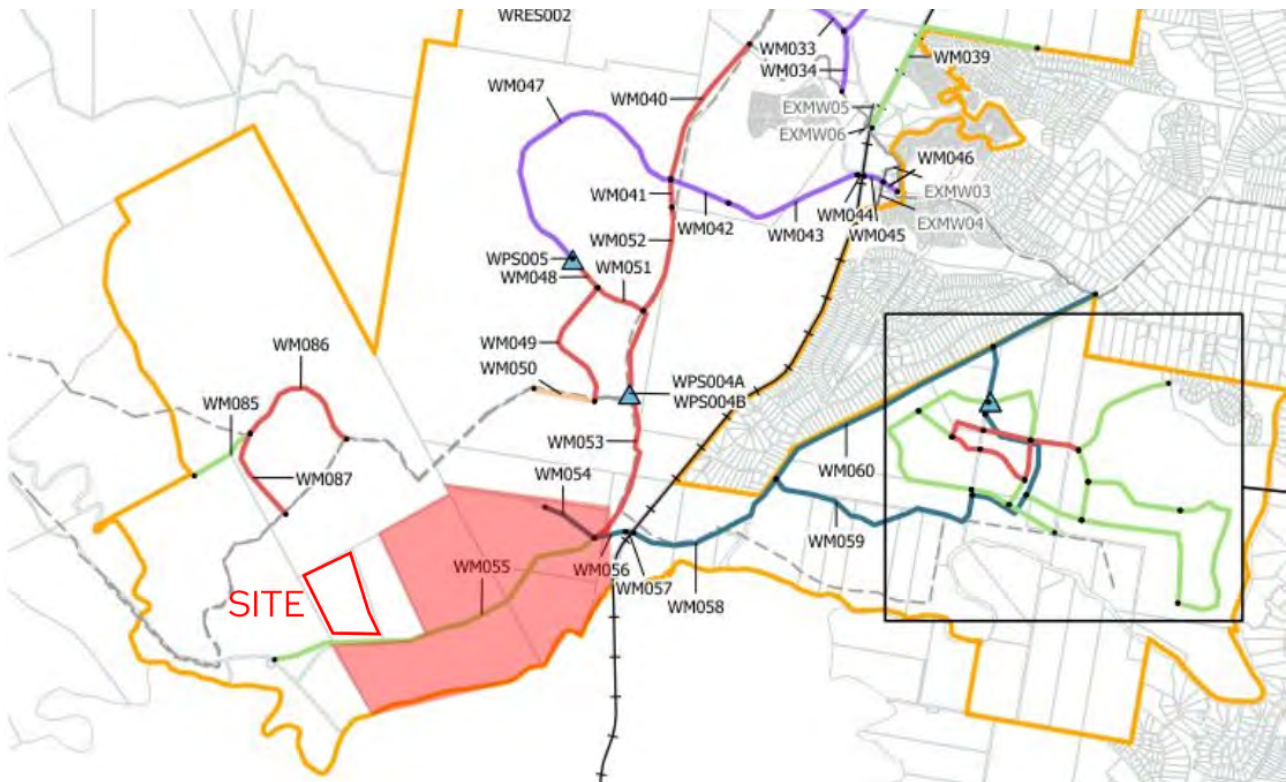
No water reticulation mains are located in the verge of Wyatt Road.

### **8.2 Proposed Water Infrastructure**

Water reticulation infrastructure will be provided as part of the development works to service each of the proposed residential allotments in accordance with EDQ requirements.

Connections will be made to the water infrastructure to be provided as part of the adjoining developments to the east and south, with water mains to be extended through the development site along the LCC standard alignment to service the proposed urban residential lots. Refer to the Preliminary Sewerage and Water Reticulation Layout drawings attached in Appendix C for details.

Water DCOP indicates future water main and reservoir upgrades in Kagaru are scheduled for future construction. It appears that the main works located to the east are unlikely to adversely impact the proposed development.



**Figure 8.1** Location of Proposed Water Main Upgrade (Source: EDQ DCOP)

Refer to the Preliminary Services Layout drawings attached in Appendix C for details.

## 9. Electrical, Communications and Gas

Electrical, telecommunications and gas services are to be provided as part of the adjoining development works to the south. Connections will be made to this infrastructure for the purpose of servicing the urban residential lots of this development.

These services will be designed and installed in accordance with the appropriate service provider's requirements. Further information on these services will be provided during the operational works phase.

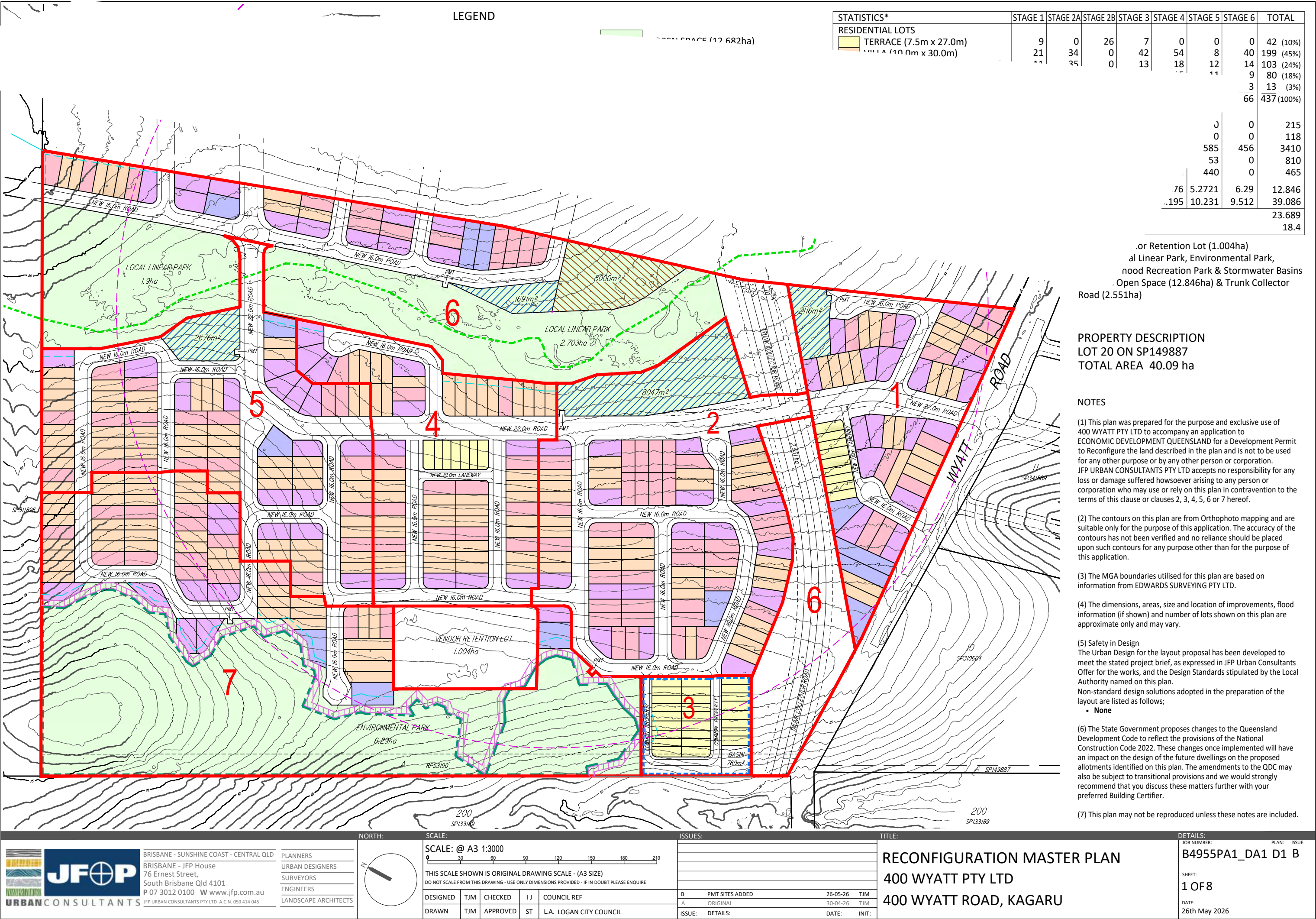
## 10. Conclusion

The information presented in this report demonstrates that the proposed development can be serviced and constructed generally in accordance with the Greater Flagstone EDQ planning scheme, Australian Standards and State Government Standards with respect to civil engineering matters.

From review of the proposed service requirements for the subject site and based on the enclosed information regarding earthworks and retaining walls, roadworks, stormwater drainage, sewer infrastructure, water infrastructure and electricity / communications / gas, there are no civil engineering constraints that would make the subject site unsuitable for development.



# Appendix A - Proposed Development Layout



or Retention Lot (1.004ha)

al Linear Park, Environmental Park,

nood Recreation Park & Stormwater Basins

Open Space (12.846ha) & Trunk Collector

Road (2.551ha)

PROPERTY DESCRIPTION

LOT 20 ON SP149887

TOTAL AREA 40.09 ha

NOTES

(1) This plan was prepared for the purpose and exclusive use of 400 WYATT PTY LTD to accompany an application to ECONOMIC DEVELOPMENT QUEENSLAND for a Development Permit to Reconfigure the land described in the plan and is not to be used for any other purpose or by any other person or corporation. JFP URBAN CONSULTANTS PTY LTD accepts no responsibility for any loss or damage suffered howsoever arising to any person or corporation who may use or rely on this plan in contravention to the terms of this clause or clauses 2, 3, 4, 5, 6 or 7 hereof.

(2) The contours on this plan are from Orthophoto mapping and are suitable only for the purpose of this application. The accuracy of the contours has not been verified and no reliance should be placed upon such contours for any purpose other than for the purpose of this application.

(3) The MGA boundaries utilised for this plan are based on information from EDWARDS SURVEYING PTY LTD.

(4) The dimensions, areas, size and location of improvements, flood information (if shown) and number of lots shown on this plan are approximate only and may vary.

(5) Safety in Design  
The Urban Design for the layout proposal has been developed to meet the stated project brief, as expressed in JFP Urban Consultants Offer for the works, and the Design Standards stipulated by the Local Authority named on this plan.  
Non-standard design solutions adopted in the preparation of the layout are listed as follows;

- None

(6) The State Government proposes changes to the Queensland Development Code to reflect the provisions of the National Construction Code 2022. These changes once implemented will have an impact on the design of the future dwellings on the proposed allotments identified on this plan. The amendments to the QDC may also be subject to transitional provisions and we would strongly recommend that you discuss these matters further with your preferred Building Certifier.

(7) This plan may not be reproduced unless these notes are included.

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JFOP

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PLANNERS  
URBAN DESIGNERS  
SURVEYORS  
ENGINEERS  
LANDSCAPE ARCHITECTS

NORTH:

SCALE:

SCALE: @ A3 1:3000

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DESIGNED TJM

CHECKED IJ

COUNCIL REF

DRAWN TJM

APPROVED ST

L.A. LOGAN CITY COUNCIL

ISSUES:

B PMT SITES ADDED

A ORIGINAL

ISSUE: DETAILS:

26-05-26 TJM

30-04-26 TJM

DATE: INIT:

TITLE:

RECONFIGURATION MASTER PLAN

400 WYATT PTY LTD

400 WYATT ROAD, KAGARU

DETAILS:

JOB NUMBER:

PLAN:

ISSUE:

B4955PA1\_DA1 D1 B

SHEET:

1 OF 8

DATE:

26th May 2026

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# Appendix B – Context Plan



CONTEXT PLAN

NOT TO BE USED FOR ENGINEERING DESIGN  
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NOTES

This plan was prepared as a conceptual layout only. The information on this plan is not suitable for any other purpose.

Property dimensions, areas, numbers of lots and contours and other physical features shown have been compiled from existing information and may not have been verified by field survey. These may need verification if the development application is approved and development proceeds, and may change when a full survey is undertaken or in order to comply with development approval conditions.

No reliance should be placed on the information on this plan for detailed subdivision design or for any financial dealings involving the land.

Pavements and centrelines shown are indicative only and are subject to Engineering Design.

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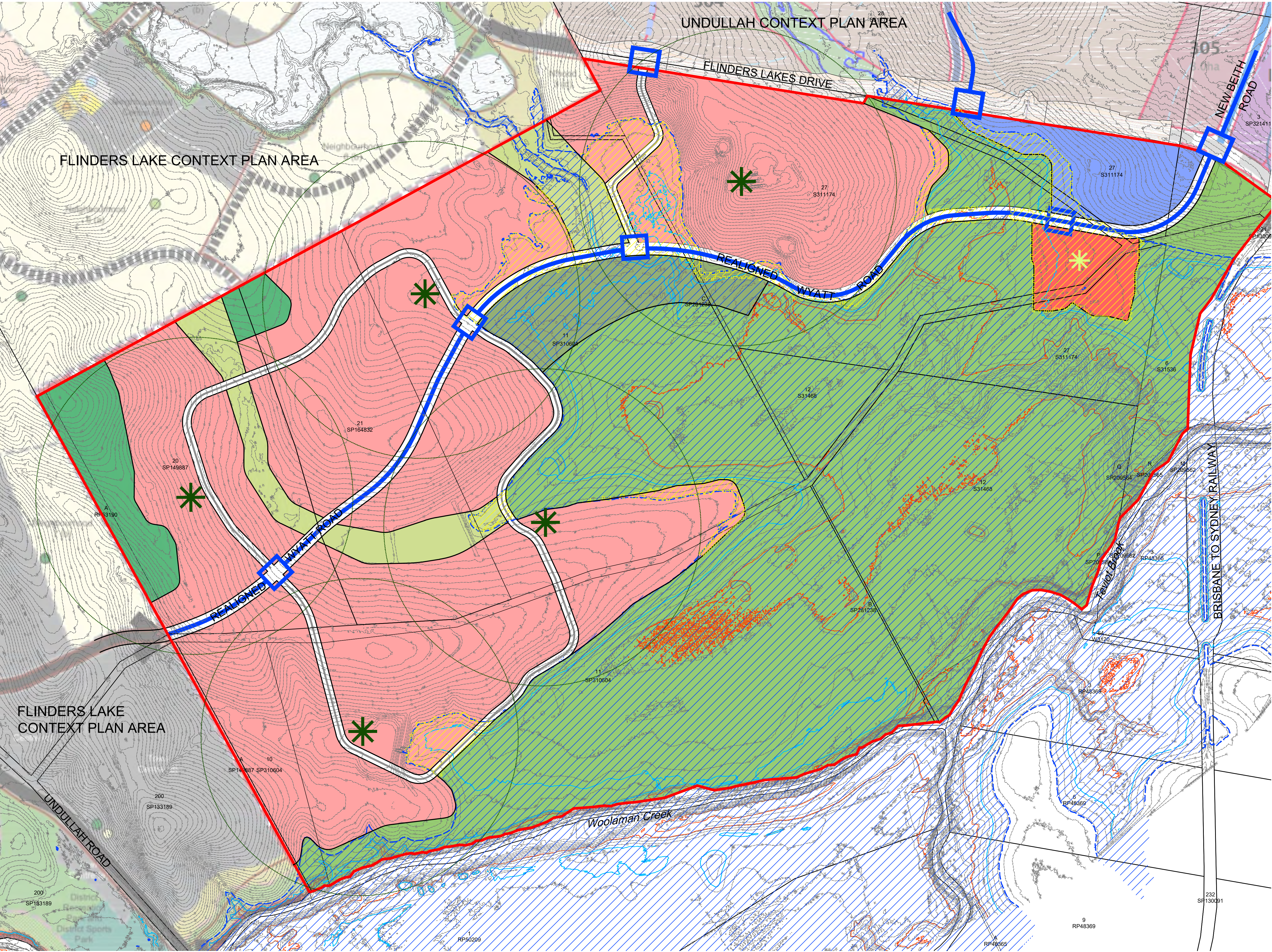
PROJECTION - GDA2020 MGA56  
SUBJECT BOUNDARIES OBTAINED FROM DCDB

LEGEND

- Context Plan Area
- Major Contour (1.0m interval)
- Flood Level - RL 35.2
- ARI 20 - RL 32.6 AHD
- ARI 5 - RL 29.8 AHD
- DFE Flood Extents
- Fill Locations (compensatory earthworks)
- Urban Residential (min 15 dw/ha)
- Medium Density Residential (20-50 dw/ha)
- Centre (retail showroom)
- District Recreation Park - 10ha
- Major Linear Park
- Local Linear Park
- Environmental Park
- Neighbourhood Recreation Park
- Neighbourhood Recreation Park (400m Walking Catchment)
- Wyatt Road Realignment - 33m Urban Arterial
- 22m Neighbourhood Collector Road
- Signalised Intersection
- Potential School Site

RP DESCRIPTION: Lot 11 on SP310604 & Lot 27 on S311174

SCALE A1 1:5000 @A3 1:10000 - LENGTHS ARE IN METRES





## **Appendix C - Preliminary Engineering Drawings prepared by Epsilon Consulting**

## CIVIL WORKS

The map displays a proposed development area outlined in orange dashed lines. The area is divided into several stages of development, labeled as follows:

- STAGE 1
- STAGE 2
- STAGE 3
- STAGE 4
- STAGE 5
- STAGE 6
- STAGE 7

Surrounding parcels and roads are also labeled:

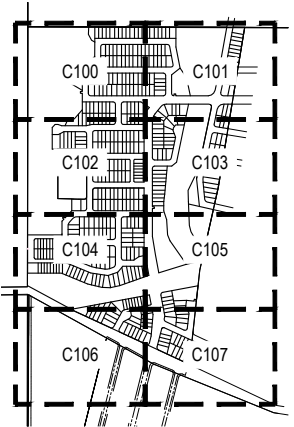
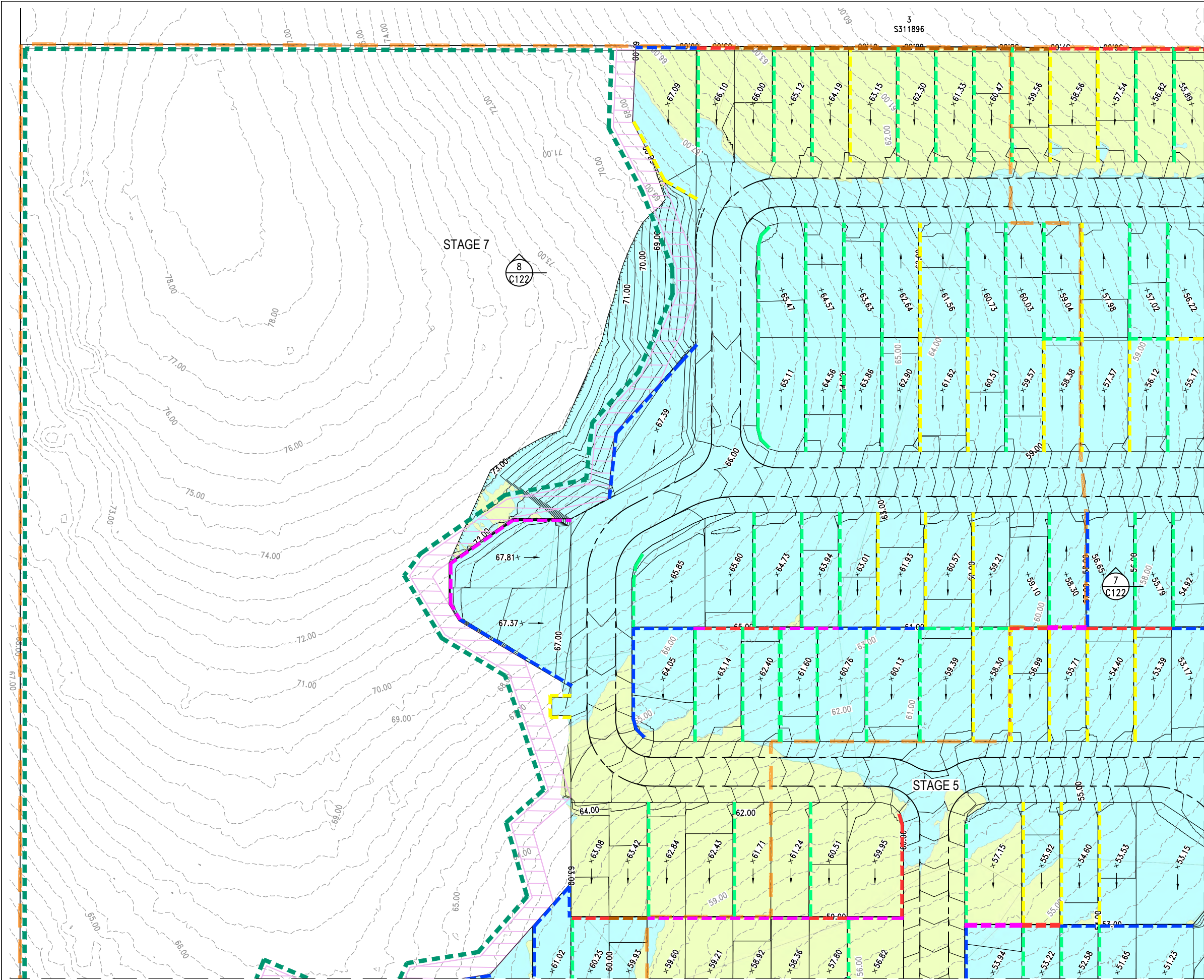
- Parcel 3 (S311896) at the top.
- Parcel 200 (SP133189) on the left.
- Parcel 21 (SP164832) on the right.
- Parcel 10 (SP310604) at the bottom left.
- Parcel 11 (SP341889) at the bottom.
- TRUNK COLLECTOR ROAD running diagonally across the lower part of the development.
- WYATT ROAD running horizontally at the bottom.

## SITE LAYOUT

NOT TO SCALE

[illegible]





KEYMAP  
NOT TO SCALE

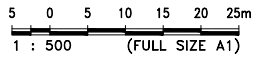
FOR CONTINUATION REFER - 26-006-DA-C101

LEGEND

- PROPOSED LOT BOUNDARY
- PROPOSED STAGE BOUNDARY
- PROPOSED KERB AND CHANNEL
- EARTHWORKS BATTER TOP
- EARTHWORKS BATTER BOTTOM
- DESIGN SURFACE CONTOUR (1m INTERVALS)
- EXISTING SURFACE CONTOUR (1m INTERVALS)
- PROPOSED SLEEPER RETAINING WALL (HEIGHT RANGE 0.6m-1.0m)
- PROPOSED SLEEPER RETAINING WALL (HEIGHT RANGE 1.0m-1.5m)
- PROPOSED SLEEPER RETAINING WALL (HEIGHT RANGE 1.5m-2.0m)
- PROPOSED SLEEPER RETAINING WALL (HEIGHT RANGE 2.0m-2.5m)
- PROPOSED SLEEPER RETAINING WALL (HEIGHT RANGE 2.5m-3.0m 2 TIERED WALL)
- PROPOSED SLEEPER RETAINING WALL (HEIGHT RANGE 3.0m-4.0m 2 TIERED WALL)
- AREA OF CUT
- AREA OF FILL
- QUEENSLAND WATERWAY
- 5m WIDE BUFFER
- GROUND-TRUTHED KOALA HABITAT AREAS
- PROPOSED EARTHWORKS PAD LEVEL
- EARTHWORKS PAD GRADING DIRECTION
- PROPOSED CUTOFF DRAIN
- FUTURE LOT BOUNDARY
- FUTURE KERB AND CHANNEL

FOR CONTINUATION REFER - 26-006-DA-C102

| REV | DESCRIPTION  | BY | DES | DATE     |
|-----|--------------|----|-----|----------|
| A   | FOR APPROVAL | NM | NM  | 27/05/26 |



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DATE:  
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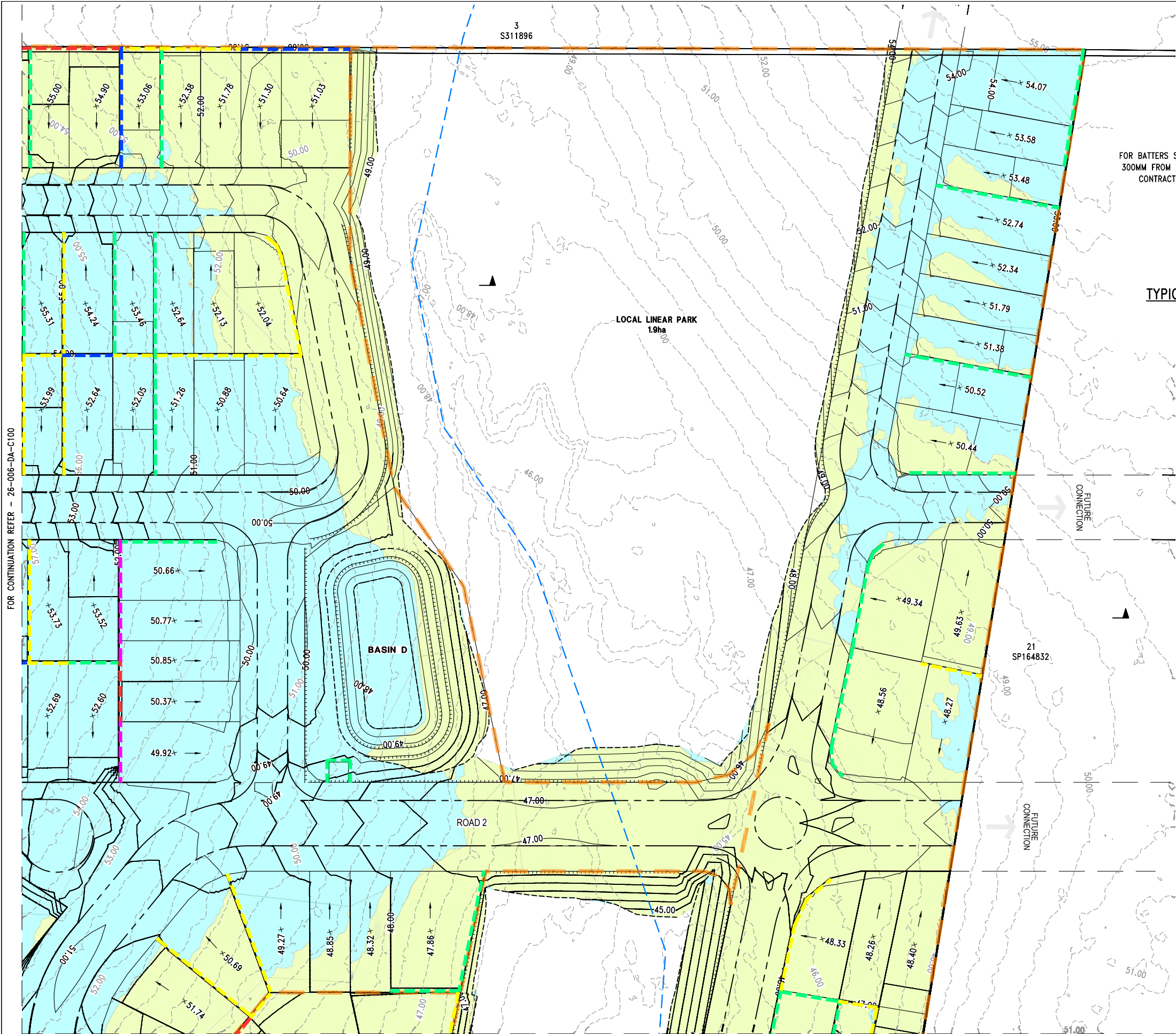
CLIENT  
400 WYATT Pty Ltd  
TITLE  
BULK EARTHWORKS  
LAYOUT PLAN  
SHEET 1 OF 8

PROJECT  
400 WYATT ROAD, KAGARU  
RESIDENTIAL DEVELOPMENT

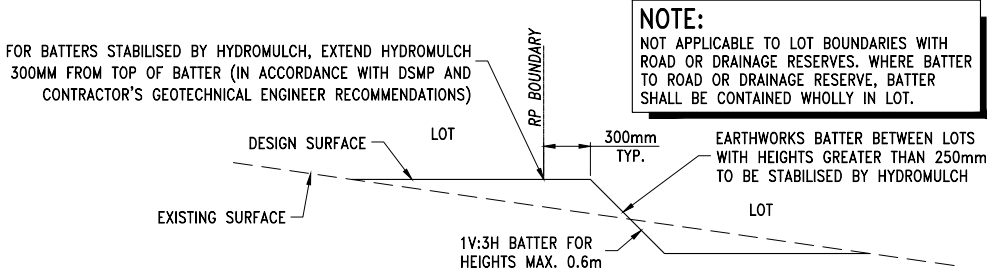
STATUS  
FOR APPROVAL

| DESIGNED   | DRAWN      | APPROVED | DATE     | SCALE | SHEET  |
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| NM         | NM         | -        | 27/05/26 | 1:500 | 1 of 8 |
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| 26-006     | C100       | A        |          |       |        |

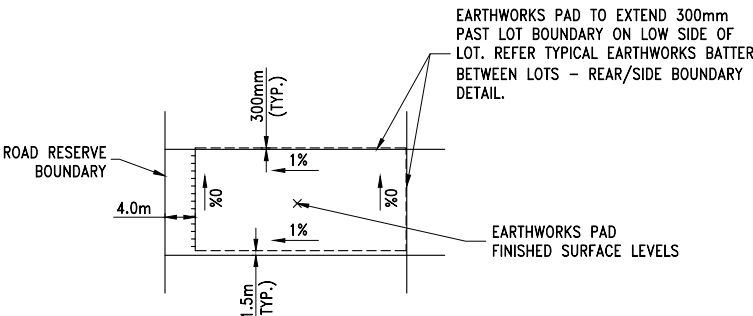




NOTE:  
REFER DRAWING C100 FOR LEGEND  
AND KEYMAP.



TYPICAL EARTHWORKS BATTER BETWEEN LOTS – REAR/SIDE BOUNDARY DETAIL  
N.T.S

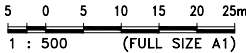


TYPICAL LOT EARTHWORKS PAD SETOUT  
N.T.S

FOR CONTINUATION REFER – 26-006-DA-C100

FOR CONTINUATION REFER – 26-006-DA-C103

| REV | DESCRIPTION  | BY | DES | DATE     |
|-----|--------------|----|-----|----------|
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RPEQ:

DATE:

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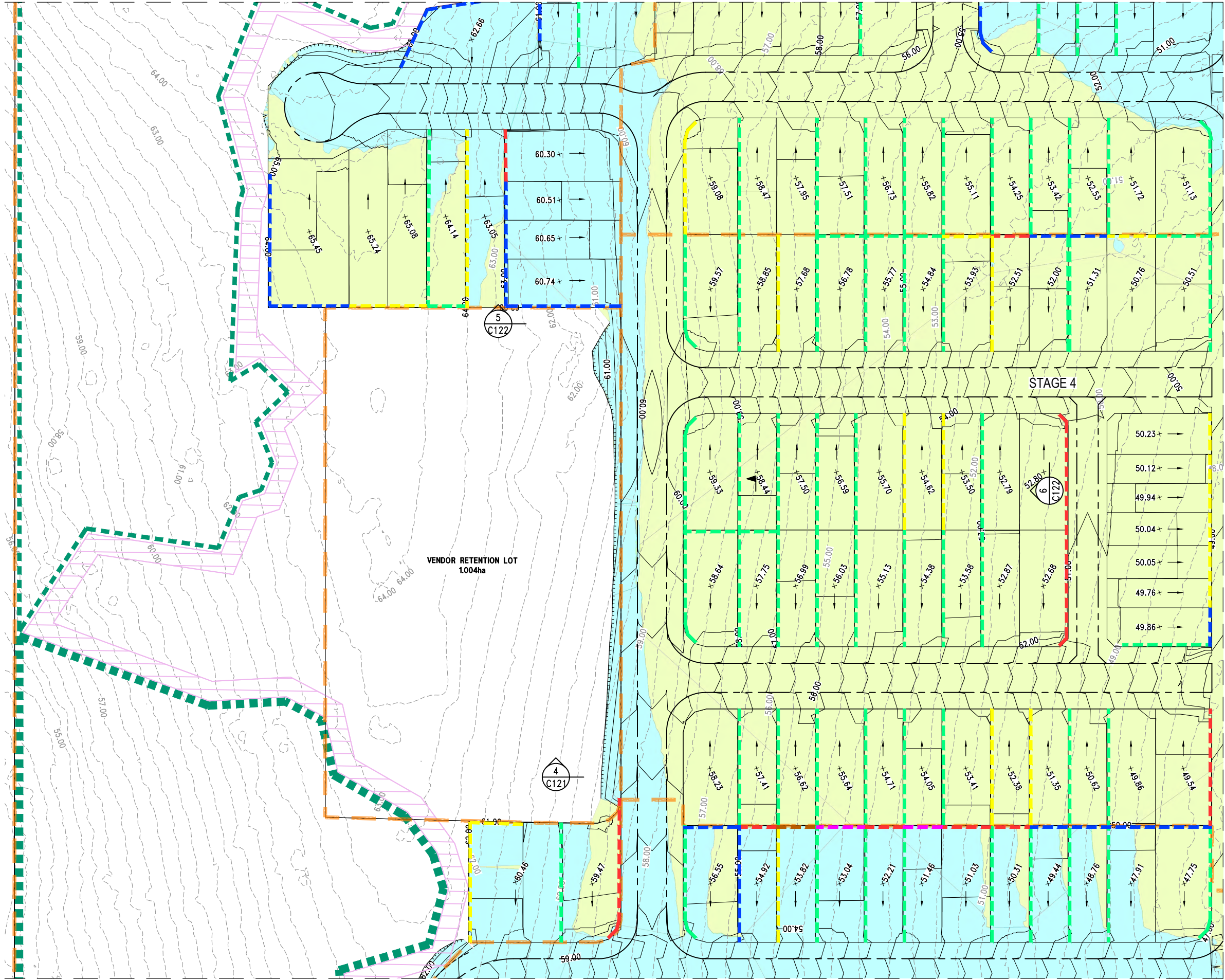
TITLE  
BULK EARTHWORKS  
LAYOUT PLAN  
SHEET 2 OF 8

PROJECT  
400 WYATT ROAD, KAGARU  
RESIDENTIAL DEVELOPMENT

STATUS  
FOR APPROVAL

| DESIGNED   | DRAWN      | APPROVED | DATE     | SCALE | SHEET  |
|------------|------------|----------|----------|-------|--------|
| NM         | NM         | -        | 27/05/26 | 1:500 | 2 OF 8 |
| PROJECT No | DRAWING No | REV      |          |       |        |
| 26-006     | C101       | A        |          |       |        |



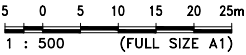


NOTE:  
REFER DRAWING C100 FOR LEGEND  
AND KEYMAP.

FOR CONTINUATION REFER - 26-006-DA-C103

FOR CONTINUATION REFER - 26-006-DA-C104

| REV | DESCRIPTION  | BY | DES | DATE     |
|-----|--------------|----|-----|----------|
| A   | FOR APPROVAL | NM | NM  | 27/05/26 |
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TITLE  
BULK EARTHWORKS  
LAYOUT PLAN  
SHEET 3 of 8

PROJECT  
400 WYATT ROAD, KAGARU  
RESIDENTIAL DEVELOPMENT

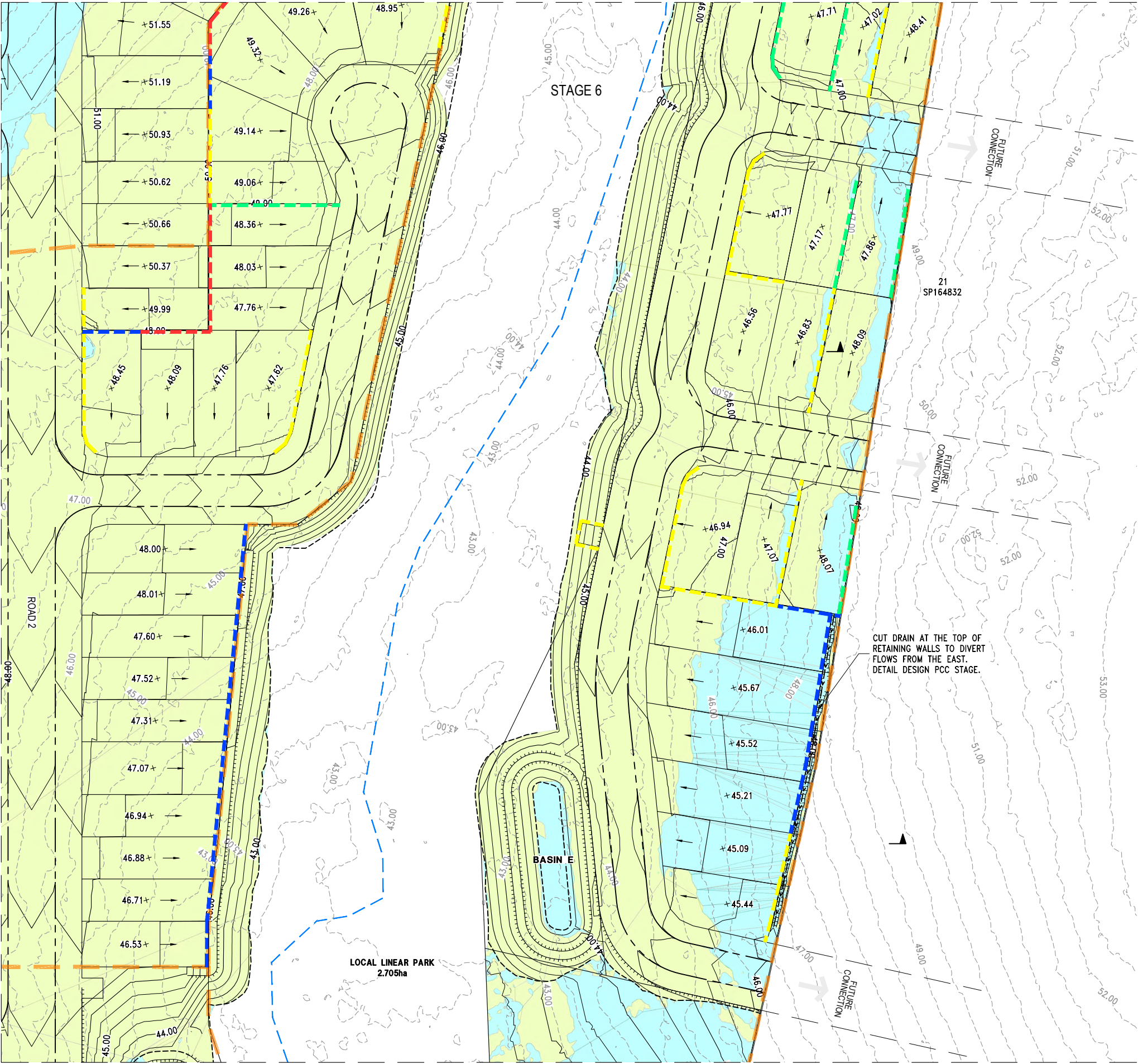
STATUS  
FOR APPROVAL

| DESIGNED   | DRAWN      | APPROVED | DATE     | SCALE | SHEET  |
|------------|------------|----------|----------|-------|--------|
| NM         | NM         | -        | 27/05/26 | 1:500 | 3 of 8 |
| PROJECT No | DRAWING No | REV      |          |       |        |
| 26-006     | C102       | A        |          |       |        |



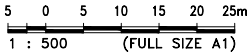
NOTE:  
REFER DRAWING C100 FOR LEGEND  
AND KEYMAP.

FOR CONTINUATION REFER - 26-006-DA-C102



FOR CONTINUATION REFER - 26-006-DA-C105

| REV | DESCRIPTION  | BY | DES | DATE     |
|-----|--------------|----|-----|----------|
| A   | FOR APPROVAL | NM | NM  | 27/05/26 |
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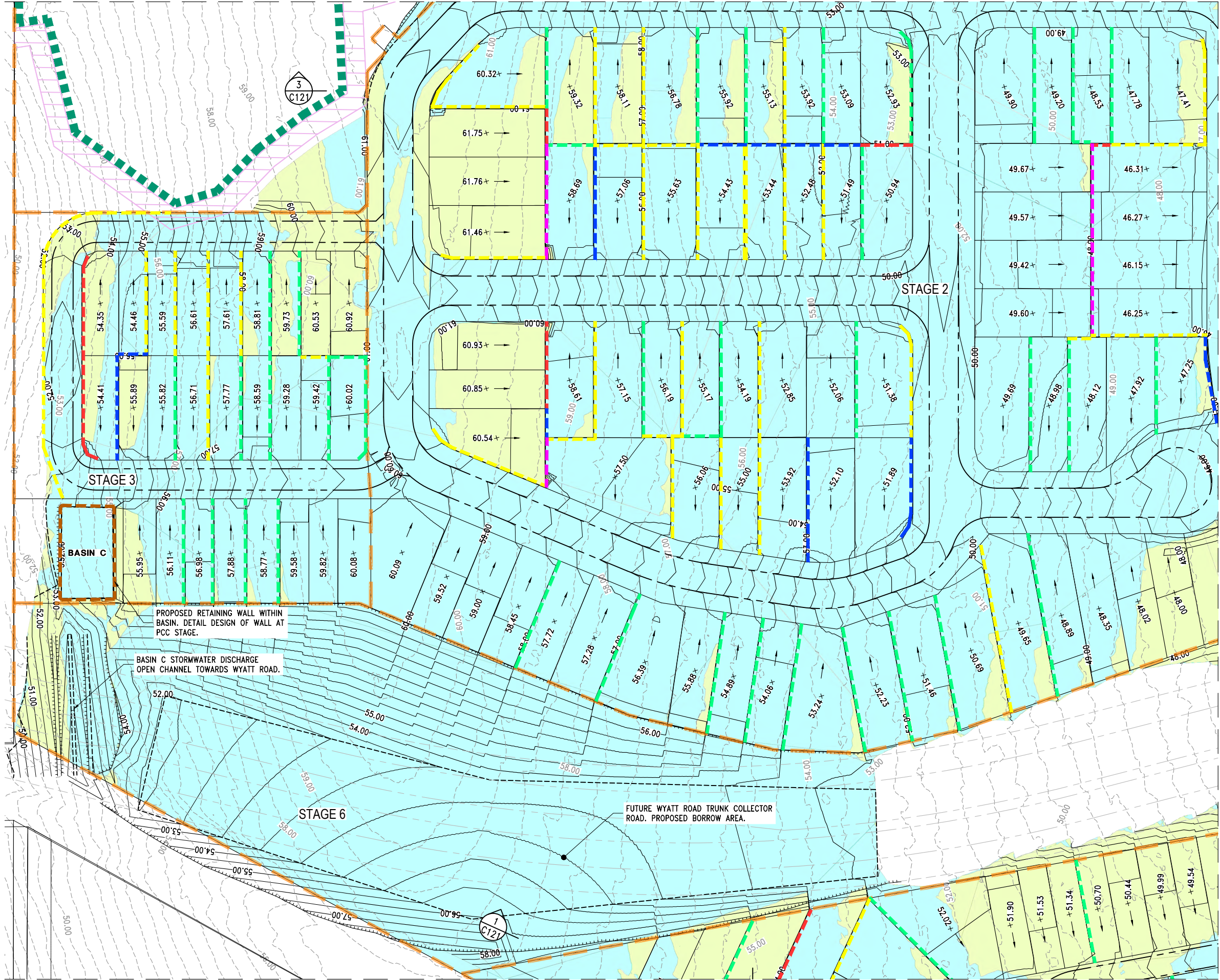


| CLIENT                                         |
|------------------------------------------------|
| 400 WYATT Pty Ltd                              |
| TITLE                                          |
| BULK EARTHWORKS<br>LAYOUT PLAN<br>SHEET 4 OF 8 |

| PROJECT                                           |
|---------------------------------------------------|
| 400 WYATT ROAD, KAGARU<br>RESIDENTIAL DEVELOPMENT |
| STATUS                                            |
| FOR APPROVAL                                      |

| DESIGNED   | DRAWN      | APPROVED | DATE     | SCALE | SHEET  |
|------------|------------|----------|----------|-------|--------|
| NM         | NM         | -        | 27/05/26 | 1:500 | 4 of 8 |
| PROJECT No | DRAWING No | REV      |          |       |        |
| 26-006     | C103       | A        |          |       |        |

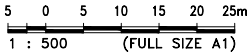




FOR CONTINUATION REFER - 26-006-DA-C105

NOTE:  
REFER DRAWING C100 FOR LEGEND  
AND KEYMAP.

| REV | DESCRIPTION  | BY | DES | DATE     |
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| A   | FOR APPROVAL | NM | NM  | 27/05/26 |



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TITLE  
BULK EARTHWORKS  
LAYOUT PLAN  
SHEET 5 OF 8

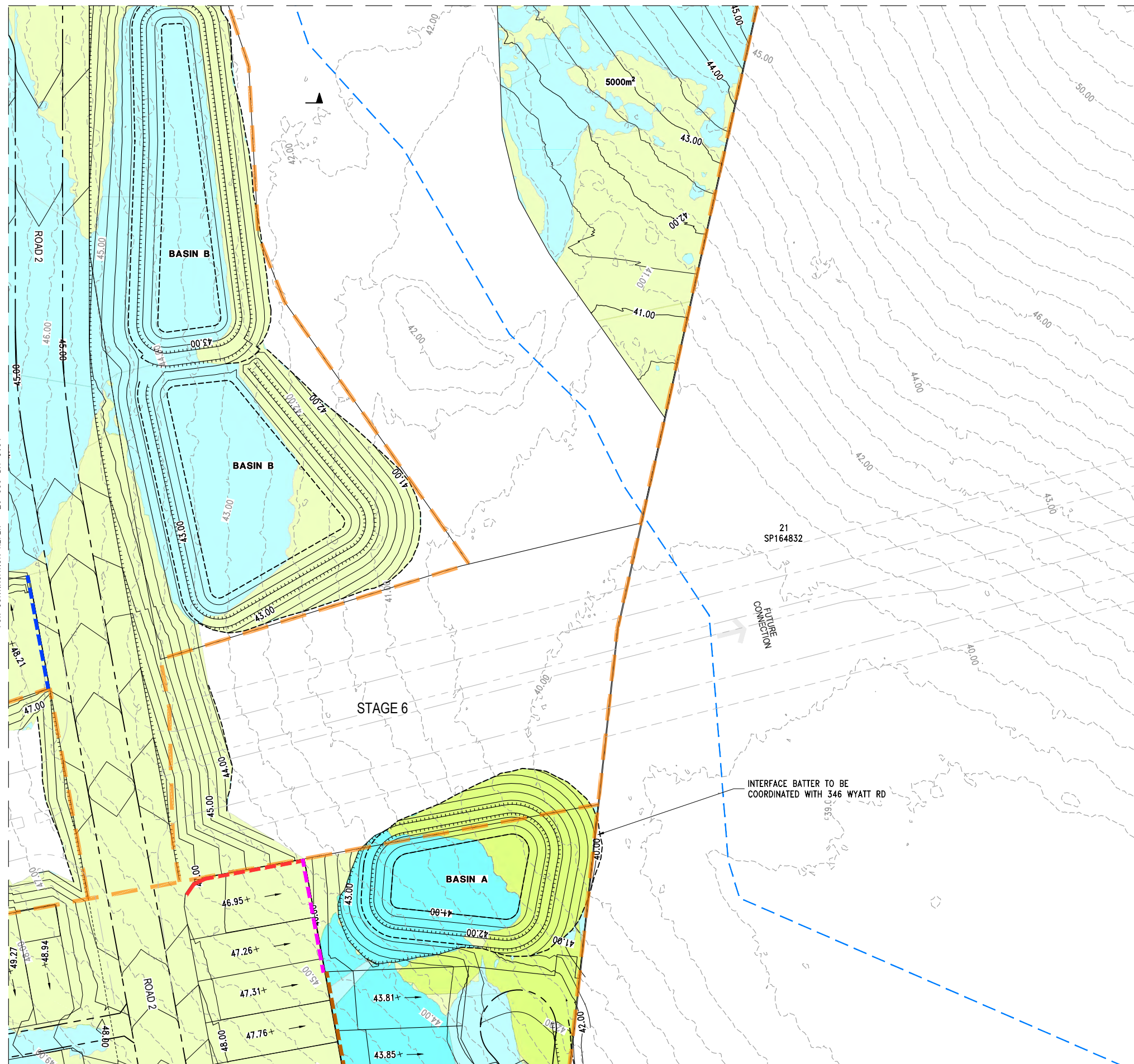
PROJECT  
400 WYATT ROAD, KAGARU  
RESIDENTIAL DEVELOPMENT

STATUS  
FOR APPROVAL

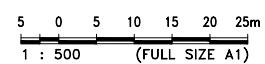
| DESIGNED   | DRAWN      | APPROVED | DATE     | SCALE | SHEET  |
|------------|------------|----------|----------|-------|--------|
| NM         | NM         | -        | 27/05/26 | 1:500 | 5 OF 8 |
| PROJECT No | DRAWING No | REV      |          |       |        |
| 26-006     | C104       | A        |          |       |        |



FOR CONTINUATION REFER - 26-006-DA-C104



FOR CONTINUATION REFER - 26-006-DA-C107

[illegible]

|                                                                                                                                                                                                                                                                                                                                           |       |
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| NAME:                                                                                                                                                                                                                                                                                                                                     |       |
| RPEQ:                                                                                                                                                                                                                                                                                                                                     | DATE: |
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| TITLE | BULK EARTHWORKS<br>LAYOUT PLAN<br>SHEET 6 OF 8 |
|-------|------------------------------------------------|

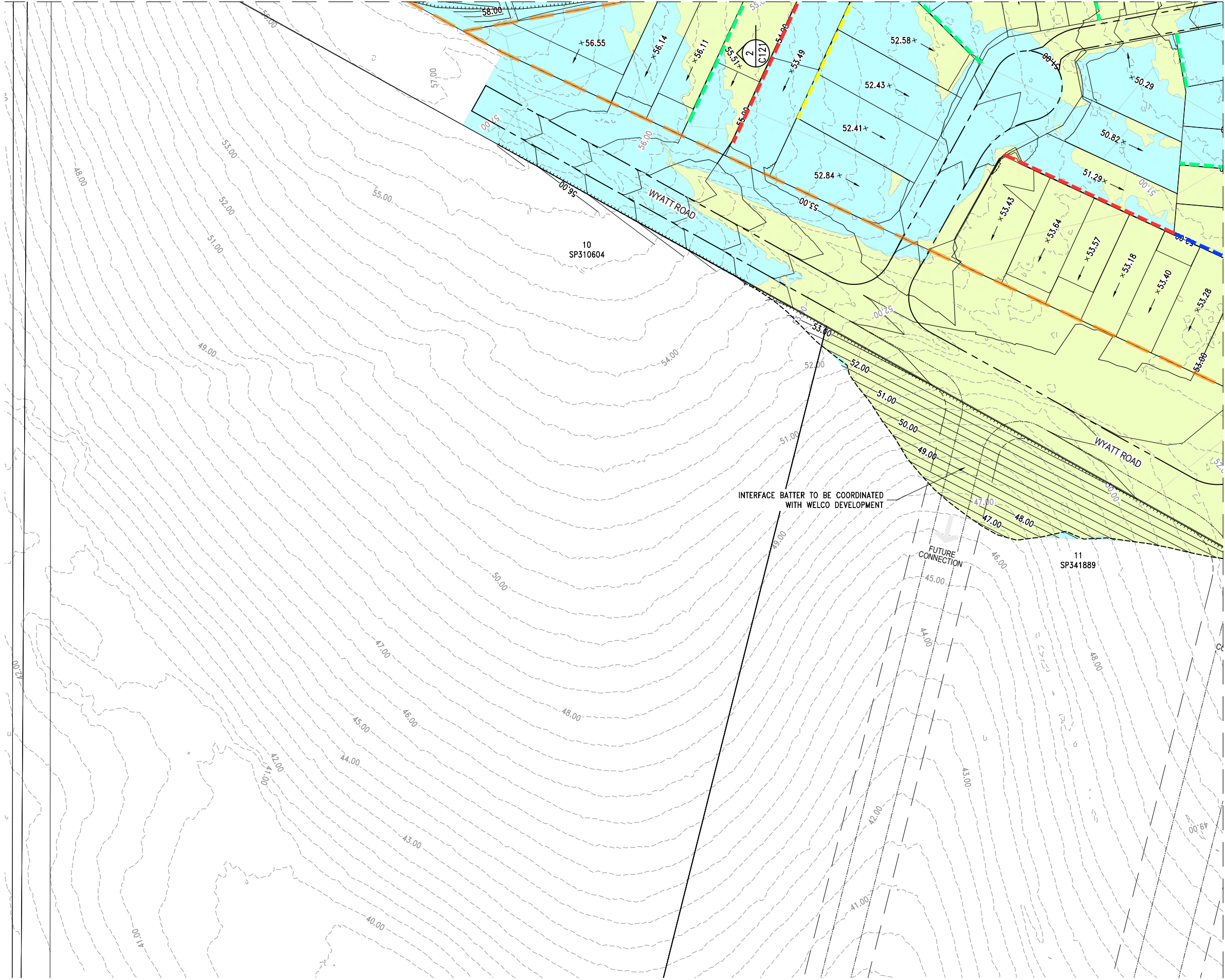
PROJECT  
400 WYATT ROAD, KAGARU  
RESIDENTIAL DEVELOPMENT

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| STATUS | FOR APPROVAL |
|--------|--------------|

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| DESIGNED<br>NM       | DRAWN<br>NM | APPROVED<br>-      | DATE<br>27/05/26 | SCALE ● A1<br>1:500 | SHEET<br>6 of 8 |
| PROJECT No<br>26-006 |             | DRAWING No<br>C105 |                  |                     | REV<br>A        |



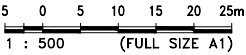
FOR CONTINUATION REFER - 26-006-DA-C104



NOTE:  
REFER DRAWING C100 FOR LEGEND  
AND KEYMAP.

