CENTRAL COAST COUNCIL

PO Box 220
19 King Edward Street
Ulverstone Tasmania 7315
Tel (03) 6429 8900

admin@centralcoast.tas.gov.au
www.centralcoast.tas.gov.au

Kellie Keating

Application for Planning

S.57 Land Use Planning and Approvals Act 1993

The following application has been received:

Application No.: **DA2025311**

Location: **Hearps Road, West Ulverstone (CT183648/1000)**

Proposal: **Site works and excavation associated with residential subdivision - no use class**

The application may be inspected at the Administration Centre, 19 King Edward Street, Ulverstone during Office hours and on the council's website: www.centralcoast.tas.gov.au Any person may make representation in relation to the applications (in accordance with S.57(5) of the Act) by writing to the Chief Executive Officer, PO Box 220, Ulverstone 7315 or by email to admin@centralcoast.tas.gov.au and quoting the Application No. Any representations received by the Council are classed as public documents and will be made available to the public where applicable under the *Local Government (Meeting Procedures) Regulations 2025*.

The representation must be made on or before **23 February 2026**

Date of Notification: **7 February 2026**

Vicki Brereton
CHIEF EXECUTIVE OFFICER

CENTRAL COAST COUNCIL
PO Box 220
19 King Edward Street
ULVERSTONE TASMANIA 7315
Ph: (03) 6429 8900
Email: planning@centralcoast.tas.gov.au
www: centralcoast.tas.gov.au

CENTRAL COAST COUNCIL

Land Use Planning and Approvals Act 1993

Tasmanian Planning Scheme – Central Coast

PLANNING PERMIT APPLICATION

CENTRAL COAST COUNCIL
LAND USE PLANNING
Received: 17/12/2025
Application No: DA2025311
Doc ID: 540905

Office use only: *Zone:* *Permit Pathway – NPR/Permitted/Discretionary*

Use or Development Site:

Site Address Hearps Road

Certificate of Title Reference CT183648/1000

Land Area

Heritage Listed Property **NO** ☐ **YES** ☐

Applicant(s)

First Name(s)

Surname(s)

Company name (if applicable) Future Developments Group Pty Ltd

Contact No: 0409793803

Postal Address: PO Box 3144 Burnie Tas 7320

Email address: admin@eqtownplanning.com.au

Please tick box to receive correspondence and any relevant information regarding your application via email. ☒

Owner(s) (note – if more than one owner, all names must be indicated)

First Name(s) Future Developments Group Pty Ltd
Paul
James

Middle Names(s) Andrew

Surname(s) Le Rossignol
Polanowski

Company name (if applicable) Future Developments Group

Postal Address: P.O Box 2150 Howrah 7018

PERMIT APPLICATION INFORMATION

(If insufficient space for proposed use and development, please attach separate documents)

"USE" is the purpose or manner for which land is utilised.

Proposed Use Cut and fill

Use Class
Office use only

"Development" is the works required to facilitate the proposed use of the land, including the construction or alteration or demolition of buildings and structures, signs, any change in ground level and the clearing of vegetation.

Proposed Development (please submit all documentation in PDF format to planning@centralcoast.tas.gov.au separating A4 documents & forms from A3 documents).

Site works associated with residential subdivision - no use class. Refer attached documents.

Value of the development – (to include all works on site such as outbuildings, sealed driveways and fencing)

$ 50,000-00 Estimate/ ~~Actual~~

Total floor area of the development .....m²

Declaration of Notice to Landowner

If land is NOT in the applicant's ownership

I Paul LeRossignol, declare that the owner/each of the owners of the land has been notified of the intention to make this permit application under section 52(1) of the *Land Use Planning and Approvals Act 1993.*

Signature of Applicant P. LeRossignol Date 11/12/25

If the application involves land within a Strata Corporation

I , declare that the owner/each of the owners of the body corporation has been notified of the intention to make this permit application.

Signature of Applicant Date

If the application involves land owned or administered by the CENTRAL COAST COUNCIL

Central Coast Council consents to the making of this permit application.

General Managers Signature _____ Date

If the permit application involves land owned or administered by the CROWN

I, _____ the Minister

responsible for the land, consent to the making of this permit application.

Minister (Signature) _____ Date

NB: If the site includes land owned or administered by the Central Coast Council or by a State government agency, the consent in writing (a letter) from the Council or the Minister responsible for Crown land must be provided at the time of making the application - and this application form must be signed by the Council or the Minister responsible.

Applicants Declaration

I/ we Paul LeRossignol
declare that the information I have given in this permit application to be true and correct to the best of my knowledge.

Signature of Applicant/s P. LeRossignol Date 11/12/25

Office Use Only	
Planning Permit Fee	$ .....
Public Notice Fee	$ .....
Permit Amendment / Extension Fee	$ .....
No Permit Required Assessment Fee	$ .....
TOTAL	**$ .....**
Validity Date	

RESULT OF SEARCH

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

SEARCH OF TORRENS TITLE

VOLUME	FOLIO
183648	1000
EDITION	DATE OF ISSUE
1	10-Nov-2022

CENTRAL COAST COUNCIL
LAND USE PLANNING
Received: 17/12/2025
Application No: DA2025311
Doc ID: 540907

SEARCH DATE : 11-Dec-2025
SEARCH TIME : 10.50 am

DESCRIPTION OF LAND

Town of ULVERSTONE
Lot 1000 on Sealed Plan 183648
Derivation : Part of Lot 10033, 273 Acres Gtd. to Charles Langford Oliver
Prior CT 113873/1

SCHEDULE 1

M852461 TRANSFER to FUTURE DEVELOPMENTS GROUP PTY LTD
Registered 25-Feb-2021 at 12.01 pm

SCHEDULE 2

Reservations and conditions in the Crown Grant if any
SP183648 EASEMENTS in Schedule of Easements
SP183648 COVENANTS in Schedule of Easements
SP104488 COVENANTS in Schedule of Easements
SP104488 FENCING COVENANT in Schedule of Easements
E250550 MORTGAGE to Commonwealth Bank of Australia
Registered 25-Feb-2021 at 12.02 pm

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

OWNER: FUTURE DEVELOPMENTS GROUP PTY LTD

FOLIO REFERENCE: C.T.113873 - 1

GRANTEE:
PART OF LOT 10033, 273 Ac. GRANTED TO CHARLES LANGFORD OLIVER

PLAN OF SURVEY

BY SURVEYOR: T. W. COX of
LEARY,COX & CRIPPS SURVEYORS
Unit G04 40 Molle Street, HOBART TAS 7000
P 03 6118 2030
E admin@lccsurvey.com

LOCATION: TOWN OF ULVERSTONE

SCALE 1: 2000 LENGTHS IN METRES

REGISTERED NUMBER
SP183648

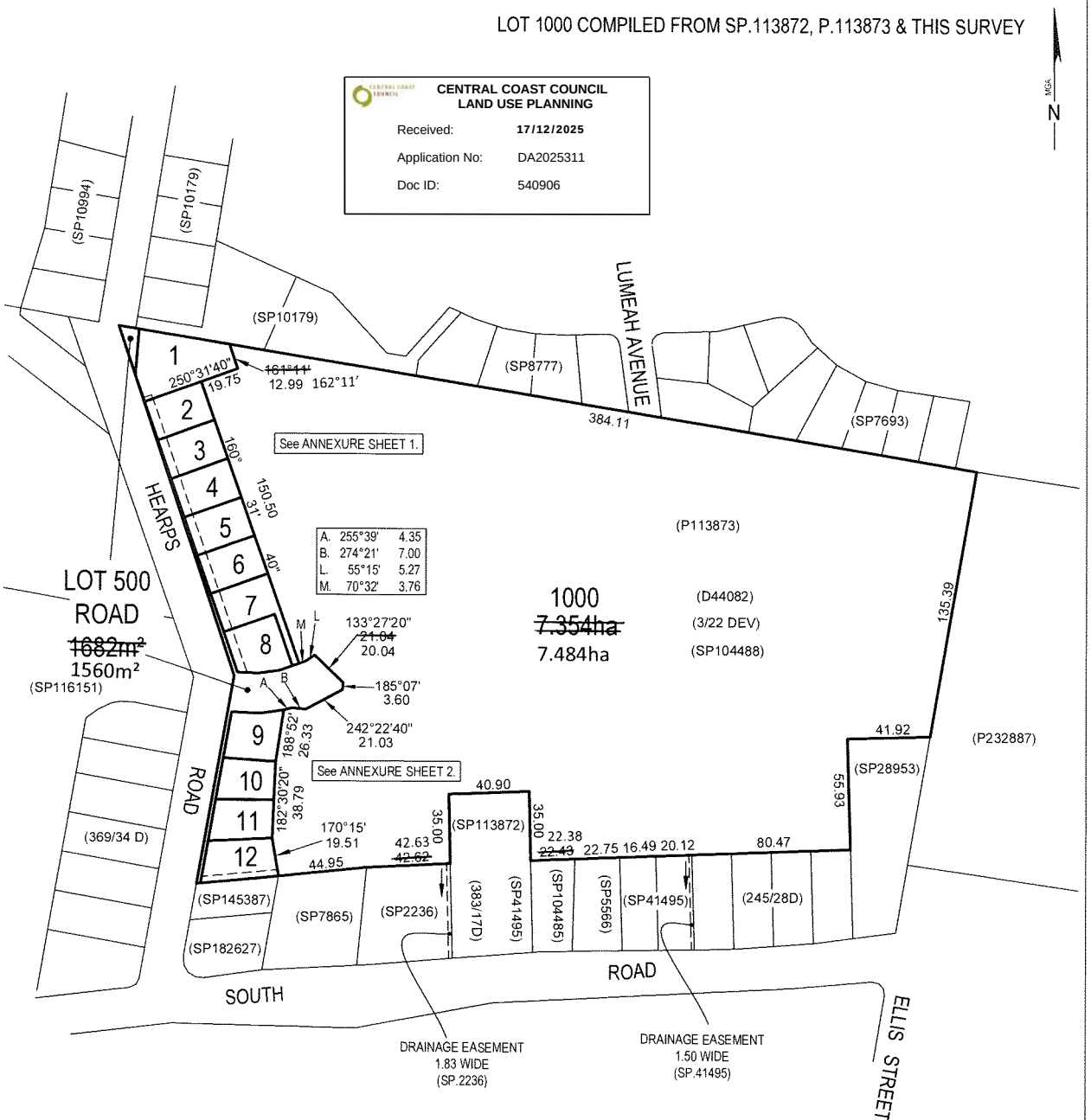
APPROVED
EFFECTIVE FROM 10 NOV 2022
Recorder of Titles

PRIORITY FINAL PLAN

ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN

LOT 1000 COMPILED FROM SP.113872, P.113873 & THIS SURVEY

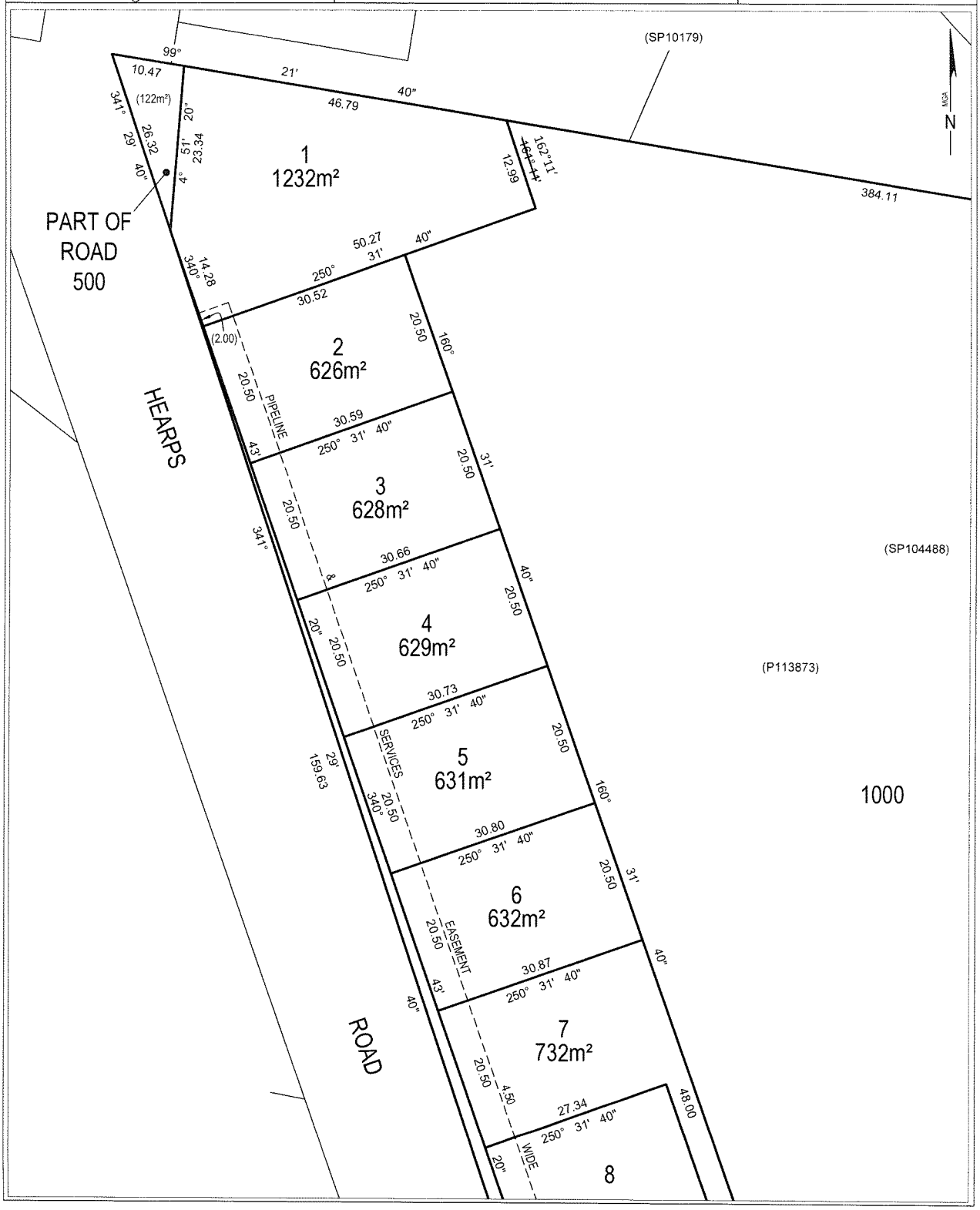
CENTRAL COAST COUNCIL
LAND USE PLANNING
Received: 17/12/2025
Application No: DA2025311
Doc ID: 540906