FOR CONTINUATION REFER - 26-006-DA-C107

| REV | DESCRIPTION  | BY | DES | DATE     |
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| A   | FOR APPROVAL | NM | NM  | 27/05/26 |
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NAME:  
RPEQ: \_\_\_\_\_ DATE: \_\_\_\_\_

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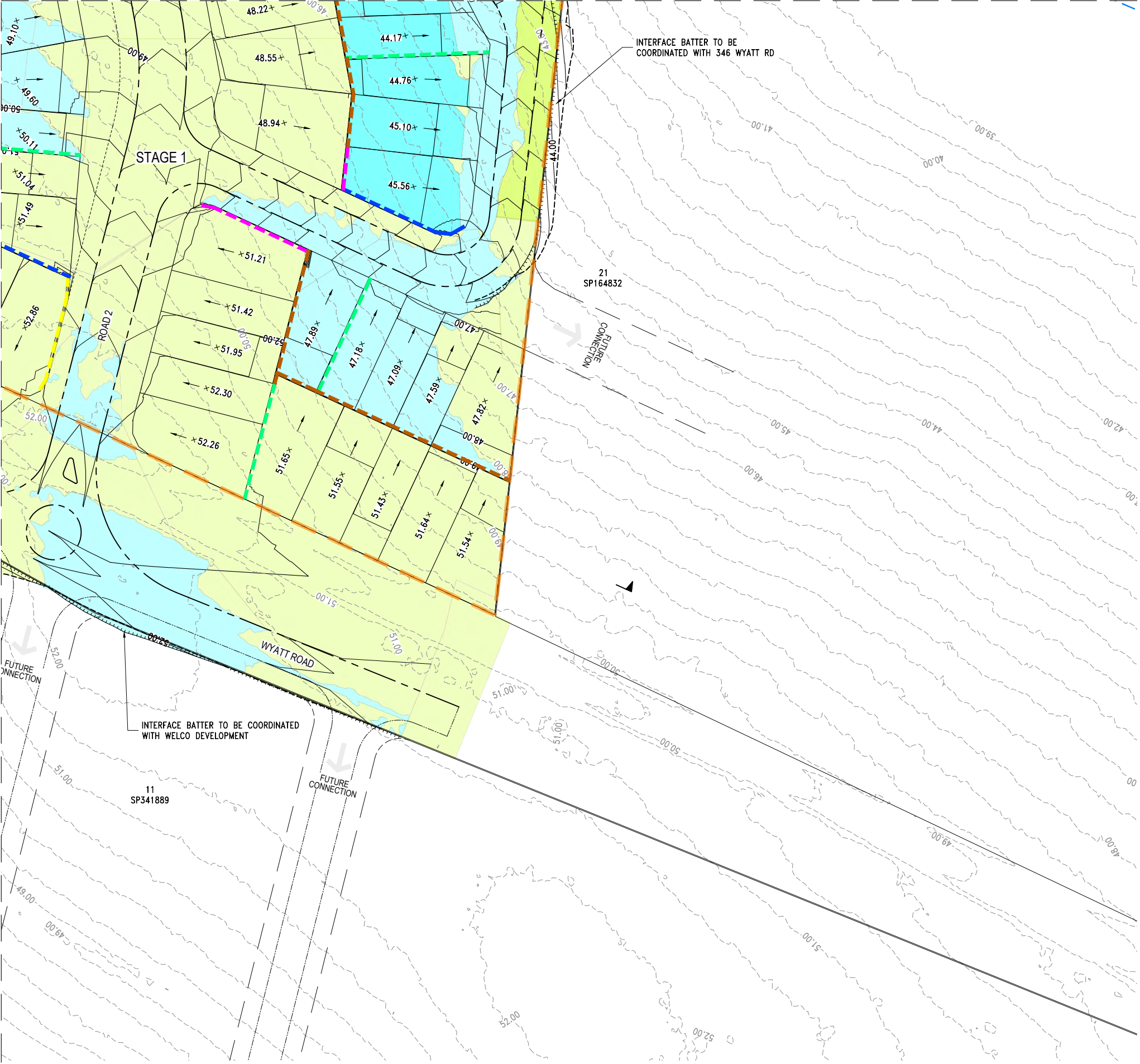
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| CLIENT                                         |
|------------------------------------------------|
| 400 WYATT Pty Ltd                              |
| TITLE                                          |
| BULK EARTHWORKS<br>LAYOUT PLAN<br>SHEET 7 OF 8 |

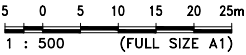
|                                                   |  |                      |       |                    |          |            |        |
|---------------------------------------------------|--|----------------------|-------|--------------------|----------|------------|--------|
| PROJECT                                           |  |                      |       |                    |          |            |        |
| 400 WYATT ROAD, KAGARU<br>RESIDENTIAL DEVELOPMENT |  |                      |       |                    |          |            |        |
| STATUS                                            |  | DESIGNED             | DRAWN | APPROVED           | DATE     | SCALE & AT | SHEET  |
| FOR APPROVAL                                      |  | NM                   | NM    | -                  | 27/05/26 | 1:500      | 7 of 8 |
|                                                   |  | PROJECT No<br>26-006 |       | DRAWING No<br>C106 |          | REV<br>A   |        |

NOTE:  
REFER DRAWING C100 FOR LEGEND  
AND KEYMAP.

FOR CONTINUATION REFER - 26-006-DA-C106



| REV | DESCRIPTION  | BY | DES | DATE     |
|-----|--------------|----|-----|----------|
| A   | FOR APPROVAL | NM | NM  | 27/05/26 |
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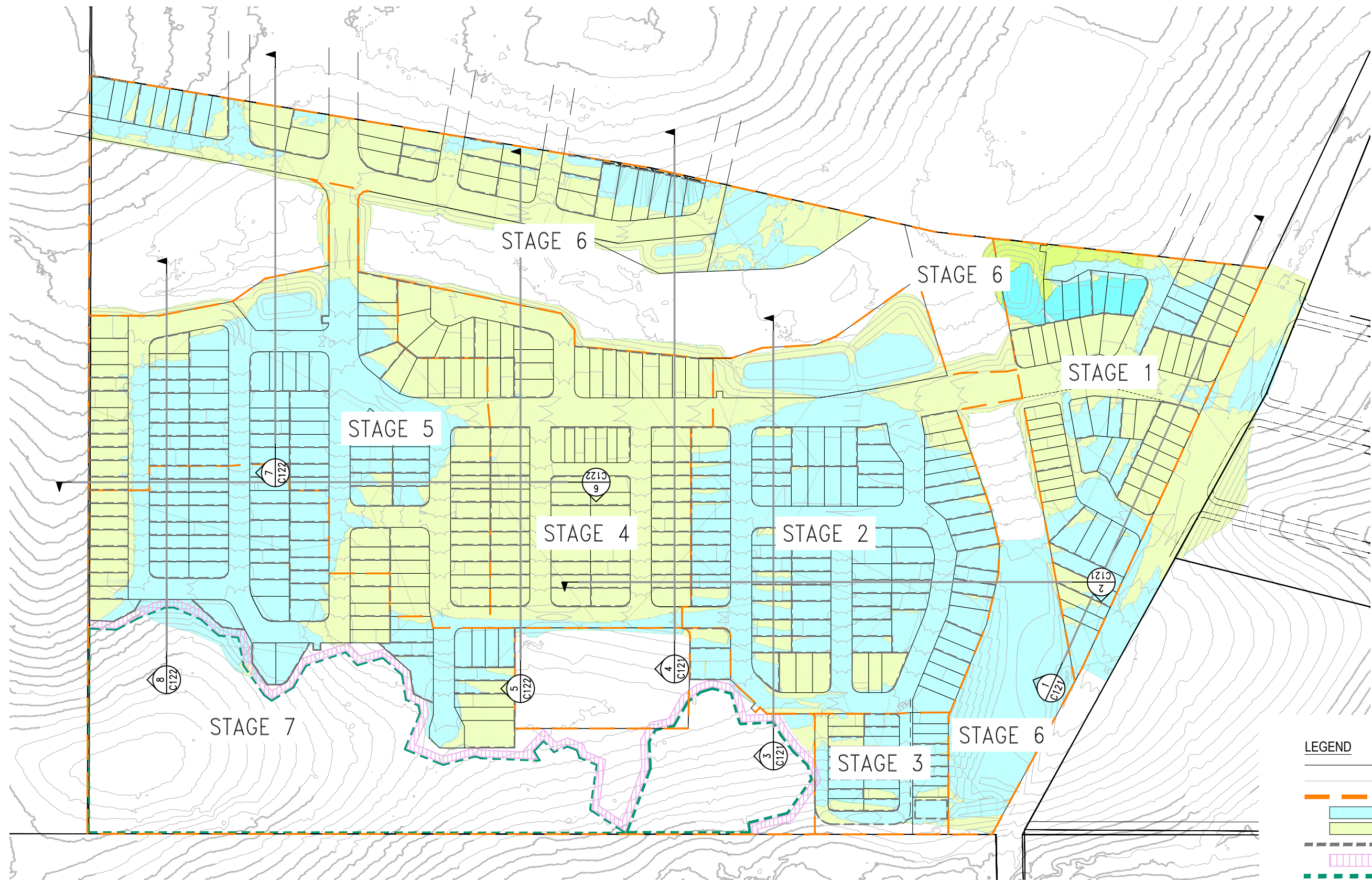
TITLE  
BULK EARTHWORKS  
LAYOUT PLAN  
SHEET 8 OF 8

PROJECT  
400 WYATT ROAD, KAGARU  
RESIDENTIAL DEVELOPMENT

STATUS  
FOR APPROVAL

| DESIGNED   | DRAWN      | APPROVED | DATE     | SCALE | SHEET  |
|------------|------------|----------|----------|-------|--------|
| NM         | NM         | -        | 27/05/26 | 1:500 | 8 of 8 |
| PROJECT No | DRAWING No | REV      |          |       |        |
| 26-006     | C107       | A        |          |       |        |





| LEGEND |                                       |
|--------|---------------------------------------|
|        | PROPOSED LOT BOUNDARY                 |
|        | DESIGN SURFACE CONTOUR (1m INTERVALS) |
|        | PROPOSED STAGE BOUNDARY               |
|        | AREA OF CUT                           |
|        | AREA OF FILL                          |
|        | PROPOSED SLEEPER RETAINING WALL       |
|        | 5m WIDE BUFFER                        |
|        | GROUND-TRUTHED KOALA HABITAT AREAS    |

| REV | DESCRIPTION  | BY | DES | DATE     |
|-----|--------------|----|-----|----------|
| A   | FOR APPROVAL | NM | NM  | 27/05/26 |

15 0 15 30 45 60 75m  
1 : 1500 (FULL SIZE A1)

|                                                                                                                                                                                                                                                                                                                             |       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| NAME:<br>RPEQ:                                                                                                                                                                                                                                                                                                              | DATE: |
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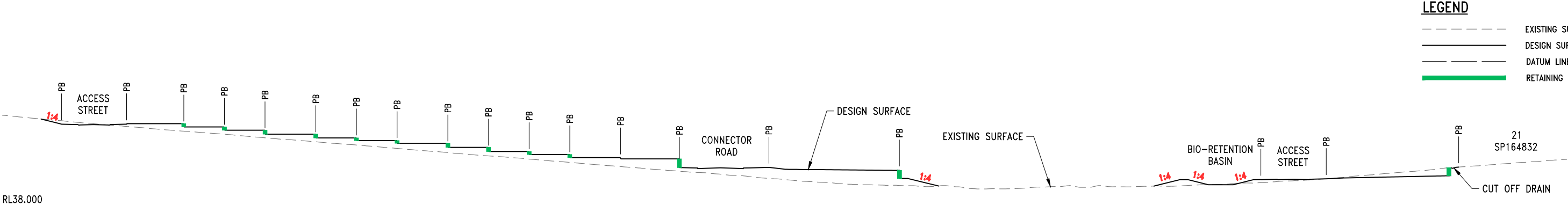


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TITLE  
EARTHWORKS SECTIONS  
KEYMAP

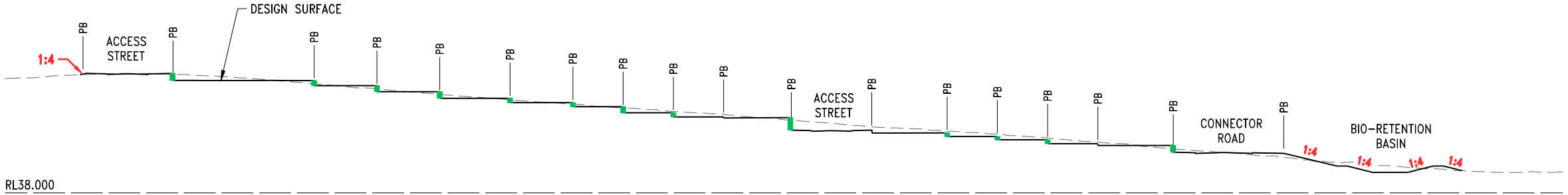
PROJECT  
400 WYATT ROAD, KAGARU  
RESIDENTIAL DEVELOPMENT

STATUS  
FOR APPROVAL

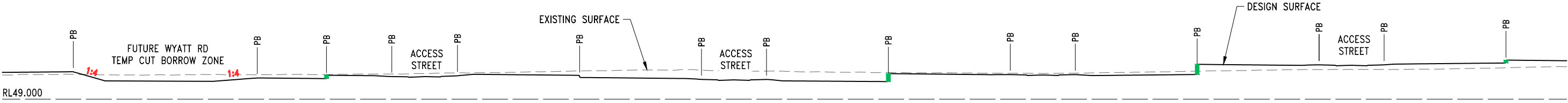
| DESIGNED   | DRAWN      | APPROVED | DATE     | SCALE  | SHEET  |
|------------|------------|----------|----------|--------|--------|
| NM         | NM         | -        | 27/05/26 | 1:1500 | 1 of 1 |
| PROJECT No | DRAWING No | REV      |          |        |        |
| 26-006     | C120       | A        |          |        |        |



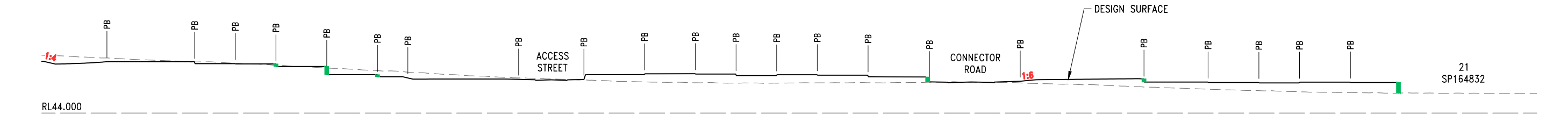
SECTION 4  
SCALE(HOR): 1:500  
SCALE(VERT): 1:500



SECTION 3  
SCALE(HOR): 1:500  
SCALE(VERT): 1:500



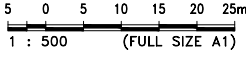
SECTION 2  
SCALE(HOR): 1:500  
SCALE(VERT): 1:500



SECTION 1  
SCALE(HOR): 1:500  
SCALE(VERT): 1:500

LEGEND

|     |                  |
|-----|------------------|
| --- | EXISTING SURFACE |
| —   | DESIGN SURFACE   |
| --- | DATUM LINE       |
| —   | RETAINING WALL   |



NAME: RPEQ: DATE:

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TITLE  
EARTHWORKS SECTIONS  
SHEET 1 OF 2

PROJECT  
400 WYATT ROAD, KAGARU  
RESIDENTIAL DEVELOPMENT

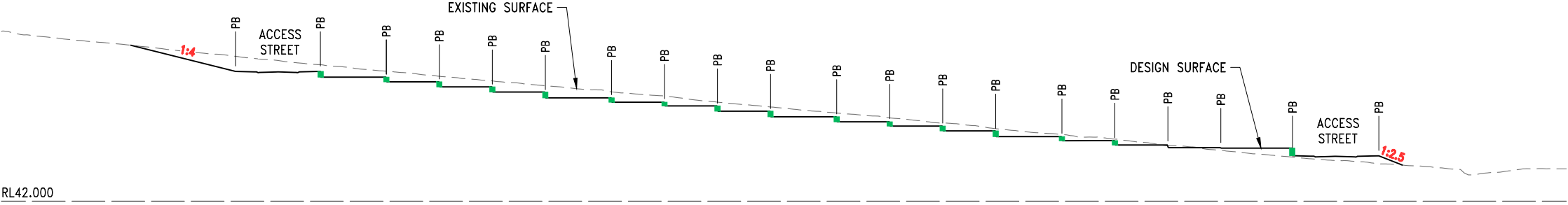
STATUS  
FOR APPROVAL

| DESIGNED   | DRAWN      | APPROVED | DATE     | SCALE | SHEET  |
|------------|------------|----------|----------|-------|--------|
| NM         | NM         | -        | 27/05/26 | 1:500 | 1 of 2 |
| PROJECT No | DRAWING No | REV      |          |       |        |
| 26-006     | C121       | A        |          |       |        |

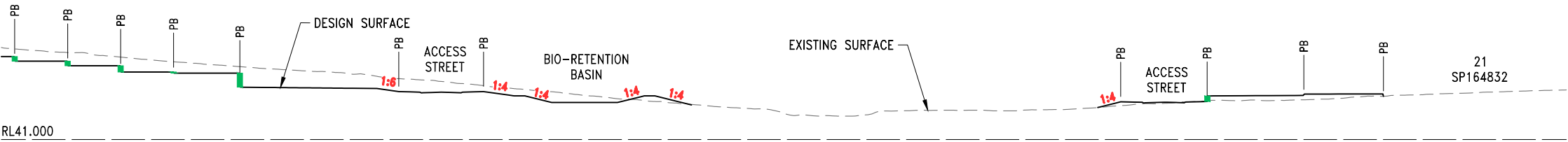


LEGEND

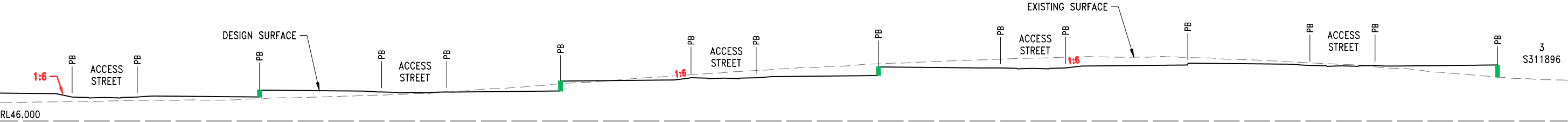
- EXISTING SURFACE
- DESIGN SURFACE
- DATUM LINE
- RETAINING WALL



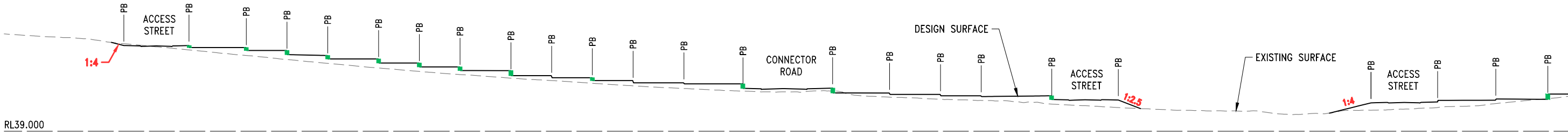
SECTION 8  
SCALE(HOR): 1:500  
SCALE(VERT): 1:500



SECTION 7  
SCALE(HOR): 1:500  
SCALE(VERT): 1:500

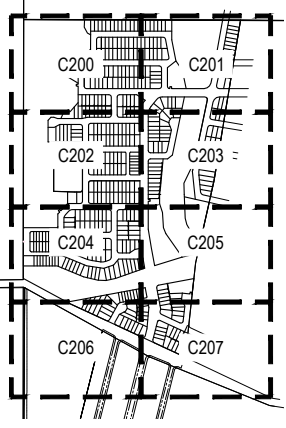
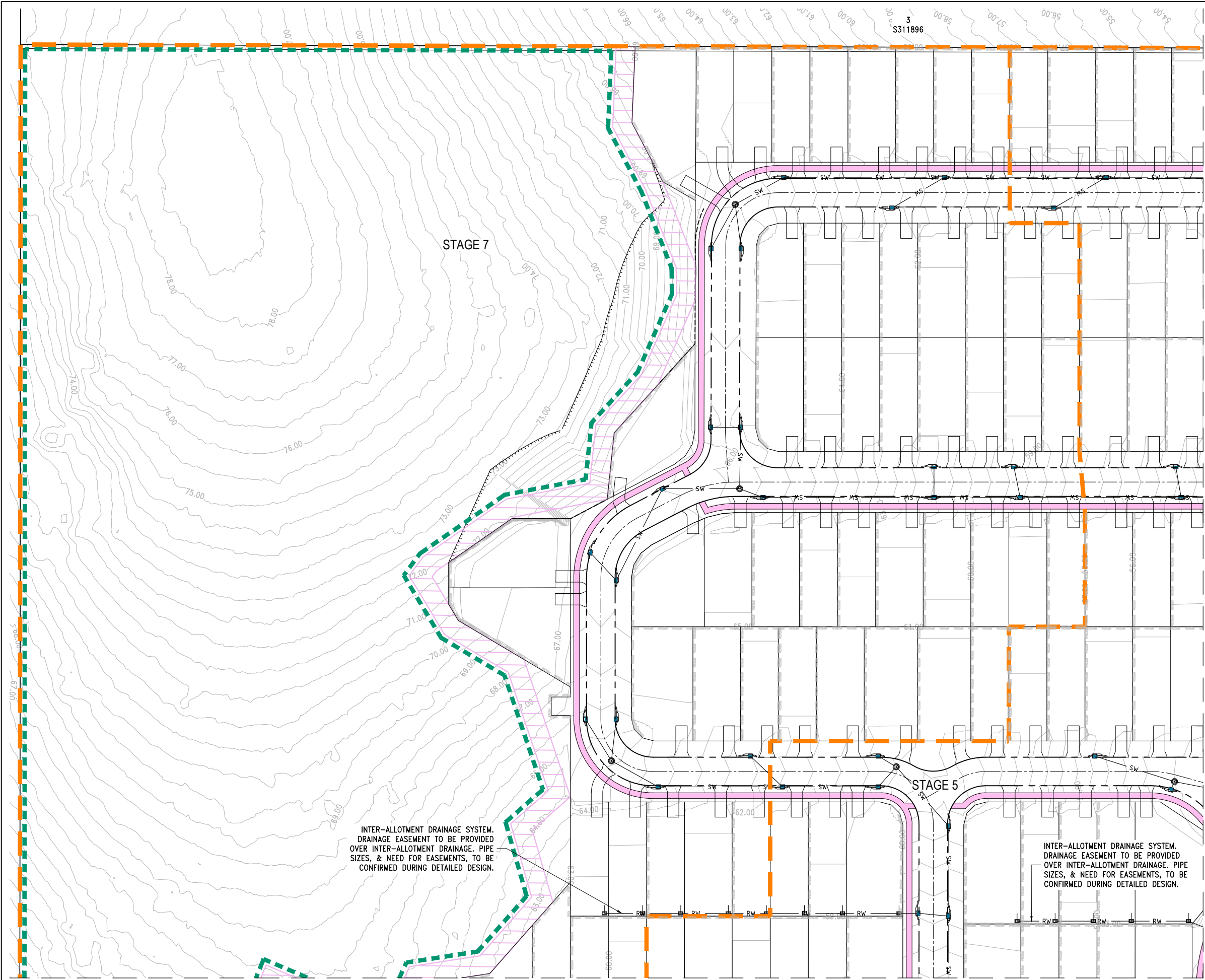


SECTION 6  
SCALE(HOR): 1:500  
SCALE(VERT): 1:500



SECTION 5  
SCALE(HOR): 1:500  
SCALE(VERT): 1:500

| REV | DESCRIPTION  | BY | DES | DATE     | NAME:<br>RPEQ:                                                                                                                                                                                                                                                                                                              | DATE: | CLIENT                                   | PROJECT                                           | STATUS       | DESIGNED   | DRAWN      | APPROVED | DATE     | SCALE | SHEET  |
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| A   | FOR APPROVAL | NM | NM  | 27/05/26 | Approved by, for and on behalf of Ensilon                                                                                                                                                                                                                                                                                   |       | 400 WYATT Pty Ltd                        | 400 WYATT ROAD, KAGARU<br>RESIDENTIAL DEVELOPMENT | FOR APPROVAL | NM         | NM         | -        | 27/05/26 | 1:500 | 2 of 2 |
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|     |              |    |     |          |                                                                                                                                                                                                                                                                                                                             |       |                                          |                                                   |              | 26-006     | C122       |          |          |       | A      |



KEYMAP  
NOT TO SCALE

FOR CONTINUATION REFER - 26-006-DA-C201

LEGEND

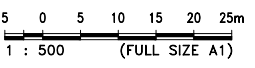
- PROPOSED LOT BOUNDARY
- PROPOSED STAGE BOUNDARY
- PROPOSED KERB AND CHANNEL
- PROPOSED ROAD CONTROL LINE
- DESIGN SURFACE CONTOUR (1m INTERVALS)
- PROPOSED STORMWATER LINE
- PROPOSED ROOFWATER LINE
- PROPOSED STORMWATER STRUCTURE
- PROPOSED ROOFWATER STRUCTURE
- EARTHWORKS BATTER TOP
- EARTHWORKS BATTER BOTTOM
- 1.5m FOOTPATH
- 3.0m SHARED FOOTPATH
- PROPOSED SLEEPER RETAINING WALL
- PROPOSED CUTOFF DRAIN
- QUEENSLAND WATERWAY
- INDICATIVE FUTURE DRIVEWAY
- 5m WIDE BUFFER
- GROUND-TRUTHED KOALA HABITAT AREAS
- PROPOSED LINEMARKING
- PROPOSED RAISED ISLANDS
- FUTURE LOT BOUNDARY
- FUTURE KERB AND CHANNEL

INTER-ALLOTMENT DRAINAGE SYSTEM.  
DRAINAGE EASEMENT TO BE PROVIDED  
OVER INTER-ALLOTMENT DRAINAGE. PIPE  
SIZES, & NEED FOR EASEMENTS, TO BE  
CONFIRMED DURING DETAILED DESIGN.

INTER-ALLOTMENT DRAINAGE SYSTEM.  
DRAINAGE EASEMENT TO BE PROVIDED  
OVER INTER-ALLOTMENT DRAINAGE. PIPE  
SIZES, & NEED FOR EASEMENTS, TO BE  
CONFIRMED DURING DETAILED DESIGN.

FOR CONTINUATION REFER - 26-006-DA-C202

| REV | DESCRIPTION  | BY | DES | DATE     |
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CLIENT

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TITLE

ROADWORKS AND DRAINAGE  
LAYOUT PLAN  
SHEET 1 OF 8

PROJECT

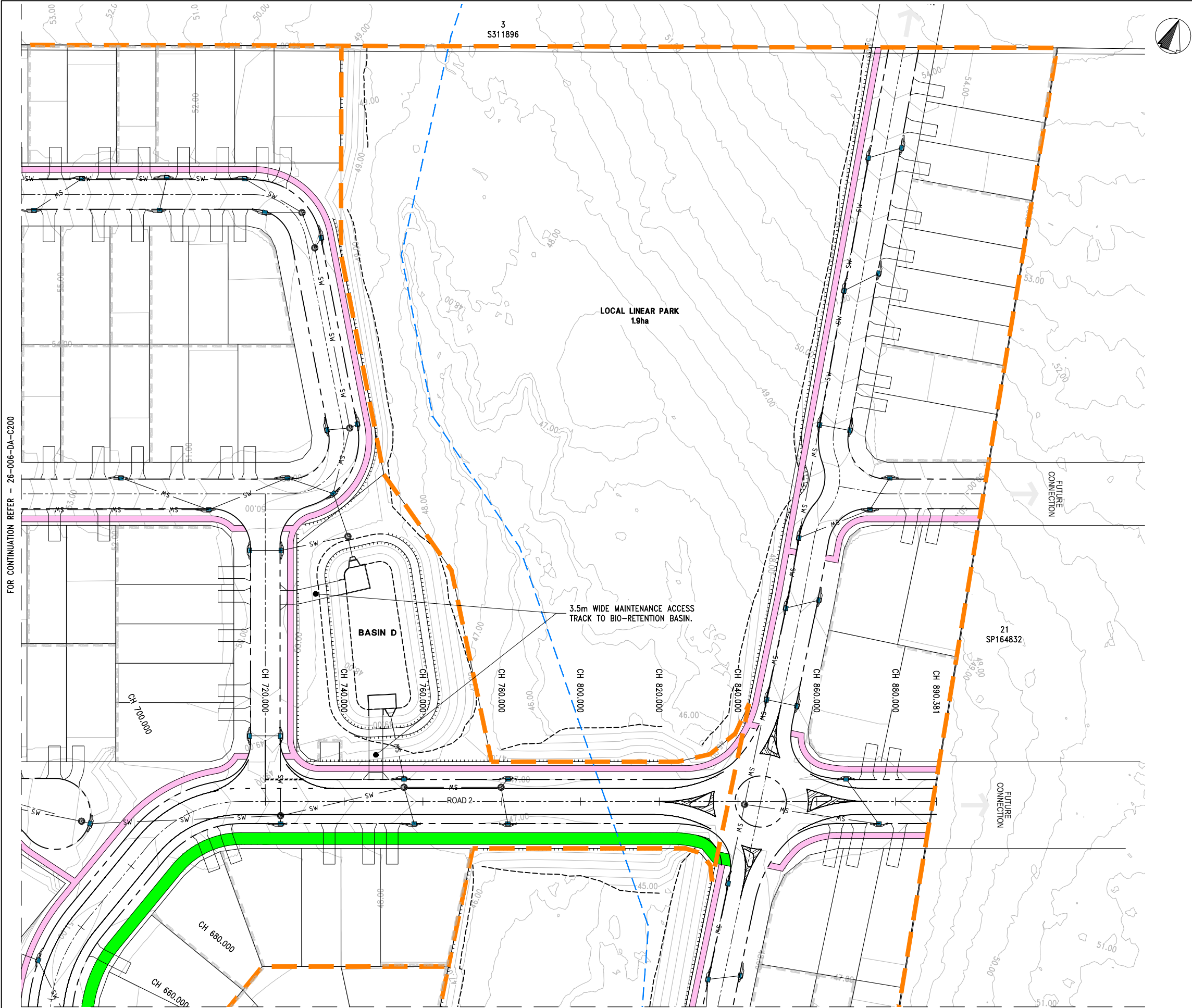
400 WYATT ROAD, KAGARU  
RESIDENTIAL DEVELOPMENT

STATUS

FOR APPROVAL

|            |            |          |          |       |        |
|------------|------------|----------|----------|-------|--------|
| DESIGNED   | DRAWN      | APPROVED | DATE     | SCALE | SHEET  |
| NM         | NM         | -        | 27/05/26 | 1:500 | 1 OF 8 |
| PROJECT No | DRAWING No | REV      |          |       |        |
| 26-006     | C200       | A        |          |       |        |



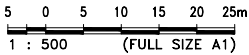


FOR CONTINUATION REFER - 26-006-DA-C200

FOR CONTINUATION REFER - 26-006-DA-C203

NOTE:  
REFER DRAWING C200 FOR LEGEND  
AND KEYMAP.

| REV | DESCRIPTION  | BY | DES | DATE     |
|-----|--------------|----|-----|----------|
| A   | FOR APPROVAL | NM | NM  | 27/05/26 |
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|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| NAME:<br>RPEQ:                                                                                                                                                                                                                                                                                                              | DATE: |
| Approved by, for and on behalf of Ensilon                                                                                                                                                                                                                                                                                   |       |
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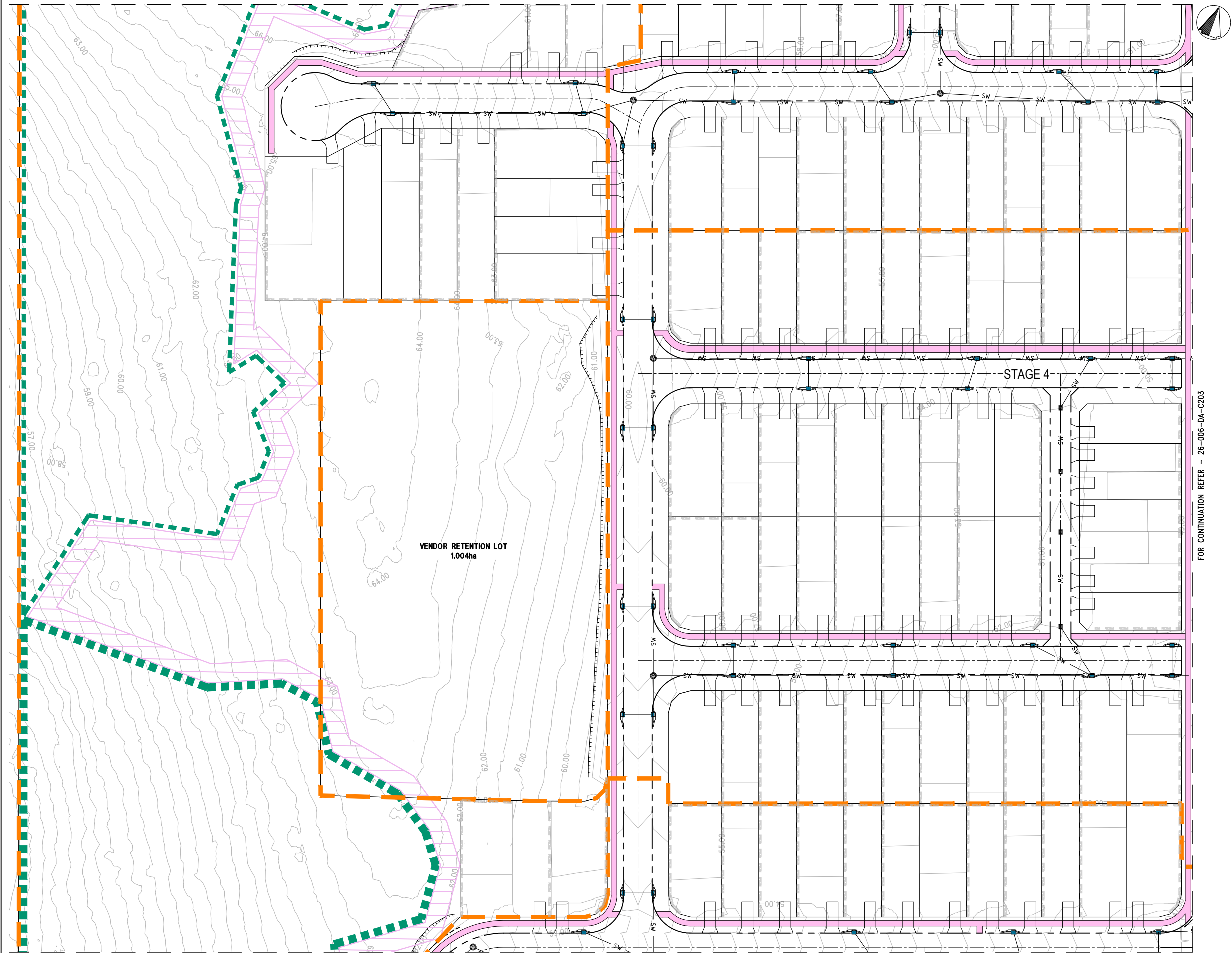


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|        |                                                       |
|--------|-------------------------------------------------------|
| CLIENT | 400 WYATT Pty Ltd                                     |
| TITLE  | ROADWORKS AND DRAINAGE<br>LAYOUT PLAN<br>SHEET 2 OF 8 |

|                                                   |  |                      |       |                    |          |            |        |
|---------------------------------------------------|--|----------------------|-------|--------------------|----------|------------|--------|
| PROJECT                                           |  |                      |       |                    |          |            |        |
| 400 WYATT ROAD, KAGARU<br>RESIDENTIAL DEVELOPMENT |  |                      |       |                    |          |            |        |
| STATUS<br><br>FOR APPROVAL                        |  | DESIGNED             | DRAWN | APPROVED           | DATE     | SCALE @ A1 | SHEET  |
|                                                   |  | NM                   | NM    | -                  | 27/05/26 | 1:500      | 2 of 8 |
|                                                   |  | PROJECT No<br>26-006 |       | DRAWING No<br>C201 |          | REV<br>A   |        |

NOTE:  
REFER DRAWING C200 FOR LEGEND  
AND KEYMAP.



FOR CONTINUATION REFER - 26-006-DA-C204

| REV | DESCRIPTION  | BY | DES | DATE     |
|-----|--------------|----|-----|----------|
| A   | FOR APPROVAL | NM | NM  | 27/05/26 |
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5 0 5 10 15 20 25m  
1 : 500 (FULL SIZE A1)

|                                                                                                                                                                                                                                                                                                                                |       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| NAME:<br>RPEQ:                                                                                                                                                                                                                                                                                                                 | DATE: |
| Approved by, for and on behalf of Ensilon                                                                                                                                                                                                                                                                                      |       |
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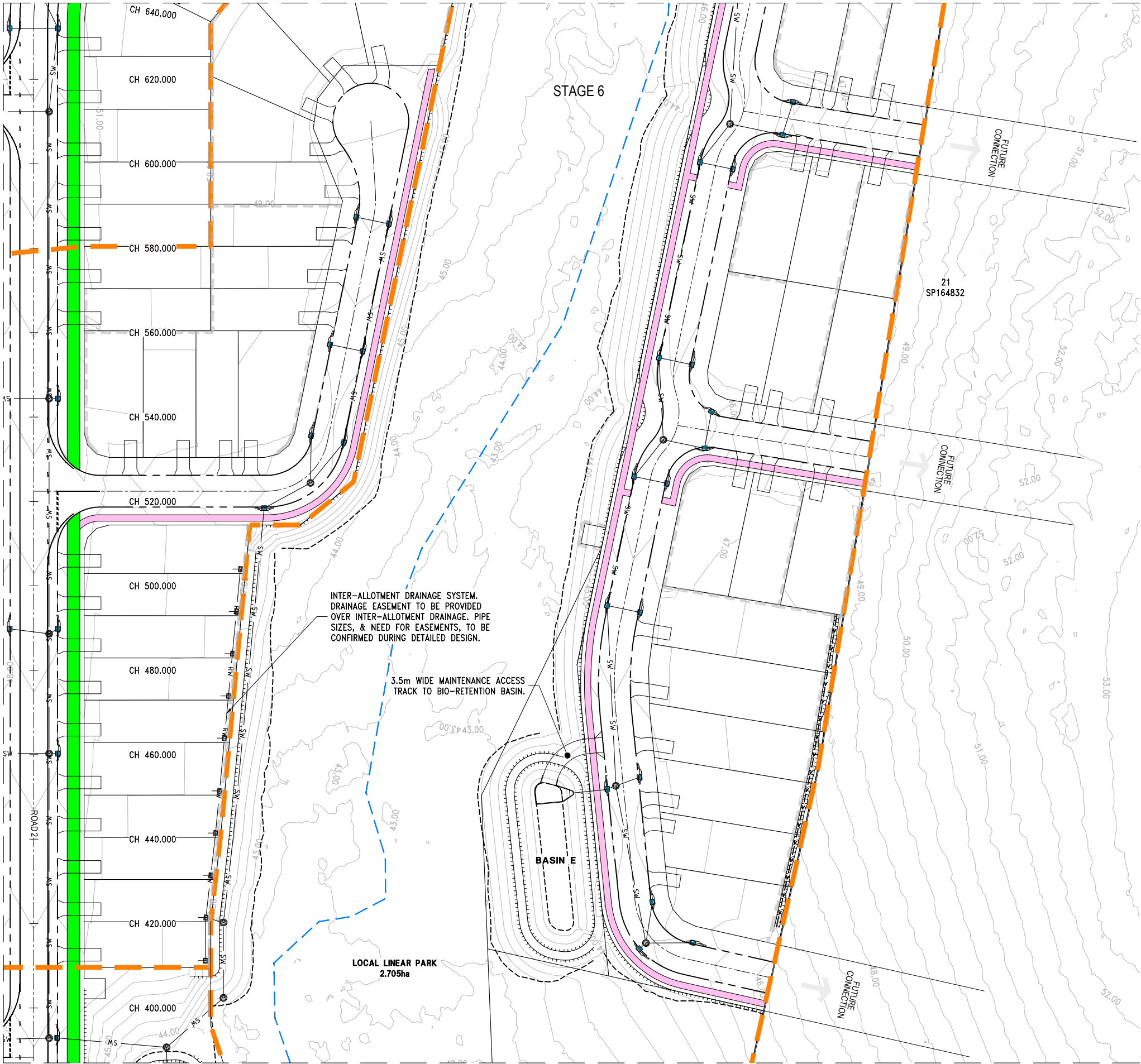
|        |                                                       |
|--------|-------------------------------------------------------|
| CLIENT | 400 WYATT Pty Ltd                                     |
| TITLE  | ROADWORKS AND DRAINAGE<br>LAYOUT PLAN<br>SHEET 3 OF 8 |

|                                                   |              |            |          |          |       |        |
|---------------------------------------------------|--------------|------------|----------|----------|-------|--------|
| PROJECT                                           |              |            |          |          |       |        |
| 400 WYATT ROAD, KAGARU<br>RESIDENTIAL DEVELOPMENT |              |            |          |          |       |        |
| STATUS                                            | FOR APPROVAL |            |          |          |       |        |
|                                                   | DESIGNED     | DRAWN      | APPROVED | DATE     | SCALE | SHEET  |
|                                                   | NM           | NM         | -        | 27/05/26 | 1:500 | 3 of 8 |
|                                                   | PROJECT No   | DRAWING No |          |          | REV   |        |
|                                                   | 26-006       | C202       |          |          | A     |        |



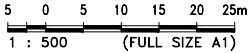
NOTE:  
REFER DRAWING C200 FOR LEGEND  
AND KEYMAP.