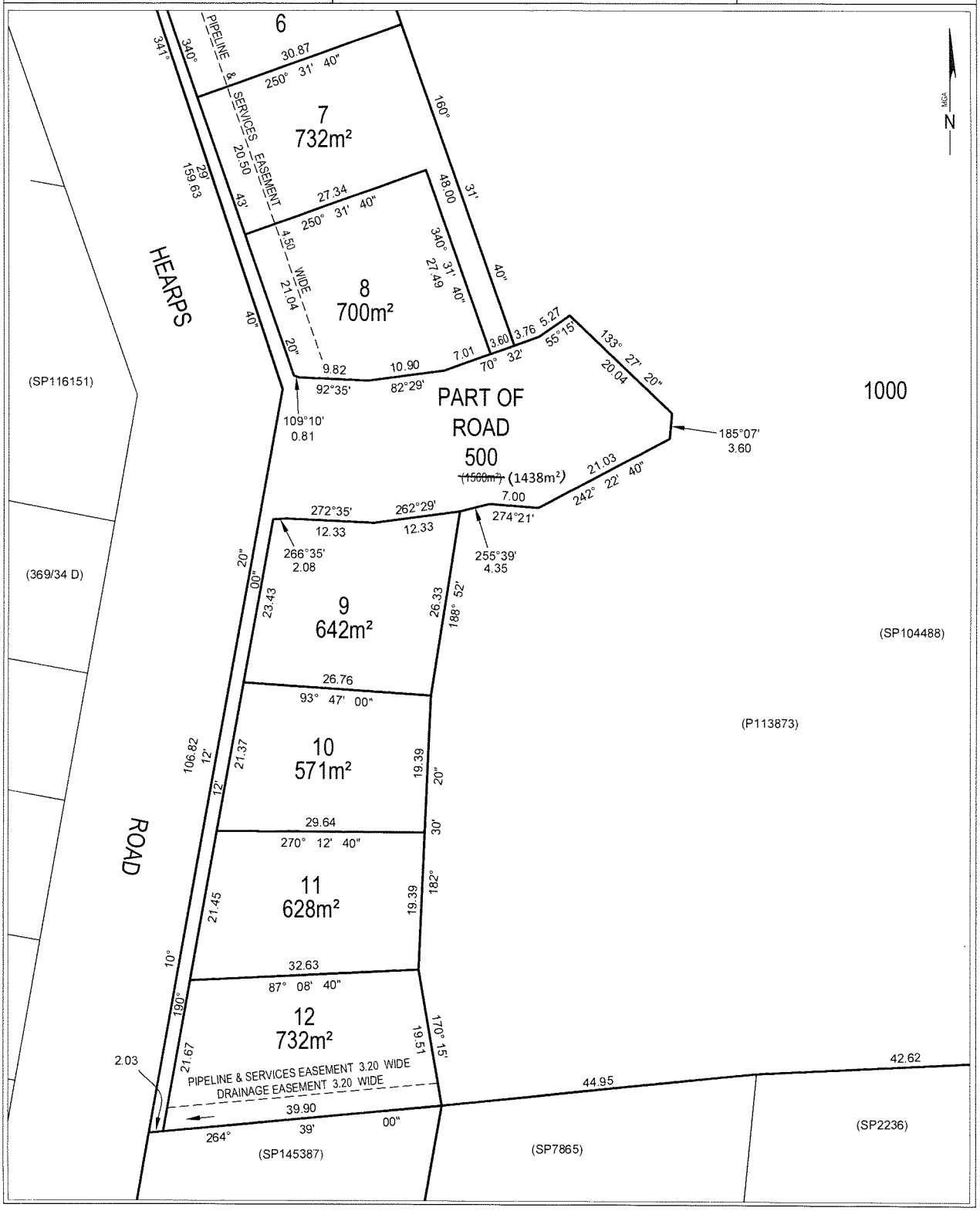
Registered Land Surveyor 18/2022 Date

Sandra Ayton 24-10-22
Council Delegate Date

PLAN OF SURVEY ANNEXURE SHEET SHEET 1 OF 2 SHEETS	OWNER: FUTURE DEVELOPMENTS GROUP PTY LTD FOLIO REFERENCE: C.T.113873 - 1 SCALE 1: 500 LENGTH IN METRES	Registered Number SP 183648
SIGNED FOR IDENTIFICATION PURPOSES Sandra Myk 2410-22. Council Delegate Date	THIS ANNEXURE SHEET FORMS PART OF THE ATTACHED INDEX PLAN. Registered Land Surveyor 18/2022 Date	APPROVED EFFECTIVE FROM 10 NOV 2022 Recorder of Titles



PLAN OF SURVEY ANNEXURE SHEET SHEET 2 OF 2 SHEETS	OWNER: FUTURE DEVELOPMENTS GROUP PTY LTD FOLIO REFERENCE: C.T.113873 - 1 SCALE 1: 500 LENGTH IN METRES	Registered Number SP 183648
SIGNED FOR IDENTIFICATION PURPOSES Council Delegate 24-10-22 Date	THIS ANNEXURE SHEET FORMS PART OF THE ATTACHED INDEX PLAN. Registered Land Surveyor 1/8/2022 Date	APPROVED EFFECTIVE FROM 10 NOV 2022 Recorder of Titles



SCHEDULE OF EASEMENTS	Registered Number
NOTE: THE SCHEDULE MUST BE SIGNED BY THE OWNERS & MORTGAGEES OF THE LAND AFFECTED. SIGNATURES MUST BE ATTESTED.	SP183648

EASEMENTS AND PROFITS

Each lot on the plan is together with:-
(1) such rights of drainage over the drainage easements shown on the plan (if any) as may be necessary to drain the stormwater and other surplus water from such lot; and
(2) any easements or profits a prendre described hereunder.
Each lot on the plan is subject to:-
(1) such rights of drainage over the drainage easements shown on the plan (if any) as passing through such lot as may be necessary to drain the stormwater and other surplus water from any other lot on the plan; and
(2) any easements or profits a prendre described hereunder.
The direction of the flow of water through the drainage easements shown on the plan is indicated by arrows.

EASEMENTS

Lot 1 is:

SUBJECT TO a Pipeline & Services Easement (as hereinafter defined) in gross in favour of TasWater over the land marked PIPELINE AND SERVICE EASEMENT 4.50 WIDE on the Plan.

Lot 2 is:

SUBJECT TO a Pipeline & Services Easement (as hereinafter defined) in gross in favour of TasWater over the land marked PIPELINE AND SERVICE EASEMENT 4.50 WIDE on the Plan.

Lot 3 is:

SUBJECT TO a Pipeline & Services Easement (as hereinafter defined) in gross in favour of TasWater over the land marked PIPELINE AND SERVICE EASEMENT 4.50 WIDE on the Plan.

Lot 4 is:

SUBJECT TO a Pipeline & Services Easement (as hereinafter defined) in gross in favour of TasWater over the land marked PIPELINE AND SERVICE EASEMENT 4.50 WIDE on the Plan.

Lot 5 is:

SUBJECT TO a Pipeline & Services Easement (as hereinafter defined) in gross in favour of TasWater over the land marked PIPELINE AND SERVICE EASEMENT 4.50 WIDE on the Plan.

Lot 6 is:

SUBJECT TO a Pipeline & Services Easement (as hereinafter defined) in gross in favour of TasWater over the land marked PIPELINE AND SERVICE EASEMENT 4.50 WIDE on the Plan.

(USE ANNEXURE PAGES FOR CONTINUATION)

SUBDIVIDER: FUTURE DEVELOPMENTS GROUP PTY LTD FOLIO REF: 45643/3 SOLICITOR & REFERENCE: MURDOCH CLARKE JJP: 2100748	PLAN SEALED BY: CENTRAL COAST COUNCIL DATE: 24-10-22 DA2021061 REF NO. DA2021061 Council Delegate

NOTE: The Council Delegate must sign the Certificate for the purposes of identification.

ANNEXURE TO SCHEDULE OF EASEMENTS PAGE 2 OF 5 PAGES	Registered Number SP 183648
SUBDIVIDER: FUTURE DEVELOPMENTS GROUP PTY LTD FOLIO REFERENCE: 113873/1	

Lot 7 is:

SUBJECT TO a Pipeline & Services Easement (as hereinafter defined) in gross in favour of TasWater over the land marked PIPELINE AND SERVICE EASEMENT 4.50 WIDE on the Plan.

Lot 8 is:

SUBJECT TO a Pipeline & Services Easement (as hereinafter defined) in gross in favour of TasWater over the land marked PIPELINE AND SERVICE EASEMENT 4.50 WIDE on the Plan.

Lot 12 is:

SUBJECT TO a Drainage Easement (as hereinafter defined) in gross in favour of Central Coast Council over the land marked DRAINAGE EASEMENT AND PIPELINE AND SERVICE EASEMENT 3.20 WIDE on the Plan.

SUBJECT TO a Pipeline & Services Easement (as hereinafter defined) in gross in favour of TasWater over the land marked DRAINAGE EASEMENT AND PIPELINE AND SERVICE EASEMENT 3.20 WIDE on the Plan.

Lot 1000 is:

TOGETHER WITH a Right of Drainage over the land marked DRAINAGE EASEMENT 1.83 WIDE on the Plan.

TOGETHER WITH a Right of Drainage over the land marked DRAINAGE EASEMENT 1.50 WIDE on the Plan.

FENCING PROVISION

In respect to each lot shown on the Plan (except lot 500 and 1000) the Vendor (Future Developments Group Pty Ltd) shall not be required to fence.

COVENANTS

The owners of each lot shown on the plan covenant with the Vendor and the Central Coast Council to the intent that the burden of these covenants may run with and bind the covenantor's lot and every part thereof and that the benefit thereof shall be annexed to and devolved with each and every part thereof and be in favour of the Central Coast Council to observe the following stipulations:–

(a) Not to erect or permit to be erected on the said lot any building which does not have a roof constructed of tiling or other substance which does not reflect light.

NOTE: Every annexed page must be signed by the parties to the dealing or where the party is a corporate body be signed by the persons who have attested the affixing of the seal of that body to the dealing.

ANNEXURE TO SCHEDULE OF EASEMENTS PAGE 3 OF 5 PAGES	Registered Number SP 183648
SUBDIVIDER: FUTURE DEVELOPMENTS GROUP PTY LTD FOLIO REFERENCE: 113873/1	

(b) Not to use unpainted galvanized iron or other reflective material or substance in the construction of any roof or any part of any dwelling or other structure on the said lot.

(c) Not to construct or place kit, re-locatable or weatherboard dwellings on the lot.

(d) Not to construct any dwellings on the lot that shall have less than seventy (70) per cent of the external walls comprising glass, masonry, brick or rendered finish.

(e) Not to commence construction of a dwelling on the lot without providing for a lockable skip bin of a capacity of at least three (3) cubic metres to remove all rubbish and discarded materials.

(f) Not to use or allow the lot to be used for public housing, public rental projects or public assistance programs or where the owner of the lot does not have the right to determine the tenants.

(g) The Vendor reserves the right for themselves or their assigns to sell lease or otherwise deal with any lot on the plan either subject to any of the above conditions and/or restrictive covenants or any one of them or not subject to such modifications thereof as they in their sole discretion deem fit. The exercise of the said right in relation to any lot shall not release the owners of any other lot from any of the conditions or covenants affecting or imposed upon such other lots will give the owners of any lot any right of action against the vendor or any other person.

All lots on the Plan are burdened by the restrictive covenants contained in Sealed Plan 104488, ~~in that, the said MAXWELL PEARS and MOLLY ELIZABETH PEARCE shall not be required to fence~~. 9/11/22
JARRYD JAMES PRICE
SOLICITOR FOR SUBDIVIDER

DEFINITIONS

"**Drainage Easement**" means a right of drainage (including the right of construction of drains) for Central Coast Council with which the right shall be capable of enjoyment for the purpose of carrying away stormwater and other surplus water form any land over or under the land herein indicated as the land over which the right is to subsist, and through all sewers and drains which may hereafter be made or passing under, through, and along the last-mentioned land and the right for Central Coast Council and its employees, agents and contractors from time to time and at all times hereafter if it or they should think fit to enter into and upon the last-mentioned land and to inspect, repair, cleanse, and amend any such sewer or drain without doing unnecessary damage to the said land.

"**Easement Land**" means the land which is subject to an easement in favour of TasWater.

"**Infrastructure**" means-

NOTE: Every annexed page must be signed by the parties to the dealing or where the party is a corporate body be signed by the persons who have attested the affixing of the seal of that body to the dealing.

ANNEXURE TO SCHEDULE OF EASEMENTS PAGE 4 OF 5 PAGES	Registered Number SP 183648
SUBDIVIDER: FUTURE DEVELOPMENTS GROUP PTY LTD FOLIO REFERENCE: 113873/1	

Infrastructure owned or for which TasWater is responsible and includes but is not limited to-

(a) sewer pipes and water pipes and associated valves;

(b) telemetry and monitoring devices;

(c) inspection and access pits;

(d) electricity assets and other conducting media (excluding telemetry and monitoring devices);

(e) markers or signs indicating the location of the Easement Land or any other infrastructure or any warnings or restrictions with respect to the Easement Land or any other Infrastructure;

(f) anything reasonably required to support, protect or cover any other Infrastructure;

(g) any other infrastructure whether of a similar nature or not to the preceding which is reasonably required for the piping of sewage or water, or the running of electricity, through the Easement Land or monitoring or managing that activity; and

(h) where the context permits, any part of the Infrastructure.

"**Owner**" means the registered proprietors of the lot in the folio of the Register from time to time.

"**Pipeline and Services Easement**" means-

FIRSTLY, THE FULL RIGHT AND LIBERTY for the TasWater and its employees, contractors, agents and all other persons duly authorised by it, at all times to:

(1) enter and remain upon the Easement Land with or without machinery, vehicles, plant and equipment;

(2) investigate, take soil, rock and other samples, survey, open and break up and excavate the Easement Land for any purpose or activity that TasWater is authorised to do or undertake;

(3) install, retain, operate, modify, relocate, maintain, inspect, cleanse and repair the Infrastructure;

(4) remove and replace the Infrastructure;

(5) run and pass sewage, water and electricity through and along the Infrastructure;

(6) do all works reasonably required in connection with such activities or as may be authorised or required by any law:

(a) without doing unnecessary damage to the Easement Land; and

(b) leaving the Easement Land in a clean and tidy condition; and

(7) if the Easement Land is not directly accessible from a highway, then for the purpose of undertaking any of the preceding activities TasWater may with or without employees, contractors, agents and all other persons authorised by it, and with or without machinery, vehicles, plant and equipment enter

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ANNEXURE TO SCHEDULE OF EASEMENTS PAGE 5 OF 5 PAGES	Registered Number SP 183648
SUBDIVIDER: FUTURE DEVELOPMENTS GROUP PTY LTD FOLIO REFERENCE: 113873/1	

the Lot from the highway at any then existing vehicle entry and cross the Lot to the Easement Land; and

(8) use the Easement Land as a right of carriageway for the purpose of undertaking any of the preceding purposes on other land, TasWater reinstating any damage that it causes in doing so to any boundary fence of the Lot.