FOR CONTINUATION REFER - 26-006-DA-C202



FOR CONTINUATION REFER - 26-006-DA-C205

| REV | DESCRIPTION  | BY | DES | DATE     |
|-----|--------------|----|-----|----------|
| A   | FOR APPROVAL | NM | NM  | 27/05/26 |
|     |              |    |     |          |
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NAME:  
RPEQ:  
DATE:  
  
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TITLE  
ROADWORKS AND DRAINAGE  
LAYOUT PLAN  
SHEET 4 OF 8

PROJECT  
400 WYATT ROAD, KAGARU  
RESIDENTIAL DEVELOPMENT

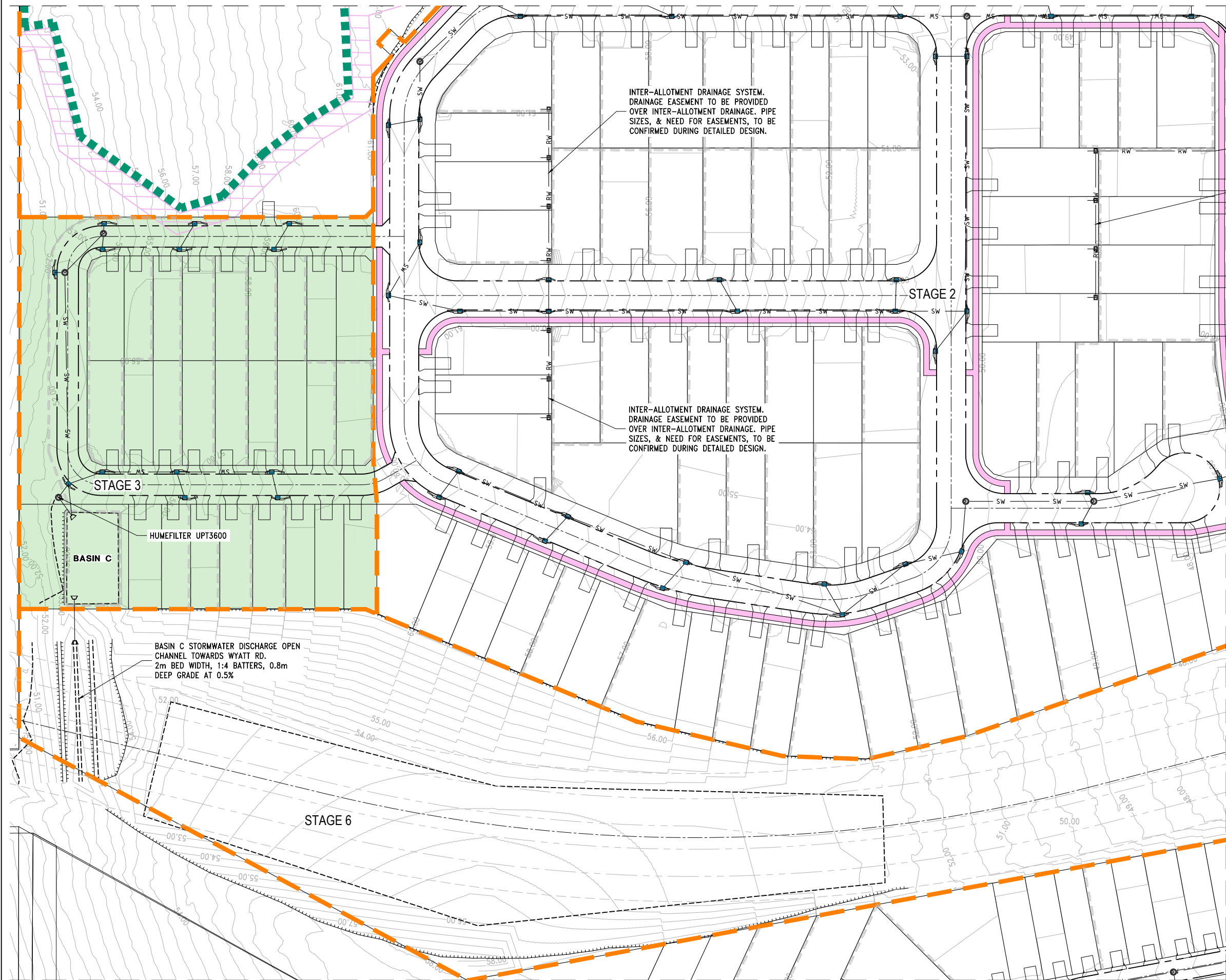
STATUS  
FOR APPROVAL

| DESIGNED   | DRAWN      | APPROVED | DATE     | SCALE | SHEET  |
|------------|------------|----------|----------|-------|--------|
| NM         | NM         | -        | 27/05/26 | 1:500 | 4 of 8 |
| PROJECT No | DRAWING No | REV      |          |       |        |
| 26-006     | C203       | A        |          |       |        |

FOR CONTINUATION REFER - 26-006-DA-C202

NOTE:  
REFER DRAWING C200 FOR LEGEND  
AND KEYMAP.

NOTE:  
GREEN HATCHED AREA DELINEATES  
THE PROPOSED COMMUNITY TITLES  
AREA.



FOR CONTINUATION REFER - 26-006-DA-C206

| REV | DESCRIPTION  | BY | DES | DATE     |
|-----|--------------|----|-----|----------|
| A   | FOR APPROVAL | NM | NM  | 27/05/26 |

5 0 5 10 15 20 25m  
1 : 500 (FULL SIZE A1)

NAME:  
RPEQ:

DATE:

Approved by, for and on behalf of Ensilon

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TITLE  
ROADWORKS AND DRAINAGE  
LAYOUT PLAN  
SHEET 5 OF 8

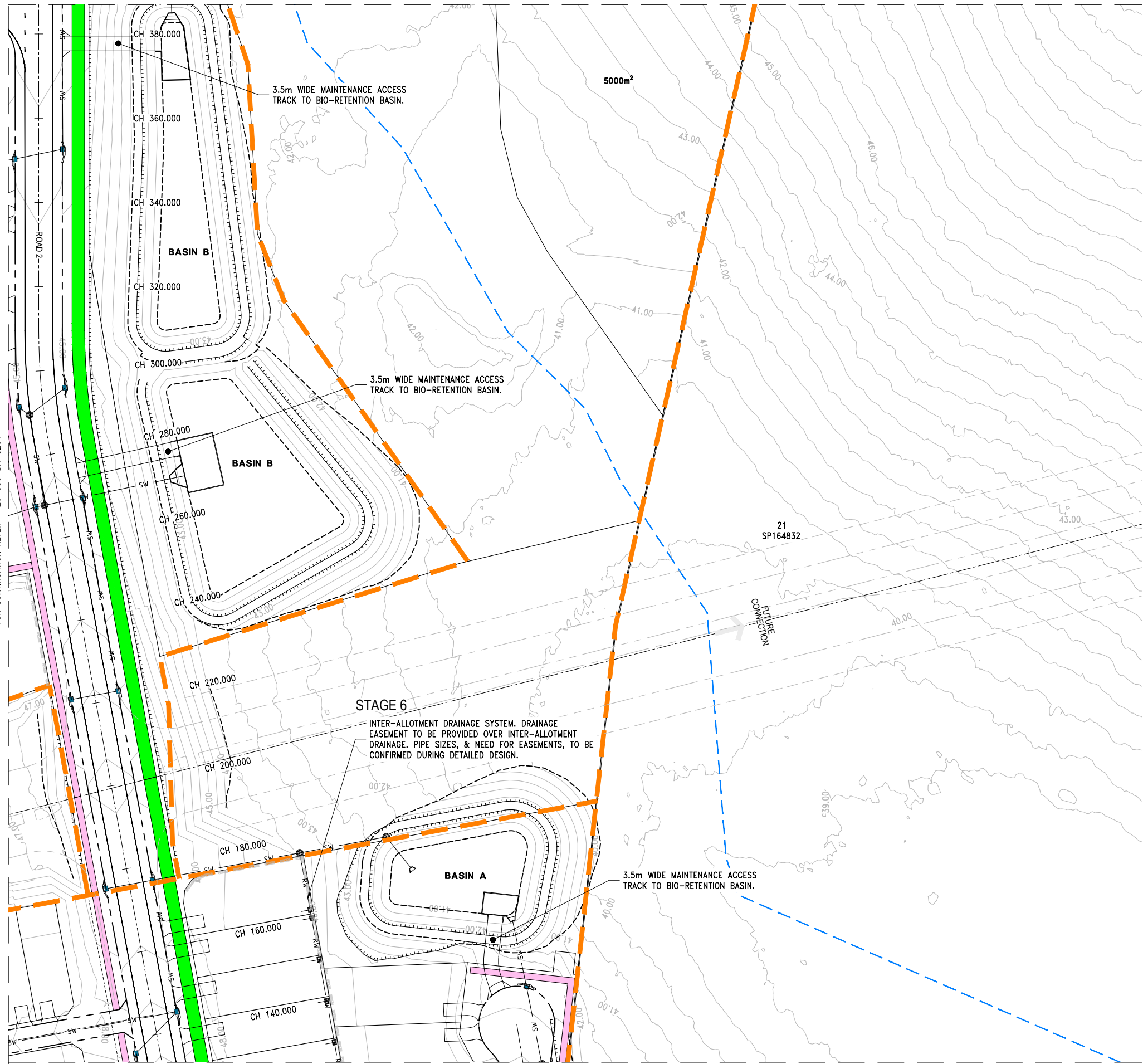
| PROJECT                                           |  | STATUS             |  | DESIGNED | DRAWN | APPROVED | DATE     | SCALE | SHEET  |
|---------------------------------------------------|--|--------------------|--|----------|-------|----------|----------|-------|--------|
| 400 WYATT ROAD, KAGARU<br>RESIDENTIAL DEVELOPMENT |  | FOR APPROVAL       |  | NM       | NM    | -        | 27/05/26 | 1:500 | 5 of 8 |
| PROJECT No<br>26-006                              |  | DRAWING No<br>C204 |  | REV<br>A |       |          |          |       |        |





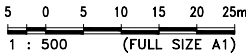
NOTE:  
REFER DRAWING C200 FOR LEGEND  
AND KEYMAP.

FOR CONTINUATION REFER - 26-006-DA-C204



FOR CONTINUATION REFER - 26-006-DA-C207

| REV | DESCRIPTION  | BY | DES | DATE     |
|-----|--------------|----|-----|----------|
| A   | FOR APPROVAL | NM | NM  | 27/05/26 |



|                                                                                                                                                                                                                                                                                                                             |       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| NAME:<br>RPEQ:                                                                                                                                                                                                                                                                                                              | DATE: |
| Approved by, for and on behalf of Ensilon                                                                                                                                                                                                                                                                                   |       |
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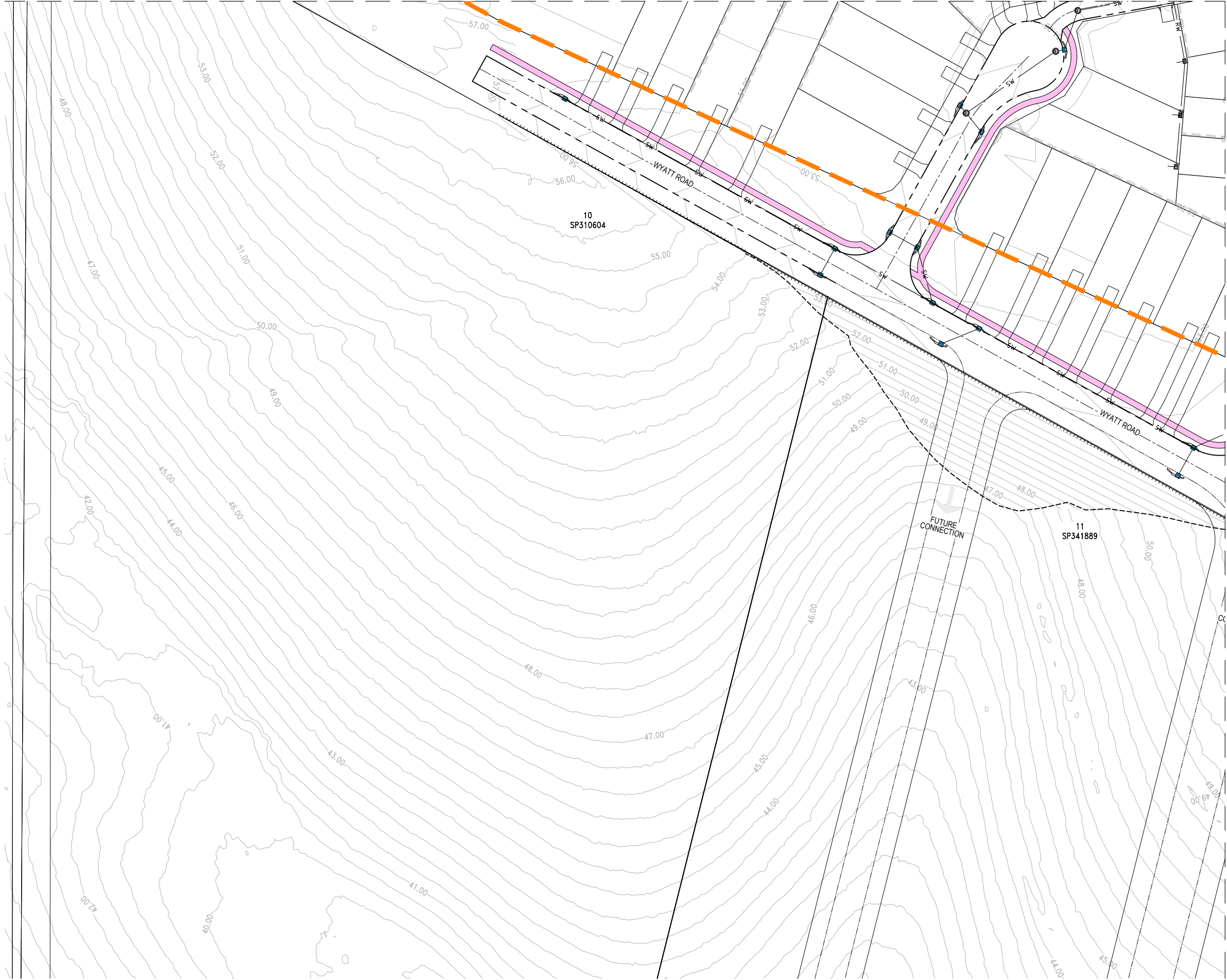
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|        |                                                       |
|--------|-------------------------------------------------------|
| CLIENT | 400 WYATT Pty Ltd                                     |
| TITLE  | ROADWORKS AND DRAINAGE<br>LAYOUT PLAN<br>SHEET 6 OF 8 |

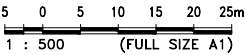
|                      |  |                                                   |  |                |             |               |                  |                     |                 |
|----------------------|--|---------------------------------------------------|--|----------------|-------------|---------------|------------------|---------------------|-----------------|
| PROJECT              |  | 400 WYATT ROAD, KAGARU<br>RESIDENTIAL DEVELOPMENT |  |                |             |               |                  |                     |                 |
| STATUS               |  | FOR APPROVAL                                      |  | DESIGNED<br>NM | DRAWN<br>NM | APPROVED<br>- | DATE<br>27/05/26 | SCALE @ A1<br>1:500 | SHEET<br>6 of 8 |
| PROJECT No<br>26-006 |  | DRAWING No<br>C205                                |  |                |             | REV<br>A      |                  |                     |                 |

NOTE:  
REFER DRAWING C200 FOR LEGEND  
AND KEYMAP.



FOR CONTINUATION REFER - 26-006-DA-C207

| REV | DESCRIPTION  | BY | DES | DATE     |
|-----|--------------|----|-----|----------|
| A   | FOR APPROVAL | NM | NM  | 27/05/26 |
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NAME:  
RPEQ: \_\_\_\_\_ DATE: \_\_\_\_\_  
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TITLE  
ROADWORKS AND DRAINAGE  
LAYOUT PLAN  
SHEET 7 OF 8

PROJECT  
400 WYATT ROAD, KAGARU  
RESIDENTIAL DEVELOPMENT

STATUS  
FOR APPROVAL

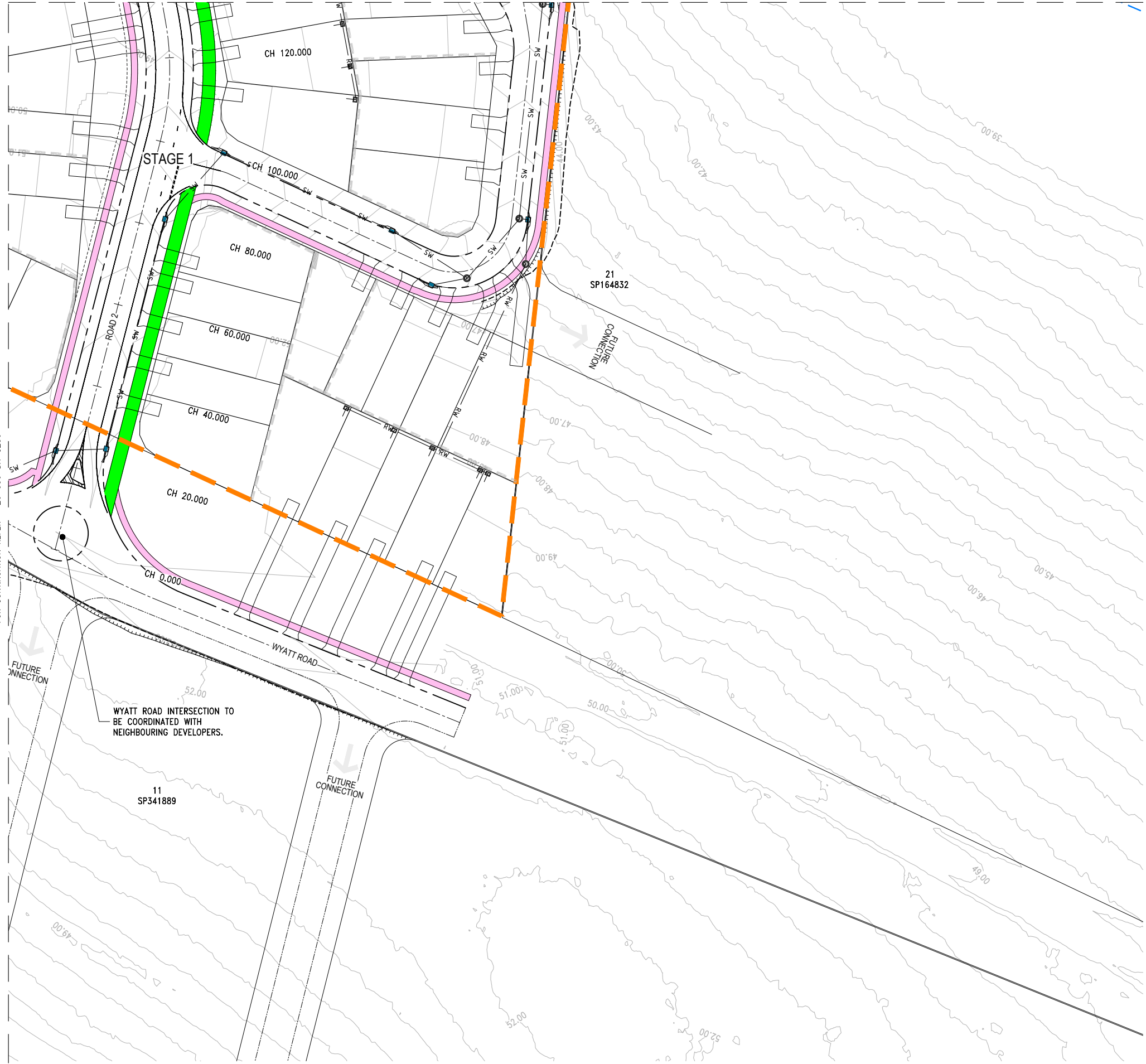
| DESIGNED   | DRAWN      | APPROVED | DATE     | SCALE @ A1 | SHEET  |
|------------|------------|----------|----------|------------|--------|
| NM         | NM         | -        | 27/05/26 | 1:500      | 7 of 8 |
| PROJECT No | DRAWING No | REV      |          |            |        |
| 26-006     | C206       | A        |          |            |        |



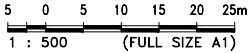


NOTE:  
REFER DRAWING C200 FOR LEGEND  
AND KEYMAP.

FOR CONTINUATION REFER - 26-006-DA-C206



| REV | DESCRIPTION  | BY | DES | DATE     |
|-----|--------------|----|-----|----------|
| A   | FOR APPROVAL | NM | NM  | 27/05/26 |
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NAME:  
RPEQ: \_\_\_\_\_ DATE: \_\_\_\_\_

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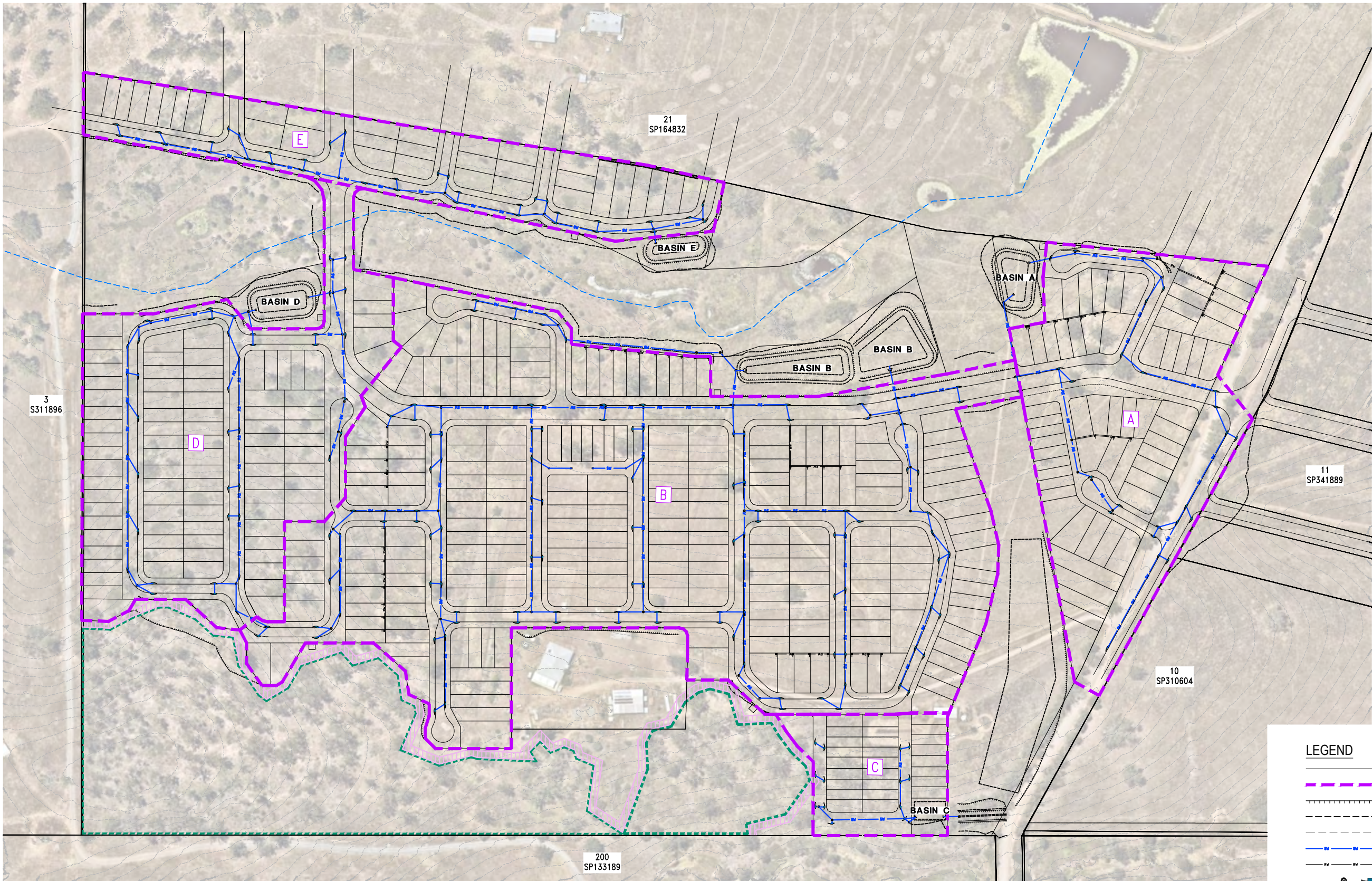
TITLE  
ROADWORKS AND DRAINAGE  
LAYOUT PLAN  
SHEET 8 OF 8

PROJECT  
400 WYATT ROAD, KAGARU  
RESIDENTIAL DEVELOPMENT

STATUS  
FOR APPROVAL

| DESIGNED   | DRAWN      | APPROVED | DATE     | SCALE | A1 | SHEET  |
|------------|------------|----------|----------|-------|----|--------|
| NM         | NM         | -        | 27/05/26 | 1:500 |    | 8 of 8 |
| PROJECT No | DRAWING No | REV      |          |       |    |        |
| 26-006     | C207       | A        |          |       |    |        |





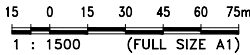
CATCHMENT TABLE

| CATCHMENT NAME | CATCHMENT AREA (ha) |
|----------------|---------------------|
| A              | 3.97                |
| B              | 12.63               |
| C              | 0.96                |
| D              | 4.67                |
| E              | 2.55                |

LEGEND

- PROPOSED LOT BOUNDARY
- STORMWATER QUALITY CATCHMENT
- EARTHWORKS BATTER TOP
- EARTHWORKS BATTER BOTTOM
- EXISTING SURFACE CONTOUR (1m INTERVALS)
- PROPOSED STORMWATER LINE
- PROPOSED ROOFWATER LINE
- PROPOSED STORMWATER STRUCTURE
- PROPOSED ROOFWATER STRUCTURE
- STORMWATER QUALITY CATCHMENT LABEL
- QUEENSLAND WATERWAY
- 5m WIDE BUFFER
- GROUND-TRUTHED KOALA HABITAT AREAS

| REV | DESCRIPTION  | BY | DES | DATE     |
|-----|--------------|----|-----|----------|
| A   | FOR APPROVAL | NM | NM  | 27/05/26 |



NAME:  
RPEQ: DATE:

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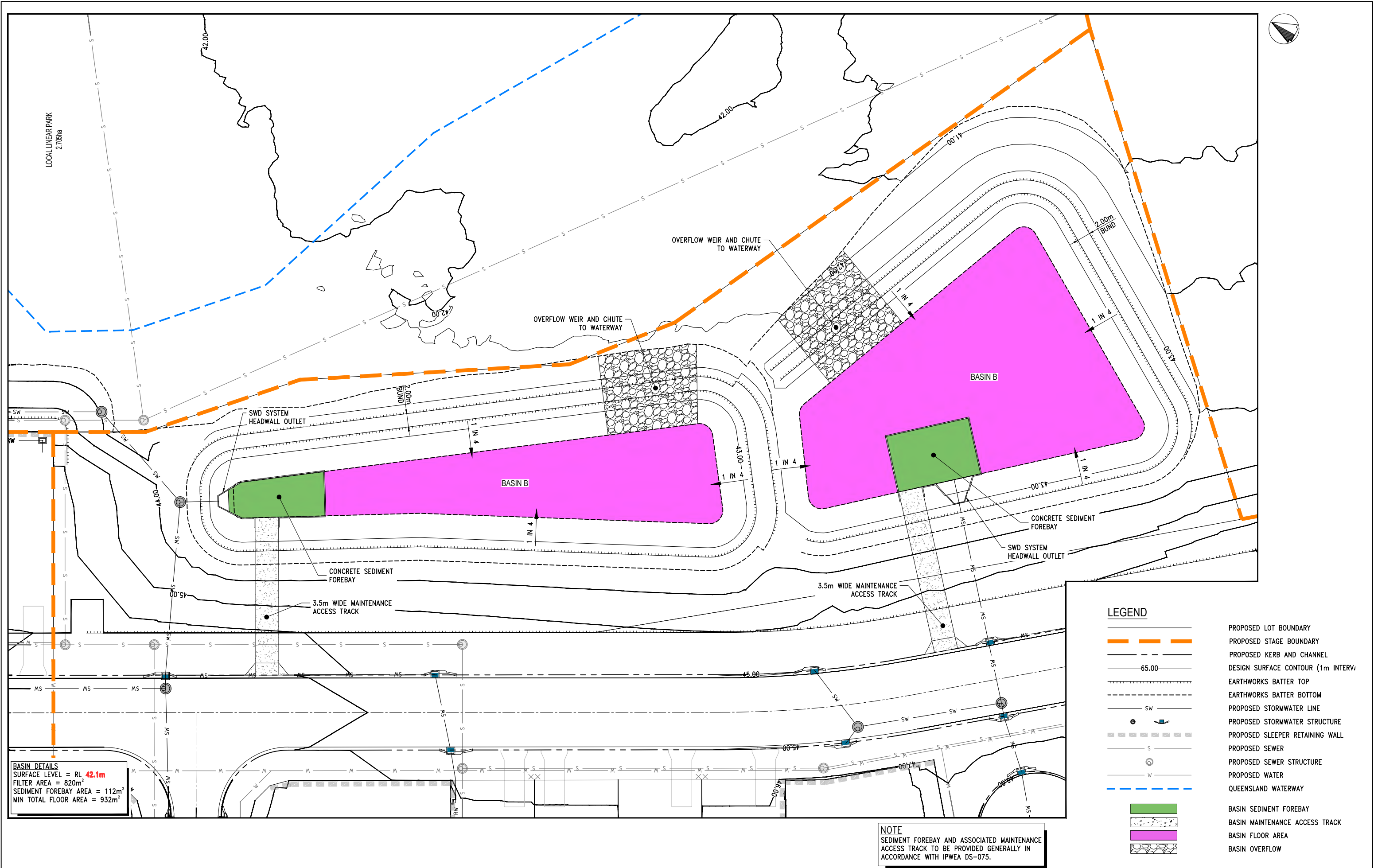
TITLE  
STORMWATER QUALITY CATCHMENT LAYOUT PLAN

PROJECT  
400 WYATT ROAD, KAGARU RESIDENTIAL DEVELOPMENT

STATUS  
FOR APPROVAL

| DESIGNED   | DRAWN      | APPROVED | DATE     | SCALE  | SHEET  |
|------------|------------|----------|----------|--------|--------|
| NM         | NM         | -        | 27/05/26 | 1:1500 | 1 of 1 |
| PROJECT No | DRAWING No | REV      |          |        |        |
| 26-006     | C210       | A        |          |        |        |



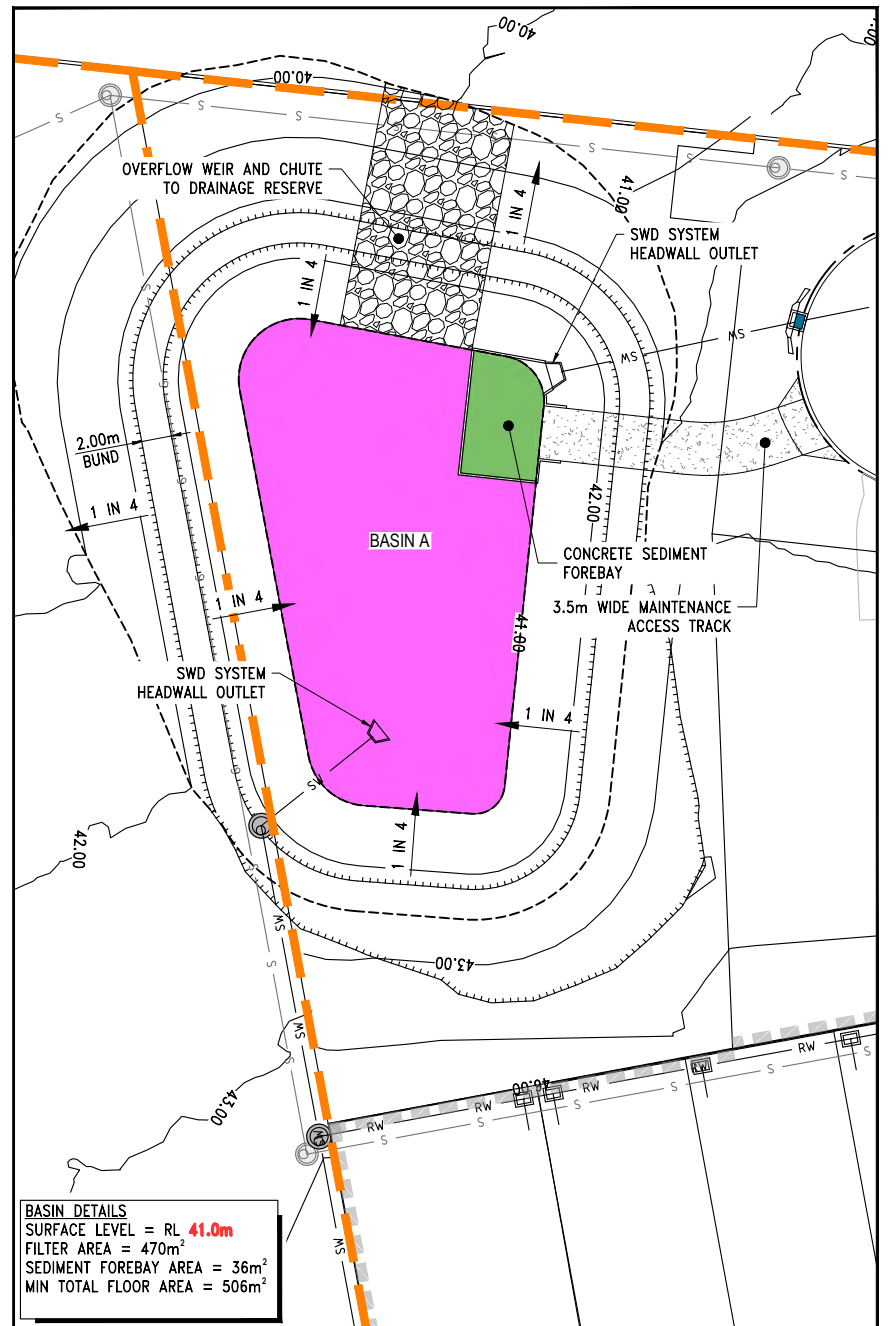
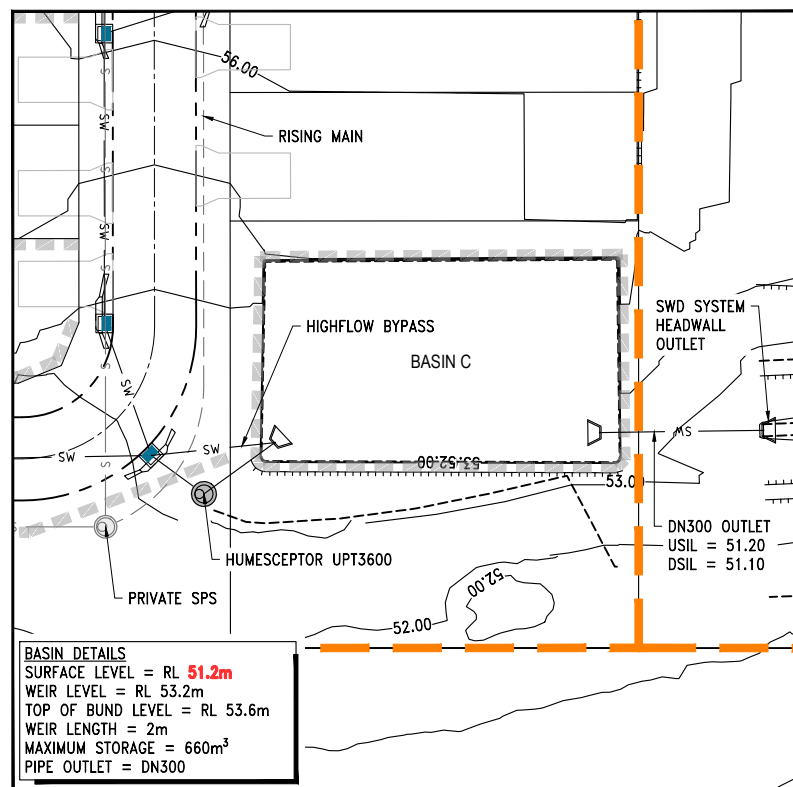
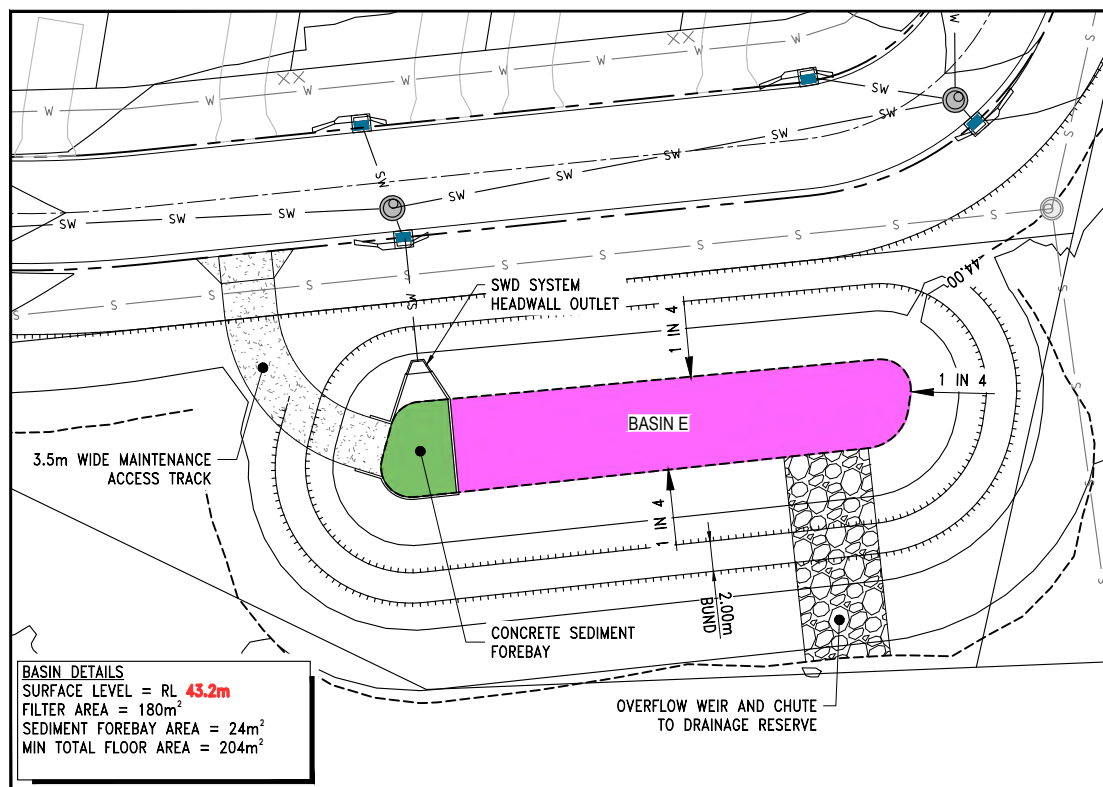
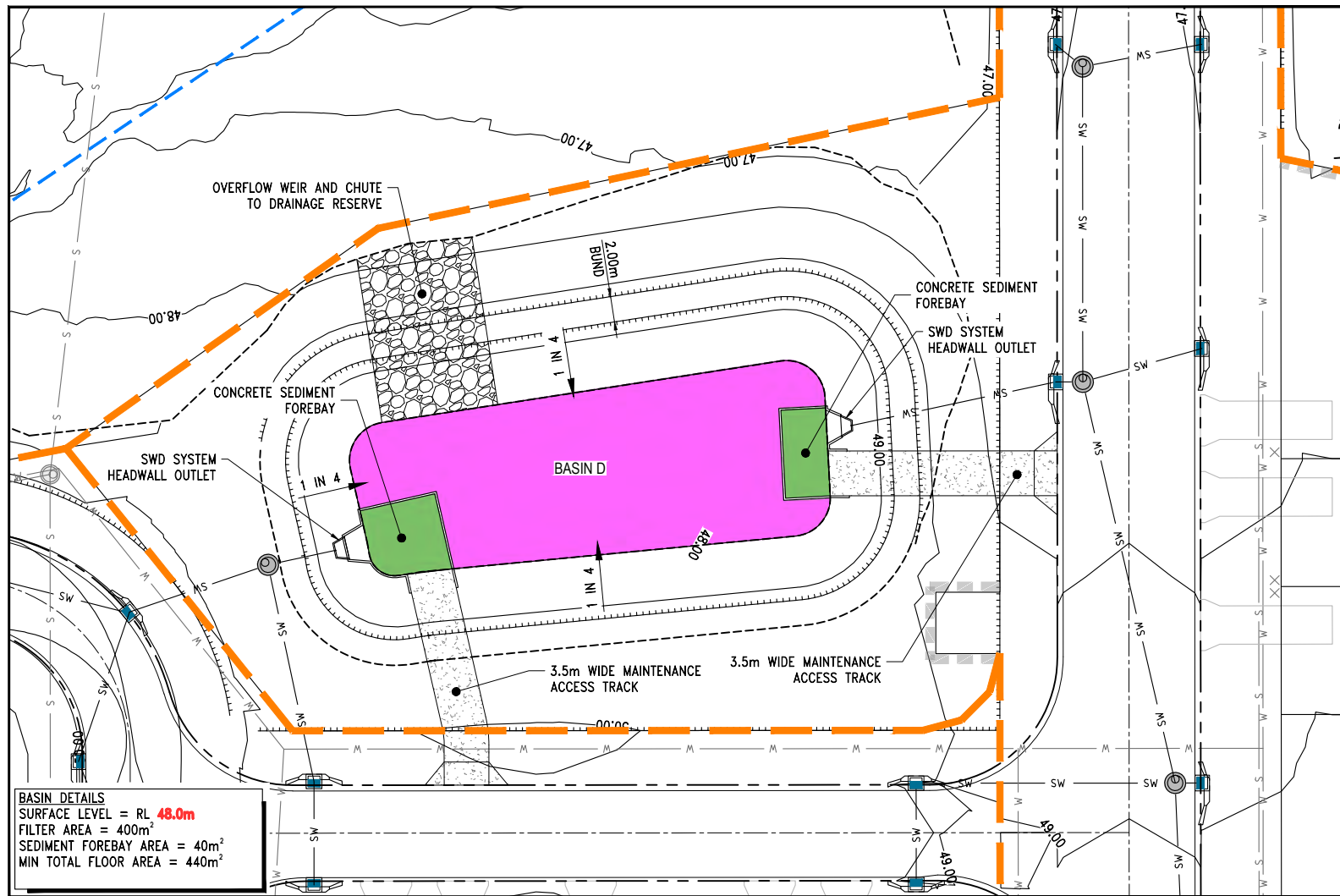


**BASIN DETAILS**  
SURFACE LEVEL = RL **42.1m**  
FILTER AREA = 820m<sup>2</sup>  
SEDIMENT FOREBAY AREA = 112m<sup>2</sup>  
MIN TOTAL FLOOR AREA = 932m<sup>2</sup>

**NOTE**  
SEDIMENT FOREBAY AND ASSOCIATED MAINTENANCE ACCESS TRACK TO BE PROVIDED GENERALLY IN ACCORDANCE WITH IPWEA DS-075.

**LEGEND**

- PROPOSED LOT BOUNDARY
- PROPOSED STAGE BOUNDARY
- PROPOSED KERB AND CHANNEL
- DESIGN SURFACE CONTOUR (1m INTV)
- EARTHWORKS BATTER TOP
- EARTHWORKS BATTER BOTTOM
- PROPOSED STORMWATER LINE
- PROPOSED STORMWATER STRUCTURE
- PROPOSED SLEEPER RETAINING WALL
- PROPOSED SEWER
- PROPOSED SEWER STRUCTURE
- PROPOSED WATER
- QUEENSLAND WATERWAY
- BASIN SEDIMENT FOREBAY
- BASIN MAINTENANCE ACCESS TRACK
- BASIN FLOOR AREA
- BASIN OVERFLOW



NOTE:  
REFER DRAWING C211 FOR LEGEND.