SECONDLY, the benefit of a covenant in gross for TasWater with the registered proprietor/s of the Easement Land and their successors and assigns not to erect any building, or place any structures, objects, vegetation, or remove any thing that supports, protects or covers any Infrastructure on or in the Easement Land, without the prior written consent of TasWater to the intent that the burden of the covenant may run with and bind the servient land and every part thereof and that the benefit thereof may be annexed to the easement herein described.

"**TasWater**" means the Tasmanian Water and Sewerage Corporation Pty Ltd (ACN 162 220 653) its successors & assigns.

EXECUTED by **FUTURE DEVELOPMENTS GROUP PTY LTD** (ACN 645 164 674) by its duly authorised Attorney JARRYD JAMES PRICE pursuant to Power of Attorney registered on 30th March 2021 Registered Number PA 129039 having received no notice of the revocation thereof)

..... Jarryd James Price

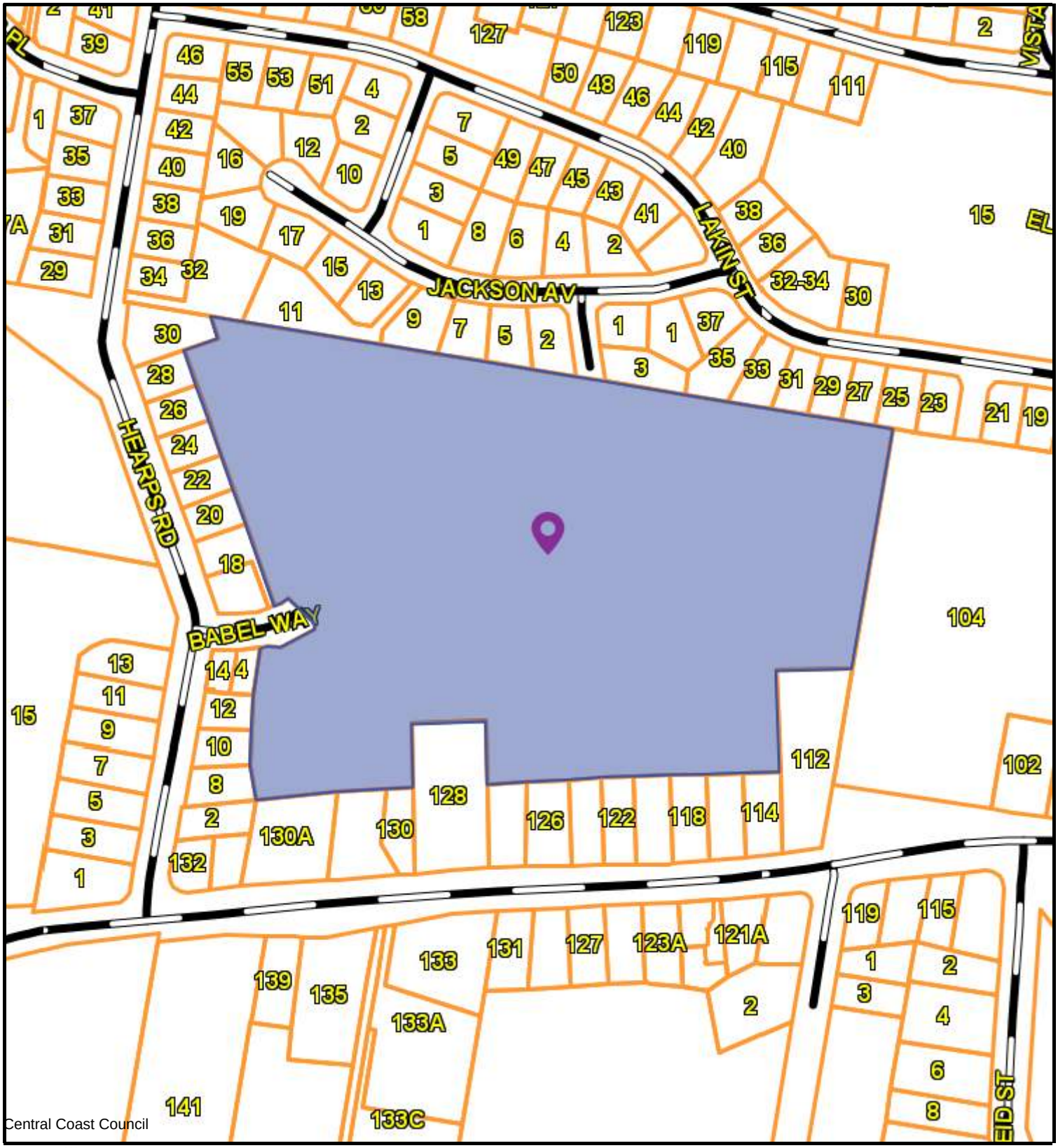
WITNESS: .....
FULL NAME: Taylah Lorraine Dillon
ADDRESS: 10 Victoria Street, Hobart 7000
Office Assistant

SIGNED for and on behalf of COMMONWEALTH BANK OF AUSTRALIA ABN 48 123 123 124 by its Attorney **JAMES ROBERT TIMPERON** under Power dated 25/7/2008, registered number PA28019 who certifies that he is **Relationship Executive** of COMMONWEALTH BANK of AUSTRALIA in the presence of:)

COMMONWEALTH BANK OF AUSTRALIA
by its attorney
.....

.....
Signature of Witness
William Scott, L3 81 Elizabeth Street, Hobart TAS 7000
Name of Witness

NOTE: Every annexed page must be signed by the parties to the dealing or where the party is a corporate body be signed by the persons who have attested the affixing of the seal of that body to the dealing.



CENTRAL COAST COUNCIL
19 King Edward St
Ulverstone
TAS 7315
Telephone: 03 6429 8900
admin@centralcoast.tas.gov.au

5-Feb-2026

**HEARPS ROAD,
WEST ULVERSTONE
(CT183648/1000)
DA2025311**

IMPORTANT
This map was produced on the GEOCENTRIC DATUM OF AUSTRALIA 1994 (GDA94), which has superseded the Australian Geographic Datum of 1984 (AGD66/84). Heights are referenced to the Australia Height Datum (AHD). For most practical purposes GDA94 coordinates, and satellite derived (GPS) coordinates based on the World Geodetic Datum 1984 (WGS84), are the same.

50 m

Scale = 1:2940.840

EQUILIBRIUM TOWN PLANNING

Development Application

Site works for residential subdivision – cut and fill

Lot 1000 Hearps Road

West Ulverstone

CT183648/1000

0409 793 803
eqtownplanning.com.au
theresia@eqtownplanning.com.au
PO Box 3144, Burnie TAS 7320
ABN31020672578

EQUILIBRIUM
TOWN
PLANNING

11 December 2025

Central Coast Council
ATTN: Town Planning Department
planning@centralcoast.tas.gov.au

To whom it may concern,

DEVELOPMENT APPLICATION – SITE WORKS FOR SUBDIVISION (CUT & FILL)

This letter has been prepared to accompany the development application for development on CT 183648/1000 for site works associated with residential subdivision of the land (cut and fill).

Figure 1 - Location of site proposed for development (boundaries approximate only) (Source: ListMap)

The proposed works include cut and fill to provide for build pads on the land titles under creation as well as roads and services.

This document provides statements against the existing planning provisions under the Tasmanian Planning Scheme & Central Coast Local Provisions Schedule.

Figure 2 - Existing access from Hearps Road

Figure 3 - Site photo, facing north and east, June 2024

Under clause 6.2.6, this development is not required to be categorised into a use class.

The proposal relies on the exercise of discretion in relation to the works and cl.15.6.1.

1. OVERVIEW

1.1. Property Owner

The site is owned by Future Developments Group Pty Ltd. A full copy of the land title is provided as Appendix A.

1.2. Proposal

The proposed development involves cut and fill and is intended to result in building pads and services on the subject titles under creation.

Under cl. 6.2.6, the works are not required to be categorised into a use class. As such, the works are discretionary as per cl.7.10.1, and the majority of assessment is provided through the Zone Purpose and the applicable Code(s).

Detailed plans have been provided as Appendix B.

1.3. Site and background information

The site is currently being developed for residential subdivision, as per DA20210601.

The area being developed is cleared in the majority, with exotic grass forming the remaining vegetation. The site clearing, access and other provisions were assessed in the application for subdivision.

The site is accessible from Hearps Road and Jackson Avenue and is surrounded by residential development.

The site is sloped, running from the highest point in the north eastern corner, down across the site to the south western corner.

2. LEGISLATIVE FRAMEWORK

2.1. TASMANIAN PLANNING SCHEME – CENTRAL COAST

The following examines the proposed development with respect to the relevant provisions of the Scheme.

2.1.1. General Residential Zone

As per cl.7.10.3 the purpose of the applicable zone is to be considered during assessment.

The development is intended for residential use / development, in accordance with cl.8.1.1, and is able to be fully serviced as per cl.8.1.2.

Non-residential use would be able to be considered on the lots under the provisions of the planning scheme at that point in time (cl.8.1.3), as would visitor accommodation (cl. 8.1.4).

The works proposed are considered to fit within the Zone Purpose.

8.0 General Residential Zone	
8.3 Use Standards	
No new use is proposed.	N/A
8.4 Development Standards for dwellings	
No dwellings are proposed.	N/A
8.5 Development standards for non-dwellings	
None of the listed developments are proposed.	N/A
8.6 Development standards for subdivision	
No subdivision is proposed in this application.	N/A
8.6.2 Roads	
No roads are proposed in this application.	N/A
8.6.3 Services	
No services are proposed in this application.	N/A

2.1.2. C15.0 Landslip Hazard Code

The development sits within the 'significant works' as defined in the C15.0 Landslip Hazard Code.

C15.6	Development Standards for Buildings and Works	
C15.6.1	**Buildings and works within a landslip Hazard Area**	
No acceptable solution.		**Relies on PC**
P1.1	The application is accompanied by a geotechnical report addressing the risk of a landslip event. That concludes that "a tolerable level of risk can be achieved for the proposed works, provided the works of the site is in accordance with the recommendations".	**Complies**
P1.2	The supporting report also states that "it is considered that the works would not adversely impact the site and immediate surrounds, including land or public infrastructure, provided that the development adheres to the principles of good hillside practice and the recommendations".	**Complies**
P1.3	The supporting report concludes that landslip reduction measures are not required outside the boundary of the site.	**Complies**

2.2. TASMANIAN PLANNING SCHEME – CENTRAL COAST LPS

None applicable.

3. CONCLUSION

The proposal is for site works (cut and fill) on the subject site.

The application is accompanied by a geotechnical report demonstrating compliance with the relevant provisions of the C15.0 Landslip Hazard code.

Please do not hesitate to make contact on 0409 793 803 or email me at theresia@eqtownplanning.com.au to discuss this matter.

Regards,

Theresia Williams

Principal Planner

Appendices

Appendix A – Land title

Appendix B – Plans

Appendix C - Geotechnical report

GEOTON Pty Ltd
Geotechnical Consultants

Geoton Pty Ltd ABN 81 129 764 629
PO Box 522 Prospect TAS 7250
Unit 24, 16-18 Goodman Court
Invermay TAS 7248
Tel (+61) (3) 6326 5001
www.geoton.com.au

24 May 2024

Reference No. GL24219Ab Rev.1

Future Developments Group Pty Ltd
PO Box 2150
Howrah TAS 7018

Attention: Mr Paul LeRossignol

Dear Sir

RE: Landslide Risk Assessment & Residential Site Classification
4 Hearps Road Subdivision, Ulverstone

We have pleasure in submitting herein our report detailing the results of the geotechnical investigation conducted at the above site.

Should you require clarification of any aspect of this report, please contact Sean Shahandeh on 03 6326 5001.

For and on behalf of Geoton Pty Ltd

Tony Barriera

Director – Principal Geotechnical Engineer

Rev No.	Date	Written By	Reviewed By	Description
Ab	21/05/2024	S Shahandeh	T Barriera	Original

1 INTRODUCTION

A limited scope investigation has been conducted for Future Developments Group Pty Ltd at the site of a subdivision development at 4 Hearps Road Subdivision, Ulverstone.

A review of the Land Information System Tasmania (LIST) website shows the site is partially located within a low landslide hazard band with the proposed development having earthworks greater than 1m in depth, and therefore is not exempt under Section C15.4.1 (e).

Therefore, a landslide risk assessment is required to satisfy the Landslide Hazard Code of the Tasmanian Planning Scheme – Central Coast, Section C15.6.1 - Building and works within a landslip hazard area.

As such, the investigation has been conducted to provide the following:

- Carry out a landslide risk assessment;
- Provide recommendations and good hillside practices to maintain or possibly lower the landslide risks; and
- Earthwork recommendations (i.e. recommended cut batter slopes for lots 20 to 29).

Plans of the subdivision were provided, prepared by CSE Tasmania Pty Ltd, drawing Nos. 4806-43_G101 Rev2 to G108 Rev.2 and C101 Rev2 to C159 Rev.2, dated 23/07/2022.

We understand that in addition to the earthworks proposed within the subdivision plans, the client is proposing cut excavations along the northern boundary of the site. The proposed maximum height of the cut batter is approximately 3.0m at the rear of Lots 20 to 29. The client plans to maintain a 1V:4H slope on the northern side, with a 1.0m clearance from the fence before excavation starts. In areas where the cut height is reduced to less than around 1.5m, the slope may be increased to 1V:3H.

2 BACKGROUND

2.1 Geology

The Mineral Resources Tasmania (MRT) Digital Geological Atlas, 1:25,000 Series, indicates that the proposed cut excavations along the rear of Lots 20 to 29 is underlain by Cretaceous-Neogene period predominantly deeply-weathered basalt.

2.2 Landslide Susceptibility

A review of the Land Information System Tasmania (LIST) website shows the proposed cut excavations within Lot 24 and Lot 25 is partially within a mapped low landslide hazard band. The remainder of the lots along the northern boundary (up to Lot 29) are not within a mapped landslide hazard band (refer to Figures 1 and 6).

2.2.1 Landslide Inventory

Examination of the Mineral Resources Tasmania (MRT) Tasmanian Landslide Map Series, Ulverstone – Landslide Inventory Map, 1:25,000 scale, indicates that there are no landslides mapped within the site or immediate surrounds, with the closest feature being a landslide with unknown activity (Landslide MRT ID. 2811) is mapped approximately 220m to the north of the site.

An extract of the Landslide Inventory Sheet is provided as Figure 2.