NOTE  
SEDIMENT FOREBAY AND ASSOCIATED MAINTENANCE ACCESS TRACK TO BE PROVIDED GENERALLY IN ACCORDANCE WITH IPWEA DS-075.

| REV | DESCRIPTION  | BY | DES | DATE     |
|-----|--------------|----|-----|----------|
| A   | FOR APPROVAL | NM | NM  | 27/05/26 |

5 0 5 10m  
1 : 250 (FULL SIZE A1)

NAME:  
RPEQ:

DATE:

Approved by, for and on behalf of Ensilon

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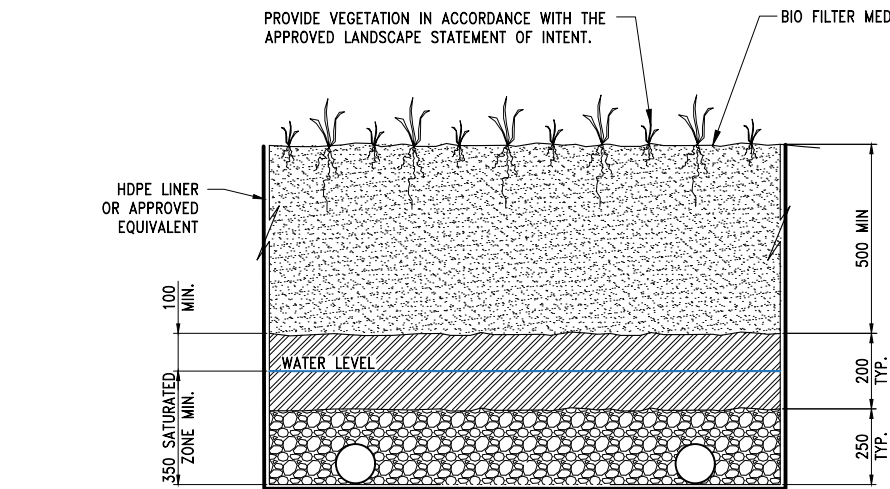
TITLE  
BIORETENTION BASIN LAYOUT PLAN  
SHEET 2 OF 2

PROJECT  
400 WYATT ROAD, KAGARU RESIDENTIAL DEVELOPMENT

STATUS  
FOR APPROVAL

| DESIGNED   | DRAWN      | APPROVED | DATE     | SCALE | SHEET  |
|------------|------------|----------|----------|-------|--------|
| NM         | NM         | -        | 27/05/26 | 1:250 | 2 of 2 |
| PROJECT No | DRAWING No |          |          |       | REV    |
| 26-006     | C212       |          |          |       | A      |





TYPICAL UNDER DRAINAGE:  
 Ø150mm SLOTTED RIGID PIPE (uPVC OR SIMILAR TO AS 2439.1) OR APPROVED EQUIVALENT, 0.5% MIN. GRADE, SPACED EQUALLY AT MAX. 2.0m CENTRES, END OF LINE TO INCLUDE FLUSHING POINTS, (REFER IPWEAQ STANDARD DRAWING WSUD-001 & WSUD-004)

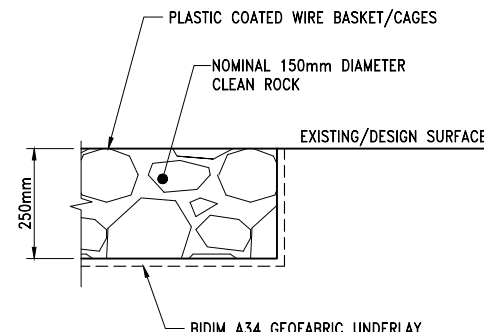
**BIO-RETENTION MEDIA CROSS SECTION**  
 N.T.S.

**FILTER MEDIA**  
 SANDY LOAM WITH 400-500mm/hr SATURATED HYDRAULIC CONDUCTIVITY. IN-SITU HYDRAULIC CONDUCTIVITY TO REACH 180mm/hr ONCE SETTLEMENT AND COMPACTION HAS TAKEN PLACE. PARTICLE SIZE DISTRIBUTION AS FOLLOWS:  
 CLAY & SILT <3% (<0.05mm)  
 VERY FINE SAND 5-30% (0.05-0.15mm)  
 FINE SAND 10-30% (0.15-0.25mm)  
 MEDIUM TO COARSE SAND 40-60% (0.25-1.0mm)  
 COARSE SAND 7-10% (1.0-2.0mm)  
 FINE GRAVEL <3% (2.0-3.4mm)  
 ORGANIC CONTENT 5% (w/w) MAX.  
 pH BETWEEN 5.5-7.5  
 PHOSPHORUS CONCENTRATION <100mg/kg

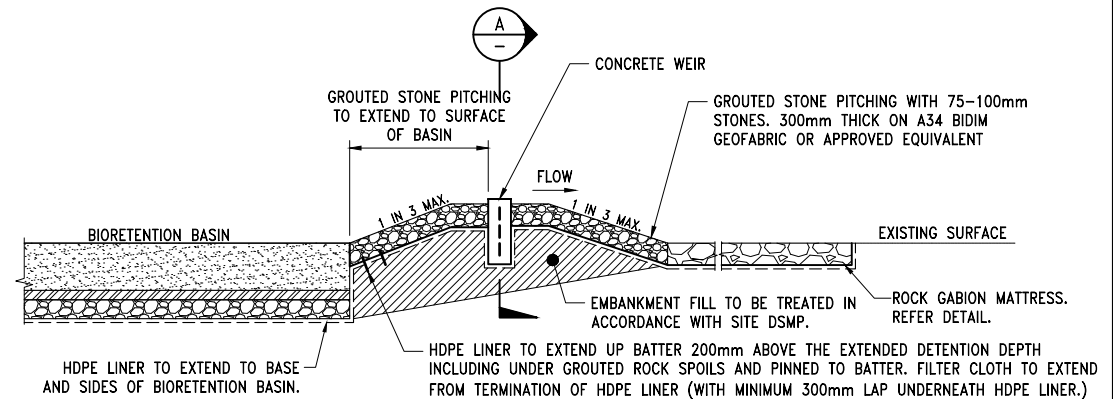
**TRANSITION LAYER**  
 1mm COARSE SAND (DESIGNED IAW WSUD TDG SECTION 5.3.4.3)

**DRAINAGE LAYER**  
 2-5mm SCREENINGS COARSE SAND/GRAVEL (DESIGNED IAW WSUD TDG SECTION 5.3.4.2)

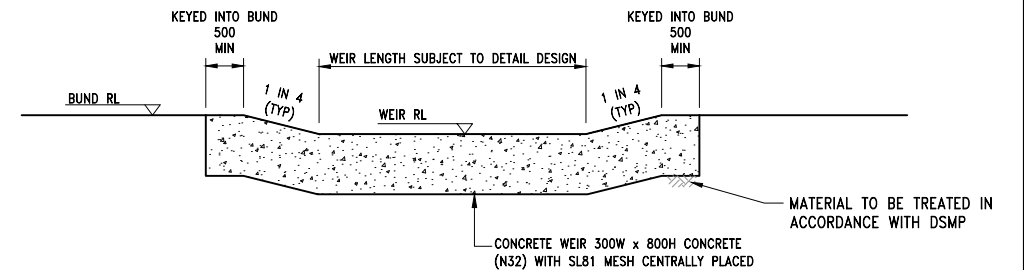
MUST MEET BIORETENTION MEDIA SPECIFIED IN THE WATER BY DESIGN CONSTRUCTION AND ESTABLISHMENT GUIDELINES: SWALES, BIORETENTION SYSTEMS & WETLANDS AND FAWB. THE REQUIRED MINIMUM FILTER MEDIA DEPTH IS 0.5m TO ACHIEVE THE WATER QUALITY OBJECTIVES BUT 0.7m FILTER DEPTH HAS BEEN NOMINATED AT THE REQUEST OF ICC



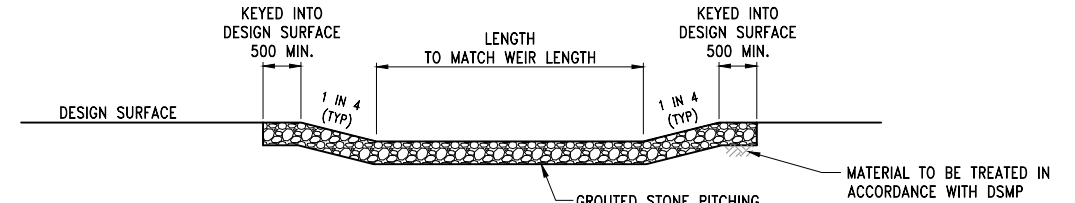
**ROCK GABION MATTRESS PROTECTION DETAIL**  
 SCALE N.T.S.



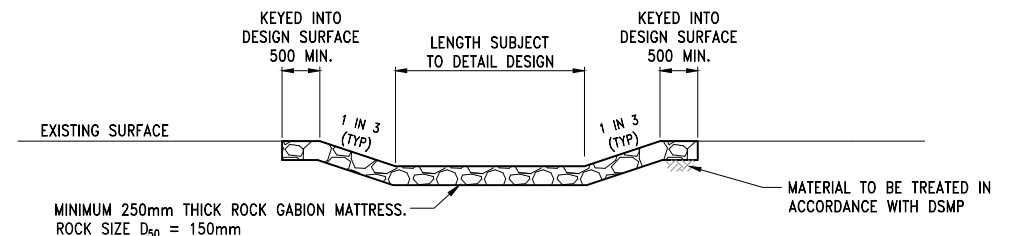
**WEIR DETAIL**  
 SCALE N.T.S.



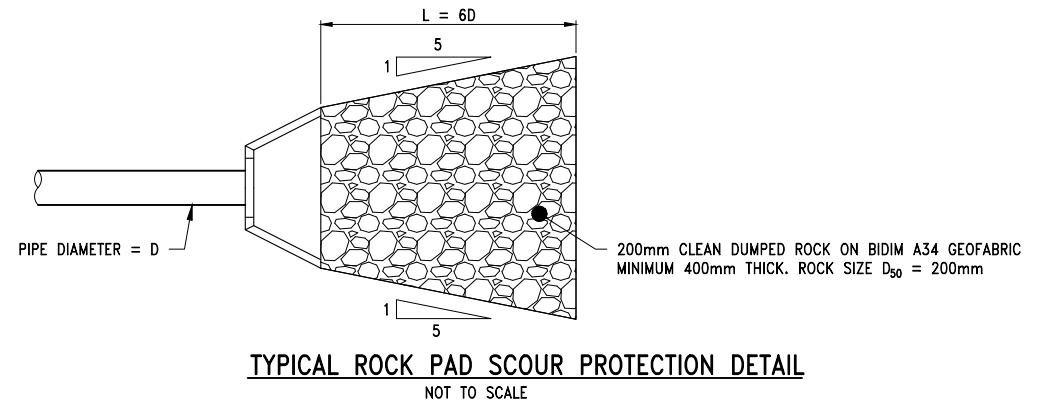
**SECTION A - TYPICAL WEIR SECTION**  
 SCALE N.T.S.



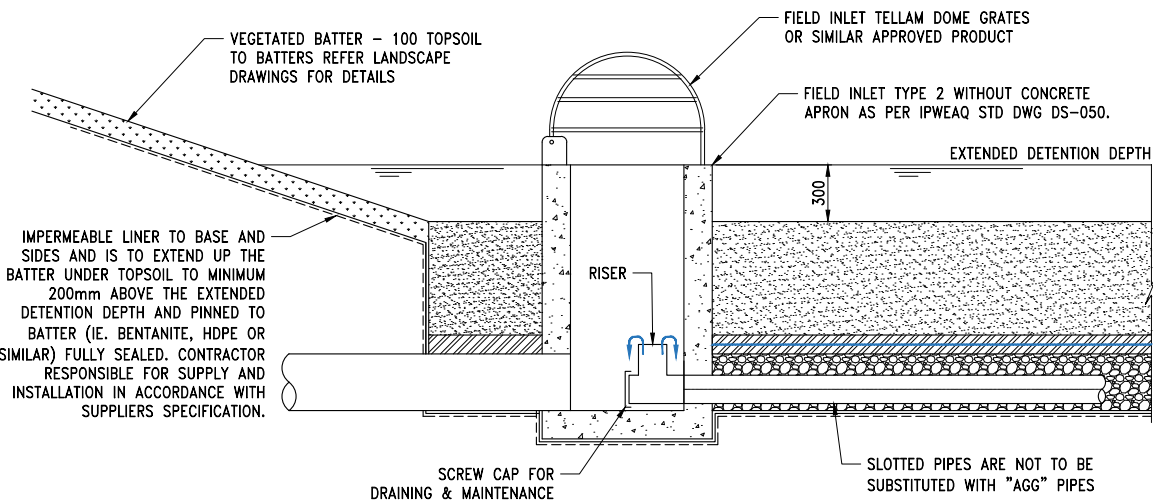
**TYPICAL GROUDED STONE PITCHING CHANNEL SECTION**  
 SCALE N.T.S.



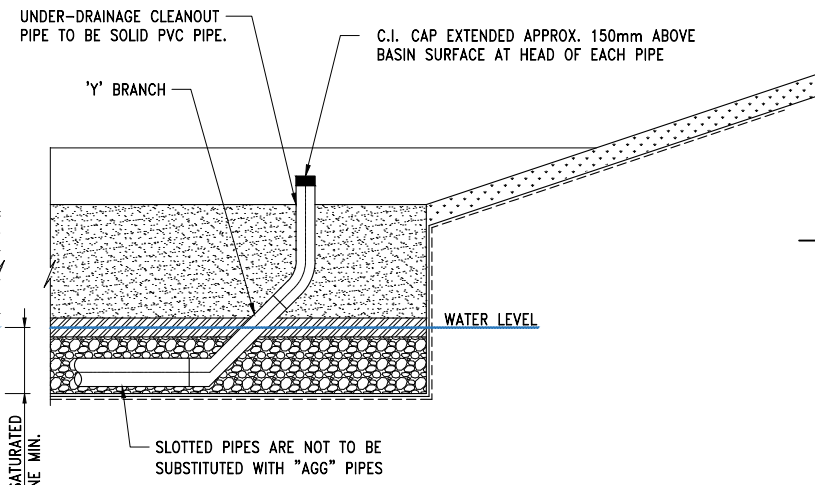
**TYPICAL ROCK GABION MATTRESS CHANNEL SECTION**  
 SCALE N.T.S.



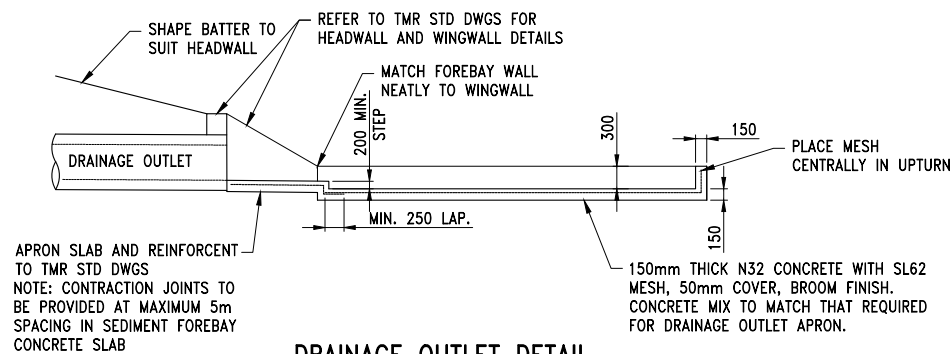
**TYPICAL ROCK PAD SCOUR PROTECTION DETAIL**  
 NOT TO SCALE



**TYPICAL BASIN OVERFLOW PIT ELEVATION**  
 SCALE 1:20

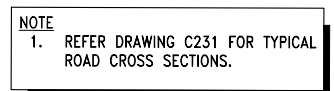


**TYPICAL BASIN OVERFLOW PIT PLAN VIEW**  
 SCALE 1:20



**DRAINAGE OUTLET DETAIL**  
 SCALE 1:5

| REV | DESCRIPTION  | BY | DES | DATE     | NAME:                                                                                                                                                                                                                                                                                                                       | DATE: | CLIENT                             | PROJECT                                           | STATUS       | DESIGNED   | DRAWN      | APPROVED | DATE     | SCALE | SHEET  |
|-----|--------------|----|-----|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|------------------------------------|---------------------------------------------------|--------------|------------|------------|----------|----------|-------|--------|
| A   | FOR APPROVAL | NM | NM  | 27/05/26 | RPEQ:                                                                                                                                                                                                                                                                                                                       |       | Ensilon Pty Ltd<br>ACN 644 618 253 | 400 WYATT ROAD, KAGARU<br>RESIDENTIAL DEVELOPMENT | FOR APPROVAL | NM         | NM         | -        | 27/05/26 | 1:500 | 1 of 1 |
|     |              |    |     |          | Approved by, for and on behalf of Ensilon                                                                                                                                                                                                                                                                                   |       |                                    |                                                   |              | PROJECT No | DRAWING No |          |          |       | REV    |
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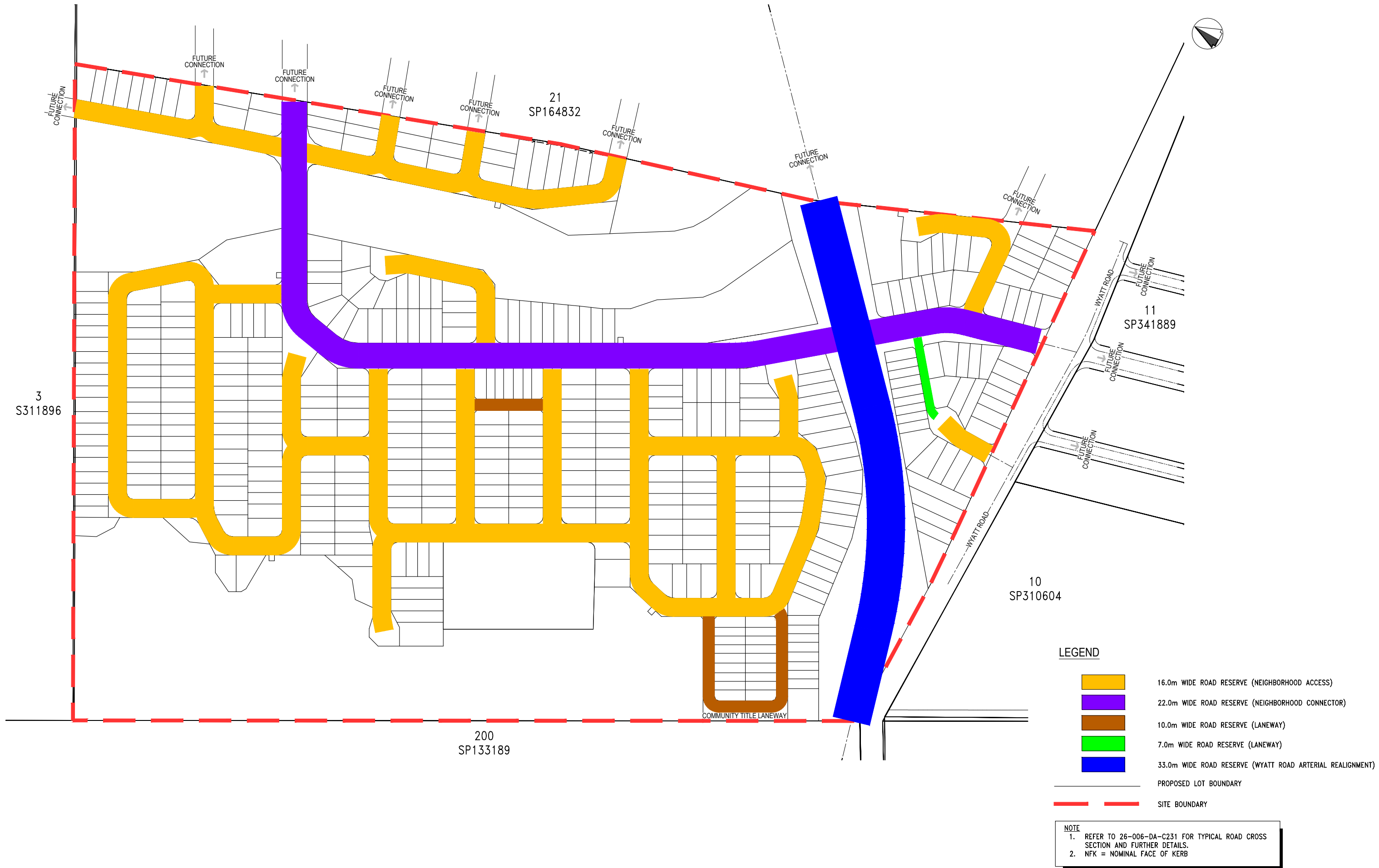
[illegible]





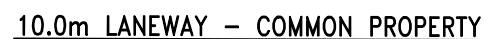
NOTE  
1. REFER DRAWING C231 FOR TYPICAL ROAD CROSS SECTIONS.

|            |                    |           |            |             |  |                                                                                                                                                                                                                                                                                                                                |              |  |                                                                                       |                                                                         |
|------------|--------------------|-----------|------------|-------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| <b>REV</b> | <b>DESCRIPTION</b> | <b>BY</b> | <b>DOS</b> | <b>DATE</b> |  | <b>NAME:</b>                                                                                                                                                                                                                                                                                                                   | <b>DATE:</b> |  | <b>CLIENT</b>                                                                         | <b>PROJECT</b>                                                          |
| A          | FOR APPROVAL       | NM        | NM         | 27/05/26    |  | RPEQ:                                                                                                                                                                                                                                                                                                                          |              |  | Ensilon Pty Ltd<br>ACN 644 618 253                                                    | 400 WYATT ROAD, KAGARU RESIDENTIAL DEVELOPMENT                          |
|            |                    |           |            |             |  | Approved by, for and on behalf of Ensilon                                                                                                                                                                                                                                                                                      |              |  | 400 WYATT Pty Ltd                                                                     |                                                                         |
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|            |                    |           |            |             |  |                                                                                                                                                                                                                                                                                                                                |              |  | TITLE                                                                                 | STATUS                                                                  |
|            |                    |           |            |             |  |                                                                                                                                                                                                                                                                                                                                |              |  | ROAD LONG SECTION SHEET 2 OF 2                                                        | FOR APPROVAL                                                            |
|            |                    |           |            |             |  |                                                                                                                                                                                                                                                                                                                                |              |  |                                                                                       | DESIGNED NM DRAWN NM APPROVED - DATE 27/05/26 SCALE 1:1000 SHEET 2 of 2 |
|            |                    |           |            |             |  |                                                                                                                                                                                                                                                                                                                                |              |  |                                                                                       | PROJECT No 26-006 DRAWING No C221 REV A                                 |



| REV | DESCRIPTION  | BY | DES | DATE     | NAME:<br>RPEQ:                                                                                                                                                                                                                                                                                                              | DATE: | Ensilon Pty Ltd<br>ACN 644 618 253       | CLIENT<br>400 WYATT Pty Ltd            | PROJECT<br>400 WYATT ROAD, KAGARU<br>RESIDENTIAL DEVELOPMENT |
|-----|--------------|----|-----|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|------------------------------------------|----------------------------------------|--------------------------------------------------------------|
| A   | FOR APPROVAL | NM | NM  | 27/05/26 | Approved by, for and on behalf of Ensilon                                                                                                                                                                                                                                                                                   |       | http://www.ensilon.com.au<br>© Copyright | TITLE<br>ROAD HIERARCHY<br>LAYOUT PLAN | STATUS<br>FOR APPROVAL                                       |
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|     |              |    |     |          |                                                                                                                                                                                                                                                                                                                             |       |                                          |                                        | DRAWN<br>NM                                                  |
|     |              |    |     |          |                                                                                                                                                                                                                                                                                                                             |       |                                          |                                        | APPROVED<br>-                                                |
|     |              |    |     |          |                                                                                                                                                                                                                                                                                                                             |       |                                          |                                        | DATE<br>27/05/26                                             |
|     |              |    |     |          |                                                                                                                                                                                                                                                                                                                             |       |                                          |                                        | SCALE @ A1<br>1:1500                                         |
|     |              |    |     |          |                                                                                                                                                                                                                                                                                                                             |       |                                          |                                        | SHEET<br>1 of 1                                              |
|     |              |    |     |          |                                                                                                                                                                                                                                                                                                                             |       |                                          |                                        | REV<br>A                                                     |
|     |              |    |     |          |                                                                                                                                                                                                                                                                                                                             |       |                                          |                                        | PROJECT No<br>26-006                                         |
|     |              |    |     |          |                                                                                                                                                                                                                                                                                                                             |       |                                          |                                        | DRAWING No<br>C230                                           |
|     |              |    |     |          |                                                                                                                                                                                                                                                                                                                             |       |                                          |                                        |                                                              |





SCALE 1:100



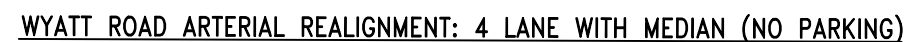
SCALE 1:100



SCALE 1:100

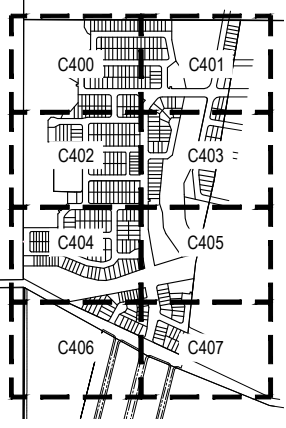
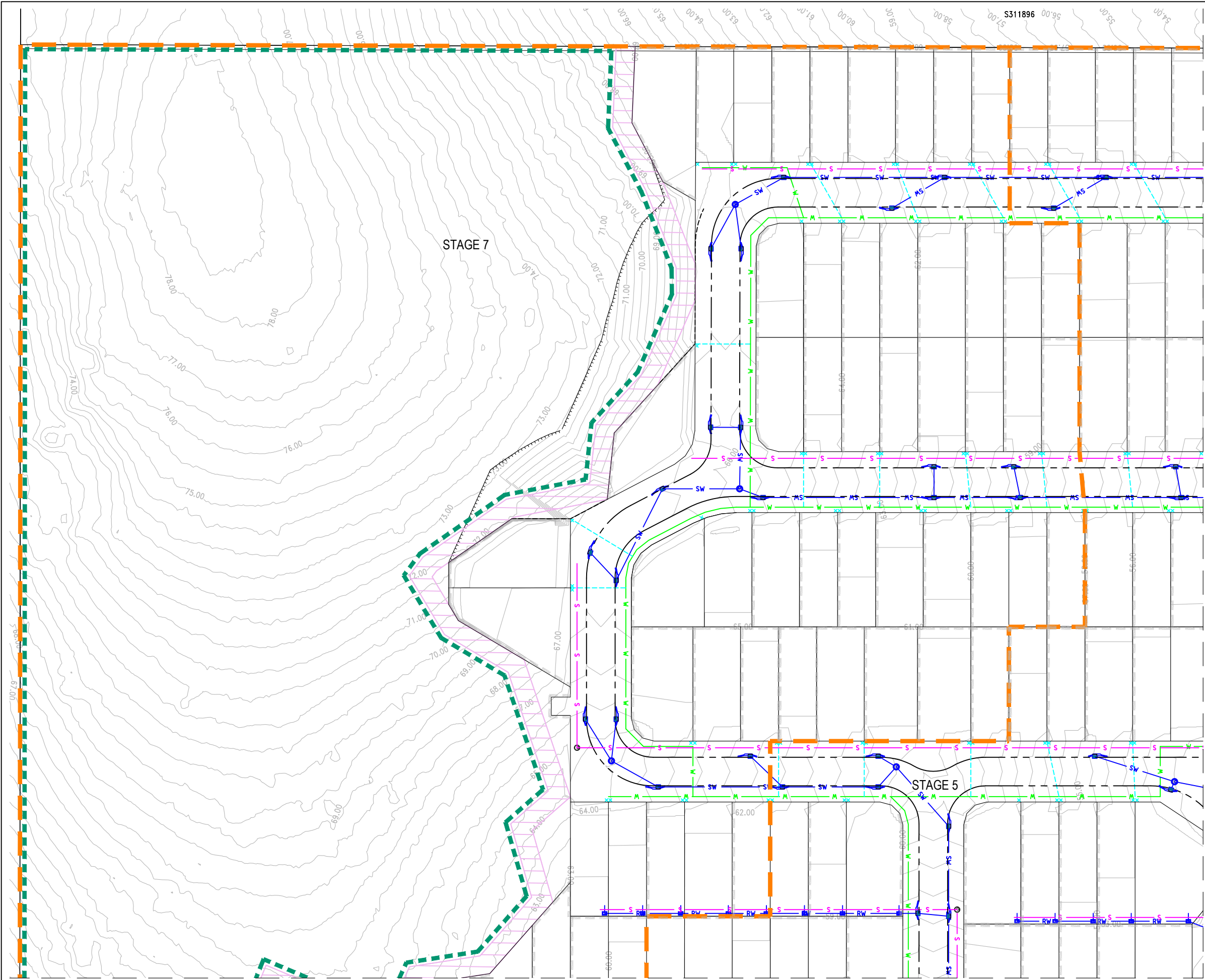


SCALE 1:100



SCALE 1:100

|     |              |    |     |          |                                                                                                                                                                                                                                                                                                                             |       |                                                                                                                                                                           |                       |                                                   |            |            |          |          |       |        |
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| REV | DESCRIPTION  | BY | DES | DATE     | NAME:                                                                                                                                                                                                                                                                                                                       | DATE: | Ensilon Pty Ltd<br>ACN 644 618 253                                                                                                                                        | CLIENT                | PROJECT                                           |            |            |          |          |       |        |
| A   | FOR APPROVAL | NM | NM  | 27/05/26 | RPEQ:                                                                                                                                                                                                                                                                                                                       |       |                                                                                                                                                                           | 400 WYATT Pty Ltd     | 400 WYATT ROAD, KAGARU<br>RESIDENTIAL DEVELOPMENT |            |            |          |          |       |        |
|     |              |    |     |          | Approved by, for and on behalf of Ensilon                                                                                                                                                                                                                                                                                   |       | <br><a href="http://www.ensilon.com.au">http://www.ensilon.com.au</a><br>© Copyright | TYPICAL ROAD SECTIONS | FOR APPROVAL                                      | DESIGNED   | DRAWN      | APPROVED | DATE     | SCALE | SHEET  |
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|     |              |    |     |          |                                                                                                                                                                                                                                                                                                                             |       |                                                                                                                                                                           |                       |                                                   | PROJECT No | DRAWING No | REV      |          |       |        |
|     |              |    |     |          |                                                                                                                                                                                                                                                                                                                             |       |                                                                                                                                                                           |                       |                                                   | 26-006     | C231       | A        |          |       |        |



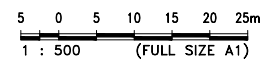
KEYMAP  
NOT TO SCALE

FOR CONTINUATION REFER - 26-006-DA-C401

- LEGEND**
- PROPOSED LOT BOUNDARY
  - PROPOSED STAGE BOUNDARY
  - PROPOSED SLEEPER RETAINING WALL
  - PROPOSED KERB AND CHANNEL
  - DESIGN SURFACE CONTOUR (1m INTERVALS)
  - PROPOSED SEWER
  - PROPOSED PRIVATE RISING MAIN
  - PROPOSED STORMWATER LINE
  - PROPOSED STORMWATER STRUCTURE
  - PROPOSED ROOFWATER STRUCTURE
  - PROPOSED ROOFWATER LINE
  - EARTHWORKS BATTER TOP
  - EARTHWORKS BATTER BOTTOM
  - PROPOSED WATER
  - PROPOSED WATER CONDUIT AND SERVICE
  - PROPOSED SEWER STRUCTURE
  - PROPOSED CUTOFF DRAIN
  - QUEENSLAND WATERWAY
  - FUTURE LOT BOUNDARY
  - FUTURE KERB AND CHANNEL

FOR CONTINUATION REFER - 26-006-DA-C402

| REV | DESCRIPTION  | BY | DES | DATE     |
|-----|--------------|----|-----|----------|
| A   | FOR APPROVAL | NM | NM  | 27/05/26 |
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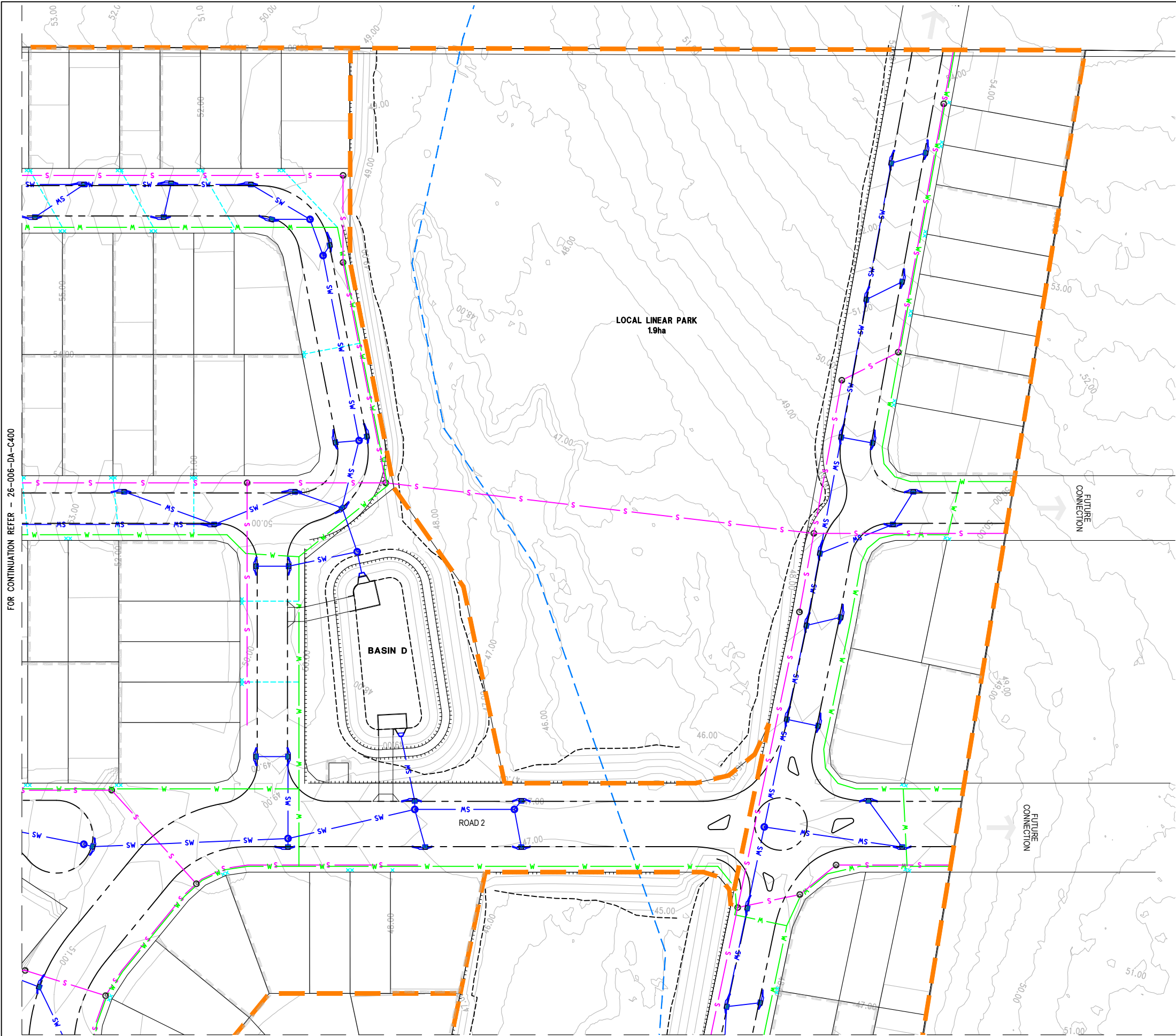
CLIENT  
400 WYATT Pty Ltd  
  
TITLE  
SERVICES LAYOUT  
SHEET 1 OF 8

PROJECT  
400 WYATT ROAD, KAGARU  
RESIDENTIAL DEVELOPMENT

STATUS  
FOR APPROVAL

| DESIGNED   | DRAWN      | APPROVED | DATE     | SCALE | SHEET  |
|------------|------------|----------|----------|-------|--------|
| NM         | NM         | -        | 27/05/26 | 1:500 | 1 of 8 |
| PROJECT No | DRAWING No | REV      |          |       |        |
| 26-006     | C400       | A        |          |       |        |



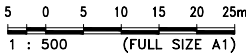


FOR CONTINUATION REFER - 26-006-DA-C400

FOR CONTINUATION REFER - 26-006-DA-C403

NOTE:  
REFER DRAWING C400 FOR LEGEND  
AND KEYMAP.

| REV | DESCRIPTION  | BY | DES | DATE     |
|-----|--------------|----|-----|----------|
| A   | FOR APPROVAL | NM | NM  | 27/05/26 |
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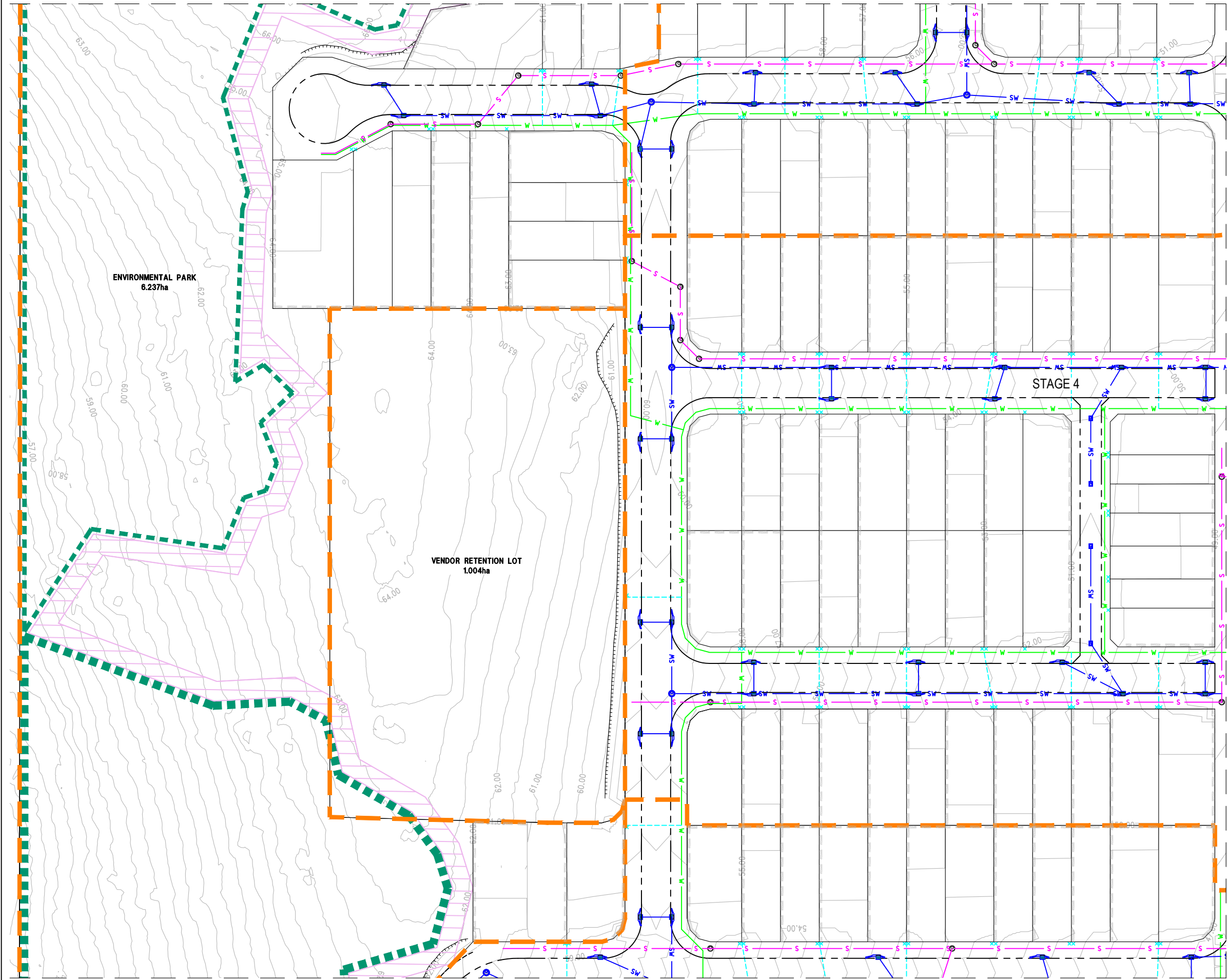
TITLE  
SERVICES LAYOUT  
SHEET 2 OF 8

PROJECT  
400 WYATT ROAD, KAGARU  
RESIDENTIAL DEVELOPMENT

STATUS  
FOR APPROVAL

| DESIGNED   | DRAWN      | APPROVED | DATE     | SCALE | SHEET  |
|------------|------------|----------|----------|-------|--------|
| NM         | NM         | -        | 27/05/26 | 1:500 | 2 of 8 |
| PROJECT No | DRAWING No | REV      |          |       |        |
| 26-006     | C401       | A        |          |       |        |

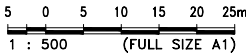
NOTE:  
REFER DRAWING C400 FOR LEGEND  
AND KEYMAP.



FOR CONTINUATION REFER - 26-006-DA-C403

FOR CONTINUATION REFER - 26-006-DA-C404

| REV | DESCRIPTION  | BY | DES | DATE     |
|-----|--------------|----|-----|----------|
| A   | FOR APPROVAL | NM | NM  | 27/05/26 |
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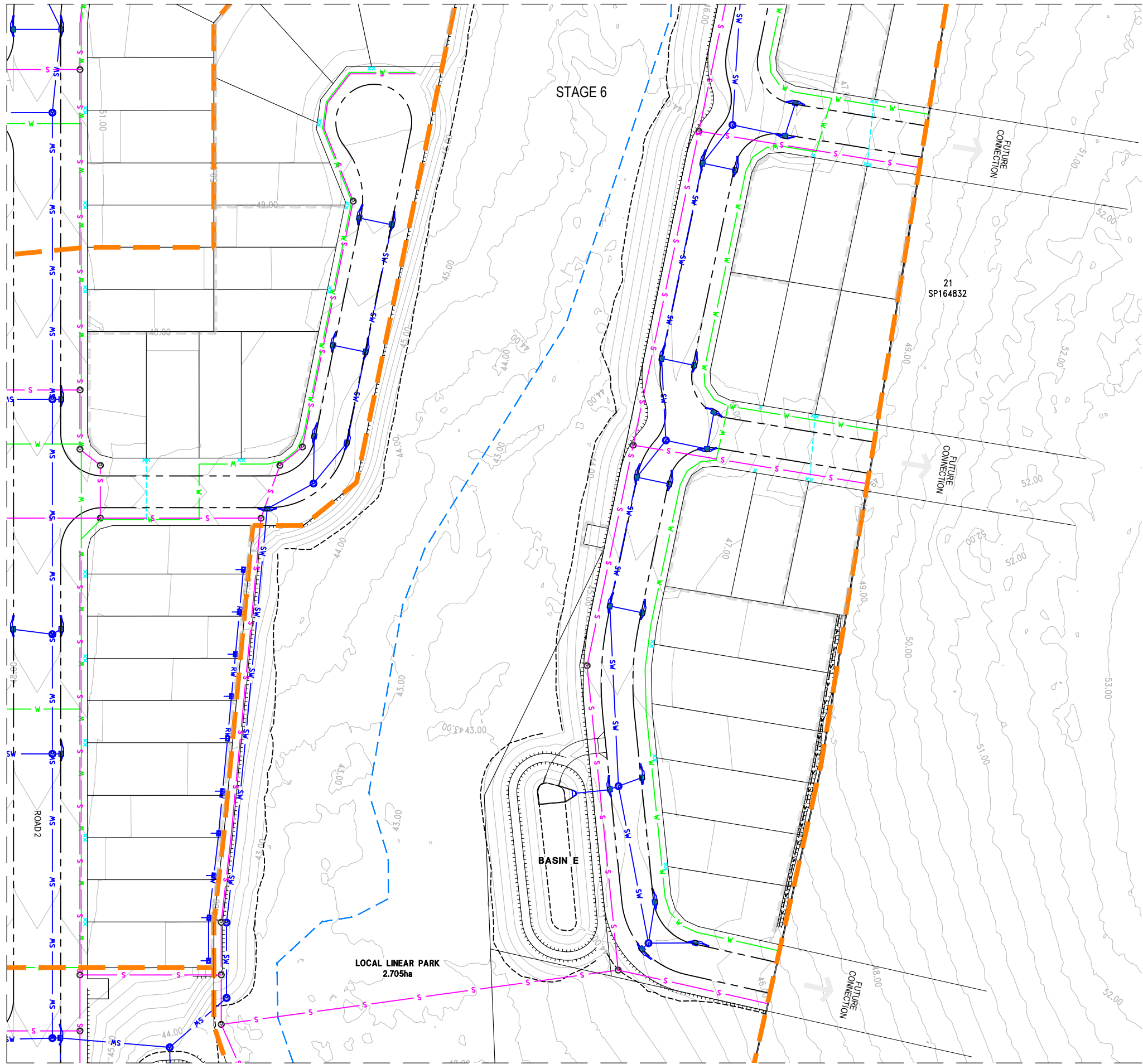
CLIENT  
400 WYATT Pty Ltd  
TITLE  
SERVICES LAYOUT  
SHEET 3 OF 8

PROJECT  
400 WYATT ROAD, KAGARU  
RESIDENTIAL DEVELOPMENT

STATUS  
FOR APPROVAL

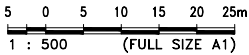
| DESIGNED   | DRAWN      | APPROVED | DATE     | SCALE | A1 | SHEET  |
|------------|------------|----------|----------|-------|----|--------|
| NM         | NM         | -        | 27/05/26 | 1:500 |    | 3 of 8 |
| PROJECT No | DRAWING No | REV      |          |       |    |        |
| 26-006     | C402       | A        |          |       |    |        |





NOTE:  
REFER DRAWING C400 FOR LEGEND  
AND KEYMAP.

| REV | DESCRIPTION  | BY | DES | DATE     |
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| A   | FOR APPROVAL | NM | NM  | 27/05/26 |
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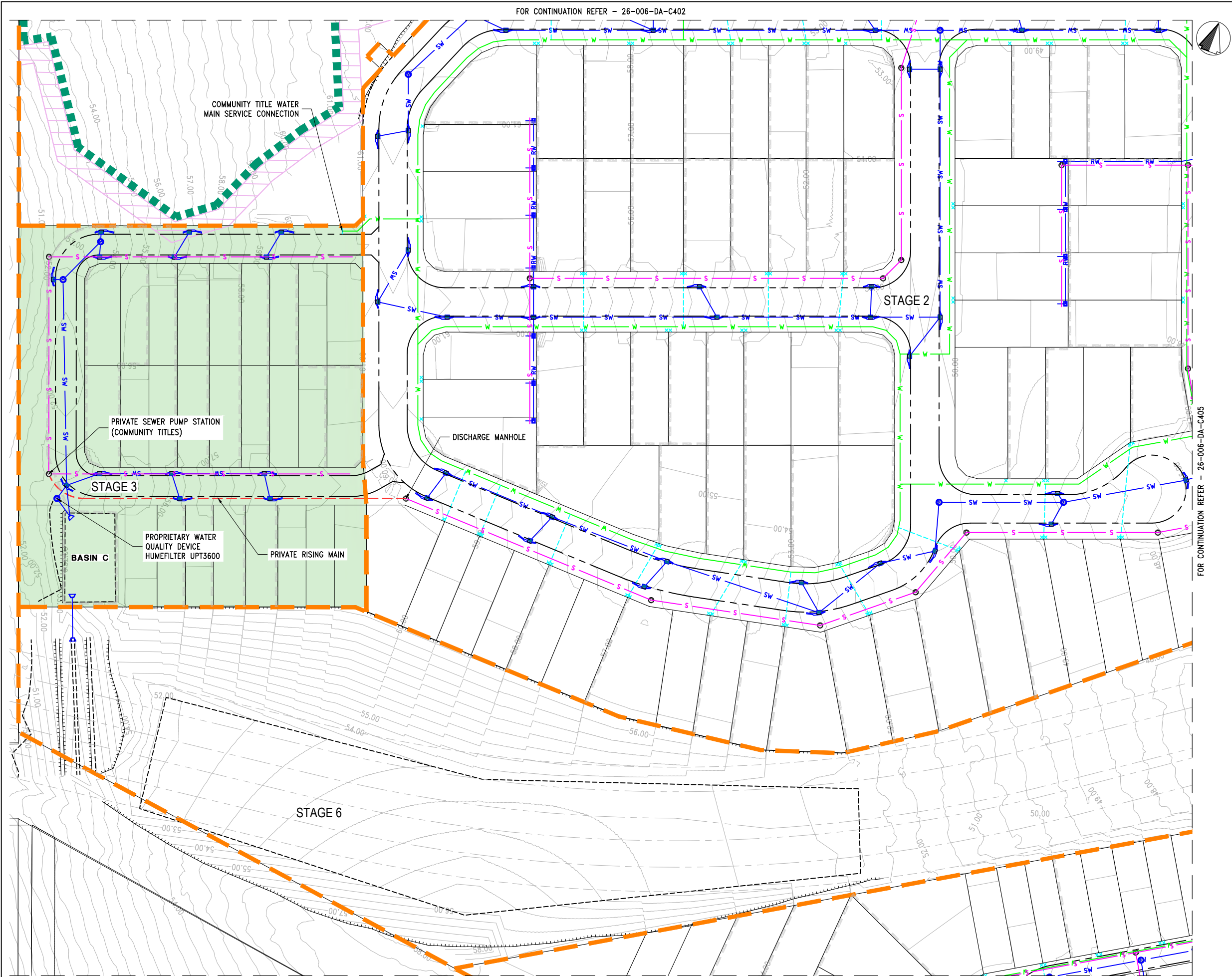
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|--------|---------------------------------|
| TITLE  | SERVICES LAYOUT<br>SHEET 4 OF 8 |

| PROJECT | 400 WYATT ROAD, KAGARU<br>RESIDENTIAL DEVELOPMENT |
|---------|---------------------------------------------------|
| STATUS  | FOR APPROVAL                                      |

| DESIGNED   | DRAWN      | APPROVED | DATE     | SCALE | SHEET  |
|------------|------------|----------|----------|-------|--------|
| NM         | NM         | -        | 27/05/26 | 1:500 | 4 of 8 |
| PROJECT No | DRAWING No | REV      |          |       |        |
| 26-006     | C403       | A        |          |       |        |



NOTE:  
REFER DRAWING C400 FOR LEGEND  
AND KEYMAP.