2.2.2 Geomorphology

Examination of the MRT Tasmanian Landslide Hazard series, Ulverstone – Geomorphology sheet, 1:25,000 scale, indicates that the proposed development area within the northwest of the site predominately has slope angles of between 7° to 13°.

An extract of the geomorphology sheet is provided as Figure 3.

2.2.3 Slide Susceptibility

Examination of the MRT Tasmanian Landslide Hazard series, Ulverstone – Deep-Seated Landslide Susceptibility Map, 1:25,000 scale, indicates that the site is not mapped within any susceptibility zones for first-time failure.

Examination of the MRT Tasmanian Landslide Map Series, Ulverstone – Shallow Slide and Flow Susceptibility Map, indicates that the northwest of the site where the proposed cut excavations are proposed is located within a low susceptibility source area for shallow landslides.

An extract of the shallow slide and flow susceptibility sheet is provided as Figure 4.

3 FIELD INVESTIGATION

The field investigation was conducted on 07 May 2024 and involved the drilling of three boreholes by 4WD mounted auger rig to depths of 3.4m of 4.8m.

Insitu vane shear strength tests and pocket penetrometer tests were conducted in the clay layers encountered in the investigation, with samples being obtained for subsequent laboratory testing.

The results of the field and laboratory tests are shown on the borehole logs.

The borehole logs are provided in Appendix A with the locations shown on Figure 5 attached.

4 SITE CONDITIONS

4.1 Site Description

The site is located on a southwesterly dipping hillslope and is currently undeveloped, with the ground surface having gentle to moderate slopes towards the southwest and a low cover of grass.

At the time of the investigation, the ground surface of the site was being modified by earthworks along the northwestern boundary. This involved creating an approximately 3m high cut batter with a slope angle of approximately 1V:3H (18.5°), which was located outside of the mapped low landslide hazard band (refer to Figure 5 and Plate 1).

Plate 1: View of the proposed excavation area looking to the west

The slopes within the site and surrounds show no sign of recent landslide activity, with no springs or seepages identified on the site.

4.2 Subsurface Conditions

The investigation indicated that the subsurface conditions varied slightly across the site. Borehole BH1 encountered clayey silt topsoil to a depth of 0.2m, overlying clayey silt to a depth of 3.0m, overlying silty clay to a depth of 3.8m, underlain by extremely weathered material (having rock fabric with soil properties) to the refusal depth of 4.0m.

Borehole BH2 encountered clayey silt topsoil to a depth of 0.2m, overlying clayey silt to a depth of 4.6m, underlain by extremely weathered material to the refusal depth of 4.8m. Borehole BH3 encountered clayey silt topsoil to a depth of 0.2m, underlain by clayey silt to the investigated depth of 3.4m.

Auger refusal within Boreholes BH1 and BH2 was inferred to be on highly weathered bedrock.

The boreholes did not encounter any sign of groundwater seepage over the investigated depths.

Full details of soil conditions encountered are presented on the borehole logs.

4.3 Laboratory Testing

The laboratory test results are summarised in Table 1 below:

Table 1: Summary of Laboratory Test Results

Sample Identifications	BH1 3.0m to 3.2m
Liquid Limit (%)	69
Plastic Limit (%)	43
Plasticity Index (%)	26
Linear Shrinkage (%)	15.5
Classification	MH
Soil Category	Clayey SILT

Laboratory Atterberg Limits and Linear Shrinkage tests conducted on the clayey silt samples taken from the site indicate that the clay soils at this site possess a high shrink/swell potential.

Published correlations between the Plasticity Index and angle of internal friction indicated that the laboratory-tested soils would have peak strength angle of internal friction values of about 26° to 28°.

5 GEOLOGICAL MODEL

From a review of available reports, geological maps and information collected during the site investigation, a general geological model of the site has been inferred. Generally, the site comprises Cretaceous - Neogene period predominantly deeply-weathered basalt, that is underlain by Cambrian period sedimentary rocks at depth.

6 PRE-DEVELOPMENT SLOPE STABILITY

The qualitative likelihood, consequence and risk terms used in this report for risk to property are given in Appendix B. The risk terms are defined by a matrix that brings together different combinations of likelihood and consequence. Risk matrices help to communicate the results of risk assessment, rank risks, set priorities and develop transparent approaches to decision making. The notes attached to the tables and terms and the comments on response to risk in Appendix B are intended to help explain the risk assessment and management process.

In light of the findings of this investigation (depth to bedrock, topographical features, geology, and slope angles), the likelihood of small to medium scale failures occurring on the steeper slopes within northern portions of the site affecting the infrastructure or future buildings is considered RARE, whilst a larger scale failure occurring is considered BARELY CREDIBLE.

The potential consequences of landslides occurring on the steeper slopes within the northern portion of the site for a small to medium scale failure are assessed to be MEDIUM, and MAJOR for a large scale event.

Therefore, the corresponding qualitative risk for both these events occurring is assessed as VERY LOW.

In our experience, regulating authorities allow developments to proceed with LOW to VERY LOW risk.

7 POST DEVELOPMENT SLOPE STABILITY ANALYSES

In order to maintain the very low landslide risk, slope stability analysis of the proposed earthworks was carried out to determine if the proposed cut slope angles provide an adequate Factor of Safety against failure.

7.1 Development of Geotechnical Models

The three major elements of a geotechnical model for slope stability analyses are:

1. Ground surface topography and cross-sections through the surface;
2. Shear strengths of subsurface layers (Strength Profile); and
3. The phreatic groundwater surface.

The three major elements have been modelled utilising the following steps:

- Cross-Section A-B (Refer Figure 5) was derived from the 2013 LiDAR survey;
- Geological model based on the site investigation and laboratory results;
- No groundwater was encountered in the investigation therefore, the phreatic surface was not considered within the model; and
- The strength parameters of the soil profile (soil cohesion and internal friction angle) for stability analyses, were estimated from empirical correlations sourced from Figure D1 of AS 4678 – 2002 Earth-retaining Structures based on the laboratory results (Section 4.3).

Table 2 below summarises the soil strength parameters adopted in the slope stability analyses.

Table 2 - Geotechnical Parameters Adopted in Analyses

Material	Unit Weight (kN/m^3)	Effective Strength Parameters	
		Cohesion, c' (kPa)	Friction Angle Ø' (°)
High Plasticity Clayey SILT (Basalt Derived Residual Soils)	18.0	2	26°

7.2 Factor of Safety

Slope stability analysis provides a numerical value for the Factor of Safety (FoS) against failure of a nominated surface. In simple terms, the FoS is a ratio of activating

(sliding) forces against resisting forces along the failure surface. Activating forces are generally the weight of soil on the upper portion of a slope and load conditions while resisting forces derive from the shear strength of the materials intersected by the failure surface. A FoS of 1.0 represents a condition of incipient failure or limiting equilibrium. A FoS of greater than 1.0 indicates that the slope should not fail, while a FoS of equal or less than 1.0 indicates that failure could occur.

The acceptable *design* value for the FoS of any failure surface is not a fixed number and depends on the type of theoretical analysis and the perceived acceptable risk. For example, a FoS of around 1.1 is often acceptable in an analysis that includes earthquake loading, while an analysis based upon assumed values, not backed up by material testing, may require a FoS of 1.5 or greater for long-term stability. The FoS also depends on the characteristics of the landslide, including volume and size.