NOTE:  
GREEN HATCHED AREA DELINEATES  
THE PROPOSED COMMUNITY TITLES  
AREA.

| REV | DESCRIPTION  | BY | DES | DATE     |
|-----|--------------|----|-----|----------|
| A   | FOR APPROVAL | NM | NM  | 27/05/26 |

5 0 5 10 15 20 25m  
1 : 500 (FULL SIZE A1)

FOR CONTINUATION REFER - 26-006-DA-C406

NAME:  
RPEQ:  
DATE:  
  
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CLIENT  
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TITLE  
SERVICES LAYOUT  
SHEET 5 OF 8

PROJECT  
400 WYATT ROAD, KAGARU  
RESIDENTIAL DEVELOPMENT

STATUS  
FOR APPROVAL

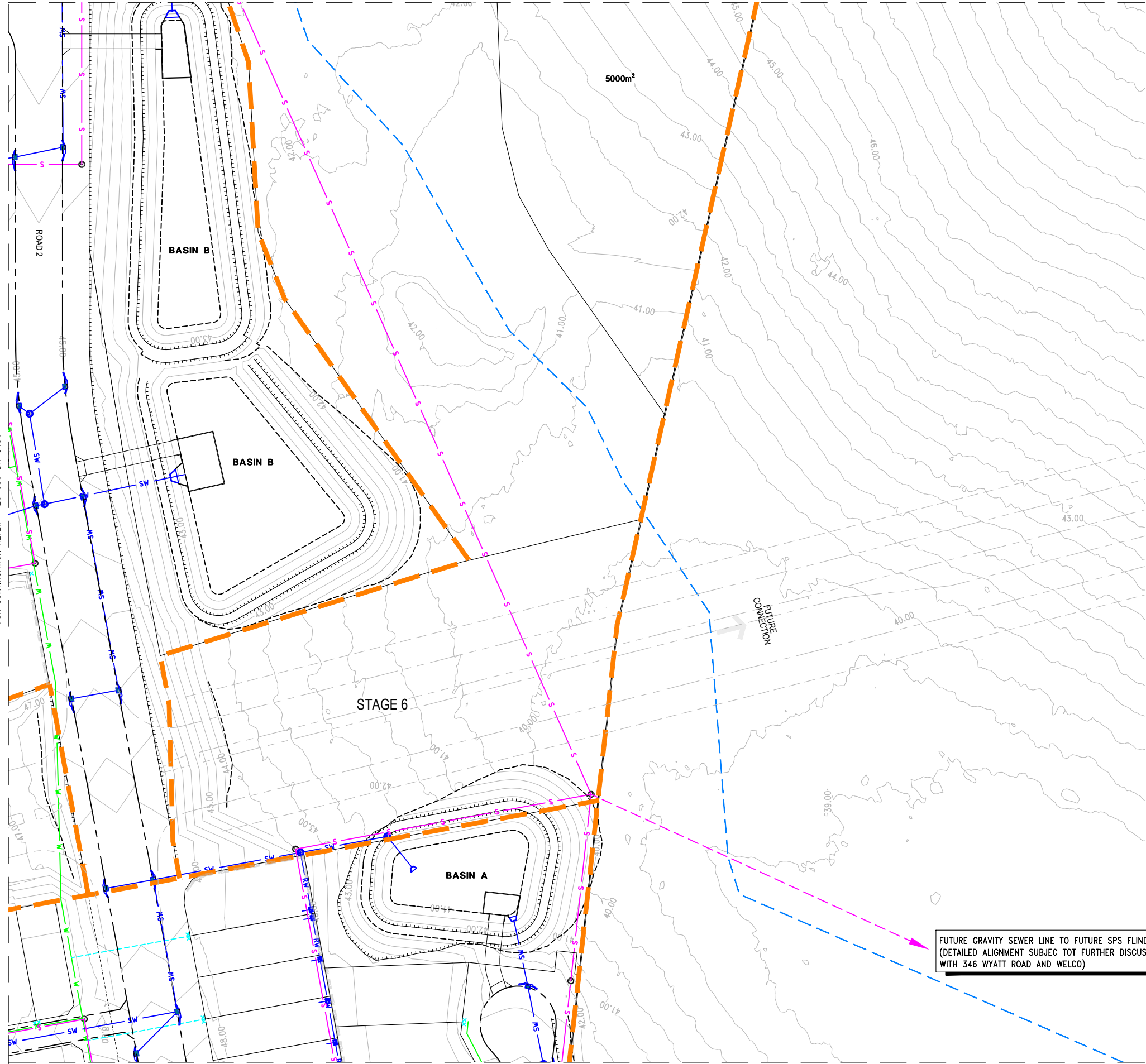
| DESIGNED   | DRAWN      | APPROVED | DATE     | SCALE | SHEET  |
|------------|------------|----------|----------|-------|--------|
| NM         | NM         | -        | 27/05/26 | 1:500 | 5 of 8 |
| PROJECT No | DRAWING No | REV      |          |       |        |
| 26-006     | C404       | A        |          |       |        |





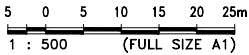
NOTE:  
REFER DRAWING C400 FOR LEGEND  
AND KEYMAP.

FOR CONTINUATION REFER - 26-006-DA-C404



FOR CONTINUATION REFER - 26-006-DA-C407

| REV | DESCRIPTION  | BY | DES | DATE     |
|-----|--------------|----|-----|----------|
| A   | FOR APPROVAL | NM | NM  | 27/05/26 |



|                                                                                                                                                                                                                                                                                                                             |       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| NAME:<br>RPEQ:                                                                                                                                                                                                                                                                                                              | DATE: |
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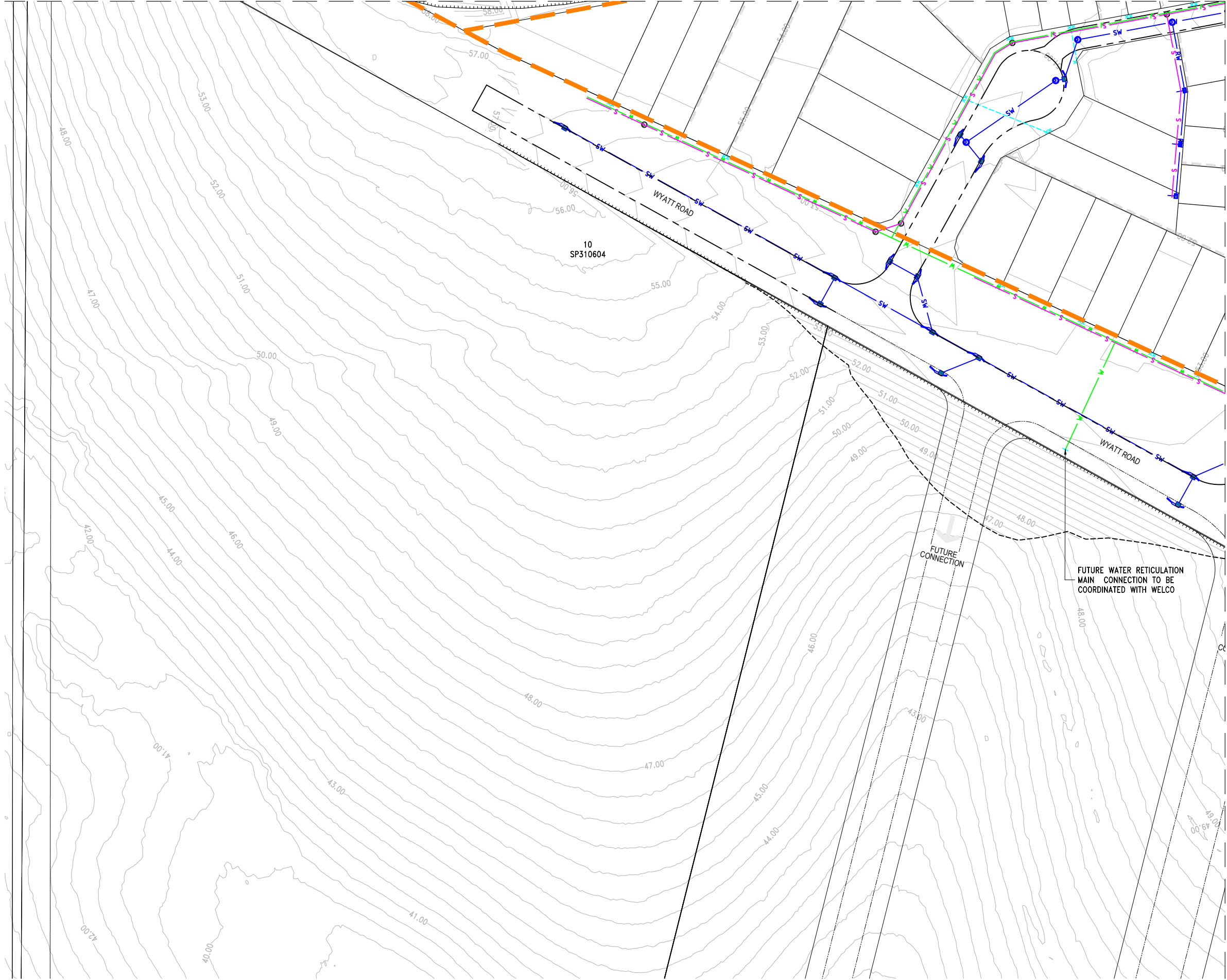
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|--------|---------------------------------|
| CLIENT | 400 WYATT Pty Ltd               |
| TITLE  | SERVICES LAYOUT<br>SHEET 6 OF 8 |

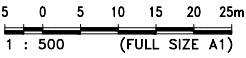
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| STATUS               |  | FOR APPROVAL                                      |  | DESIGNED<br>NM     | DRAWN<br>NM | APPROVED<br>- | DATE<br>27/05/26 | SCALE<br>1:500 | AT | SHEET<br>6 of 8 |  |
| PROJECT No<br>26-006 |  |                                                   |  | DRAWING No<br>C405 |             |               |                  | REV<br>A       |    |                 |  |

NOTE:  
REFER DRAWING C400 FOR LEGEND  
AND KEYMAP.



FOR CONTINUATION REFER - 26-006-DA-C207

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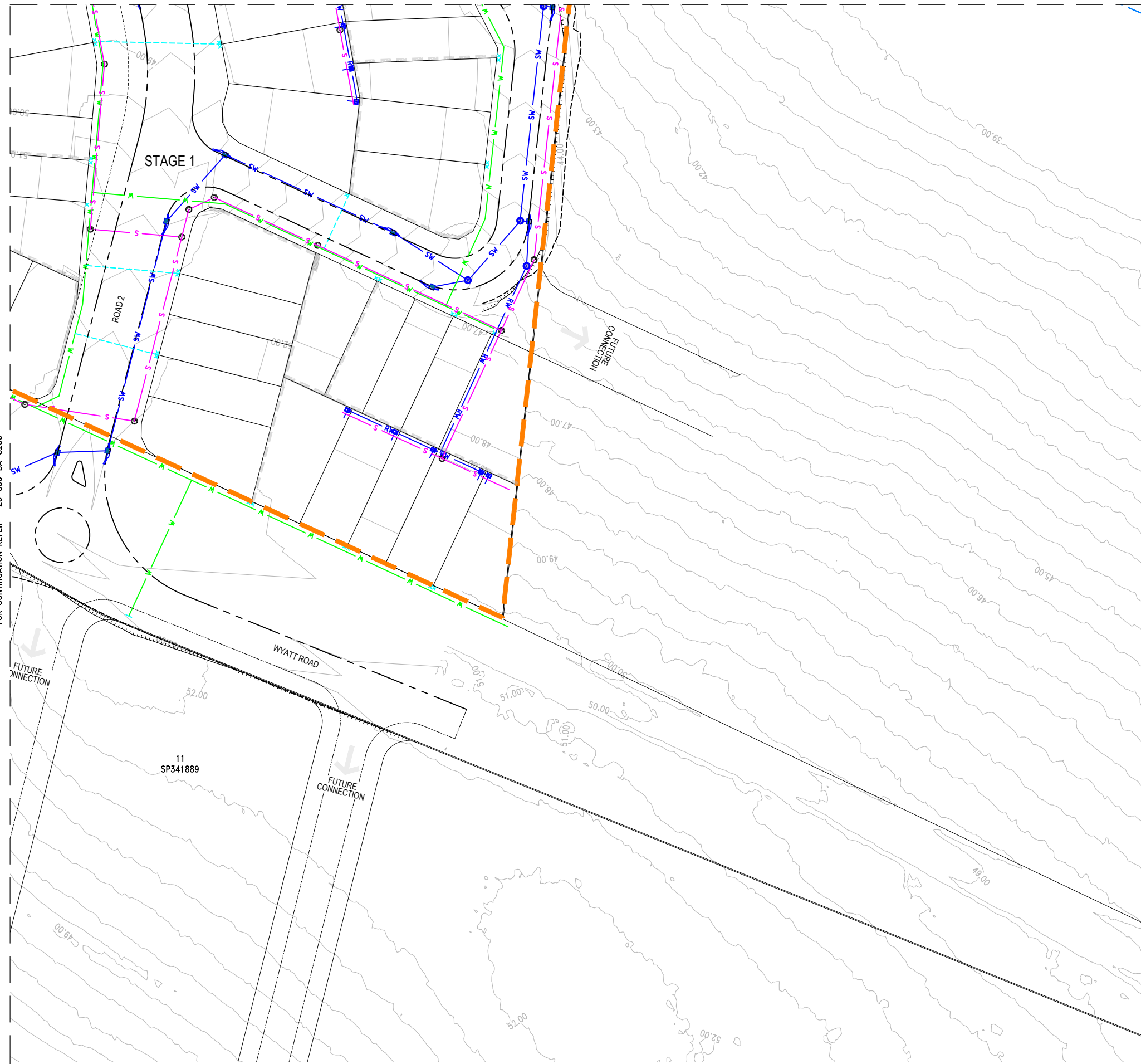
CLIENT  
400 WYATT Pty Ltd  
TITLE  
SERVICES LAYOUT  
SHEET 7 OF 8

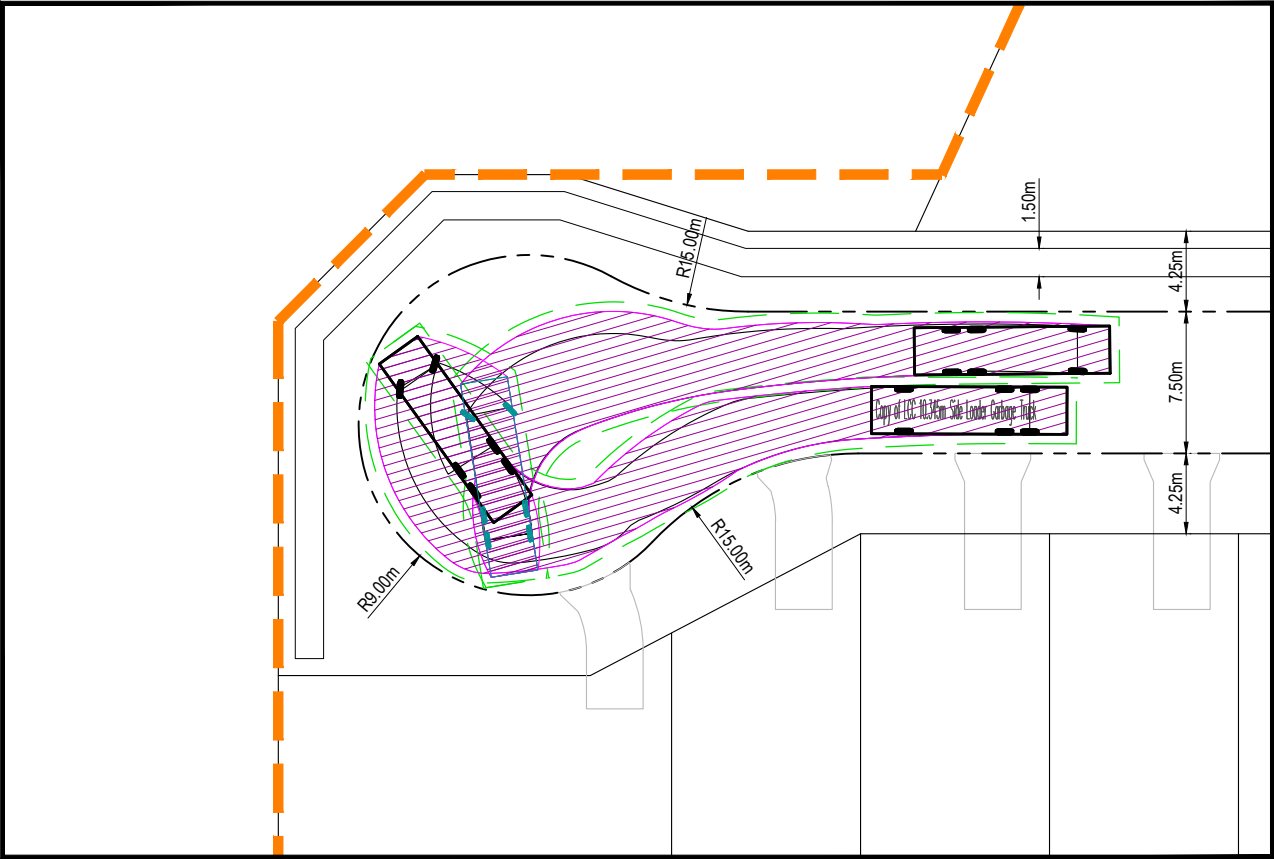
PROJECT  
400 WYATT ROAD, KAGARU  
RESIDENTIAL DEVELOPMENT  
STATUS  
FOR APPROVAL

| DESIGNED   | DRAWN      | APPROVED | DATE     | SCALE | SHEET  |
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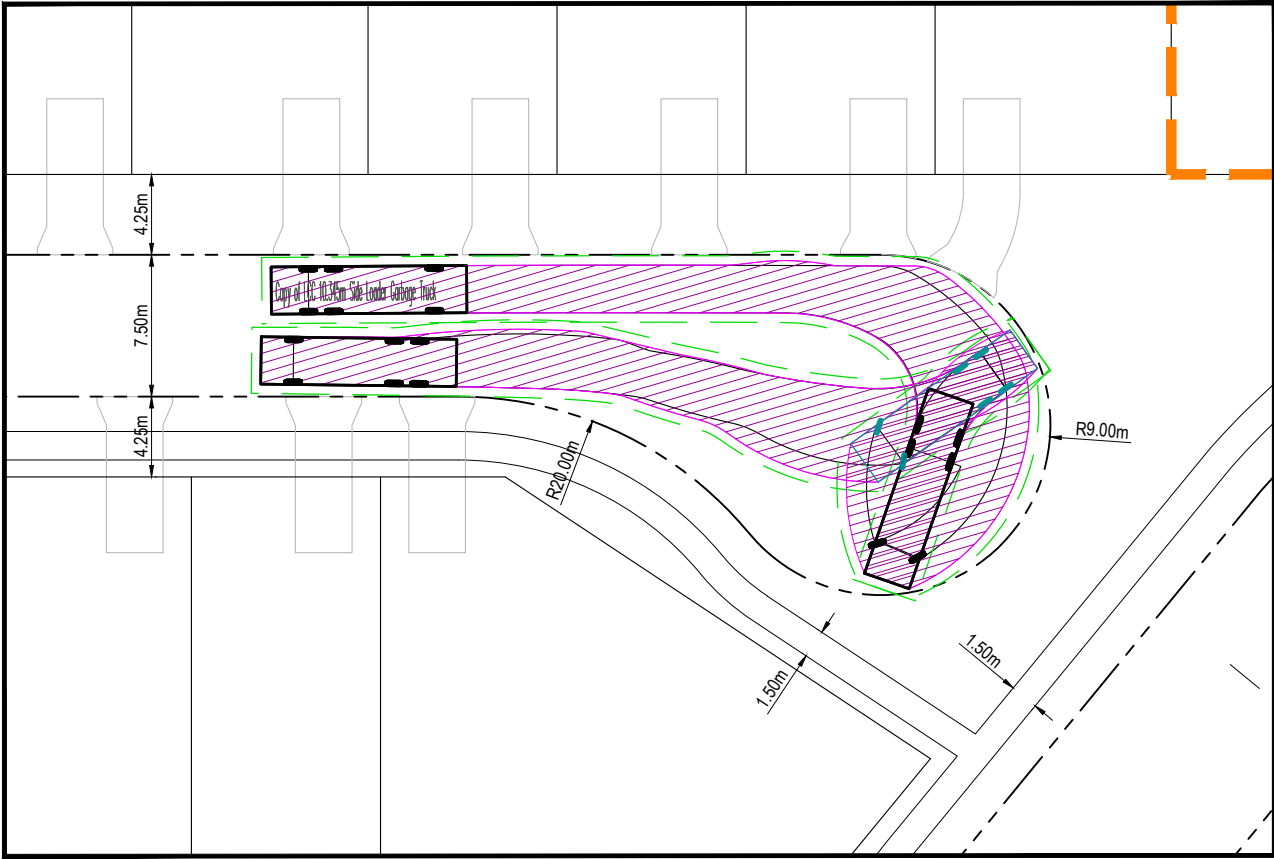


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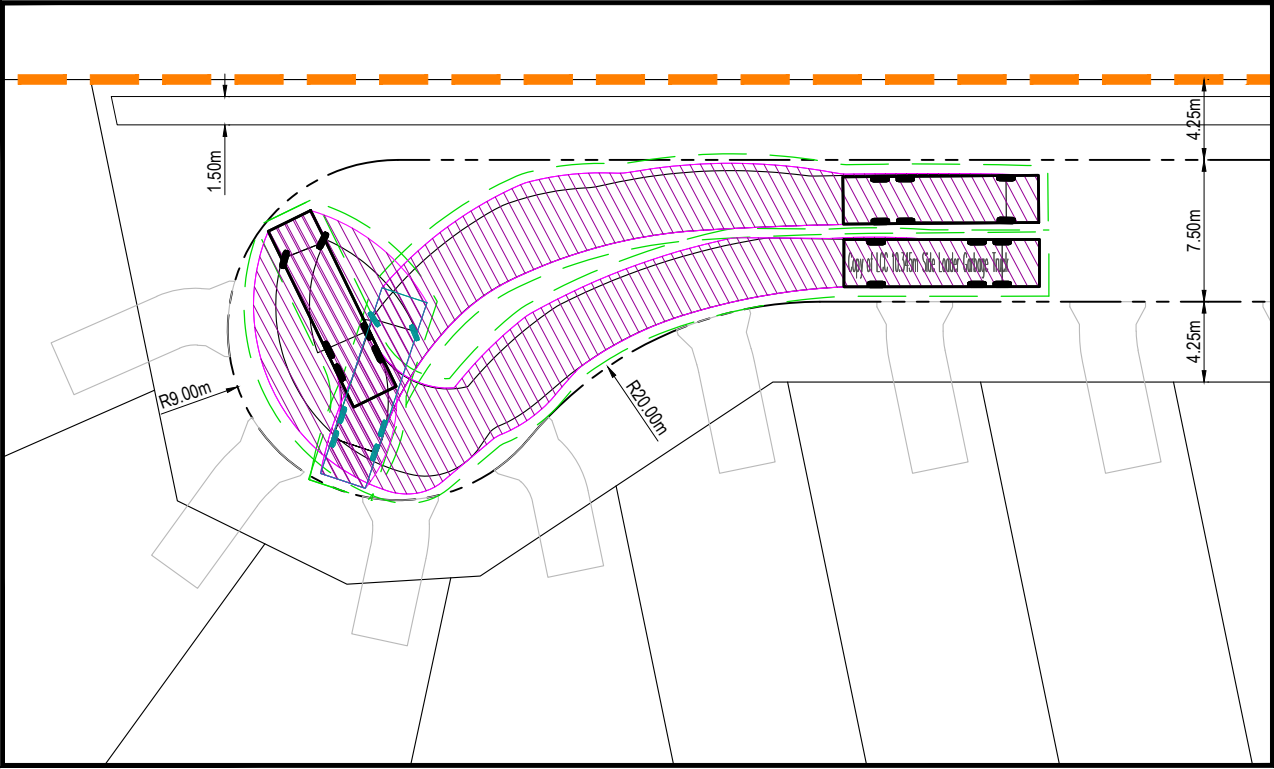
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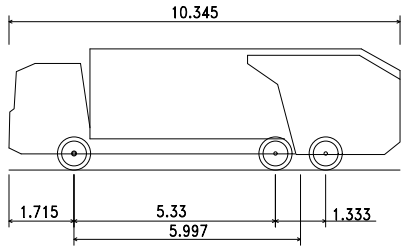
ROAD TURNAROUND – WASTE COLLECTION TRUCK TURNPATH  
SCALE 1:200



ROAD TURNAROUND – WASTE COLLECTION TRUCK TURNPATH  
SCALE 1:200



ROAD TURNAROUND – WASTE COLLECTION TRUCK TURNPATH  
SCALE 1:200



LCC 10.345m Side Loader Waste Collection  
Overall Length 10.345m  
Overall Width 2.500m  
Overall Body Height 3.205m  
Min Body Ground Clearance 0.410m  
Track Width 2.500m  
Lock-to-lock time 4.00s  
Wall to Wall Turning Radius 10.329m

- LEGEND**
- PROPOSED LOT BOUNDARY
  - PROPOSED KERB AND CHANNEL
  - PROPOSED STAGE BOUNDARY
  - VEHICLE BODY
  - CHASSIS OUTLINE
  - BODY OUTLINE – 0.3m CLEARANCE
  - BODY ENVELOPE
  - INDICATIVE FUTURE DRIVEWAY

| REV | DESCRIPTION  | BY | DES | DATE     |
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| A   | FOR APPROVAL | NM | NM  | 27/05/26 |

2 0 2 4 6 8 10m  
1 : 200 (FULL SIZE A1)

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| TITLE  | TURNPATHS LAYOUT  |

|                                                   |  |             |                    |                  |             |          |                 |  |  |  |
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| 400 WYATT ROAD, KAGARU<br>RESIDENTIAL DEVELOPMENT |  |             |                    |                  |             |          |                 |  |  |  |
| STATUS                                            |  |             |                    |                  |             |          |                 |  |  |  |
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| PROJECT No<br>26-006                              |  |             | DRAWING No<br>C500 |                  |             | REV<br>A |                 |  |  |  |





LEGEND

PROPOSED LOT BOUNDARY

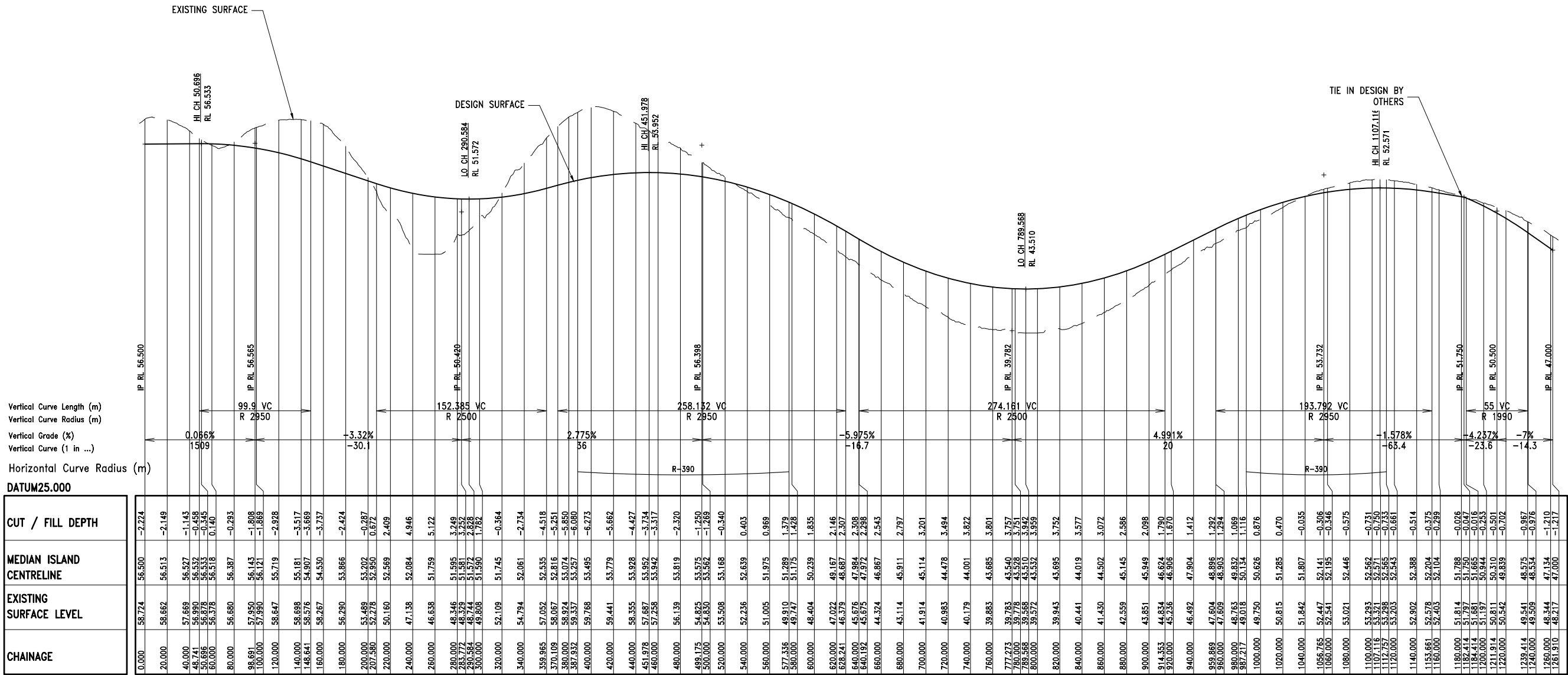
FUTURE LOT BOUNDARY

PROPOSED KERB AND CHANNEL

EXISTING SURFACE CONTOUR (1m INTERVALS)

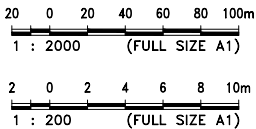
CONTROL LINE LAYOUT PLAN  
SCALE 1:2000

| REV                                                                            | DESCRIPTION  | BY                 | DES      | DATE     | NAME:<br>RPEQ:                                                                                                                                                                                                                                                                                                                             | DATE: | Ensilon Pty Ltd<br>ACN 644 618 253                                               | CLIENT<br>400 WYATT Pty Ltd | PROJECT<br>400 WYATT ROAD, KAGARU<br>RESIDENTIAL DEVELOPMENT |                                                                                                                                                                                                                                                                                                                                    |          |       |          |      |       |       |    |    |   |          |        |        |                      |  |                    |  |          |  |
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| A                                                                              | FOR APPROVAL | NM                 | NM       | 27/05/26 | Approved by, for and on behalf of Ensilon                                                                                                                                                                                                                                                                                                  |       | <a href="http://www.ensilon.com.au">http://www.ensilon.com.au</a><br>© Copyright | ROAD 1 LAYOUT PLAN          | FOR APPROVAL                                                 |                                                                                                                                                                                                                                                                                                                                    |          |       |          |      |       |       |    |    |   |          |        |        |                      |  |                    |  |          |  |
| <div><div>200 0 20 40 60 80 100m</div><div>1 : 2000 (FULL SIZE A1)</div></div> |              |                    |          |          | <div>This drawing has been produced for the exclusive use of the client (nominated on this document). No third party is to rely on this document without written permission from Ensilon. This drawing is not to be constructed from unless "Issued for construction" is displayed and only where signed by an RPEQ.<br/>© Copyright</div> |       |                                                                                  |                             |                                                              | <table><tr><th>DESIGNED</th><th>DRAWN</th><th>APPROVED</th><th>DATE</th><th>SCALE</th><th>SHEET</th></tr><tr><td>NM</td><td>NM</td><td>-</td><td>27/05/26</td><td>1:2000</td><td>1 of 1</td></tr><tr><td colspan="2">PROJECT No<br/>26-006</td><td colspan="2">DRAWING No<br/>C600</td><td colspan="2">REV<br/>A</td></tr></table> | DESIGNED | DRAWN | APPROVED | DATE | SCALE | SHEET | NM | NM | - | 27/05/26 | 1:2000 | 1 of 1 | PROJECT No<br>26-006 |  | DRAWING No<br>C600 |  | REV<br>A |  |
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WYATT ROAD – ARTERIAL

SCALE: HORIZONTAL – 1:2000  
VERTICAL – 1:200



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TITLE  
ROAD 1 LONG SECTION

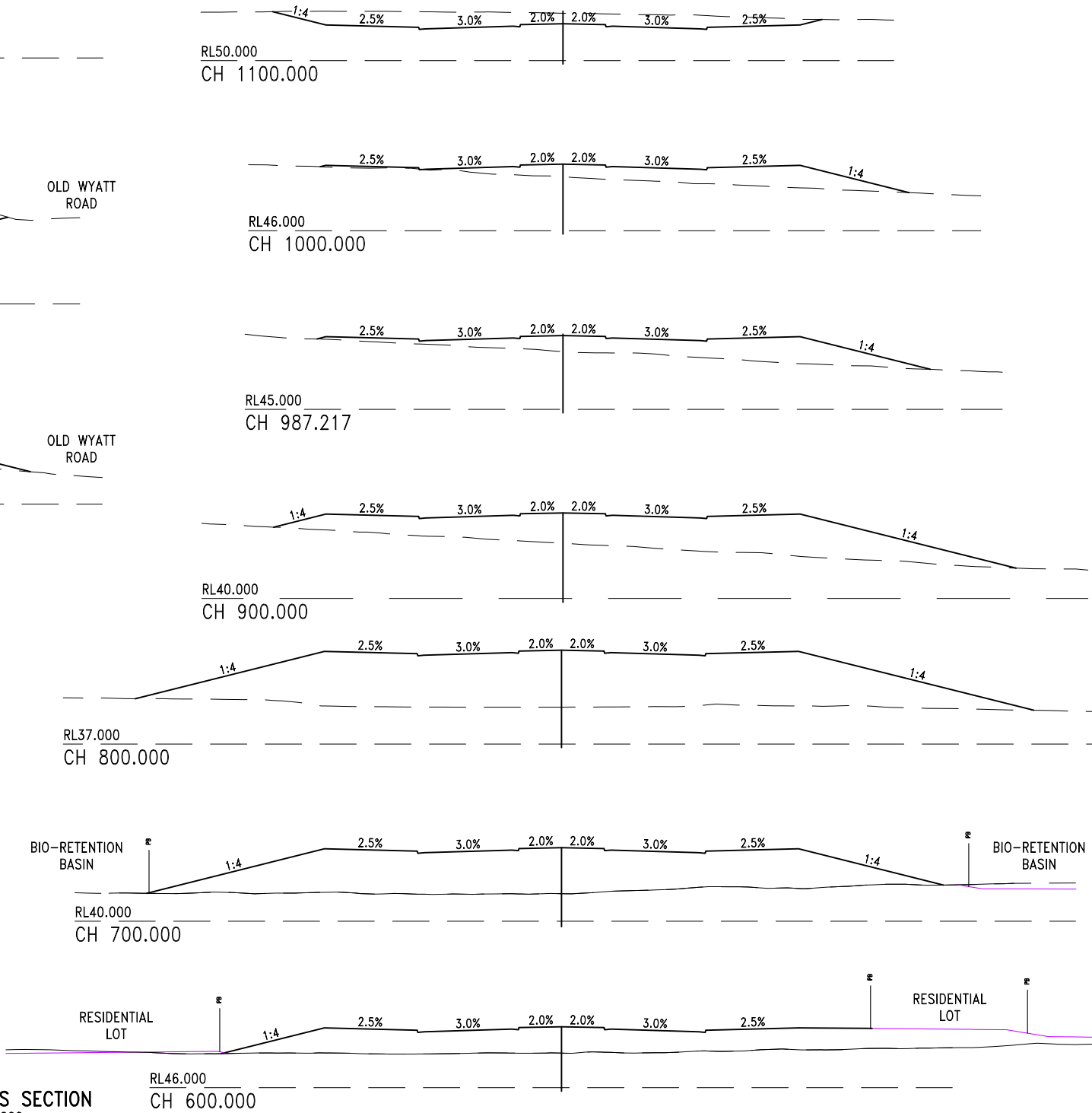
PROJECT  
400 WYATT ROAD, KAGARU  
RESIDENTIAL DEVELOPMENT

STATUS  
FOR APPROVAL

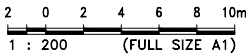
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| NM         | NM         | NM       | 27/05/26 | -     | 1 of 1 |
| PROJECT No | DRAWING No | REV      |          |       |        |
| 26-006     | C601       | A        |          |       |        |



EXISTING SURFACE  
DESIGN SURFACE  
DATUM LINE  
INTERNAL RESIDENTIAL  
SURFACE



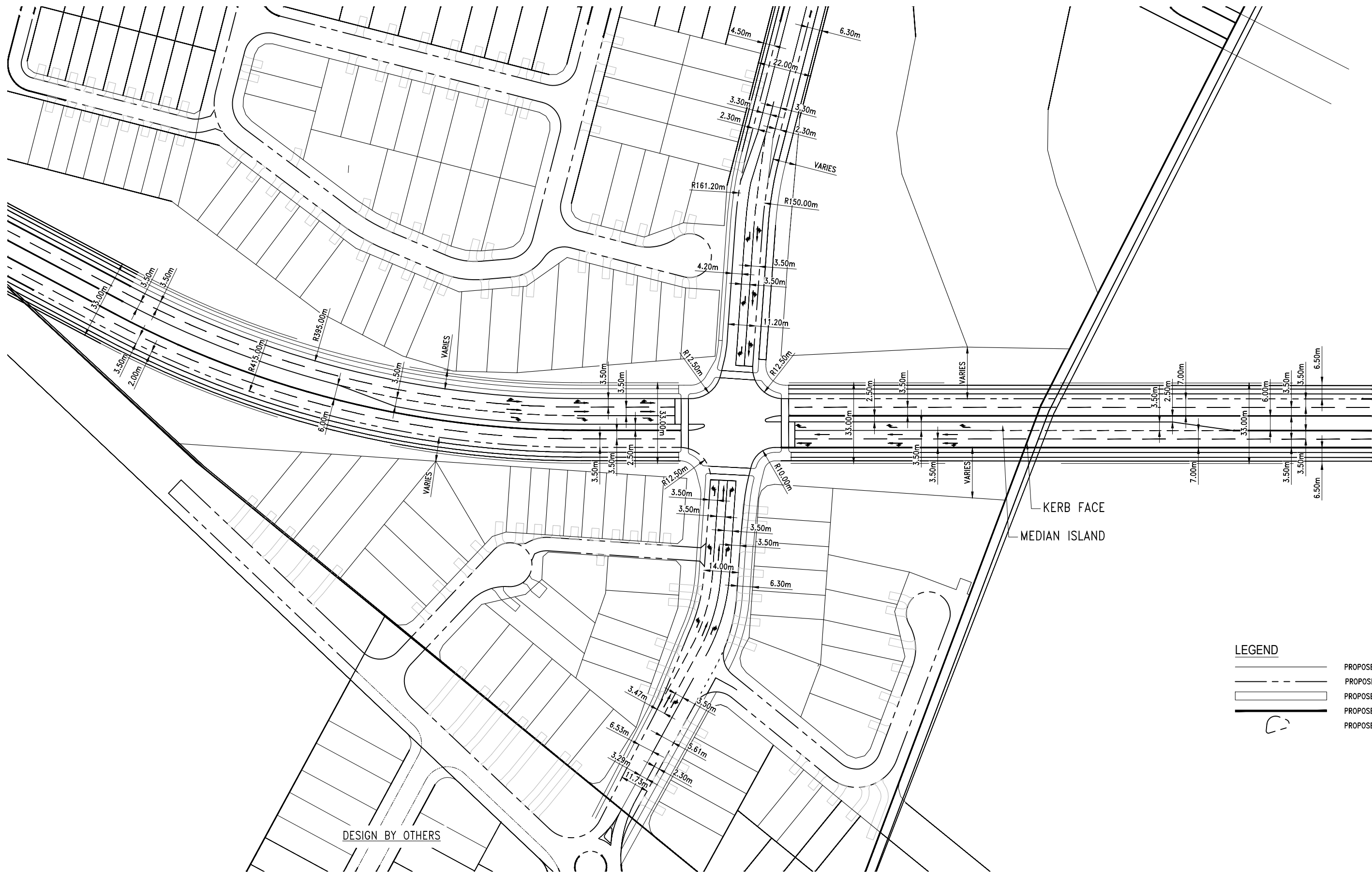
TYPICAL CROSS SECTION  
SCALE 1:200

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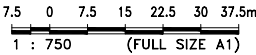
DESIGN BY OTHERS

FUNCTIONAL LAYOUT PLAN  
SCALE 1:750

LEGEND

- PROPOSED LOT BOUNDARY
- PROPOSED KERB AND CHANNEL
- PROPOSED FOOTPATH
- PROPOSED LINEMARKING
- PROPOSED RAISED ISLANDS

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| TITLE                        |
| WYATT ROAD FUNCTIONAL LAYOUT |

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| 400 WYATT ROAD, KAGARU<br>RESIDENTIAL DEVELOPMENT |  |                      |       |                    |          |            |        |
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|                                                   |  | PROJECT No<br>26-006 |       | DRAWING No<br>C610 |          | REV<br>A   |        |



# Appendix D – Geotechnical Investigation



**Qualtest Geotechnical & Laboratory**  
Est. 1987

**Geotechnical Investigation  
Interpretative Report  
#400 Wyatt Road  
Karagu QLD 4311**

**March 30, 2026**

**Presented To**

Mountain Property

***Qualtest Geotechnical and Laboratory***

*2/40 Boyland Avenue, Coopers Plains QLD 4108*

*3/64 Evans Drive, Caboolture QLD 4510*

*PO Box 733 Archerfield QLD 4108*

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*ABN 74 010 752 815*





## Mountain Property

*Level 16A, 239 George Street, Brisbane, QLD 4000*

## Geotechnical Investigation #400 Wyatt Road, Karagu, QLD 4311

## Interpretative Report

Report Ref. No.: 10791 – 26-044

March 30, 2025



ATTENTION: MR BRAD GATES

Email: [brad.gates@mountainproperty.com.au](mailto:brad.gates@mountainproperty.com.au)

Qualtest Laboratory Pty Ltd  
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Email: [qualtest@qualtestgeo.com](mailto:qualtest@qualtestgeo.com)  
Phone: 07 3875 1898  
Report Ref. No.: 10791– 26-044  
Date: March 30, 2026

| Revision | Date       | Author                    | Reviewer                     | Description         |
|----------|------------|---------------------------|------------------------------|---------------------|
|          |            |                           |                              |                     |
|          |            |                           |                              |                     |
|          |            |                           |                              |                     |
| 0        | 30/03/2026 | Kwaku Donkor – RPEQ 33046 | Dennis Alazigha – RPEQ 22169 | Issued for Comments |





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# 1 INTRODUCTION

This report presents the findings of the geotechnical investigation undertaken at the site with the Street Address - #400 Wyatt Road, Kagaru. The site has the Real Property Description Lot 20 on SP149887 and covers a land area of approximately 404,500m<sup>2</sup>:

It is understood that a residential subdivision is proposed for construction and that this investigation report will inform design requirements.

This work was commissioned by Mr Brad Gates, representing Mountain Property (The Client), following the acceptance of our fee proposal with reference QGQ26-005-10194, dated January 7, 2026.

The fieldwork was undertaken on February 3, 2026.

The geographical location of the site is highlighted in red in *Figure 1*.



*Figure 1: The Geographical Location of The Site Highlighted in Red*

## 1.1 Proposed Development

The client-supplied *Concept Layout Drawing* show that the site is to be reconfigured to create 400 new lots. The development plan also includes new internal roads, green spaces and stormwater corridors. Other structures that are expected to be included in the development are:

- Bulk earthworks, including cut and fill activities to create allotments;
- Retaining structures – type and height unknown at this stage;
- Drainage networks,
- Sewer and water reticulation works; and
- Soft and hard landscaping.

*Figure 2* presents an excerpt from the concept layout plan, showing the proposed development.



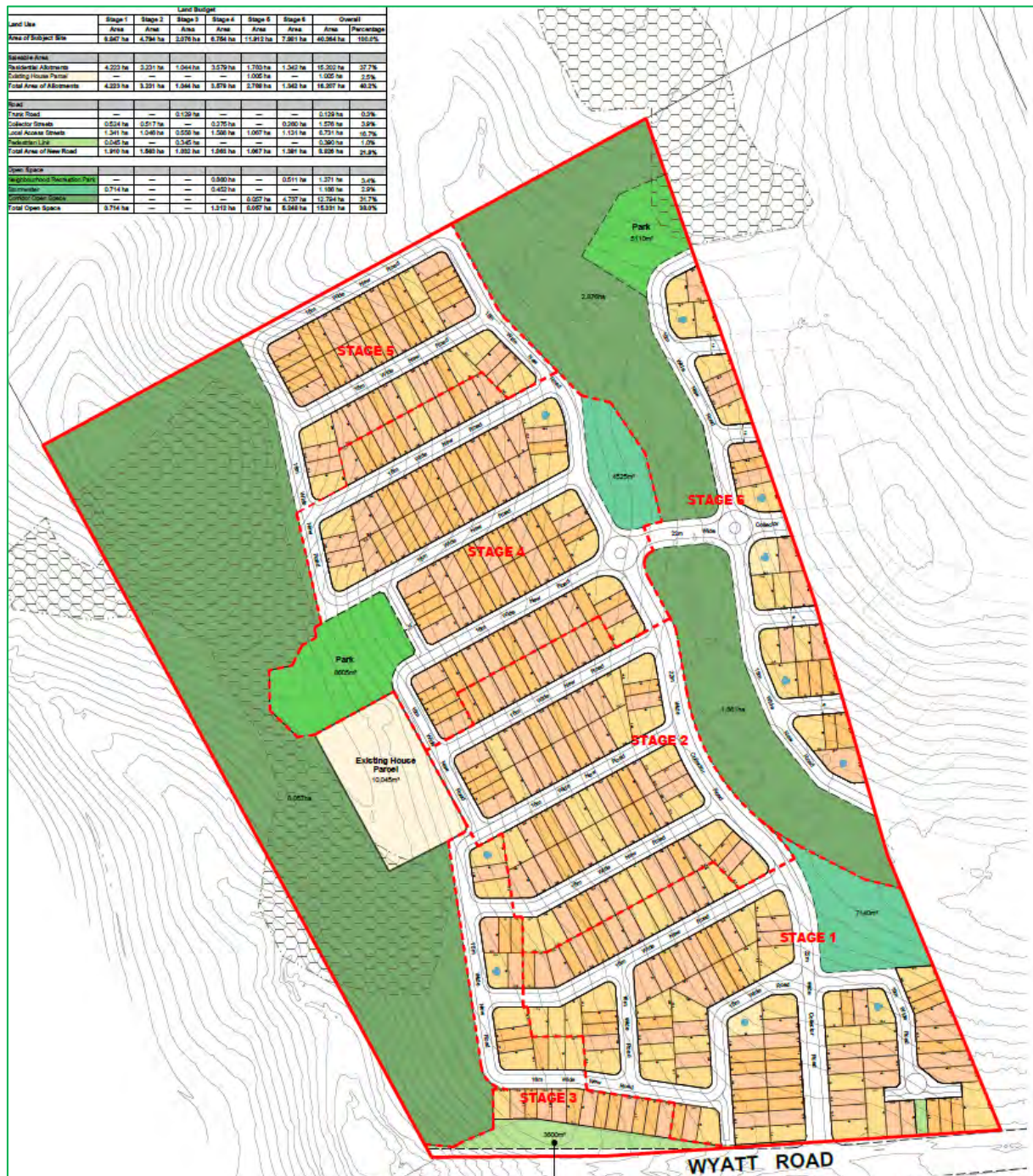


Figure 2: Excerpt of Master Plan Showing Proposed Site Layout

## 1.2 Purpose

This Interpretative report aims to present Mountain Property and its partners with a geotechnical report addressing the scope of work per Section 1.3.



### 1.3 Scope of Work

The recommended scope of work, as presented in our fee proposal, is summarised below:

1. Carry out a geotechnical investigation of the site, including drilling an appropriate number of boreholes to sufficient depths;
2. Identify suitable founding material for the proposed development;
3. Borehole logs shall include standing groundwater levels and depths of each soil regime;
4. Carry out suitable laboratory testing to assist in the recommendations for the proposed foundation design, retaining wall design, compaction requirements and earthworks conditions, including:
  - o Suitability of site cut material for use as fill material;
  - o Compaction standards;
  - o Topsoil stripping depths;
  - o Trafficability;
  - o Excavatability;
  - o Cut and fill temporary and permanent batter slopes.
5. Suitability of the proposed development based on the existing geotechnical conditions;
6. Identify all risk mitigation measures to ensure the proposed development remains geologically stable in the long term;
7. Broadscale recommendations on:
  - o Foundation types;
  - o Allowable bearing capacity;
  - o Soil classification report to inform the Plumbing and Drainage design for the site, in accordance with AS2870;
  - o Pavement design recommendations;
  - o Thrust block design recommendations;
  - o Native soil modulus based on values presented in AS2566;
  - o Presence and extent of uncontrolled fill & associated treatment measures;
  - o Sewer and water pipe trench design & embedment support type through identification of migratory soils (assessment of dispersive soils);
  - o Retaining wall design parameters;
  - o Presence of uncontrolled fill;
  - o Expansive soil treatment recommendations.

## 2 Methodology

### 2.1 Standards

This investigation has predominantly been undertaken in line with the following Australian Standards (AS):

- AS 1289 – Methods of testing soils for engineering purposes;
- AS 1289.6.3.2-1997 – Soil strength and consolidation tests – Determination of the penetration resistance of a soil – 9 kg dynamic cone penetrometer;
- AS 3798 – Guidelines on earthworks for commercial and residential developments;
- AS 2870 – Residential slabs and footings; and
- AS 1726:2017 – Geotechnical site investigations.

### 2.2 Literature Review

An initial literature review was undertaken before conducting the site investigation, covering the site's geology and geomorphology, a review of documents provided by the client, and a search for any other information that was publicly available.

#### 2.2.1 Information Provided

The Client provided the following information to assist in preparing this report:

- Request for proposal/Geotechnical Brief – contained in email received from Brade Gates, representing Mountain Property;
- Draft Concept Layout Plan, 400 Wyatt Road, Kagaru, Prepared by RPS Group, Plan Ref:152722-06, dated 21 July 2025.
- Disclosure Plan – Plan of Lots 1 & 2 and Emt B in Lot 2, Prepared by Edward Surveying Pty Ltd, Dated 19/12/2025
- Context Area Plan – Wyatt Road, Kagaru, Prepared by Saunders Havill, Drawing No: 11560 P14, Rev V-CON 01, dated 21/10/2025.

#### 2.2.2 Previous Reports

At the time of writing this report, Qualtest is unaware of any previous geotechnical report for the site or nearby sites.

#### 2.2.3 Site Geology

The online *Queensland Globe* Detailed Surface Geology (1:100k) map shows the site is underlain by the following geological units:

- Koukandowie Formation (Jbmk) – Early Jurassic to Middle Jurassic-aged arenite-mudrock unit with the following lithological summary: Lithofeldspathic labile and sublabile to quartzose sandstone, siltstone, shale, minor coal, ferruginous oolite marker
- Heifer Creek Sandstone Member (Jbmkh) – Middle Jurassic-aged arenite unit with a lithological summary of sublabile to quartzose sandstone, siltstone, shale.
- Walloon Coal Measures (Jw) Middle Jurassic-aged arenite-mudrock unit with a lithological summary of shale, siltstone, sandstone and coal seams.

Based on the above, the shallow soils encountered onsite are likely to be residual in nature. At depth, it is expected that residual soils and bedrock would be encountered. However, a drainage path within the site would likely have alluvial deposits within its area of influence.

An extract from the Detailed Surface Geology map showing the site is presented in *Figure 3*.



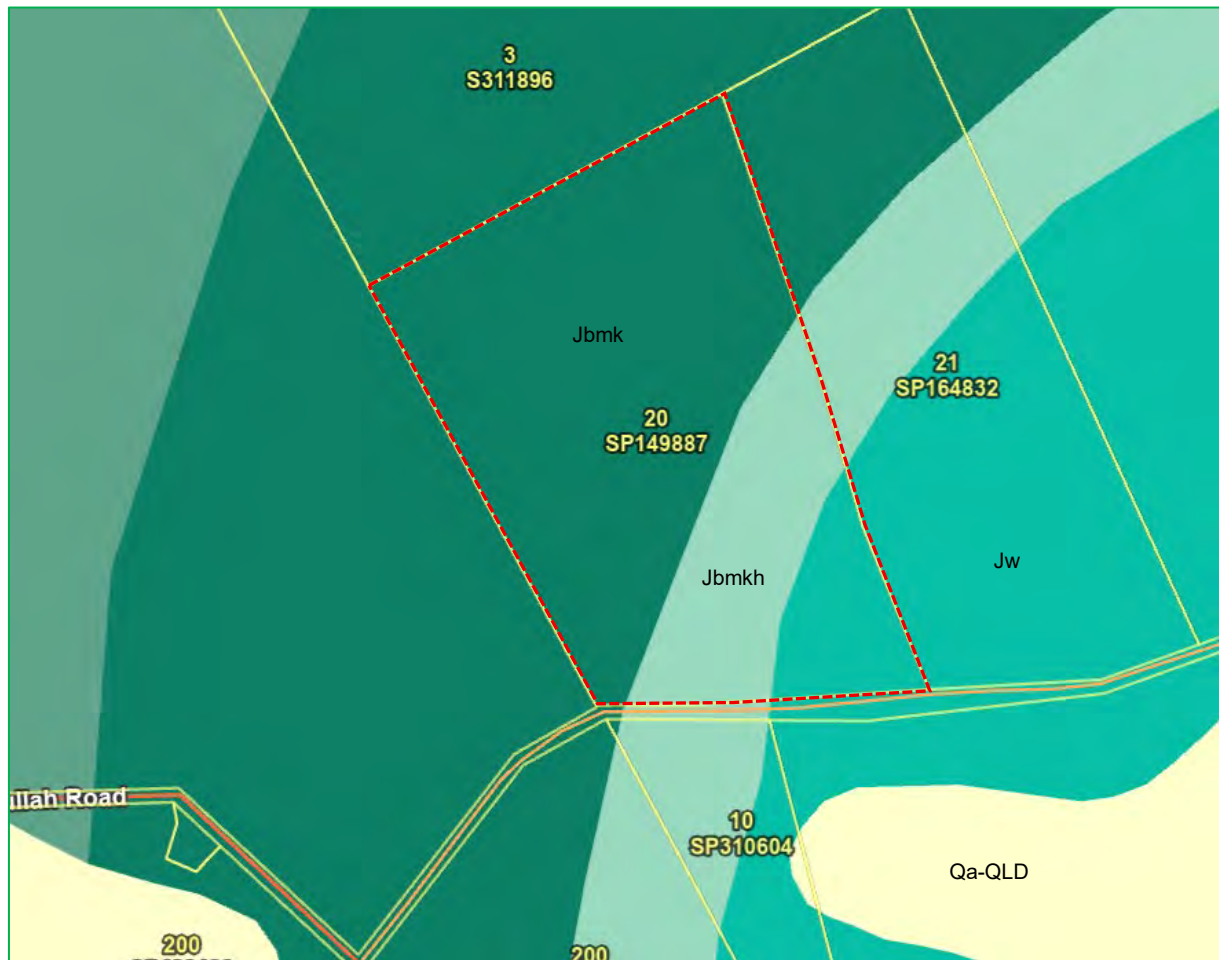


Figure 3: The Detailed Surface Geology Map, The Site Highlighted in Red

#### 2.2.4 Site Description

The subject site, 400 Wyatt Road, is located in the rural township of Kagaru, which is within the Logan City Council area of Queensland. The allotment is described as Lot 20 on SP149887 and covers a gross land area of about 40ha.

Wyatt Road forms the site's southern boundary and provides vehicular access into the site. On all other sides, the site is bordered by rural farming allotments.

On the day of the investigation, a number of relevant features were noted onsite; these included a residential building, sheds, fence lines and animal enclosures. Vegetation over the majority of the site typically consisted of overgrown grass cover and scattered shrubs/trees.

Topographically, the site contains a number of low-rise hills/ridges and valleys. In general, the high ground was recorded at the western sections of the site, while a drainage path and a dam were recorded in the eastern section of the site.

The Ground slopes were typically found to be 5 to 10 degrees. Localised areas with steeper slopes (e.g., drainage gullies) were also recorded.

Photographs showing typical site conditions are presented in *Figure 4(a,b,c,& d)*.



Figure 4: Selected Photographs of The Site

## 2.3 Site Investigation

### 2.3.1 Geotechnical Investigation

The geotechnical investigation comprised a desktop study, fieldwork, and laboratory testing.

In consultation with the client, the location of eight (8) boreholes was nominated across the site to maximise geotechnical information gathering. The boreholes, designated QT1 to QT8, were drilled to a target depth of 3.0m. Onsite, the boreholes were located using site features for positional reference.

The boreholes were drilled using a 4WD Ute-mounted Jacro 200 drill rig fitted with a 100mm diameter solid auger and a Tungsten Carbide drill bit.

The fieldwork was supervised by a Qualtest Geotechnical Engineer, who logged the boreholes per Australian Standard AS 1726-2017.

For subsequent laboratory testing, disturbed and undisturbed soil samples were collected at various depths in the boreholes. Select materials were tested to address the scope of work.

All boreholes were backfilled with spoil won from the drilling operations.

The approximate location of the boreholes as drilled on the day of investigation is illustrated in *Figure 5*.

#### 2.3.1.1 DCP Testing

Dynamic cone penetrometer (DCP) testing was carried out at each borehole (QT1 to QT8) location prior to drilling. The DCP tests extended to depths between 0.4m to 2.4m bgl. The blow counts per 100mm penetration ranged from 1 to >20 (refusal), generally corresponding to a material stiffness of soft to hard or loose to very dense materials.

The results of the DCP tests are included in the borehole logs (*Appendix A*).





Figure 5: The Site Showing the Approximate Borehole Locations

### 2.3.1.2 Subsurface Conditions

The detailed subsurface conditions encountered at the borehole locations, together with the DCP test results, are presented in *Appendix A*.

In general, the boreholes (QT1 – QT8) encountered a sandy topsoil layer overlying residual soils that gradually graded into weathered rock. The main layers encountered in the boreholes are further described below:

|                       |                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Topsoil</i>        | Observed at all borehole locations and was assessed as medium dense silty sand. The topsoil extended to a relatively uniform depth of approximately 0.1m, underlain by:                                                                                                                                                                                                                                            |
| <i>Residual Soils</i> | Observed in all boreholes. These materials typically consisted of a two-tier soil profile - upper level sand-based soils overlying sandy clay/clay soils.<br><br>The sands contained some silt fines and were generally described as medium dense, while the clays were described as stiff to hard and contained medium to high plasticity fines. The residual soils extended to depths ranging from 0.6 to >3.0m. |
| <i>Weathered Rock</i> | Encountered in three out of the eight boreholes. These materials were typically described as extremely to highly weathered sandstone that was recovered as very dense clayey sand. At the auger refusal depths, the sandstone was considered moderately weathered, medium to high strength bedrock.                                                                                                                |

### 2.3.1.3 Groundwater

Groundwater or seepage was not encountered in any of the boreholes at the time of the investigation. However, it is noted that the presence of groundwater could be influenced by climatic conditions as well as the soil material properties and profile. For example, relatively permeable silty sand overlying the indurated clayey soils is conducive to the development of perched groundwater conditions at the interface following a prolonged rain event.

### 2.3.1.4 Geotechnical Model

A preliminary geotechnical model of the subsurface conditions encountered based on the boreholes is illustrated in *Table 1*.

*Table 1: The Preliminary Geotechnical Model Based on Borehole Profiles*

| BH ID | Depth Range (m) |           |                |                   |
|-------|-----------------|-----------|----------------|-------------------|
|       | Topsoil         | Residual  | Weathered Rock | Termination Depth |
| QT1   | 0.0 – 0.1       | 0.1 – 0.9 | 0.9 – 2.5      | 2.5*              |
| QT2   | 0.0 – 0.1       | 0.1 – 0.6 | 0.6 – 0.7      | 0.7*              |
| QT3   | 0.0 – 0.1       | 0.1 – 3.0 | NE             | 3.0**             |
| QT4   | 0.0 – 0.1       | 0.1 – 3.0 | NE             | 3.0**             |
| QT5   | 0.0 – 0.1       | 0.1 – 3.0 | NE             | 3.0**             |
| QT6   | 0.0 – 0.1       | 0.1 – 3.0 | NE             | 3.0**             |
| QT7   | 0.0 – 0.1       | 0.1 – 3.0 | NE             | 3.0**             |
| QT8   | 0.0 – 0.1       | 0.1 – 0.8 | 0.8 – 2.2      | 2.2*              |

*NE – not encountered, \* = auger refusal depth, \*\* = target depth*



### 3 Laboratory Testing and Results

Selected soil samples were tested for geotechnical properties at Qualtest's NATA-accredited laboratory in Brisbane in accordance with relevant Australian Standards (AS). Tests outside the scope of Qualtest laboratory were outsourced.

The quantity and type of laboratory tests performed in this investigation are summarised in *Table 2*.

*Table 2: Laboratory Testing Program*

| Laboratory Test            | Quantity | Reference Standard                |
|----------------------------|----------|-----------------------------------|
| Atterberg Limits           | 3        | AS1289.3.1.2, 3.2.1, 3.3.3, 3.4.1 |
| Particle Size Distribution | 3        | AS1289.3.6.1                      |
| Shrink-Swell               | 3        | AS1289.7.1.1                      |
| Emerson Class Number       | 6        | AS1289.3.8.1                      |
| 4-Day Soaked CBR           | 3        | AS1289.6.1.1                      |

The laboratory test certificates for the investigation are presented in *Appendix B*.

#### 3.1 Particle Size Distribution

The behaviour of coarse-grained soils (sands and gravels) can be predicted by classifying the soil in terms of its particle size distribution (PSD). AS 1726-2017 denotes soils with fine contents ( $\leq 75 \mu\text{m}$ ) greater than or equal to 35% will behave geomechanically as fine-grained soil and, therefore, are to be described as cohesive soils.

Three soil samples recovered from boreholes QT3 and QT7 were tested for particle size distribution. The results of particle size distribution tests conducted on the selected samples are presented in the test certificates included in *Appendix B* and are summarised in *Table 3*. The results indicate the presence of both fine/coarse grained soils onsite.

*Table 3: Results of Particle Size Distribution Tests*

| BH ID | Sample Depth, m | Material Type | Grading    |          |           |
|-------|-----------------|---------------|------------|----------|-----------|
|       |                 |               | Gravel (%) | Sand (%) | Fines (%) |
| QT3   | 1.0 – 1.5       | Clay          | 0          | 5        | 95        |
| QT7   | 0.1 – 0.4       | Silty Sand    | 4          | 73       | 23        |
| QT7   | 0.8 – 1.5       | Clayey Sand   | 5          | 65       | 30        |

#### 3.2 Atterberg Limits

The behaviour of fine-grained soils (silts and clays) can be predicted by classifying the soil in terms of its plasticity. Plasticity is broadly described as either “High”, “Medium”, or “Low”.

Soils behave very differently depending on their moisture content. It can exist as either a solid at very low moisture contents, a semi-solid, plastic, or liquid at ever-increasing moisture contents. To determine plasticity, the moisture content is determined to define the boundaries between semi-solid, plastic, and liquid. The minimum moisture content at which the soil becomes plastic is known as the “Plastic Limit”, and the minimum moisture content at which the soil behaves as a liquid is known as the “Liquid Limit”. These limits collectively are known as the Atterberg Limits.

Soils with liquid limits below 35% are described as Low plasticity, liquid limits between 35 and 50% are described as medium plasticity and liquid limits above 50% are described as High plasticity.

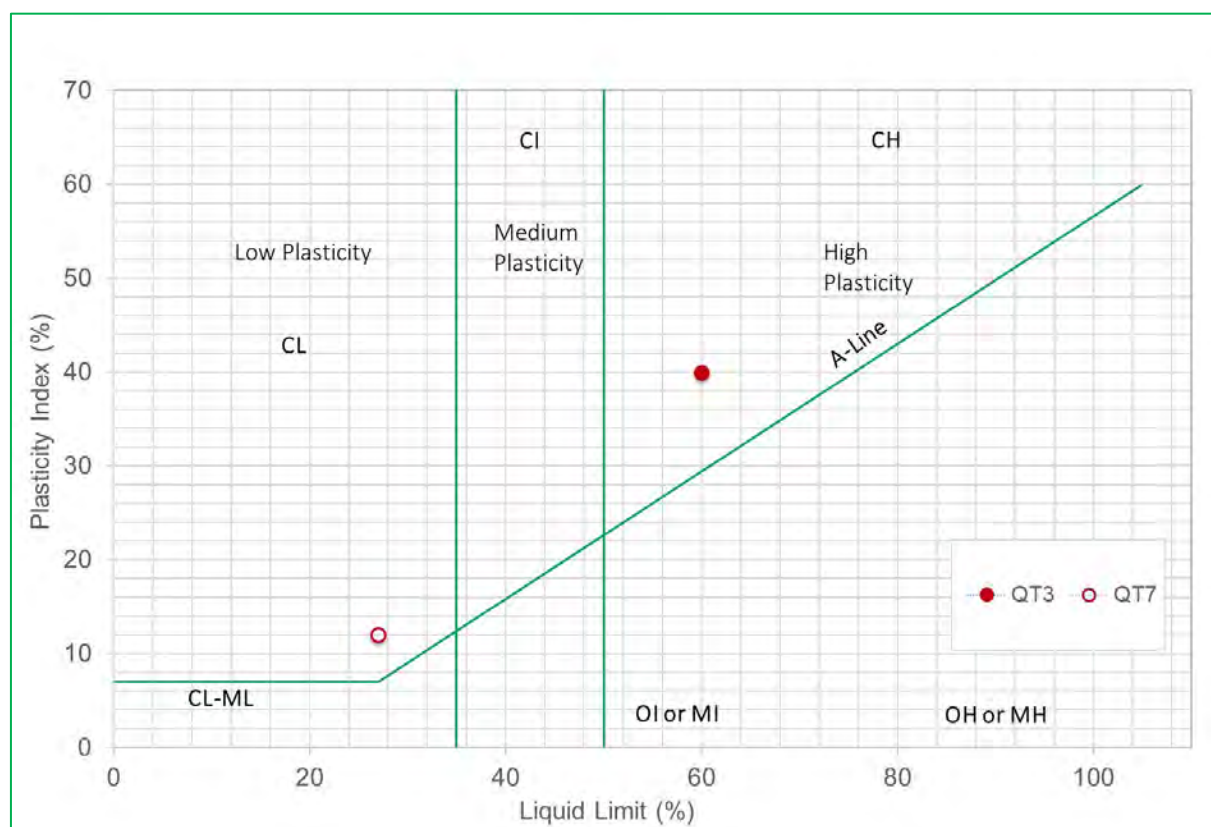
The 'Plasticity Index' of soil is the range of moisture contents where the soil exhibits plastic behaviour. This is calculated by subtracting the Plastic Limit from the Liquid Limit of the soil. Soils with a plasticity Index greater than 25% are often referred to as high plasticity.

The Atterberg limits of soil samples recovered from QT3 and QT7 were tested, including linear shrinkage. The test results are summarised in *Table 4* and shown graphically in *Figure 6*, which shows the presence of low and high-plasticity clays.

*Table 4: Results of the Atterberg Limit Tests*

| BH ID | Sample Depth, m | Liquid Limit (%) | Plastic Limit (%) | Plasticity Index (%) | Linear Shrinkage (%) | Weighted Plasticity Index (%) |
|-------|-----------------|------------------|-------------------|----------------------|----------------------|-------------------------------|
| QT3   | 1.0 – 1.5       | 60               | 20                | 40                   | 15.5                 | 3958                          |
| QT7   | 0.1 – 0.4       | 52               | 14                | NO                   | NP                   | -                             |
| QT7   | 0.8 – 1.5       | 27               | 15                | 12                   | 7.0                  | 869                           |

NO = not obtainable, NP = non-plastic



*Figure 6: Soil Classification Based on the Unified Soil Classification Scheme*

### 3.3 Shrink-Swell

The shrink-swell test is a simple test routinely employed in Australian geotechnical engineering practice to quantitatively assess the expansive potential of undisturbed or remoulded clay soils and to guide the design of footings on these soils. A fundamental rationale for using the shrink-swell test is that it evaluates the soil over both wetting (swell) and drying (shrink) phases. Hence, the result is independent of the initial moisture state of the soil sample and defines a unique soil class related to the fundamental properties of the soil.

Three (3) undisturbed soil samples (U50) recovered from boreholes QT2, QT3, and QT6 were subjected to a shrink-swell test. The results show a maximum shrink-swell index ( $I_{ss}$ ) of 4.6% at the QT6 location for the clay-based soils, indicative of the presence of extremely reactive clays. The test results are summarised in *Table 5*.



Table 5: Summary of the Shrink-Swell Test Results

| Borehole ID | Sample Depth, m | Shrinkage (%) | Swell (%) | Shrink-Swell Index ( $I_{ss}$ ), % |
|-------------|-----------------|---------------|-----------|------------------------------------|
| QT2         | 0.3 – 0.50      | 2.8           | 7.1       | 3.5                                |
| QT3         | 0.6 – 0.70      | 2.6           | 9.5       | 4.1                                |
| QT6         | 0.6 – 0.67      | 4.2           | 8.1       | 4.6                                |

### 3.4 Emerson Class Number Test

When brought into contact with water, soil can release silt and clay particles into suspension and increase the turbidity of water. Turbid water in soils indicates susceptibility to erosion.

The Emerson Class Number can measure the potential of soil to release silt and clay particles into suspension. The values range from one (high potential) to eight (low potential). Classes 1 to 3 are considered dispersive, Class 4 indicates the presence of carbonate or gypsum and is slightly dispersive, Classes 5 and 6 are deemed non-dispersive, and Classes 7 and 8 are water-stable Soils (non-slaking), but if it swells (Class 7), retain its original size and shape (Class 8).

Six (6) samples collected across the site were subjected to Emerson Class tests. The dispersive potential of the soils, as assessed by the Emerson Class Number, is summarised in *Table 6*. The results indicate extremely dispersive soils.

Table 6: Summary of Emerson Class Test Results

| BH ID | Sample Depth (m) | Material    | Emerson Class Number | Remarks           |
|-------|------------------|-------------|----------------------|-------------------|
| QT1   | 0.3 – 0.4        | Silty sand  | 2                    | Highly Dispersive |
| QT2   | 0.3 – 0.4        | Sandy Clay  | 2                    | Highly Dispersive |
| QT3   | 1.0 – 1.5        | Clay        | 2                    | Highly Dispersive |
| QT4   | 0.4 – 0.8        | Sandy Clay  | 6                    | Non-Dispersive    |
| QT5   | 0.0 – 0.1        | Silty Sand  | 3                    | Dispersive        |
| QT7   | 0.8 – 1.5        | Clayey Sand | 4                    | Non-Dispersive    |

### 3.5 California Bearing Ratio (CBR)

Selected soil samples recovered from QT4, QT8, and QT11 were tested for 4-day soaked CBR using the test methods described in AS1289.6.1.1-2014. The samples were compacted using Standard compaction effort at optimum moisture content and soaked for four days under a 4.5kg surcharge. The tests were conducted at Qualtest's NATA-accredited laboratory in Brisbane.

A summary of the laboratory CBR test results is presented in *Table 7*, with CBR values ranging from 1.5 to 4.0% for the clay-based soils and 40.0% for the sand-based soils.

Table 7: Summary of Laboratory CBR Test Results

| BH ID | Sample Depth, m | MDD (t/m <sup>3</sup> ) | OMC (%) | Swell (%) | CBR (%) |
|-------|-----------------|-------------------------|---------|-----------|---------|
| QT2   | 0.3 – 0.5       | 1.80                    | 11.5    | 1.0       | 4.0     |
| QT4   | 0.4 – 0.8       | 1.67                    | 17.0    | 5.0       | 1.5     |
| QT7   | 0.1 – 0.4       | 2.0                     | 8.5     | 0.0       | 40.0    |

*MDD = maximum dry density, OMC = optimum moisture content*

## 4 Geotechnical Engineering Assessment

Based on our understanding of the proposed development, the following sub-sections have been provided to assist with the geotechnical aspects of the design and construction phases. It is noted that the recommendations and comments given in this report are broadscale in nature.

### 4.1 Bearing Capacity of Soils

The bearing capacity of the subsurface profiles encountered onsite was determined using DCP test data acquired during the February 11, 2026, investigation.

Campanella & Robertson (1983) developed a correlation between DCP blow counts and the bearing capacity of soils. This relation was adopted to derive the allowable bearing capacity of the subsurface profile with a safety factor of 4.0 for cohesive soils with a foundation factor  $N_c = 5$ .

The allowable bearing capacity of the subsurface soils at the DCP test locations (QT1 to QT8) with depth is presented in *Figure 7*.



*Figure 7: The Allowable Bearing Capacity of Onsite Soils with Depth; Derived from DCP Data*

Based on *Figure 7* above, there appears to be water softened soils up to a depth of approximately 1.5m in QT4, QT5 and QT6. These soils would have an allowable bearing capacity of less than 100kPa.

At all other boreholes (and beyond the depth of water softened soils), an allowable bearing capacity of 120kPa is achievable for the residual clays. An allowable bearing capacity of 200 kPa can be adopted for the extremely weathered rock materials.

It is highly recommended that a competent person assess all exposed foundations prior to fill placement and ensure that the recommended bearing pressures are achieved during construction.

### 4.2 Young's Modulus of Soils

Young's modulus is an elastic soil parameter and a measure of soil stiffness, and it is defined as the ratio of the stress along an axis to the strain along that axis in the range of elastic soil behaviour.

In this investigation, the soil Young's modulus ( $E$ ), commonly referred to as soil elastic modulus, was calculated using correlation equations with DCP test data.

For the stiff to very stiff underlying alluvial soils, the correlation proposed by Jianzhou et al. (2022) was used to determine Young's modulus of the soil, per Equation 1.



$$E(\text{MPa}) = 338 \times PR^{-0.39}$$

Eqn. 1

Where

$PR$  = the number of hammer blows required to produce 300mm of rod penetration.

Based on the above, Qualtest recommends a conservative Young's modulus of 0.5MPa for the soft to firm residual soils, and 8.0MPa for the very stiff to hard clay soils. A modulus of 15 may be adopted for the extremely to highly weathered sandstone materials.

### 4.3 Site Classification

To determine the broadscale soil classification, a number of site features are considered. The features include the subsurface profile, the surface topography, existing vegetation, and the proposed development. Given that the existing subsurface profile provides a bearing capacity of less than 100kPa, and earthworks development would also likely create fill heights greater than 0.4m, and for the planned removal of trees, the site is assigned a **Class P** per AS2870-2011.

The site was also classified based on characteristic surface movement ( $y_s$ ) estimated in accordance with Clause 2.3 and applying Table 2.3 of AS2870-2011. The shrink-swell index,  $I_{ss}$  (i.e., 4.6%) obtained from laboratory testing, was adopted to calculate  $y_s$ . The change in suction was estimated from published literature as 1.2pF, and the design soil suction change ( $H_s$ ) depth of 2.3m was acquired from the literature and a cracked  $H_s$  of 50%.

Based on a worst-case soil profile, a potential ground surface movement of about 75mm can be expected for the clay soils under normal moisture conditions, which corresponds with a site classification of **Class H2-E**. However, it is noted that in areas with shallow depth to rock, potential ground movement may reduce down to about 10mm, corresponding to a site classification of **Class S**.

The potential ground surface movements are subject to change when:

- Cut-to-fill or imported earthworks operations are carried out;
- Abnormal site soil moisture conditions are allowed to develop; and
- Tree planting is carried out, or existing trees are removed, on or adjacent to the site.

### 4.4 Shallow Footing Systems

Slab-on-ground, pad, and strip footings are considered appropriate for the site, provided the allowable bearing pressures presented in Table 8 are adhered to.

Based on ground conditions, all structures should be supported by at least select engineered fill and keyed into the existing slopes, where applicable.

Table 8: Preliminary Recommended Parameters for Foundation Design

| Material                                                                                      |                    | Allowable Bearing Pressure (kPa) |              |
|-----------------------------------------------------------------------------------------------|--------------------|----------------------------------|--------------|
|                                                                                               |                    | Slab on ground/Strip Footing     | Pad Footings |
| Topsoil, Uncontrolled Fill, Water-Softened Soils                                              | Soft/firm or Loose | <100 (NR)                        | <100 (NR)    |
| Controlled Fill                                                                               | Stiff or better    | 100                              | 100          |
| Residual Soil                                                                                 | Very Stiff to Hard | 120                              | 120          |
| Weathered Rock                                                                                | Dense              | 200                              | 200          |
| NR = not recommended                                                                          |                    |                                  |              |
| All founding materials should be verified by a suitably qualified person during construction. |                    |                                  |              |

Footing total and differential settlements are not expected to exceed 15mm, where footings are designed for the allowable bearing pressures in Table 8.

## 4.5 Dispersive soils/Emerson Class

Soil samples subjected to Emerson Class Number tests returned values of 2, 3, 4 or 6, which indicates that the site soils are generally dispersive, with four out of six samples returning as 2 and 3.

The risks associated with dispersive soils can be managed with the implementation of a standard Erosion and Sediment Control Plan prepared by a Certified Practitioner in Erosion and Sediment Control (CPESC) with reference to Best Practice Erosion & Sediment Control (IECA 2008). These control measures should be in place prior to and during the commencement of earthworks.

Specific control and construction measures to prevent scour and erosion could include:

- Effective drainage control, such as diversion of up-slope stormwater and installation of scour protection mechanisms
- Minimise surface water flow velocities
- Provision of soil binders or stabilisers.

## 4.6 Embedment Recommendations for Sewer and Water

Trench foundations at this site are likely to include controlled fill, residual soils and weathered sandstone. Laboratory testing shows the site soils are dispersive. The preliminary recommended trench embedment types are presented in *Table 9*.

The actual trench foundation and embedment materials, as well as the presence of groundwater, should be verified at the time of construction.

*Table 9: Recommended Trench Embedment Types*

| Material                                                                          | Trench Embedment Type          | Comments                   |
|-----------------------------------------------------------------------------------|--------------------------------|----------------------------|
| Site Won Controlled Fill                                                          | Type 4 – Sewer, Type D – Water | Trench Foundation > 50 kPa |
| Residual Soils/XW-HW Rock                                                         | Type 4 – Sewer, Type D – Water | Trench Foundation > 50 kPa |
| ≥ MW Sandstone                                                                    | Type 3 – Sewer, Type C – Water | Trench Foundation > 50 kPa |
| <i>XW = extremely weathered, HW = highly weathered, MW = moderately weathered</i> |                                |                            |

## 4.7 Thrust Block Design Parameters

Thrust blocks may be designed based on the allowable horizontal bearing capacities provided in *Table 10*.

*Table 8: Preliminary Parameters for Thrust Block Design*

| Material                                                                                                                        |                     | Allowable Horizontal Bearing Pressure (kPa) |
|---------------------------------------------------------------------------------------------------------------------------------|---------------------|---------------------------------------------|
| Topsoil, Uncontrolled Fill, Disturbed Soils; Water-Softened Soils                                                               | Soft/firm or Loose  | NR                                          |
| Controlled Fill                                                                                                                 | Stiff or better     | 50                                          |
| Residual Soil/XW-HW Rock                                                                                                        | VSt to H or D to VD | 60                                          |
| ≥ MW Sandstone                                                                                                                  | VLS to LS           | 100                                         |
| <i>NR = not recommended, VSt = very stiff, H = hard, D = dense, VD = very dense, VLS = very low strength, LS = low strength</i> |                     |                                             |



## 4.8 Bulking Factors

The bulking factor is the ratio or percentage of the volume change of excavated material to the volume of the original volume before excavation.

Bulking occurs when soil is excavated. One cubic metre of insitu material expands and does not always translate into one cubic metre of fill when placed and compacted on the site. Bulking can significantly affect the balance of cut and fill volumes and, hence, the cost of the earthworks.

Excavation increases the volume of material. It is, therefore, necessary to use a bulking factor to determine the volume of material that will be created by excavation. The bulking factor is defined as:

$$\text{Bulking Factor} = \frac{\text{Volume after Excavation}}{\text{Volume before Excavation}}$$

Based on experience, engineering judgement, laboratory demonstrations, and published typical values (Look, 2014), *Table 11* provides estimated bulking factors for the material types encountered on the site.

*Table 9: Bulking Factors*

| Material        | Bulking Factor for Transportation |
|-----------------|-----------------------------------|
| Clay-Based Soil | 1.30                              |
| Sand-Based Soil | 1.10                              |

Typical wastage of approximately 5% by volume may be adopted.

## 4.9 Cohesion and Friction Angles

The internal friction angle of the stiff (or better ) clay-based soil material was determined using graphical correlations proposed by Ladd et al. (1977) and Bjerrum and Simons (1960).

For clay with a plasticity index of 40%, the corresponding effective cohesion and internal friction angle are presented as follows:

Qualtest recommends that the following be adopted for the site materials:

- **Effective Cohesion**
  - o Residual Soil (water-softened, firm) = not recommended (remove);
  - o Controlled Fill = 2kPa,
  - o Residual Soil/XW-HW Rock (stiff or better) = 5kPa;
  - o ≥ Moderately Weathered Sandstone Rock = 10 kPa
- **Internal Friction Angle**
  - o Residual Soil (water-softened, firm) = not recommended (remove);
  - o Controlled Fill = 25°;
  - o Residual Soil/XW-HW Rock (stiff or better) = 26°
  - o ≥ Moderately Weathered Sandstone Rock = 34°
- **Bulk Density**
  - o Residual Soil (water-softened, firm) = not recommended (remove);
  - o Controlled Fill = 18kN/m<sup>3</sup>;
  - o Residual Soil/XW-HW Rock (stiff or better) = 19kN/m<sup>3</sup>
  - o ≥ Moderately Weathered Sandstone Rock = 22kN/m<sup>3</sup>

## 4.10 Retaining Wall Parameters

This section provides advice and recommendations for free-headed and fixed-headed retaining walls that may be constructed as part of the proposed development.

Passive earth pressures for the site can be calculated by the Rankine (1857) method, which assumes no soil cohesion or wall soil friction.

The design of fixed or free-headed permanent retaining wall systems supporting fill or natural clay soil can be based on the lateral earth pressure distribution given as:

$$p_a = \frac{1}{2} k_a \gamma H^2 - 2cH + 2c^2/\gamma$$

In the above equation, H(m) is the height of the wall,  $\gamma$  (kN/m<sup>3</sup>) is the unit weight of the soil,  $k_a$  is the coefficient of active earth pressure, and  $c$  is soil cohesion.

Retaining walls are to be designed with respect to internal stability properties such as sliding, overturning, and bearing capacity failure. The retaining walls are also to be assessed and designed for global stability. Internal and global stability design should be carried out in accordance with AS4678:2002 (Earth-Retaining Structures).

Preliminary design parameters for retaining walls onsite are shown in *Table 12*.

*Table 10: Retaining Wall Design Parameters for Backfill Slope Angle*

| Origin                      | Description     | Bulk density, $\gamma$ (kN/m <sup>3</sup> ) | Long-Term Friction Angle, (°) | $K_o$ | $K_a$ | $K_p$ | Long-Term Cohesion, $C'$ (kPa) |
|-----------------------------|-----------------|---------------------------------------------|-------------------------------|-------|-------|-------|--------------------------------|
| Controlled Fill             | Stiff or better | 18                                          | 25                            | 0.58  | 0.41  | 2.46  | 2                              |
| Residual Soils / XW-HW Rock | Stiff or Better | 19                                          | 26                            | 0.56  | 0.39  | 2.56  | 5                              |
| ≥ MW Sandstone              | Dense           | 22                                          | 34                            | 0.44  | 0.28  | 3.53  | 10                             |

Drainage is perhaps one of the most important considerations in the design and construction of earth-retaining structures, and it is necessary to separate the surface drainage from the subsoil drainage system.

Surface water must be diverted away from the back of retaining walls to prevent ponding surface water behind the top of the wall. This usually includes placing a 400mm to 600mm thick layer of compacted clay over the subsoil system to act as a seal.

Subsoil drainage comprising free-draining granular material connected to slotted PVC pipes must be placed behind the permanent retaining walls to prevent the buildup of groundwater pressures behind the walls, and this must be discharged to the point of legal discharge.

## 4.11 Earthworks Recommendations

All earthwork procedures should be carried out in a responsible manner in accordance with AS.3798-2007 "Guidelines on Earthworks for Commercial and Residential Developments". The earthworks contractor should make themselves familiar with the site conditions.

Given the subsurface profile encountered on site and considering the proposed earthworks operations, it is recommended that all earthwork activities be supervised under Level 1 engineering supervision and an engineering certification provided by a registered professional engineer (RPEQ).

The earthwork recommendations are presented in the following subsections:

### 4.11.1 Existing Onsite Fill

The investigation did not reveal fill at the borehole locations. However, given that parts of the site have previously been developed, including building, access tracks and dams, some fill should be expected.

In the absence of certifying documents, all onsite fill is deemed uncontrolled. All fill within the development area subject to structural loads (e.g., dwelling, roads, etc) must be removed and replaced in accordance with AS 3798 recommendations.



#### *4.11.2 Stripping Depths*

Based on the borehole logs, a topsoil layer thickness of 0.1m can be expected at the site. In addition, the areas characterised by low DCP blow counts are deemed not suitable to support structural loads and should also be stripped and replaced in controlled conditions.

Where dams are to be reclaimed, particular care should be taken to ensure all water-affected materials are removed from the sides and bottom of the pits.

Following the removal of topsoil/disturbed ground, the exposed surface should be proof-rolled prior to any fill placement.

#### *4.11.3 Depth to Rock*

Three out of the eight boreholes encountered rock. The depth to rock ranged from 0.6m to 0.9m. There was also an approximately 1m thick cemented section in QT7 at 0.8m.

#### *4.11.4 Excavation Conditions*

It is expected that 6 to 14t+ excavators fitted with general-purpose/toothed buckets will be required to excavate soils down to the borehole termination depth of 3.0m.

Larger (say 30t) equipment would be required to excavate weathered sandstone and cemented soils (duricrust) materials. Beyond the depth of auger TC refusal, the use of hydraulic jacks/rippers is likely with increasing depth.

#### *4.11.5 Trafficability*

Trafficability of the site on the date of the investigation was good due to the dry conditions and existing vegetation. Clay-based soils are expected to behave poorly if exposed to heavy construction traffic, particularly when wet. A platform of granular material, such as roadbase or crushed concrete, may be needed to support the construction plant.

To help reduce, but not eliminate, trafficability issues associated with wet weather, especially during earthworks, exposed subgrades should be sealed with a smooth drum roller and graded such that they promote surface drainage and prevent ponding.

On this site, trafficability problems could arise for earthworks and construction machinery from:

- Softening of the upper residual clay-based soils following the removal of topsoil after periods of rainfall.
- Disturbance of the upper-level soil fabric with the removal of regrowth vegetation. Depressions could be formed, resulting in potential water traps, which could cause further softening of exposed soils.

To improve the site's trafficability, it is recommended that the exposed residual soil surface be inspected and assessed following stripping, clearing, and grubbing. Areas that demonstrate excessive movement and/or do not improve sufficiently under proof rolling should be removed and replaced as required.

Maintaining adequate drainage conditions is also essential. It should be ensured that runoff is diverted away from the construction area to prevent the ponding of water.

#### *4.11.6 Subgrade Preparation and Compaction Standards for the Basin and Embankment*

The following earthworks procedures are recommended:

- Clearing and stripping should be carried out across the development areas;
- The existing topsoil and encountered upper weak natural soils should be excavated from the development areas to expose competent, stiff or better natural clay soils. This excavation should extend for a distance beyond the perimeter of the development areas of at least 1.5m or equal to the depth of excavation, whichever is greater. Site inspections by Qualtest are recommended during this excavation process to minimise the depth of excavation required;
- After stripping and removal of the topsoil and any upper weak natural soils, the competent exposed natural surface should be proof rolled under the supervision of Qualtest using a static vehicle with a tare of at least 10 tonnes and then compacted to 98% Standard Maximum Dry Density (SMDD). Areas demonstrating excessive movement should be treated (dried and recompacted) or removed and replaced with compacted fill;

- Sloping areas that are to be filled should be benched prior to fill placement;
- Temporary cut batters in existing natural clay material should generally not exceed 27° subject to inspection by an experienced geotechnical engineer; and
- Depressions formed by the removal of vegetation, underground elements, etc., should have all disturbed and weakened soil removed.

The exposed base of the basin must be rolled to seal any cracks.

#### 4.11.7 Reuse of Excavated Material

All site-won materials (sand, clay) are suitable for reuse as fill onsite, provided the materials are free of organics, topsoil, soft soils, slope-wash, and deleterious materials.

All earthworks should be carried out by experienced contractors in general accordance with AS3798-2007 (Guidelines on Earthworks for Commercial and Residential Developments). Quality control of the earthworks should be carried out under Level One Inspection and Testing as defined in AS3798 – 2007.

The subgrade shall be graded to drain effectively to subsoil drains and should be cleaned of any softened material prior to pouring of footings or placement of fill materials.

#### 4.11.8 Safe Batter Angles

Batters can be constructed to the following short and long-term gradients presented in *Table 13*. This is very significant as fill batters may be placed on sloping ground.

The short-term is deemed to be no longer than a 2-week period, and following wet weather (rainfall), the short-term batter slopes would need to be reassessed for stability.

Temporary and permanent batters exceeding 3.0m in height will require benching at 3.0m high vertical intervals. The benches should be at least 1.5m wide.

Further assessment of the batter angles may be required once the exact geometry and materials have been finalised.

Batters should be covered by topsoil, mulched, and vegetated to prevent dispersion and drying/cracking. This is very important due to the highly dispersive and highly reactive nature of the alluvial soils.

It is essential that permanent batter faces are suitably protected from erosion and scour by appropriate drainage.

*Table 11: Recommendations for Cut and Fill Batters*

| Material                      | Short term  | Long term   |
|-------------------------------|-------------|-------------|
| Controlled Fill               | 18° (1V:3H) | 14° (1V:4H) |
| Residual Soils / XW - HW Rock | 18° (1V:3H) | 14° (1V:4H) |
| ≥ MW Sandstone                | 45° (1V:1H) | 18° (1V:3H) |

## 4.12 Pavement Design

Three (3) near-surface soil samples were collected and tested for 4-day soaked CBR to indicate the suitability of existing near-surface materials as subgrade support.

The 4-day soaked California Bearing Ratio tests returned CBR values of 1.5, 4.0 and 40% for the near-surface materials.

It is recommended that, for preliminary design, a CBR value of 1.0% be adopted for the clay-based soils, while a CBR value of 8 be adopted for the coarse-based soils.

It is also noted that the clay soils have a high shrink-swell potential, which should be managed to reduce the risk of premature road failures.



## 5 Conclusions

This geotechnical interpretative report is a product of a site investigation conducted at #400 Wyatt Road, Kagaru. The site is on the allotment with the real property description Lot 20 on SP149887.

The property, which covers a gross land area of approximately 40ha, is being considered for a 400-lot residential subdivision.

The site is underlain by three geological units - Koukandowie Formation, Heifer Creek Sandstone Member and Walloon Coal Measures. These are typically sedimentary rock-dominated units.

The subsurface profile of the site consists of upper-level topsoil overlying residual soils that intermittently grade into weathered sandstone rock. In three boreholes, the upper soil units were found to be water softened with a consistency of soft to firm and an allowable bearing capacity of less than 100kPa.

The site has been assigned a **Class P** site, given the current softened upper soils and the likely quantum of fill to be placed on the site. The underlying clays have also been found to have a potential shrink-swell ground movement of up to about 75mm under normal moisture conditions, which corresponds to a **Class H2-E** site. However, the shallow depth to rock in sections would likely reduce the potential shrink-swell movement, which indicates that **Class S** sites are also possible.

Strip, slab-on-ground, and pad footings are considered appropriate for the site. For shallow footings on very stiff to hard clay soils, an allowable bearing capacity of 120kPa is recommended.

Stripping of organic-rich topsoil is estimated to have a nominal depth of 100mm. However, in areas of structural loading, underlying water-softened soils should also be stripped. Excavation conditions are expected to be achieved with traditional earthwork equipment, such as 6 to 14t excavators or backhoes in the residual overburden/extremely to highly weathered sandstone. For moderately weathered to fresh rock, a 30t+ excavator fitted with a toothed bucket and probably with a ripper/hydraulic jack may be required.

The permanent soil batter angles should be less than or equal to 14° (1V:4H). For short-term batters, an angle of 27° (1V:2H) is considered appropriate. For moderately weathered rock, a temporary batter angle of 1V:1H is recommended, and a permanent batter angle of 1V:3H is suitable.

Reuse of onsite soils is permitted, provided it is free from deleterious matters such as wet soils, silts, organics, sediments, and deep root systems from trees previously removed.

The trafficability of the site is judged to be fair in dry conditions and could rapidly deteriorate in wet weather.

## 6 Disclaimer

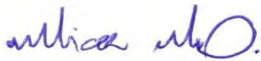
This report has been prepared on behalf of and for the exclusive use of Mountain Property and their partners in accordance with the scope of work outlined in Proposal QGQ26-005-10194, dated January 8, 2026. This report is not intended for and should not be relied upon by any third party. In preparing this report, Qualtest relied upon information provided by Mountain Property. This report must be read in conjunction with the attached appendices and kept in its entirety without separating individual pages or sections. This report, or sections from this report, should not be used as part of a specification for a project without review and agreement by Qualtest.

Interpretations and recommendations provided in the report are based on the ground conditions at the site, only at the specific sampling and/or testing locations, and then only to the depths investigated and at the time the work was carried out. This is because ground conditions are subject to change from place to place and with time due to geological processes and/or because of human influences.

The advice provided by Qualtest is based on the conditions encountered onsite at the time of the investigation. If different ground conditions are encountered following the issuance of this report, Qualtest should be notified so that further advice can be provided.

Should you require further information regarding the above, please do not hesitate to contact this office.

Yours faithfully,



**MICHAEL MORRISON**

For and on behalf of

**QUALTEST LABORATORY PTY LTD**

*Appendix A: Engineering Logs*

*Appendix B: Laboratory Test Certificates*



**DENNIS ALAZIGHA, RPEQ 22169**



# APPENDIX A

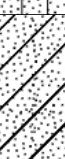
## Engineering Logs



**Qualtest Laboratory**  
Est. 1987



|                                 |                              |                                                     |
|---------------------------------|------------------------------|-----------------------------------------------------|
| UTM : 56J                       | Drill Rig : Jaco 200         | Job Number : 26-044                                 |
| Easting (m) : 489909.96         | Driller Supplier : Civiltech | Client : Mountain Property                          |
| Northing (m) : 6920496.85       | Logged By : KD               | Project : Geotechnical Investigation                |
| Ground Elevation : Not Surveyed | Reviewed By : DA             | Location : 400 Wyatt Rd, Kagaru QLD 4285, Australia |
| Total Depth : 2.5 m BGL         | Date : 11/02/2026            | Loc Comment :                                       |

| Drilling Method                                                                   | Water | Elevation (m)                                                                      | Depth (m) | Soil Origin | Graphic Log                                                                       | Classification Code | Moisture                                                                   | Material Description                                                                   | Consistency/ Density | Samples                                                                             | Testing | Remarks |
|-----------------------------------------------------------------------------------|-------|------------------------------------------------------------------------------------|-----------|-------------|-----------------------------------------------------------------------------------|---------------------|----------------------------------------------------------------------------|----------------------------------------------------------------------------------------|----------------------|-------------------------------------------------------------------------------------|---------|---------|
|                                                                                   |       |                                                                                    |           |             |                                                                                   |                     |                                                                            |                                                                                        |                      |                                                                                     | DCP     |         |
|  |       |                                                                                    | 0.1       | Topsoil     |  | SM                  | D                                                                          | Silty SAND: fine to medium grained, medium dense, dark grey, dry.                      | MD                   |  | 3       |         |
|                                                                                   |       |                                                                                    | Residual  | SM          |                                                                                   | D                   | Silty SAND: fine to coarse grained, medium dense to dense, pale grey, dry. | MD-D                                                                                   | 5                    |                                                                                     |         |         |
|                                                                                   |       |                                                                                    |           |             | 11                                                                                |                     |                                                                            |                                                                                        |                      |                                                                                     |         |         |
|                                                                                   |       |                                                                                    |           |             | 20/70                                                                             |                     |                                                                            |                                                                                        |                      |                                                                                     |         |         |
|                                                                                   |       |                                                                                    | 0.5       | Residual    |  | SC                  | D                                                                          | Clayey SAND: fine to coarse grained, very dense, pale brown, dry, low plasticity clay. | VD                   |                                                                                     |         |         |
| 0.9                                                                               | Rock  |  | SST       | D           | Clayey SAND: fine to coarse grained, very dense, pale brown, low plasticity clay. | VD                  |                                                                            |                                                                                        |                      |                                                                                     |         |         |
| 1.0                                                                               |       |                                                                                    |           |             |                                                                                   |                     |                                                                            |                                                                                        |                      |                                                                                     |         |         |
| 2.0                                                                               |       |                                                                                    |           |             |                                                                                   |                     |                                                                            |                                                                                        |                      |                                                                                     |         |         |
|                                                                                   |       |                                                                                    |           |             |                                                                                   |                     |                                                                            | QT1 Refusal at 2.5 m (very slow drilling)                                              |                      |                                                                                     |         |         |

| Water | Weathering                                                                                                                                                                                     | Altering                                                                                                                                                        | Consistency                                                                                                                                                                                                                      | Density                                                                                                              | Rock Strength                                                                                                                             | Tests&Results                                                                                                                                                                                                                                                                                                                                                                  |
|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|       | <b>XW</b> : Extremely weathered<br><b>DW</b> : Distinctly weathered<br><b>HW</b> : Highly weathered<br><b>MW</b> : Moderately weathered<br><b>SW</b> : Slightly weathered<br><b>FR</b> : Fresh | <b>XA</b> : Extremely altered<br><b>DA</b> : Distinctly altered<br><b>HA</b> : Highly altered<br><b>MA</b> : Moderately altered<br><b>SA</b> : Slightly altered | <b>VS</b> : Very soft<br><b>S</b> : Soft<br><b>F</b> : Firm<br><b>St</b> : Stiff<br><b>VSt</b> : Very stiff<br><b>H</b> : Hard<br><b>FR</b> : Friable<br><b>Moisture</b><br><b>D</b> : Dry<br><b>M</b> : Moist<br><b>W</b> : Wet | <b>VL</b> : Very loose<br><b>L</b> : Loose<br><b>MD</b> : Medium dense<br><b>D</b> : Dense<br><b>VD</b> : Very dense | <b>VLS</b> : Very low<br><b>LS</b> : Low<br><b>MS</b> : Medium<br><b>HS</b> : High<br><b>VH</b> : Very high<br><b>XH</b> : Extremely high | <b>U50</b> : Undisturbed 50mm diam tube.<br><b>D</b> : Disturbed sample.<br><b>SPT</b> : Standard Penetration Test, N = number of blows to drive 50mm sampler 300mm with a 63.6kg hammer falling 762mm.<br><b>PP</b> : Hand penetrometer estimate of unconfined compressive strength, kPa.<br><b>S</b> : Vane shear value kPa.<br><b>DCP</b> : Dynamic Cone Penetrometer test. |



# Qualtest

2/40 Boyland Ave, Coopers Plains QLD 4108

Phone: (07) 3875 1898

## Geotechnical Log - Borehole

QT2

|                                 |                              |                                                     |
|---------------------------------|------------------------------|-----------------------------------------------------|
| UTM : 56J                       | Drill Rig : Jaco 200         | Job Number : 26-044                                 |
| Easting (m) : 489921.43         | Driller Supplier : Civiltech | Client : Mountain Property                          |
| Northing (m) : 6920328.93       | Logged By : KD               | Project : Geotechnical Investigation                |
| Ground Elevation : Not Surveyed | Reviewed By : DA             | Location : 400 Wyatt Rd, Kagaru QLD 4285, Australia |
| Total Depth : 0.7 m BGL         | Date : 11/02/2026            | Loc Comment :                                       |

| Drilling Method                                                                  | Water | Elevation (m) | Depth (m)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Soil Origin | Graphic Log | Classification Code | Moisture | Material Description | Consistency/ Density | Samples | Testing | Remarks |
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| Water | Weathering                                                                                                                                                                                     | Altering                                                                                                                                                        | Consistency                                                                                                                                                                                                                          | Density                                                                                                              | Rock Strength                                                                                                                             | Tests&Results                                                                                                                                                                                                                                                                                                                                                                  |
|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|       | <b>XW</b> : Extremely weathered<br><b>DW</b> : Distinctly weathered<br><b>HW</b> : Highly weathered<br><b>MW</b> : Moderately weathered<br><b>SW</b> : Slightly weathered<br><b>FR</b> : Fresh | <b>XA</b> : Extremely altered<br><b>DA</b> : Distinctly altered<br><b>HA</b> : Highly altered<br><b>MA</b> : Moderately altered<br><b>SA</b> : Slightly altered | <b>VS</b> : Very soft<br><b>S</b> : Soft<br><b>F</b> : Firm<br><b>St</b> : Stiff<br><b>VSt</b> : Very stiff<br><b>H</b> : Hard<br><b>FR</b> : Friable<br><br><b>Moisture</b><br><b>D</b> : Dry<br><b>M</b> : Moist<br><b>W</b> : Wet | <b>VL</b> : Very loose<br><b>L</b> : Loose<br><b>MD</b> : Medium dense<br><b>D</b> : Dense<br><b>VD</b> : Very dense | <b>VLS</b> : Very low<br><b>LS</b> : Low<br><b>MS</b> : Medium<br><b>HS</b> : High<br><b>VH</b> : Very high<br><b>XH</b> : Extremely high | <b>U50</b> : Undisturbed 50mm diam tube.<br><b>D</b> : Disturbed sample.<br><b>SPT</b> : Standard Penetration Test, N = number of blows to drive 50mm sampler 300mm with a 63.6kg hammer falling 762mm.<br><b>PP</b> : Hand penetrometer estimate of unconfined compressive strength, kPa.<br><b>S</b> : Vane shear value kPa.<br><b>DCP</b> : Dynamic Cone Penetrometer test. |

|                                 |                              |                                                     |
|---------------------------------|------------------------------|-----------------------------------------------------|
| UTM : 56J                       | Drill Rig : Jaco 200         | Job Number : 26-044                                 |
| Easting (m) : 490197.65         | Driller Supplier : Civiltech | Client : Mountain Property                          |
| Northing (m) : 6920423.09       | Logged By : KD               | Project : Geotechnical Investigation                |
| Ground Elevation : Not Surveyed | Reviewed By : DA             | Location : 400 Wyatt Rd, Kagaru QLD 4285, Australia |
| Total Depth : 3 m BGL           | Date : 11/02/2026            | Loc Comment :                                       |

| Drilling Method                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Water                     | Elevation (m)           | Depth (m)        | Soil Origin                                                                       | Graphic Log                                                                         | Classification Code                                                                                                  | Moisture                                                     | Material Description                                                                                                 | Consistency/<br>Density | Samples           | Testing               | Remarks |       |            |          |             |         |               |               |  |                          |                        |                |                 |                |                                   |  |                           |                         |          |           |          |                       |  |                       |                     |          |                   |             |                                                                                                                      |  |                           |                         |            |           |           |                                                                          |  |                         |                       |                  |                 |                |                           |  |            |  |          |  |                     |                                       |  |  |  |              |  |  |  |  |  |  |          |  |  |  |  |  |  |         |  |  |  |  |  |  |           |  |  |  |  |  |  |         |  |  |  |
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| <table><tr><td>Water</td><td>Weathering</td><td>Altering</td><td>Consistency</td><td>Density</td><td>Rock Strength</td><td>Tests&amp;Results</td></tr><tr><td></td><td>XW : Extremely weathered</td><td>XA : Extremely altered</td><td>VS : Very soft</td><td>VL : Very loose</td><td>VLS : Very low</td><td>U50 : Undisturbed 50mm diam tube.</td></tr><tr><td></td><td>DW : Distinctly weathered</td><td>DA : Distinctly altered</td><td>S : Soft</td><td>L : Loose</td><td>LS : Low</td><td>D : Disturbed sample.</td></tr><tr><td></td><td>HW : Highly weathered</td><td>HA : Highly altered</td><td>F : Firm</td><td>MD : Medium dense</td><td>MS : Medium</td><td>SPT : Standard Penetration Test, N = number of blows to drive 50mm sampler 300mm with a 63.6kg hammer falling 762mm.</td></tr><tr><td></td><td>MW : Moderately weathered</td><td>MA : Moderately altered</td><td>St : Stiff</td><td>D : Dense</td><td>HS : High</td><td>PP : Hand penetrometer estimate of unconfined compressive strength, kPa.</td></tr><tr><td></td><td>SW : Slightly weathered</td><td>SA : Slightly altered</td><td>VSt : Very stiff</td><td>VD : Very dense</td><td>VH : Very high</td><td>S : Vane shear value kPa.</td></tr><tr><td></td><td>FR : Fresh</td><td></td><td>H : Hard</td><td></td><td>XH : Extremely high</td><td>DCP : Dynamic Cone Penetrometer test.</td></tr><tr><td></td><td></td><td></td><td>FR : Friable</td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td>Moisture</td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td>D : Dry</td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td>M : Moist</td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td>W : Wet</td><td></td><td></td><td></td></tr></table> |                           |                         |                  |                                                                                   |                                                                                     |                                                                                                                      |                                                              |                                                                                                                      |                         |                   |                       |         | Water | Weathering | Altering | Consistency | Density | Rock Strength | Tests&Results |  | XW : Extremely weathered | XA : Extremely altered | VS : Very soft | VL : Very loose | VLS : Very low | U50 : Undisturbed 50mm diam tube. |  | DW : Distinctly weathered | DA : Distinctly altered | S : Soft | L : Loose | LS : Low | D : Disturbed sample. |  | HW : Highly weathered | HA : Highly altered | F : Firm | MD : Medium dense | MS : Medium | SPT : Standard Penetration Test, N = number of blows to drive 50mm sampler 300mm with a 63.6kg hammer falling 762mm. |  | MW : Moderately weathered | MA : Moderately altered | St : Stiff | D : Dense | HS : High | PP : Hand penetrometer estimate of unconfined compressive strength, kPa. |  | SW : Slightly weathered | SA : Slightly altered | VSt : Very stiff | VD : Very dense | VH : Very high | S : Vane shear value kPa. |  | FR : Fresh |  | H : Hard |  | XH : Extremely high | DCP : Dynamic Cone Penetrometer test. |  |  |  | FR : Friable |  |  |  |  |  |  | Moisture |  |  |  |  |  |  | D : Dry |  |  |  |  |  |  | M : Moist |  |  |  |  |  |  | W : Wet |  |  |  |
| Water                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Weathering                | Altering                | Consistency      | Density                                                                           | Rock Strength                                                                       | Tests&Results                                                                                                        |                                                              |                                                                                                                      |                         |                   |                       |         |       |            |          |             |         |               |               |  |                          |                        |                |                 |                |                                   |  |                           |                         |          |           |          |                       |  |                       |                     |          |                   |             |                                                                                                                      |  |                           |                         |            |           |           |                                                                          |  |                         |                       |                  |                 |                |                           |  |            |  |          |  |                     |                                       |  |  |  |              |  |  |  |  |  |  |          |  |  |  |  |  |  |         |  |  |  |  |  |  |           |  |  |  |  |  |  |         |  |  |  |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | DW : Distinctly weathered | DA : Distinctly altered | S : Soft         | L : Loose                                                                         | LS : Low                                                                            | D : Disturbed sample.                                                                                                |                                                              |                                                                                                                      |                         |                   |                       |         |       |            |          |             |         |               |               |  |                          |                        |                |                 |                |                                   |  |                           |                         |          |           |          |                       |  |                       |                     |          |                   |             |                                                                                                                      |  |                           |                         |            |           |           |                                                                          |  |                         |                       |                  |                 |                |                           |  |            |  |          |  |                     |                                       |  |  |  |              |  |  |  |  |  |  |          |  |  |  |  |  |  |         |  |  |  |  |  |  |           |  |  |  |  |  |  |         |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | HW : Highly weathered     | HA : Highly altered     | F : Firm         | MD : Medium dense                                                                 | MS : Medium                                                                         | SPT : Standard Penetration Test, N = number of blows to drive 50mm sampler 300mm with a 63.6kg hammer falling 762mm. |                                                              |                                                                                                                      |                         |                   |                       |         |       |            |          |             |         |               |               |  |                          |                        |                |                 |                |                                   |  |                           |                         |          |           |          |                       |  |                       |                     |          |                   |             |                                                                                                                      |  |                           |                         |            |           |           |                                                                          |  |                         |                       |                  |                 |                |                           |  |            |  |          |  |                     |                                       |  |  |  |              |  |  |  |  |  |  |          |  |  |  |  |  |  |         |  |  |  |  |  |  |           |  |  |  |  |  |  |         |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | MW : Moderately weathered | MA : Moderately altered | St : Stiff       | D : Dense                                                                         | HS : High                                                                           | PP : Hand penetrometer estimate of unconfined compressive strength, kPa.                                             |                                                              |                                                                                                                      |                         |                   |                       |         |       |            |          |             |         |               |               |  |                          |                        |                |                 |                |                                   |  |                           |                         |          |           |          |                       |  |                       |                     |          |                   |             |                                                                                                                      |  |                           |                         |            |           |           |                                                                          |  |                         |                       |                  |                 |                |                           |  |            |  |          |  |                     |                                       |  |  |  |              |  |  |  |  |  |  |          |  |  |  |  |  |  |         |  |  |  |  |  |  |           |  |  |  |  |  |  |         |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | SW : Slightly weathered   | SA : Slightly altered   | VSt : Very stiff | VD : Very dense                                                                   | VH : Very high                                                                      | S : Vane shear value kPa.                                                                                            |                                                              |                                                                                                                      |                         |                   |                       |         |       |            |          |             |         |               |               |  |                          |                        |                |                 |                |                                   |  |                           |                         |          |           |          |                       |  |                       |                     |          |                   |             |                                                                                                                      |  |                           |                         |            |           |           |                                                                          |  |                         |                       |                  |                 |                |                           |  |            |  |          |  |                     |                                       |  |  |  |              |  |  |  |  |  |  |          |  |  |  |  |  |  |         |  |  |  |  |  |  |           |  |  |  |  |  |  |         |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | FR : Fresh                |                         | H : Hard         |                                                                                   | XH : Extremely high                                                                 | DCP : Dynamic Cone Penetrometer test.                                                                                |                                                              |                                                                                                                      |                         |                   |                       |         |       |            |          |             |         |               |               |  |                          |                        |                |                 |                |                                   |  |                           |                         |          |           |          |                       |  |                       |                     |          |                   |             |                                                                                                                      |  |                           |                         |            |           |           |                                                                          |  |                         |                       |                  |                 |                |                           |  |            |  |          |  |                     |                                       |  |  |  |              |  |  |  |  |  |  |          |  |  |  |  |  |  |         |  |  |  |  |  |  |           |  |  |  |  |  |  |         |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                           |                         | FR : Friable     |                                                                                   |                                                                                     |                                                                                                                      |                                                              |                                                                                                                      |                         |                   |                       |         |       |            |          |             |         |               |               |  |                          |                        |                |                 |                |                                   |  |                           |                         |          |           |          |                       |  |                       |                     |          |                   |             |                                                                                                                      |  |                           |                         |            |           |           |                                                                          |  |                         |                       |                  |                 |                |                           |  |            |  |          |  |                     |                                       |  |  |  |              |  |  |  |  |  |  |          |  |  |  |  |  |  |         |  |  |  |  |  |  |           |  |  |  |  |  |  |         |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                           |                         | Moisture         |                                                                                   |                                                                                     |                                                                                                                      |                                                              |                                                                                                                      |                         |                   |                       |         |       |            |          |             |         |               |               |  |                          |                        |                |                 |                |                                   |  |                           |                         |          |           |          |                       |  |                       |                     |          |                   |             |                                                                                                                      |  |                           |                         |            |           |           |                                                                          |  |                         |                       |                  |                 |                |                           |  |            |  |          |  |                     |                                       |  |  |  |              |  |  |  |  |  |  |          |  |  |  |  |  |  |         |  |  |  |  |  |  |           |  |  |  |  |  |  |         |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                           |                         | D : Dry          |                                                                                   |                                                                                     |                                                                                                                      |                                                              |                                                                                                                      |                         |                   |                       |         |       |            |          |             |         |               |               |  |                          |                        |                |                 |                |                                   |  |                           |                         |          |           |          |                       |  |                       |                     |          |                   |             |                                                                                                                      |  |                           |                         |            |           |           |                                                                          |  |                         |                       |                  |                 |                |                           |  |            |  |          |  |                     |                                       |  |  |  |              |  |  |  |  |  |  |          |  |  |  |  |  |  |         |  |  |  |  |  |  |           |  |  |  |  |  |  |         |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                           |                         | M : Moist        |                                                                                   |                                                                                     |                                                                                                                      |                                                              |                                                                                                                      |                         |                   |                       |         |       |            |          |             |         |               |               |  |                          |                        |                |                 |                |                                   |  |                           |                         |          |           |          |                       |  |                       |                     |          |                   |             |                                                                                                                      |  |                           |                         |            |           |           |                                                                          |  |                         |                       |                  |                 |                |                           |  |            |  |          |  |                     |                                       |  |  |  |              |  |  |  |  |  |  |          |  |  |  |  |  |  |         |  |  |  |  |  |  |           |  |  |  |  |  |  |         |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                           |                         | W : Wet          |                                                                                   |                                                                                     |                                                                                                                      |                                                              |                                                                                                                      |                         |                   |                       |         |       |            |          |             |         |               |               |  |                          |                        |                |                 |                |                                   |  |                           |                         |          |           |          |                       |  |                       |                     |          |                   |             |                                                                                                                      |  |                           |                         |            |           |           |                                                                          |  |                         |                       |                  |                 |                |                           |  |            |  |          |  |                     |                                       |  |  |  |              |  |  |  |  |  |  |          |  |  |  |  |  |  |         |  |  |  |  |  |  |           |  |  |  |  |  |  |         |  |  |  |



|                                 |                              |                                                     |
|---------------------------------|------------------------------|-----------------------------------------------------|
| UTM : 56J                       | Drill Rig : Jaco 200         | Job Number : 26-044                                 |
| Easting (m) : 490279.06         | Driller Supplier : Civiltech | Client : Mountain Property                          |
| Northing (m) : 6920197.95       | Logged By : KD               | Project : Geotechnical Investigation                |
| Ground Elevation : Not Surveyed | Reviewed By : DA             | Location : 400 Wyatt Rd, Kagaru QLD 4285, Australia |
| Total Depth : 3 m BGL           | Date : 11/02/2026            | Loc Comment :                                       |

| Drilling Method                                                                   | Water | Elevation (m) | Depth (m) | Soil Origin           | Graphic Log                                                                         | Classification Code | Moisture                                                     | Material Description                                                                                    | Consistency/ Density                                                                | Samples | Testing             | Remarks |                                                                                                             |     |   |
|-----------------------------------------------------------------------------------|-------|---------------|-----------|-----------------------|-------------------------------------------------------------------------------------|---------------------|--------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------|---------------------|---------|-------------------------------------------------------------------------------------------------------------|-----|---|
|                                                                                   |       |               |           |                       |                                                                                     |                     |                                                              |                                                                                                         |                                                                                     |         | DCP                 |         |                                                                                                             |     |   |
|  |       |               | 0.1       | Topsoil               |    | SM                  | D                                                            | Silty SAND: fine to coarse grained, medium dense, dark grey, dry.                                       | MD                                                                                  |         | 3                   |         |                                                                                                             |     |   |
|                                                                                   |       |               | Residual  | SM                    |                                                                                     | D                   | Silty SAND: fine to coarse grained, medium dense, grey, dry. | MD                                                                                                      | 6                                                                                   |         |                     |         |                                                                                                             |     |   |
|                                                                                   |       |               | 0.4       | Residual              |   | CI                  | D                                                            | Sandy CLAY: medium plasticity, firm to stiff, grey mottled brown red, fine to medium grained sand, dry. | F-St                                                                                |         | D : CBR 0.4 - 0.8 m |         | 8                                                                                                           |     |   |
|                                                                                   |       |               | 5         |                       |                                                                                     |                     |                                                              |                                                                                                         |                                                                                     |         |                     |         |                                                                                                             |     |   |
|                                                                                   |       |               | 5         |                       |                                                                                     |                     |                                                              |                                                                                                         |                                                                                     |         |                     |         |                                                                                                             |     |   |
|                                                                                   |       |               | 5         |                       |                                                                                     |                     |                                                              |                                                                                                         |                                                                                     |         |                     |         |                                                                                                             |     |   |
|                                                                                   |       |               | 3         |                       |                                                                                     |                     |                                                              |                                                                                                         |                                                                                     |         |                     |         |                                                                                                             |     |   |
|                                                                                   |       |               | 4         |                       |                                                                                     |                     |                                                              |                                                                                                         |                                                                                     |         |                     |         |                                                                                                             |     |   |
|                                                                                   |       |               | 1.0       |                       |                                                                                     |                     |                                                              |                                                                                                         | 3                                                                                   |         |                     |         |                                                                                                             |     |   |
|                                                                                   |       |               | 4         |                       |                                                                                     |                     |                                                              |                                                                                                         |                                                                                     |         |                     |         |                                                                                                             |     |   |
|                                                                                   |       |               | 3         |                       |                                                                                     |                     |                                                              |                                                                                                         |                                                                                     |         |                     |         |                                                                                                             |     |   |
|                                                                                   |       |               | 3         |                       |                                                                                     |                     |                                                              |                                                                                                         |                                                                                     |         |                     |         |                                                                                                             |     |   |
|                                                                                   |       |               | 1.3       |                       |                                                                                     |                     |                                                              |                                                                                                         | 3                                                                                   |         |                     |         |                                                                                                             |     |   |
|                                                                                   |       |               | Residual  |                       |                                                                                     |                     |                                                              |                                                                                                         |  | CH      | M-D                 |         | CLAY: high plasticity, very stiff, grey mottled pale brown, with fine to medium grained sand, moist to dry. | VSt | 3 |
|                                                                                   |       |               |           | 5                     |                                                                                     |                     |                                                              |                                                                                                         |                                                                                     |         |                     |         |                                                                                                             |     |   |
|                                                                                   |       |               |           | 6                     |                                                                                     |                     |                                                              |                                                                                                         |                                                                                     |         |                     |         |                                                                                                             |     |   |
|                                                                                   |       |               |           | 10                    |                                                                                     |                     |                                                              |                                                                                                         |                                                                                     |         |                     |         |                                                                                                             |     |   |
|                                                                                   |       |               |           | 9                     |                                                                                     |                     |                                                              |                                                                                                         |                                                                                     |         |                     |         |                                                                                                             |     |   |
|                                                                                   |       |               |           | 13                    |                                                                                     |                     |                                                              |                                                                                                         |                                                                                     |         |                     |         |                                                                                                             |     |   |
|                                                                                   |       |               |           | 20                    |                                                                                     |                     |                                                              |                                                                                                         |                                                                                     |         |                     |         |                                                                                                             |     |   |
|                                                                                   |       |               |           | 20/60                 |                                                                                     |                     |                                                              |                                                                                                         |                                                                                     |         |                     |         |                                                                                                             |     |   |
|                                                                                   |       |               | 2.0       | Residual              |  | CI                  | D                                                            | Sandy CLAY: medium plasticity, very stiff to hard, brown, fine to medium grained sand, dry.             | VSt-H                                                                               |         |                     |         |                                                                                                             |     |   |
|                                                                                   |       |               |           |                       |                                                                                     |                     |                                                              |                                                                                                         |                                                                                     |         |                     |         |                                                                                                             |     |   |
|                                                                                   |       |               |           |                       |                                                                                     |                     |                                                              |                                                                                                         |                                                                                     |         |                     |         |                                                                                                             |     |   |
|                                                                                   |       |               | 2.5       | QT4 Terminated at 3 m |                                                                                     |                     |                                                              |                                                                                                         |                                                                                     |         |                     |         |                                                                                                             |     |   |

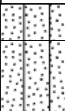
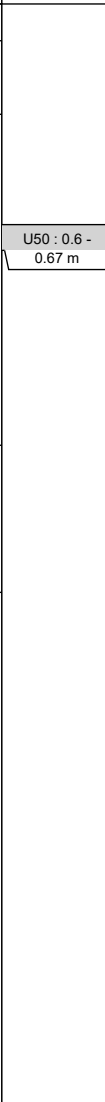
| Water | Weathering                                                                                                                                                                                     | Altering                                                                                                                                                        | Consistency                                                                                                                                                                                                                      | Density                                                                                                              | Rock Strength                                                                                                                             | Tests&Results                                                                                                                                                                                                                                                                                                                                                                  |
|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|       | <b>XW</b> : Extremely weathered<br><b>DW</b> : Distinctly weathered<br><b>HW</b> : Highly weathered<br><b>MW</b> : Moderately weathered<br><b>SW</b> : Slightly weathered<br><b>FR</b> : Fresh | <b>XA</b> : Extremely altered<br><b>DA</b> : Distinctly altered<br><b>HA</b> : Highly altered<br><b>MA</b> : Moderately altered<br><b>SA</b> : Slightly altered | <b>VS</b> : Very soft<br><b>S</b> : Soft<br><b>F</b> : Firm<br><b>St</b> : Stiff<br><b>VSt</b> : Very stiff<br><b>H</b> : Hard<br><b>FR</b> : Friable<br><b>Moisture</b><br><b>D</b> : Dry<br><b>M</b> : Moist<br><b>W</b> : Wet | <b>VL</b> : Very loose<br><b>L</b> : Loose<br><b>MD</b> : Medium dense<br><b>D</b> : Dense<br><b>VD</b> : Very dense | <b>VLS</b> : Very low<br><b>LS</b> : Low<br><b>MS</b> : Medium<br><b>HS</b> : High<br><b>VH</b> : Very high<br><b>XH</b> : Extremely high | <b>U50</b> : Undisturbed 50mm diam tube.<br><b>D</b> : Disturbed sample.<br><b>SPT</b> : Standard Penetration Test, N = number of blows to drive 50mm sampler 300mm with a 63.6kg hammer falling 762mm.<br><b>PP</b> : Hand penetrometer estimate of unconfined compressive strength, kPa.<br><b>S</b> : Vane shear value kPa.<br><b>DCP</b> : Dynamic Cone Penetrometer test. |

|                                 |                              |                                                     |
|---------------------------------|------------------------------|-----------------------------------------------------|
| UTM : 56J                       | Drill Rig : Jaco 200         | Job Number : 26-044                                 |
| Easting (m) : 490048.69         | Driller Supplier : Civiltech | Client : Mountain Property                          |
| Northing (m) : 6920153.46       | Logged By : KD               | Project : Geotechnical Investigation                |
| Ground Elevation : Not Surveyed | Reviewed By : DA             | Location : 400 Wyatt Rd, Kagaru QLD 4285, Australia |
| Total Depth : 3 m BGL           | Date : 11/02/2026            | Loc Comment :                                       |

| Drilling Method                                                                   | Water | Elevation (m) | Depth (m) | Soil Origin | Graphic Log                                                                        | Classification Code | Moisture              | Material Description                                                                                           | Consistency/ Density | Samples                     | Testing | Remarks |   |
|-----------------------------------------------------------------------------------|-------|---------------|-----------|-------------|------------------------------------------------------------------------------------|---------------------|-----------------------|----------------------------------------------------------------------------------------------------------------|----------------------|-----------------------------|---------|---------|---|
|                                                                                   |       |               |           |             |                                                                                    |                     |                       |                                                                                                                |                      |                             | DCP     |         |   |
|  |       |               | 0.1       | Topsoil     |   | SM                  | D                     | Silty SAND: fine to coarse grained, medium dense, dark grey, dry.                                              | MD                   | <div>D : em 0 - 0.1 m</div> | 3       |         |   |
|                                                                                   |       |               |           | Residual    |                                                                                    | SM                  | D                     | Silty SAND: fine to coarse grained, with fine sized gravel, dense, grey, dry.                                  | D                    |                             | 8       |         |   |
|                                                                                   |       |               |           |             |                                                                                    |                     |                       |                                                                                                                |                      |                             | 11      |         |   |
|                                                                                   |       |               |           |             |                                                                                    |                     |                       |                                                                                                                |                      |                             | 13      |         |   |
|                                                                                   |       |               |           |             |                                                                                    |                     |                       |                                                                                                                |                      |                             | 12      |         |   |
|                                                                                   |       |               | 0.6       |             |                                                                                    |                     |                       |                                                                                                                |                      |                             |         |         | 3 |
|                                                                                   |       |               |           | Residual    |   | CH                  | M-D                   | Sandy CLAY: high plasticity, firm to stiff, grey mottled red brown, fine to medium grained sand, moist to dry. | F-St                 |                             | 3       |         |   |
|                                                                                   |       |               |           |             |                                                                                    |                     |                       |                                                                                                                |                      |                             | 4       |         |   |
|                                                                                   |       |               |           |             |                                                                                    |                     |                       |                                                                                                                |                      |                             | 4       |         |   |
|                                                                                   |       |               | 1.0       |             |                                                                                    |                     |                       |                                                                                                                |                      |                             | 3       |         |   |
|                                                                                   |       |               |           |             |                                                                                    |                     |                       |                                                                                                                |                      |                             | 5       |         |   |
|                                                                                   |       |               | 1.2       |             |                                                                                    |                     |                       |                                                                                                                |                      |                             |         |         | 8 |
|                                                                                   |       |               |           | Residual    |  | CI                  | D                     | Sandy CLAY: medium plasticity, very stiff to hard, pale brown mottled grey, fine to coarse grained sand, dry.  | VSt-H                |                             | 16      |         |   |
|                                                                                   |       |               |           |             |                                                                                    |                     |                       |                                                                                                                |                      |                             | 20/90   |         |   |
|                                                                                   |       |               |           |             |                                                                                    |                     |                       |                                                                                                                |                      |                             |         |         |   |
|                                                                                   |       |               |           |             |                                                                                    |                     |                       |                                                                                                                |                      |                             |         |         |   |
|                                                                                   |       |               | 2.0       |             |                                                                                    |                     |                       |                                                                                                                |                      |                             |         |         |   |
|                                                                                   |       |               |           |             |                                                                                    |                     | QT5 Terminated at 3 m |                                                                                                                |                      |                             |         |         |   |

| Water | Weathering                                                                                                                                                                                     | Altering                                                                                                                                                        | Consistency                                                                                                                                                                                                                      | Density                                                                                                              | Rock Strength                                                                                                                             | Tests&Results                                                                                                                                                                                                                                                                                                                                                                  |
|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|       | <b>XW</b> : Extremely weathered<br><b>DW</b> : Distinctly weathered<br><b>HW</b> : Highly weathered<br><b>MW</b> : Moderately weathered<br><b>SW</b> : Slightly weathered<br><b>FR</b> : Fresh | <b>XA</b> : Extremely altered<br><b>DA</b> : Distinctly altered<br><b>HA</b> : Highly altered<br><b>MA</b> : Moderately altered<br><b>SA</b> : Slightly altered | <b>VS</b> : Very soft<br><b>S</b> : Soft<br><b>F</b> : Firm<br><b>St</b> : Stiff<br><b>VSt</b> : Very stiff<br><b>H</b> : Hard<br><b>FR</b> : Friable<br><b>Moisture</b><br><b>D</b> : Dry<br><b>M</b> : Moist<br><b>W</b> : Wet | <b>VL</b> : Very loose<br><b>L</b> : Loose<br><b>MD</b> : Medium dense<br><b>D</b> : Dense<br><b>VD</b> : Very dense | <b>VLS</b> : Very low<br><b>LS</b> : Low<br><b>MS</b> : Medium<br><b>HS</b> : High<br><b>VH</b> : Very high<br><b>XH</b> : Extremely high | <b>U50</b> : Undisturbed 50mm diam tube.<br><b>D</b> : Disturbed sample.<br><b>SPT</b> : Standard Penetration Test, N = number of blows to drive 50mm sampler 300mm with a 63.6kg hammer falling 762mm.<br><b>PP</b> : Hand penetrometer estimate of unconfined compressive strength, kPa.<br><b>S</b> : Vane shear value kPa.<br><b>DCP</b> : Dynamic Cone Penetrometer test. |

|                                 |                              |                                                     |
|---------------------------------|------------------------------|-----------------------------------------------------|
| UTM : 56J                       | Drill Rig : Jaco 200         | Job Number : 26-044                                 |
| Easting (m) : 490116.21         | Driller Supplier : Civiltech | Client : Mountain Property                          |
| Northing (m) : 6920065.56       | Logged By : KD               | Project : Geotechnical Investigation                |
| Ground Elevation : Not Surveyed | Reviewed By : DA             | Location : 400 Wyatt Rd, Kagaru QLD 4285, Australia |
| Total Depth : 3 m BGL           | Date : 11/02/2026            | Loc Comment :                                       |

| Drilling Method                                                                   | Water | Elevation (m) | Depth (m)             | Soil Origin | Graphic Log                                                                         | Classification Code | Moisture | Material Description                                                                                                        | Consistency/ Density | Samples                                                                              | Testing            | Remarks |   |
|-----------------------------------------------------------------------------------|-------|---------------|-----------------------|-------------|-------------------------------------------------------------------------------------|---------------------|----------|-----------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------------------------------------------------------------------------|--------------------|---------|---|
|                                                                                   |       |               |                       |             |                                                                                     |                     |          |                                                                                                                             |                      |                                                                                      | DCP                |         |   |
|  |       |               | 0.1                   | Topsoil     |    | SM                  | D        | Silty SAND: fine to coarse grained, medium dense, dark grey, dry.                                                           | MD                   |  | 8                  |         |   |
|                                                                                   |       |               | 0.3                   | Residual    |                                                                                     | SM                  | D        | Silty SAND: fine to coarse grained, medium dense, grey, dry.                                                                | MD                   |                                                                                      | 5                  |         |   |
|                                                                                   |       |               | 1.0                   | Residual    |   | CH                  |          | Sandy CLAY: high plasticity, soft to firm, brown mottled grey.                                                              | S-F                  |                                                                                      | U50 : 0.6 - 0.67 m |         | 4 |
|                                                                                   |       |               |                       |             |                                                                                     |                     |          |                                                                                                                             |                      |                                                                                      |                    |         | 3 |
|                                                                                   |       |               |                       |             |                                                                                     |                     |          |                                                                                                                             |                      |                                                                                      |                    |         | 2 |
|                                                                                   |       |               |                       |             |                                                                                     |                     |          |                                                                                                                             |                      |                                                                                      |                    |         | 2 |
|                                                                                   |       |               |                       |             |                                                                                     |                     |          |                                                                                                                             |                      |                                                                                      |                    |         | 2 |
|                                                                                   |       |               |                       |             |                                                                                     |                     |          |                                                                                                                             |                      |                                                                                      |                    |         | 2 |
|                                                                                   |       |               |                       |             |                                                                                     |                     |          |                                                                                                                             |                      |                                                                                      |                    |         | 1 |
|                                                                                   |       |               |                       |             |                                                                                     |                     |          |                                                                                                                             |                      |                                                                                      |                    |         | 3 |
|                                                                                   |       |               | 1.2                   | Residual    |  | CH                  | M        | CLAY: high plasticity, stiff, grey mottled red brown, with fine to medium grained sand, moist.                              | St                   |                                                                                      | 4                  |         |   |
|                                                                                   |       |               |                       |             |                                                                                     |                     |          |                                                                                                                             |                      |                                                                                      | 4                  |         |   |
|                                                                                   |       |               | 2.0                   | Residual    |  | CI-CH               | M-D      | CLAY: medium to high plasticity, very stiff, orange mottled red grey brown, with fine to medium grained sand, moist to dry. | VSt                  |                                                                                      | 5                  |         |   |
|                                                                                   |       |               |                       |             |                                                                                     |                     |          |                                                                                                                             |                      |                                                                                      | 6                  |         |   |
|                                                                                   |       |               |                       |             |                                                                                     |                     |          |                                                                                                                             |                      |                                                                                      | 6                  |         |   |
|                                                                                   |       |               |                       |             |                                                                                     |                     |          |                                                                                                                             |                      |                                                                                      | 7                  |         |   |
|                                                                                   |       |               |                       |             |                                                                                     |                     |          |                                                                                                                             |                      |                                                                                      | 8                  |         |   |
|                                                                                   |       |               |                       |             |                                                                                     |                     |          |                                                                                                                             |                      |                                                                                      | 9                  |         |   |
|                                                                                   |       |               |                       |             |                                                                                     |                     |          |                                                                                                                             |                      |                                                                                      | 14                 |         |   |
|                                                                                   |       |               |                       |             |                                                                                     |                     |          |                                                                                                                             |                      |                                                                                      | 13                 |         |   |
|                                                                                   |       |               |                       |             |                                                                                     |                     |          |                                                                                                                             |                      |                                                                                      | 12                 |         |   |
|                                                                                   |       |               |                       |             |                                                                                     |                     |          |                                                                                                                             |                      |                                                                                      | 20                 |         |   |
|                                                                                   |       |               |                       | 20/80       |                                                                                     |                     |          |                                                                                                                             |                      |                                                                                      |                    |         |   |
|                                                                                   |       |               |                       |             |                                                                                     |                     |          |                                                                                                                             |                      |                                                                                      |                    |         |   |
|                                                                                   |       |               | QT6 Terminated at 3 m |             |                                                                                     |                     |          |                                                                                                                             |                      |                                                                                      |                    |         |   |

|       |                                                                                                                                                                                                                     |                                                                                                                                                                                    |                                                                                                                                                                                                                                                        |                                                                                                                                        |                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Water | <b>Weathering</b><br><b>XW</b> : Extremely weathered<br><b>DW</b> : Distinctly weathered<br><b>HW</b> : Highly weathered<br><b>MW</b> : Moderately weathered<br><b>SW</b> : Slightly weathered<br><b>FR</b> : Fresh | <b>Altering</b><br><b>XA</b> : Extremely altered<br><b>DA</b> : Distinctly altered<br><b>HA</b> : Highly altered<br><b>MA</b> : Moderately altered<br><b>SA</b> : Slightly altered | <b>Consistency</b><br><b>VS</b> : Very soft<br><b>S</b> : Soft<br><b>F</b> : Firm<br><b>St</b> : Stiff<br><b>VSt</b> : Very stiff<br><b>H</b> : Hard<br><b>FR</b> : Friable<br><b>Moisture</b><br><b>D</b> : Dry<br><b>M</b> : Moist<br><b>W</b> : Wet | <b>Density</b><br><b>VL</b> : Very loose<br><b>L</b> : Loose<br><b>MD</b> : Medium dense<br><b>D</b> : Dense<br><b>VD</b> : Very dense | <b>Rock Strength</b><br><b>VLS</b> : Very low<br><b>LS</b> : Low<br><b>MS</b> : Medium<br><b>HS</b> : High<br><b>VH</b> : Very high<br><b>XH</b> : Extremely high | <b>Tests&amp;Results</b><br><b>U50</b> : Undisturbed 50mm diam tube.<br><b>D</b> : Disturbed sample.<br><b>SPT</b> : Standard Penetration Test, N = number of blows to drive 50mm sampler 300mm with a 63.6kg hammer falling 762mm.<br><b>PP</b> : Hand penetrometer estimate of unconfined compressive strength, kPa.<br><b>S</b> : Vane shear value kPa.<br><b>DCP</b> : Dynamic Cone Penetrometer test. |
|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|



|                                 |                              |                                                     |
|---------------------------------|------------------------------|-----------------------------------------------------|
| UTM : 56J                       | Drill Rig : Jaco 200         | Job Number : 26-044                                 |
| Easting (m) : 490108.17         | Driller Supplier : Civiltech | Client : Mountain Property                          |
| Northing (m) : 6919903.05       | Logged By : KD               | Project : Geotechnical Investigation                |
| Ground Elevation : Not Surveyed | Reviewed By : DA             | Location : 400 Wyatt Rd, Kagaru QLD 4285, Australia |
| Total Depth : 3 m BGL           | Date : 11/02/2026            | Loc Comment :                                       |

| Drilling Method                                                                   | Water | Elevation (m) | Depth (m) | Soil Origin | Graphic Log                                                                         | Classification Code | Moisture | Material Description                                                                                                           | Consistency/Density | Samples         | Testing DCP | Remarks |
|-----------------------------------------------------------------------------------|-------|---------------|-----------|-------------|-------------------------------------------------------------------------------------|---------------------|----------|--------------------------------------------------------------------------------------------------------------------------------|---------------------|-----------------|-------------|---------|
|  |       |               | 0.1       | Topsoil     |    | SM                  | D        | Silty SAND: fine to coarse grained, medium dense, dark grey, dry.                                                              | MD                  |                 | 6           |         |
|                                                                                   |       |               |           | Residual    |    | SM                  | D        | Silty SAND: fine to coarse grained, dense, grey, dry.                                                                          | D                   | D : 0.1 - 0.4 m | 10          |         |
|                                                                                   |       |               | 0.4       |             |                                                                                     |                     |          |                                                                                                                                |                     |                 | 12          |         |
|                                                                                   |       |               |           | Residual    |    | CI-CH               | D        | Sandy CLAY: medium to high plasticity, stiff, brown mottled grey, fine to medium grained sand, dry.                            | St                  |                 | 9           |         |
|                                                                                   |       |               | 0.8       |             |                                                                                     |                     |          |                                                                                                                                |                     |                 | 7           |         |
|                                                                                   |       |               |           |             |                                                                                     |                     |          |                                                                                                                                |                     |                 | 7           |         |
|                                                                                   |       |               |           |             |                                                                                     |                     |          |                                                                                                                                |                     |                 | 8           |         |
|                                                                                   |       |               |           |             |                                                                                     |                     |          |                                                                                                                                |                     |                 | 20/50       |         |
|                                                                                   |       |               | 1.0       | Residual    |   | SC                  | D        | Clayey SAND: fine to coarse grained, medium dense, orange brown, dry, low plasticity clay (hard drilling - cemented material.) | MD                  | D : 0.8 - 1.5 m |             |         |
|                                                                                   |       |               | 1.7       |             |                                                                                     |                     |          |                                                                                                                                |                     |                 |             |         |
|                                                                                   |       |               | 2.0       | Residual    |  | CI                  |          | Sandy CLAY: medium plasticity, stiff, brown, fine to medium grained sand.                                                      | St                  |                 |             |         |
|                                                                                   |       |               | 2.7       | Residual    |  | CH                  | D        | CLAY: high plasticity, stiff to very stiff, pale grey mottled dark brown, trace fine to medium grained sand, dry.              | St-VSt              |                 |             |         |
|                                                                                   |       |               |           |             |                                                                                     |                     |          | QT7 Terminated at 3 m                                                                                                          |                     |                 |             |         |

| Water | Weathering                                                                                                                                                                                     | Altering                                                                                                                                                        | Consistency                                                                                                                                                                                                                      | Density                                                                                                              | Rock Strength                                                                                                                             | Tests&Results                                                                                                                                                                                                                                                                                                                                                                  |
|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|       | <b>XW</b> : Extremely weathered<br><b>DW</b> : Distinctly weathered<br><b>HW</b> : Highly weathered<br><b>MW</b> : Moderately weathered<br><b>SW</b> : Slightly weathered<br><b>FR</b> : Fresh | <b>XA</b> : Extremely altered<br><b>DA</b> : Distinctly altered<br><b>HA</b> : Highly altered<br><b>MA</b> : Moderately altered<br><b>SA</b> : Slightly altered | <b>VS</b> : Very soft<br><b>S</b> : Soft<br><b>F</b> : Firm<br><b>St</b> : Stiff<br><b>VSt</b> : Very stiff<br><b>H</b> : Hard<br><b>FR</b> : Friable<br><b>Moisture</b><br><b>D</b> : Dry<br><b>M</b> : Moist<br><b>W</b> : Wet | <b>VL</b> : Very loose<br><b>L</b> : Loose<br><b>MD</b> : Medium dense<br><b>D</b> : Dense<br><b>VD</b> : Very dense | <b>VLS</b> : Very low<br><b>LS</b> : Low<br><b>MS</b> : Medium<br><b>HS</b> : High<br><b>VH</b> : Very high<br><b>XH</b> : Extremely high | <b>U50</b> : Undisturbed 50mm diam tube.<br><b>D</b> : Disturbed sample.<br><b>SPT</b> : Standard Penetration Test, N = number of blows to drive 50mm sampler 300mm with a 63.6kg hammer falling 762mm.<br><b>PP</b> : Hand penetrometer estimate of unconfined compressive strength, kPa.<br><b>S</b> : Vane shear value kPa.<br><b>DCP</b> : Dynamic Cone Penetrometer test. |

|                                 |                              |                                                     |
|---------------------------------|------------------------------|-----------------------------------------------------|
| UTM : 56J                       | Drill Rig : Jaco 200         | Job Number : 26-044                                 |
| Easting (m) : 490378.01         | Driller Supplier : Civiltech | Client : Mountain Property                          |
| Northing (m) : 6919834.70       | Logged By : KD               | Project : Geotechnical Investigation                |
| Ground Elevation : Not Surveyed | Reviewed By : DA             | Location : 400 Wyatt Rd, Kagaru QLD 4285, Australia |
| Total Depth : 2.2 m BGL         | Date : 11/02/2026            | Loc Comment :                                       |

| Drilling Method                                                                   | Water | Elevation (m) | Depth (m) | Soil Origin | Graphic Log                                                                        | Classification Code | Moisture | Material Description                                                              | Consistency/Density | Samples | Testing | Remarks |
|-----------------------------------------------------------------------------------|-------|---------------|-----------|-------------|------------------------------------------------------------------------------------|---------------------|----------|-----------------------------------------------------------------------------------|---------------------|---------|---------|---------|
|                                                                                   |       |               |           |             |                                                                                    |                     |          |                                                                                   |                     |         | DCP     |         |
|  |       |               | 0.1       | Topsoil     |   | SM                  | D        | Silty SAND: fine grained, medium dense, dark grey, dry.                           | MD                  |         | 6       |         |
|                                                                                   |       |               |           | Residual    |   | SM                  | D        | Silty SAND: fine to medium grained, medium dense, grey, dry.                      | MD                  |         | 7       |         |
|                                                                                   |       |               | 0.4       |             |                                                                                    |                     |          |                                                                                   |                     |         | 7       |         |
|                                                                                   |       |               |           | Residual    |   | SC                  | D        | Clayey SAND: fine to coarse grained, dense, brown, dry, medium plasticity clay.   | D                   |         | 8       |         |
|                                                                                   |       |               | 0.8       |             |                                                                                    |                     |          |                                                                                   |                     |         | 12      |         |
|                                                                                   |       |               |           |             |                                                                                    |                     |          |                                                                                   |                     |         | 8       |         |
|                                                                                   |       |               |           |             |                                                                                    |                     |          |                                                                                   |                     |         | 11      |         |
|                                                                                   |       |               |           |             |                                                                                    |                     |          |                                                                                   |                     |         | 15      |         |
|                                                                                   |       |               |           |             |                                                                                    |                     |          |                                                                                   |                     |         | 20/90   |         |
|                                                                                   |       |               | 1.0       |             |                                                                                    |                     |          |                                                                                   |                     |         |         |         |
|                                                                                   |       |               |           | Rock        |  | SST                 | D        | Clayey SAND: fine to coarse grained, very dense, pale brown, low plasticity clay. | VD                  |         |         |         |
|                                                                                   |       |               | 2.0       |             |                                                                                    |                     |          |                                                                                   |                     |         |         |         |
|                                                                                   |       |               |           |             |                                                                                    |                     |          | QT8 Refusal at 2.2 m                                                              |                     |         |         |         |

| Water | Weathering                                                                                                                                                                                     | Altering                                                                                                                                                        | Consistency                                                                                                                                                                                                                      | Density                                                                                                              | Rock Strength                                                                                                                             | Tests&Results                                                                                                                                                                                                                                                                                                                                                                  |
|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|       | <b>XW</b> : Extremely weathered<br><b>DW</b> : Distinctly weathered<br><b>HW</b> : Highly weathered<br><b>MW</b> : Moderately weathered<br><b>SW</b> : Slightly weathered<br><b>FR</b> : Fresh | <b>XA</b> : Extremely altered<br><b>DA</b> : Distinctly altered<br><b>HA</b> : Highly altered<br><b>MA</b> : Moderately altered<br><b>SA</b> : Slightly altered | <b>VS</b> : Very soft<br><b>S</b> : Soft<br><b>F</b> : Firm<br><b>St</b> : Stiff<br><b>VSt</b> : Very stiff<br><b>H</b> : Hard<br><b>FR</b> : Friable<br><b>Moisture</b><br><b>D</b> : Dry<br><b>M</b> : Moist<br><b>W</b> : Wet | <b>VL</b> : Very loose<br><b>L</b> : Loose<br><b>MD</b> : Medium dense<br><b>D</b> : Dense<br><b>VD</b> : Very dense | <b>VLS</b> : Very low<br><b>LS</b> : Low<br><b>MS</b> : Medium<br><b>HS</b> : High<br><b>VH</b> : Very high<br><b>XH</b> : Extremely high | <b>U50</b> : Undisturbed 50mm diam tube.<br><b>D</b> : Disturbed sample.<br><b>SPT</b> : Standard Penetration Test, N = number of blows to drive 50mm sampler 300mm with a 63.6kg hammer falling 762mm.<br><b>PP</b> : Hand penetrometer estimate of unconfined compressive strength, kPa.<br><b>S</b> : Vane shear value kPa.<br><b>DCP</b> : Dynamic Cone Penetrometer test. |



# APPENDIX B

## Laboratory Test Certificates



# Material Test Report

**Report Number:** 26-044E-1  
**Issue Number:** 1  
**Date Issued:** 24/02/2026  
**Client:** MOUNTAIN PROPERTY  
LEVEL 16, 239 GEORGE STREET, BRISBANE QLD 4000  
**Contact:** BRAD GATES  
**Project Number:** 26-044E  
**Project Name:** GEOTECHNICAL INVESTIGATION - PROPOSED RESIDENTIAL DEVELOPMENT  
**Project Location:** 400 WYATT ROAD, KAGARU QLD 4285  
**Work Request:** 4530  
**Sample Number:** S4530A  
**Date Sampled:** 11/02/2026  
**Dates Tested:** 13/02/2026 - 19/02/2026  
**Sampling Method:** AS 1289.1.2.1 6.5.3 - Power auger drilling  
**Preparation Method:** AS 1289.1.1 - Sampling and Preparation of Soils  
**Site Selection:** Selected by Client  
**Sample Location:** QT2, Depth: 0.3 - 0.5  
**Material:** Refer to Logs  
**Material Source:** Insitu



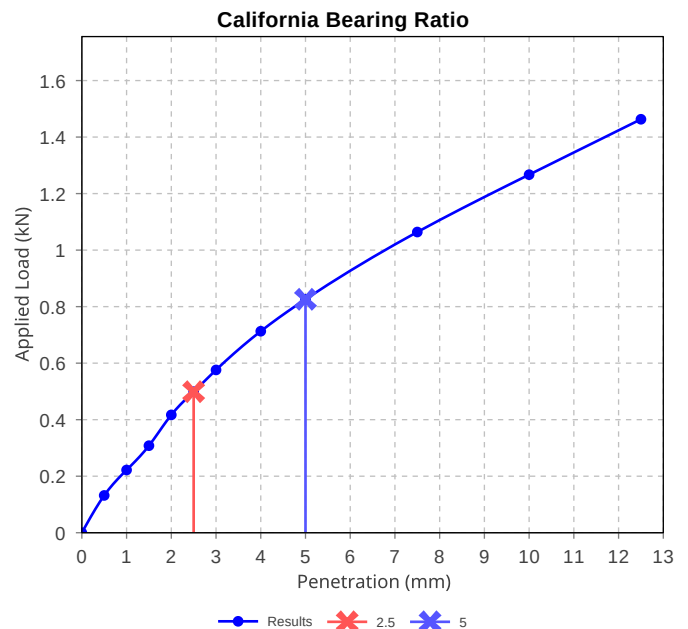
Qualtest Laboratory Pty Ltd  
Caboolture Laboratory  
3 / 64 Evans Drive Caboolture QLD 4510  
Phone: 0417 011 515  
Email: will@qualtestgeo.com



Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: William Richards  
Laboratory Manager  
Laboratory Number: 2316

| California Bearing Ratio (AS 1289 6.1.1 & 2.1.1) |                       | Min | Max |
|--------------------------------------------------|-----------------------|-----|-----|
| CBR taken at                                     | 5 mm                  |     |     |
| CBR %                                            | 4.0                   |     |     |
| Method of Compactive Effort                      | Standard              |     |     |
| Method used to Determine MDD                     | AS 1289 5.1.1 & 2.1.1 |     |     |
| Method used to Determine Plasticity              | Visual                |     |     |
| Maximum Dry Density ( $t/m^3$ )                  | 1.80                  |     |     |
| Optimum Moisture Content (%)                     | 11.5                  |     |     |
| Laboratory Density Ratio (%)                     | 101.0                 |     |     |
| Laboratory Moisture Ratio (%)                    | 97.0                  |     |     |
| Dry Density after Soaking ( $t/m^3$ )            | 1.80                  |     |     |
| Field Moisture Content (%)                       | 6.0                   |     |     |
| Moisture Content at Placement (%)                | 11.3                  |     |     |
| Moisture Content Top 30mm (%)                    | 18.6                  |     |     |
| Moisture Content Rest of Sample (%)              | 15.6                  |     |     |
| Mass Surcharge (kg)                              | 4.5                   |     |     |
| Soaking Period (days)                            | 4                     |     |     |
| Curing Hours (h)                                 | 138.1                 |     |     |
| Swell (%)                                        | 1.0                   |     |     |
| Oversize Material (mm)                           | 19                    |     |     |
| Oversize Material Included                       | Excluded              |     |     |
| Oversize Material (%)                            | 0.0                   |     |     |



# Material Test Report

**Report Number:** 26-044E-1  
**Issue Number:** 1  
**Date Issued:** 24/02/2026  
**Client:** MOUNTAIN PROPERTY  
LEVEL 16, 239 GEORGE STREET, BRISBANE QLD 4000  
**Contact:** BRAD GATES  
**Project Number:** 26-044E  
**Project Name:** GEOTECHNICAL INVESTIGATION - PROPOSED RESIDENTIAL DEVELOPMENT  
**Project Location:** 400 WYATT ROAD, KAGARU QLD 4285  
**Work Request:** 4530  
**Sample Number:** S4530B  
**Date Sampled:** 11/02/2026  
**Dates Tested:** 13/02/2026 - 19/02/2026  
**Sampling Method:** AS 1289.1.2.1 6.5.3 - Power auger drilling  
**Preparation Method:** AS 1289.1.1 - Sampling and Preparation of Soils  
**Site Selection:** Selected by Client  
**Sample Location:** QT4, Depth: 0.4 - 0.8  
**Material:** Refer to Logs  
**Material Source:** Insitu



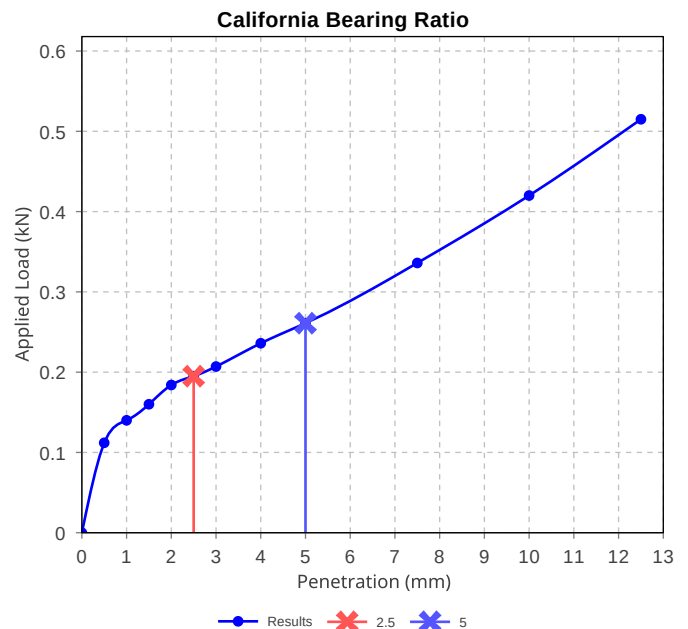
Qualtest Laboratory Pty Ltd  
Caboolture Laboratory  
3 / 64 Evans Drive Caboolture QLD 4510  
Phone: 0417 011 515  
Email: will@qualtestgeo.com



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Approved Signatory: William Richards  
Laboratory Manager  
Laboratory Number: 2316

| California Bearing Ratio (AS 1289 6.1.1 & 2.1.1) |                       | Min | Max |
|--------------------------------------------------|-----------------------|-----|-----|
| CBR taken at                                     | 2.5 mm                |     |     |
| CBR %                                            | 1.5                   |     |     |
| Method of Compactive Effort                      | Standard              |     |     |
| Method used to Determine MDD                     | AS 1289 5.1.1 & 2.1.1 |     |     |
| Method used to Determine Plasticity              | Visual                |     |     |
| Maximum Dry Density ( $t/m^3$ )                  | 1.67                  |     |     |
| Optimum Moisture Content (%)                     | 17.0                  |     |     |
| Laboratory Density Ratio (%)                     | 100.0                 |     |     |
| Laboratory Moisture Ratio (%)                    | 101.0                 |     |     |
| Dry Density after Soaking ( $t/m^3$ )            | 1.59                  |     |     |
| Field Moisture Content (%)                       | 16.1                  |     |     |
| Moisture Content at Placement (%)                | 17.4                  |     |     |
| Moisture Content Top 30mm (%)                    | 28.7                  |     |     |
| Moisture Content Rest of Sample (%)              | 19.0                  |     |     |
| Mass Surcharge (kg)                              | 4.5                   |     |     |
| Soaking Period (days)                            | 4                     |     |     |
| Curing Hours (h)                                 | 50.8                  |     |     |
| Swell (%)                                        | 5.0                   |     |     |
| Oversize Material (mm)                           | 19                    |     |     |
| Oversize Material Included                       | Excluded              |     |     |
| Oversize Material (%)                            | 0.0                   |     |     |



# Material Test Report

**Report Number:** 26-044E-1  
**Issue Number:** 1  
**Date Issued:** 24/02/2026  
**Client:** MOUNTAIN PROPERTY  
LEVEL 16, 239 GEORGE STREET, BRISBANE QLD 4000  
**Contact:** BRAD GATES  
**Project Number:** 26-044E  
**Project Name:** GEOTECHNICAL INVESTIGATION - PROPOSED RESIDENTIAL DEVELOPMENT  
**Project Location:** 400 WYATT ROAD, KAGARU QLD 4285  
**Work Request:** 4530  
**Sample Number:** S4530B  
**Date Sampled:** 11/02/2026  
**Dates Tested:** 13/02/2026 - 18/02/2026  
**Sampling Method:** AS 1289.1.2.1 6.5.3 - Power auger drilling  
**Preparation Method:** AS 1289.1.1 - Sampling and Preparation of Soils  
**Site Selection:** Selected by Client  
**Sample Location:** QT4, Depth: 0.4 - 0.8  
**Material:** Refer to Logs  
**Material Source:** Insitu



Qualtest Laboratory Pty Ltd  
Caboolture Laboratory  
3 / 64 Evans Drive Caboolture QLD 4510  
Phone: 0417 011 515  
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Approved Signatory: William Richards  
Laboratory Manager  
Laboratory Number: 2316

| Emerson Class Number of a Soil (AS 1289 3.8.1) |               | Min | Max |
|------------------------------------------------|---------------|-----|-----|
| Emerson Class                                  | 6             |     |     |
| Soil Description                               | Refer to Logs |     |     |
| Nature of Water                                | Distilled     |     |     |



# Material Test Report

**Report Number:** 26-044E-1  
**Issue Number:** 1  
**Date Issued:** 24/02/2026  
**Client:** MOUNTAIN PROPERTY  
 LEVEL 16, 239 GEORGE STREET, BRISBANE QLD 4000  
**Contact:** BRAD GATES  
**Project Number:** 26-044E  
**Project Name:** GEOTECHNICAL INVESTIGATION - PROPOSED RESIDENTIAL DEVELOPMENT  
**Project Location:** 400 WYATT ROAD, KAGARU QLD 4285  
**Work Request:** 4530  
**Sample Number:** S4530C  
**Date Sampled:** 11/02/2026  
**Dates Tested:** 13/02/2026 - 19/02/2026  
**Sampling Method:** AS 1289.1.2.1 6.5.3 - Power auger drilling  
**Preparation Method:** AS 1289.1.1 - Sampling and Preparation of Soils  
**Site Selection:** Selected by Client  
**Sample Location:** QT7, Depth: 0.1 - 0.4  
**Material:** Refer to Logs  
**Material Source:** Insitu



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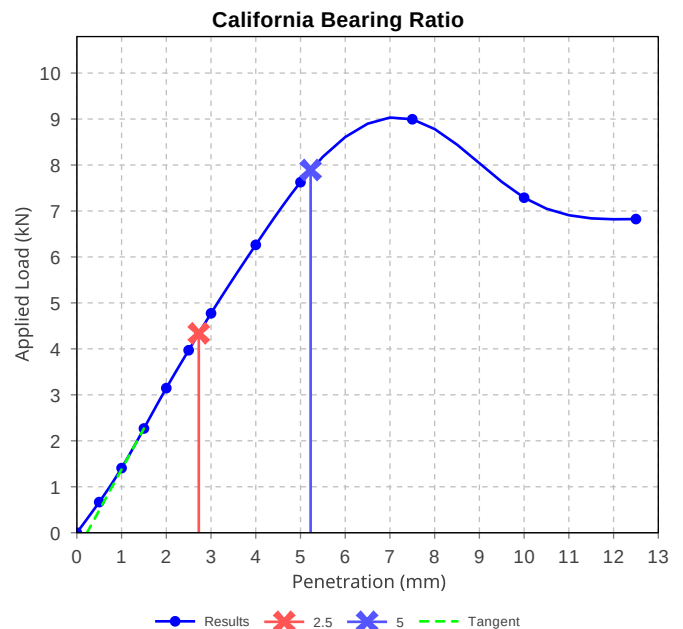


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*[Signature]*

Approved Signatory: William Richards  
 Laboratory Manager  
 Laboratory Number: 2316

| California Bearing Ratio (AS 1289 6.1.1 & 2.1.1) |                       | Min | Max |
|--------------------------------------------------|-----------------------|-----|-----|
| CBR taken at                                     | 5 mm                  |     |     |
| CBR %                                            | 40                    |     |     |
| Method of Compactive Effort                      | Standard              |     |     |
| Method used to Determine MDD                     | AS 1289 5.1.1 & 2.1.1 |     |     |
| Method used to Determine Plasticity              | Visual                |     |     |
| Maximum Dry Density (t/m <sup>3</sup> )          | 2.00                  |     |     |
| Optimum Moisture Content (%)                     | 8.5                   |     |     |
| Laboratory Density Ratio (%)                     | 101.0                 |     |     |
| Laboratory Moisture Ratio (%)                    | 95.5                  |     |     |
| Dry Density after Soaking (t/m <sup>3</sup> )    | 2.03                  |     |     |
| Field Moisture Content (%)                       | 2.7                   |     |     |
| Moisture Content at Placement (%)                | 8.1                   |     |     |
| Moisture Content Top 30mm (%)                    | 9.8                   |     |     |
| Moisture Content Rest of Sample (%)              | 8.4                   |     |     |
| Mass Surcharge (kg)                              | 4.5                   |     |     |
| Soaking Period (days)                            | 4                     |     |     |
| Curing Hours (h)                                 | 68.2                  |     |     |
| Swell (%)                                        | 0.0                   |     |     |
| Oversize Material (mm)                           | 19                    |     |     |
| Oversize Material Included                       | Excluded              |     |     |
| Oversize Material (%)                            | 0.0                   |     |     |



# Material Test Report

**Report Number:** 26-044E-1  
**Issue Number:** 1  
**Date Issued:** 24/02/2026  
**Client:** MOUNTAIN PROPERTY  
 LEVEL 16, 239 GEORGE STREET, BRISBANE QLD 4000  
**Contact:** BRAD GATES  
**Project Number:** 26-044E  
**Project Name:** GEOTECHNICAL INVESTIGATION - PROPOSED RESIDENTIAL DEVELOPMENT  
**Project Location:** 400 WYATT ROAD, KAGARU QLD 4285  
**Work Request:** 4530  
**Sample Number:** S4530C  
**Date Sampled:** 11/02/2026  
**Dates Tested:** 13/02/2026 - 17/02/2026  
**Sampling Method:** AS 1289.1.2.1 6.5.3 - Power auger drilling  
**Preparation Method:** AS 1289.1.1 - Sampling and Preparation of Soils  
**Site Selection:** Selected by Client  
**Sample Location:** QT7, Depth: 0.1 - 0.4  
**Material:** Refer to Logs  
**Material Source:** Insitu



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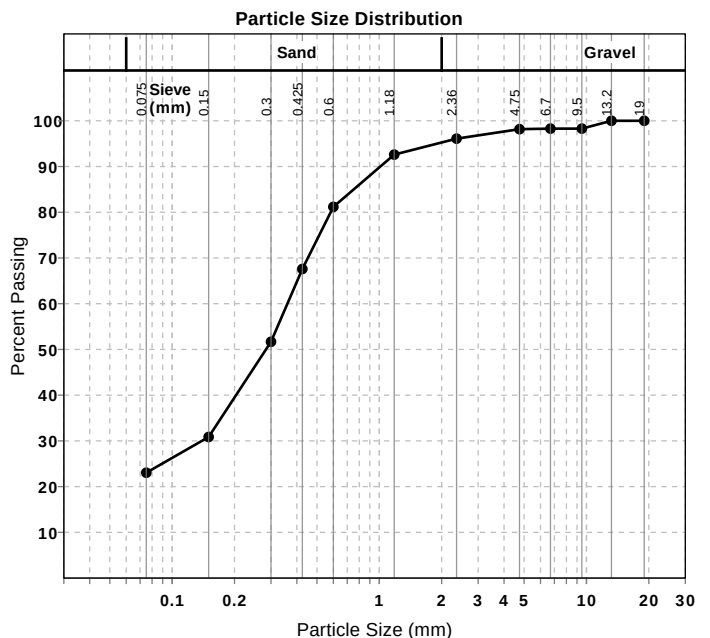
*[Signature]*

Approved Signatory: William Richards  
 Laboratory Manager  
 Laboratory Number: 2316

| Particle Size Distribution (AS1289 3.6.1) |          |                |  |            |                 |
|-------------------------------------------|----------|----------------|--|------------|-----------------|
| Sieve                                     | Passed % | Passing Limits |  | Retained % | Retained Limits |
| 19 mm                                     | 100      |                |  | 0          |                 |
| 13.2 mm                                   | 100      |                |  | 0          |                 |
| 9.5 mm                                    | 98       |                |  | 2          |                 |
| 6.7 mm                                    | 98       |                |  | 0          |                 |
| 4.75 mm                                   | 98       |                |  | 0          |                 |
| 2.36 mm                                   | 96       |                |  | 2          |                 |
| 1.18 mm                                   | 93       |                |  | 3          |                 |
| 0.6 mm                                    | 81       |                |  | 11         |                 |
| 0.425 mm                                  | 68       |                |  | 14         |                 |
| 0.3 mm                                    | 52       |                |  | 16         |                 |
| 0.15 mm                                   | 31       |                |  | 21         |                 |
| 0.075 mm                                  | 23       |                |  | 8          |                 |

| Atterberg Limit (AS1289 3.9.2 & 3.2.1 & 3.3.2 & Q252) |                | Min | Max |
|-------------------------------------------------------|----------------|-----|-----|
| Sample History                                        | Air Dried      |     |     |
| Preparation Method                                    | Dry Sieve      |     |     |
| Passing 0.425 (%)                                     | 68             |     |     |
| Retained 0.425 (%)                                    | 14             |     |     |
| Liquid Limit (%)                                      | 14             |     |     |
| Plastic Limit (%)                                     | Not Obtainable |     |     |
| Plasticity Index (%)                                  | Non Plastic    |     |     |
| Weighted Plasticity Index (%)                         |                |     |     |

| Linear Shrinkage (AS1289 3.4.1)  |               | Min | Max |
|----------------------------------|---------------|-----|-----|
| Moisture Condition Determined By | AS 1289.3.1.2 |     |     |
| Linear Shrinkage (%)             | 1.0           |     |     |
| Cracking Crumbling Curling       | None          |     |     |



# Material Test Report

**Report Number:** 26-044E-1  
**Issue Number:** 1  
**Date Issued:** 24/02/2026  
**Client:** MOUNTAIN PROPERTY  
LEVEL 16, 239 GEORGE STREET, BRISBANE QLD 4000  
**Contact:** BRAD GATES  
**Project Number:** 26-044E  
**Project Name:** GEOTECHNICAL INVESTIGATION - PROPOSED  
RESIDENTIAL DEVELOPMENT  
**Project Location:** 400 WYATT ROAD, KAGARU QLD 4285  
**Work Request:** 4530  
**Sample Number:** S4530G  
**Date Sampled:** 11/02/2026  
**Dates Tested:** 13/02/2026 - 18/02/2026  
**Sampling Method:** AS 1289.1.2.1 6.5.3 - Power auger drilling  
**Preparation Method:** AS 1289.1.1 - Sampling and Preparation of Soils  
**Site Selection:** Selected by Client  
**Sample Location:** QT1, Depth: 0.3 - 0.4  
**Material:** Refer to Logs  
**Material Source:** Insitu



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Approved Signatory: William Richards  
Laboratory Manager  
Laboratory Number: 2316

| Emerson Class Number of a Soil (AS 1289 3.8.1) |               | Min | Max |
|------------------------------------------------|---------------|-----|-----|
| Emerson Class                                  | 2             |     |     |
| Soil Description                               | Refer to Logs |     |     |
| Nature of Water                                | Distilled     |     |     |



# Material Test Report

**Report Number:** 26-044E-1  
**Issue Number:** 1  
**Date Issued:** 24/02/2026  
**Client:** MOUNTAIN PROPERTY  
LEVEL 16, 239 GEORGE STREET, BRISBANE QLD 4000  
**Contact:** BRAD GATES  
**Project Number:** 26-044E  
**Project Name:** GEOTECHNICAL INVESTIGATION - PROPOSED RESIDENTIAL DEVELOPMENT  
**Project Location:** 400 WYATT ROAD, KAGARU QLD 4285  
**Work Request:** 4530  
**Sample Number:** S4530H  
**Date Sampled:** 11/02/2026  
**Dates Tested:** 13/02/2026 - 18/02/2026  
**Sampling Method:** AS 1289.1.2.1 6.5.3 - Power auger drilling  
**Preparation Method:** AS 1289.1.1 - Sampling and Preparation of Soils  
**Site Selection:** Selected by Client  
**Sample Location:** QT2, Depth: 0.3 - 0.4  
**Material:** Refer to Logs  
**Material Source:** Insitu



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Approved Signatory: William Richards  
Laboratory Manager  
Laboratory Number: 2316

| Emerson Class Number of a Soil (AS 1289 3.8.1) |               | Min | Max |
|------------------------------------------------|---------------|-----|-----|
| Emerson Class                                  | 2             |     |     |
| Soil Description                               | Refer to Logs |     |     |
| Nature of Water                                | Distilled     |     |     |

# Material Test Report

**Report Number:** 26-044E-1  
**Issue Number:** 1  
**Date Issued:** 24/02/2026  
**Client:** MOUNTAIN PROPERTY  
 LEVEL 16, 239 GEORGE STREET, BRISBANE QLD 4000  
**Contact:** BRAD GATES  
**Project Number:** 26-044E  
**Project Name:** GEOTECHNICAL INVESTIGATION - PROPOSED RESIDENTIAL DEVELOPMENT  
**Project Location:** 400 WYATT ROAD, KAGARU QLD 4285  
**Work Request:** 4530  
**Sample Number:** S45301  
**Date Sampled:** 11/02/2026  
**Dates Tested:** 13/02/2026 - 18/02/2026  
**Sampling Method:** AS 1289.1.2.1 6.5.3 - Power auger drilling  
**Preparation Method:** AS 1289.1.1 - Sampling and Preparation of Soils  
**Site Selection:** Selected by Client  
**Sample Location:** QT3, Depth: 1.0 - 1.5  
**Material:** Refer to Logs  
**Material Source:** Insitu



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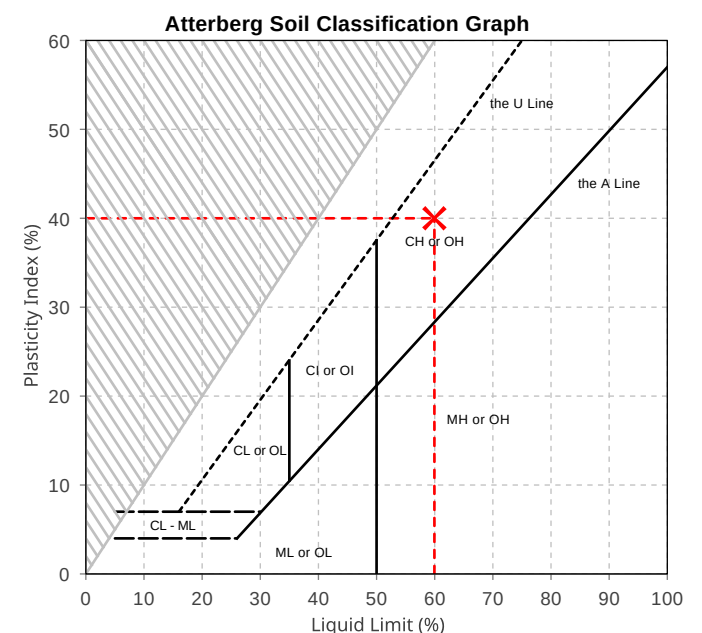
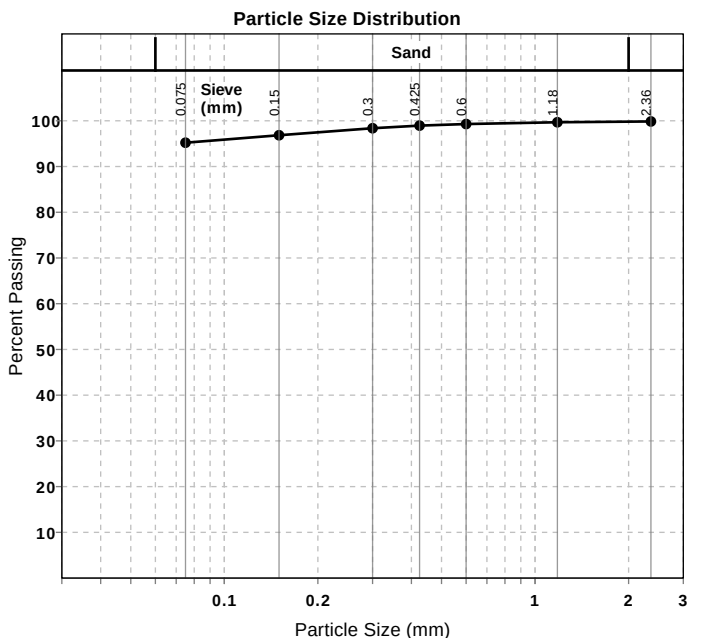
Approved Signatory: William Richards  
 Laboratory Manager  
 Laboratory Number: 2316

| Particle Size Distribution (AS1289 3.6.1) |          |                |            |                 |  |
|-------------------------------------------|----------|----------------|------------|-----------------|--|
| Sieve                                     | Passed % | Passing Limits | Retained % | Retained Limits |  |
| 2.36 mm                                   | 100      |                | 0          |                 |  |
| 1.18 mm                                   | 100      |                | 0          |                 |  |
| 0.6 mm                                    | 99       |                | 0          |                 |  |
| 0.425 mm                                  | 99       |                | 0          |                 |  |
| 0.3 mm                                    | 98       |                | 1          |                 |  |
| 0.15 mm                                   | 97       |                | 2          |                 |  |
| 0.075 mm                                  | 95       |                | 2          |                 |  |

| Atterberg Limit (AS1289 3.1.2 & 3.2.1 & 3.3.1 & Q252) |  |            |  | Min | Max |
|-------------------------------------------------------|--|------------|--|-----|-----|
| Sample History                                        |  | Oven Dried |  |     |     |
| Preparation Method                                    |  | Dry Sieve  |  |     |     |
| Passing 0.425 (%)                                     |  | 99         |  |     |     |
| Liquid Limit (%)                                      |  | 60         |  |     |     |
| Plastic Limit (%)                                     |  | 20         |  |     |     |
| Plasticity Index (%)                                  |  | 40         |  |     |     |
| Weighted Plasticity Index (%)                         |  | 3958       |  |     |     |

| Linear Shrinkage (AS1289 3.4.1)  |  |               |  | Min | Max |
|----------------------------------|--|---------------|--|-----|-----|
| Moisture Condition Determined By |  | AS 1289.3.1.2 |  |     |     |
| Linear Shrinkage (%)             |  | 15.5          |  |     |     |
| Cracking Crumbling Curling       |  | Curling       |  |     |     |

| Emerson Class Number of a Soil (AS 1289 3.8.1) |  |               |  | Min | Max |
|------------------------------------------------|--|---------------|--|-----|-----|
| Emerson Class                                  |  | 2             |  |     |     |
| Soil Description                               |  | Refer to Logs |  |     |     |
| Nature of Water                                |  | Distilled     |  |     |     |



# Material Test Report

**Report Number:** 26-044E-1  
**Issue Number:** 1  
**Date Issued:** 24/02/2026  
**Client:** MOUNTAIN PROPERTY  
LEVEL 16, 239 GEORGE STREET, BRISBANE QLD 4000  
**Contact:** BRAD GATES  
**Project Number:** 26-044E  
**Project Name:** GEOTECHNICAL INVESTIGATION - PROPOSED RESIDENTIAL DEVELOPMENT  
**Project Location:** 400 WYATT ROAD, KAGARU QLD 4285  
**Work Request:** 4530  
**Sample Number:** S4530J  
**Date Sampled:** 11/02/2026  
**Dates Tested:** 13/02/2026 - 18/02/2026  
**Sampling Method:** AS 1289.1.2.1 6.5.3 - Power auger drilling  
**Preparation Method:** AS 1289.1.1 - Sampling and Preparation of Soils  
**Site Selection:** Selected by Client  
**Sample Location:** QT5, Depth: 0.0 - 0.1  
**Material:** Refer to Logs  
**Material Source:** Insitu



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Approved Signatory: William Richards  
Laboratory Manager  
Laboratory Number: 2316

| Emerson Class Number of a Soil (AS 1289 3.8.1) |               | Min | Max |
|------------------------------------------------|---------------|-----|-----|
| Emerson Class                                  | 3             |     |     |
| Soil Description                               | Refer to Logs |     |     |
| Nature of Water                                | Distilled     |     |     |



# Material Test Report

**Report Number:** 26-044E-1  
**Issue Number:** 1  
**Date Issued:** 24/02/2026  
**Client:** MOUNTAIN PROPERTY  
 LEVEL 16, 239 GEORGE STREET, BRISBANE QLD 4000  
**Contact:** BRAD GATES  
**Project Number:** 26-044E  
**Project Name:** GEOTECHNICAL INVESTIGATION - PROPOSED RESIDENTIAL DEVELOPMENT  
**Project Location:** 400 WYATT ROAD, KAGARU QLD 4285  
**Work Request:** 4530  
**Sample Number:** S4530K  
**Date Sampled:** 11/02/2026  
**Dates Tested:** 13/02/2026 - 18/02/2026  
**Sampling Method:** AS 1289.1.2.1 6.5.3 - Power auger drilling  
**Preparation Method:** AS 1289.1.1 - Sampling and Preparation of Soils  
**Site Selection:** Selected by Client  
**Sample Location:** QT7, Depth: 0.8 - 1.5  
**Material:** Refer to Logs  
**Material Source:** Insitu



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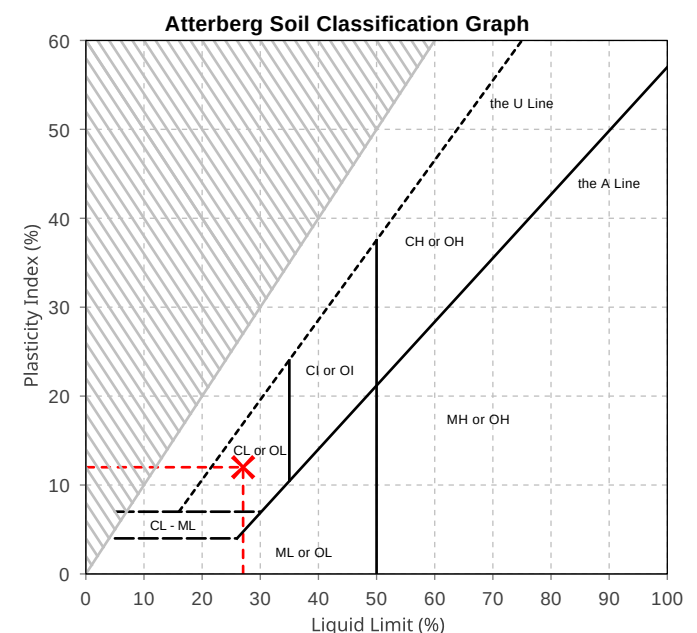
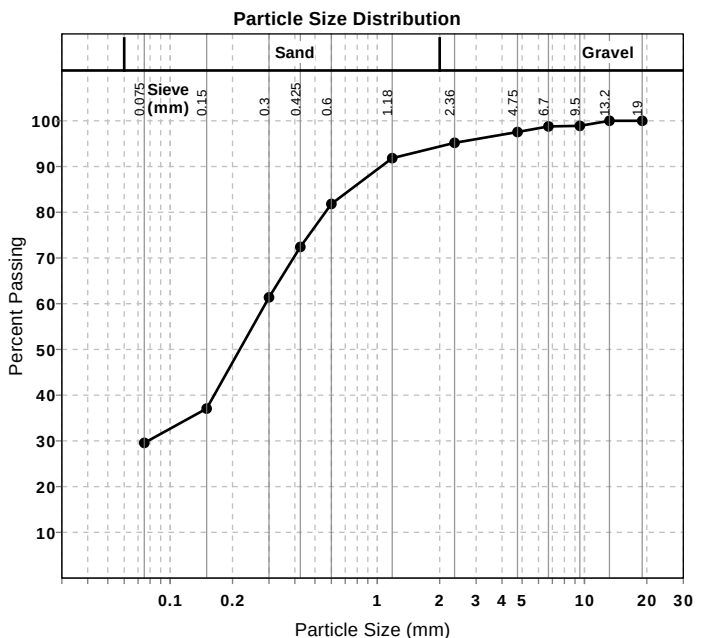
Approved Signatory: William Richards  
 Laboratory Manager  
 Laboratory Number: 2316

| Particle Size Distribution (AS1289 3.6.1) |          |                |            |                 |
|-------------------------------------------|----------|----------------|------------|-----------------|
| Sieve                                     | Passed % | Passing Limits | Retained % | Retained Limits |
| 19 mm                                     | 100      |                | 0          |                 |
| 13.2 mm                                   | 100      |                | 0          |                 |
| 9.5 mm                                    | 99       |                | 1          |                 |
| 6.7 mm                                    | 99       |                | 0          |                 |
| 4.75 mm                                   | 98       |                | 1          |                 |
| 2.36 mm                                   | 95       |                | 2          |                 |
| 1.18 mm                                   | 92       |                | 3          |                 |
| 0.6 mm                                    | 82       |                | 10         |                 |
| 0.425 mm                                  | 72       |                | 9          |                 |
| 0.3 mm                                    | 61       |                | 11         |                 |
| 0.15 mm                                   | 37       |                | 24         |                 |
| 0.075 mm                                  | 30       |                | 8          |                 |

| Atterberg Limit (AS1289 3.1.2 & 3.2.1 & 3.3.1 & Q252) |           | Min | Max |
|-------------------------------------------------------|-----------|-----|-----|
| Sample History                                        | Air Dried |     |     |
| Preparation Method                                    | Dry Sieve |     |     |
| Passing 0.425 (%)                                     | 72        |     |     |
| Liquid Limit (%)                                      | 27        |     |     |
| Plastic Limit (%)                                     | 15        |     |     |
| Plasticity Index (%)                                  | 12        |     |     |
| Weighted Plasticity Index (%)                         | 869       |     |     |

| Linear Shrinkage (AS1289 3.4.1)  |               | Min | Max |
|----------------------------------|---------------|-----|-----|
| Moisture Condition Determined By | AS 1289.3.1.2 |     |     |
| Linear Shrinkage (%)             | 7.0           |     |     |
| Cracking Crumbling Curling       | Cracking      |     |     |

| Emerson Class Number of a Soil (AS 1289 3.8.1) |               | Min | Max |
|------------------------------------------------|---------------|-----|-----|
| Emerson Class                                  | 4 *           |     |     |
| Soil Description                               | Refer to Logs |     |     |
| Nature of Water                                | Distilled     |     |     |
| * Mineral Present                              | Gypsum        |     |     |



# Material Test Report

**Report Number:** 26-044E-1A  
**Issue Number:** 1  
**Date Issued:** 24/02/2026  
**Client:** MOUNTAIN PROPERTY  
LEVEL 16, 239 GEORGE STREET, BRISBANE QLD 4000  
**Contact:** BRAD GATES  
**Project Number:** 26-044E  
**Project Name:** GEOTECHNICAL INVESTIGATION - PROPOSED  
RESIDENTIAL DEVELOPMENT  
**Project Location:** 400 WYATT ROAD, KAGARU QLD 4285  
**Work Request:** 4530  
**Dates Tested:** 13/02/2026 - 16/02/2026  
**Location:** 400 Wyatt Rd, Kagaru



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William Richards (Laboratory Manager)

| Shrink Swell Index AS 1289 7.1.1 & 2.1.1 |                    |                    |                     |  |  |
|------------------------------------------|--------------------|--------------------|---------------------|--|--|
| Sample Number                            | S4530D             | S4530E             | S4530F              |  |  |
| Date Sampled                             | 11/02/2026         | 11/02/2026         | 11/02/2026          |  |  |
| Date Tested                              | 16/02/2026         | 16/02/2026         | 16/02/2026          |  |  |
| Material Source                          | In-situ            | In-situ            | In-situ             |  |  |
| Sample Location                          | QT2<br>(0.3 - 0.5) | QT3<br>(0.6 - 0.7) | QT6<br>(0.6 - 0.67) |  |  |
| Inert Material Estimate (%)              | **                 | **                 | **                  |  |  |
| Pocket Penetrometer before (kPa)         | >600               | >600               | **                  |  |  |
| Pocket Penetrometer after (kPa)          | 250                | 210                | 180                 |  |  |
| Shrinkage Moisture Content (%)           | 16.0               | 15.6               | 22.1                |  |  |
| Shrinkage (%)                            | 2.8                | 2.6                | 4.2                 |  |  |
| Swell Moisture Content Before (%)        | 13.3               | 16.1               | 23.2                |  |  |
| Swell Moisture Content After (%)         | 20.4               | 22.3               | 29.3                |  |  |
| Swell (%)                                | 7.1                | 9.5                | 8.1                 |  |  |
| Shrink Swell Index Iss (%)               | 3.5                | 4.1                | 4.6                 |  |  |
| Visual Description                       | Sandy Clay         | Clay with sand     | Clay                |  |  |
| Cracking                                 | MC                 | UC                 | UC                  |  |  |
| Crumbling                                | **                 | **                 | **                  |  |  |
| Remarks                                  | **                 | **                 | **                  |  |  |

Shrink Swell Index (Iss) reported as the percentage vertical strain per pF change in suction.

Cracking Terminology: UC Uncracked, SC Slightly Cracked, MC Moderately Cracked, HC Highly Cracked, FR Fragmented.

Scope of accreditation does not cover the performance of pocket penetrometer readings.