Therefore, considering the proposed excavations are permanent with heights of 3.0, the corresponding minimum acceptable factor of safety (FOS) adopted as acceptance criteria are as follows:

Table 3: Analysed Scenarios and Acceptance Criteria

Analysed Scenario	Minimum Acceptable FoS
Permanent 3.0m cuts	1.5

7.3 Analysed Scenarios and Results

Slope stability analysis was carried out using the two-dimensional, limit equilibrium-based computer program SLOPE/W, utilising Morgenstern-Price method and circular slip surface grid search method based on introduced entry and exit failure surfaces.

The graphical output of the stability analyses is provided in Figure A below, with the resulting FoS being 1.83:

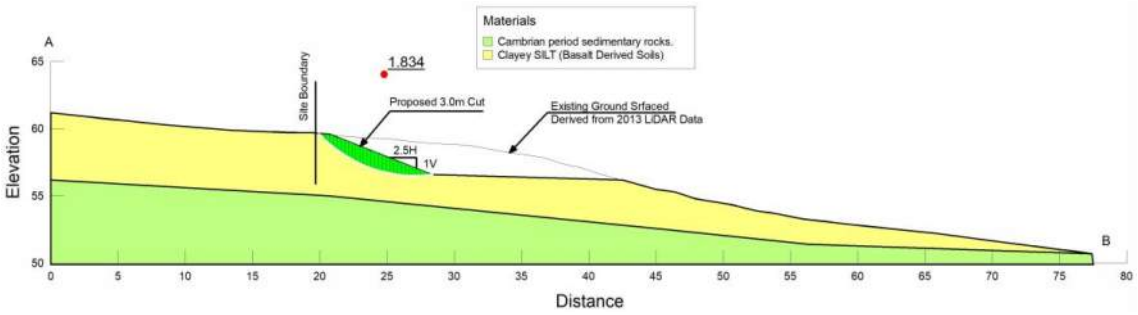


Figure A: Slope stability analysis of the proposed cut batter

The FoS value above indicates that the slope stability analyses have returned acceptable FoS for the analysed slopes' long-term criteria conditions. Therefore, the corresponding risk for the failure occurring is assessed as VERY LOW.

It is noted that shallow/small-scale slides were found to be the cause of failure.

8 DISCUSSION AND RECOMMENDATIONS

8.1 General

The outcomes of the assessments for landslide risk to property (above) only apply if the recommendations provided herein are adhered to.

Therefore, provided the development of the site is in accordance with the recommendations within our report, we consider that a tolerable level of risk can be achieved in accordance with Section C15.6.1 (Building and works within a landslip hazard area) of the Landslide Hazard Code of the Tasmanian Planning Scheme – Central Coast Council with the following Performance Criteria:

- **C15.6.1 - P1.1** - Building and works within a landslip hazard area must minimise the likelihood of triggering a landslip event and achieve and maintain a tolerable risk from landslip: **a tolerable level of risk can be achieved for the proposed works, provided the works of the site is in accordance with the recommendations outlined below;**
- **C15.6.1 - P1.2** - A landslip hazard report also demonstrates that the buildings and works do not cause or contribute to landslip on the site, on adjacent land or public infrastructure: **It is considered that the works would not adversely impact the site and immediate surrounds, including land or public infrastructure, provided that the development adheres to the principles of good hillside practice and the recommendations provided below; and**
- **C15.6.1 - P1.3** - If landslip reduction or protection measures are required beyond the boundary of the site the consent in writing of the owner of that land must be provided for that land to be managed in accordance with the specific hazard reduction or protection measures: **will not be required.**

An Engineering Certificate addressing the Landslide Code is provided in Appendix C.

8.2 Cuts

- **The proposed cuts where <u>less than 3.0m</u> in height may be battered at slope angles <u>no steeper than 1 vertical to 2.5 horizontal (1V:2.5H – 21.8°)</u>; and**
- **Recommend vegetation be grown and maintained on the cut batter slopes to minimise erosion.**

9 REFERENCES:

Australian Geomechanics Society (2007) – Practice note guidelines for landslide risk management 2007, Australian Geomechanics Journal, Vol 42, No. 1.

Tasmanian Geological Survey Record 2007/04 – Lawrence Vale Landslide Investigations: implications for landslide hazard assessment in Launceston.

AS 1726 - 2017 Geotechnical Site Investigation

AS 2870 - 2011 Residential Slabs and Footings

AS 4055 - 2021 Wind Loads for Housing

AS 4678 - 2002 Earth-retaining Structure

Land Information System Tasmania (LIST).
https://maps.thelist.tas.gov.au/listmap/app/list/map

Mineral Resources Tasmania (2013) – Tasmanian Information on Geoscience and Exploration Resources (TIGER) System.
http://www.mrt.tas.gov.au/portal/database-searches

ELVIS - Elevation and Depth - Foundation Spatial Data http://elevation.fsdf.org.au/

Attachments:

Limitations of report

Figures

Figure 1: Locality Plan

Figure 2: Landslide Inventory

Figure 3: Geomorphology

Figure 4: Shallow Slide Susceptibility

Figure 5: Site Plan

Appendices

Appendix A – Borehole Log & Explanation Sheets

Appendix B – Qualitative Terminology for Use in Assessing Risk to Property

Appendix C – Certificate Forms

GEOTON Pty Ltd

Geotechnical Consultants - Limitations of report

These notes have been prepared to assist in the interpretation and understanding of the limitations of this report.

Project specific criteria

The report has been developed on the basis of unique project specific requirements as understood by Geoton and applies only to the site investigated. Project criteria are typically identified in the Client brief and the associated proposal prepared by Geoton and may include risk factors arising from limitations on scope imposed by the Client. The report should not be used without further consultation if significant changes to the project occur. No responsibility for problems that might occur due to changed factors will be accepted without consultation.

Subsurface variations with time

Because a report is based on conditions which existed at the time of subsurface exploration, decisions should not be based on a report whose adequacy may have been affected by time. For example, water levels can vary with time, fill may be placed on a site and pollutants may migrate with time. In the event of significant delays in the commencement of a project, further advice should be sought.

Interpretation of factual data

Site assessment identifies actual subsurface conditions only at those points where samples are taken and at the time they are taken. All available data is interpreted by professionals to provide an opinion about overall site conditions, their likely impact on the proposed development and recommended actions. Actual conditions may differ from those inferred to exist, as it is virtually impossible to provide a definitive subsurface profile which includes all the possible variabilities inherent in soil and rock masses.

Report Recommendations

The report is based on the assumption that the site conditions as revealed through selective point sampling are indicative of actual conditions throughout an area. This assumption cannot be substantiated until earthworks and/or foundation construction is almost complete and therefore the report recommendations can only be regarded as preliminary. Where variations in conditions are encountered, further advice should be sought.

Specific purposes

This report should not be applied to any project other than that originally specified at the time the report was issued.

Interpretation by others

Geoton will not be responsible for interpretations of site data or the report findings by others involved in the design and construction process. Where any confusion exists, clarification should be sought from Geoton.

Report integrity

The report as a whole presents the findings of the site assessment and the report should not be copied in part or altered in any way.

Geoenvironmental issues

This report does not cover issues of site contamination unless specifically required to do so by the client. In the absence of such a request, Geoton take no responsibility for such issues.

Legend

BH 1 — Approximate Borehole Location

5m Contours (LIST)

Cadastral Parcels

Low Landslide Hazard Band (LIST)

Approximate Scale

20 0 20 40 60 m

GEOTON Pty Ltd

Date	21/05/2024	Drawn	SS
Scale	As Shown	Approved	TB
Original size	A3	Rev	

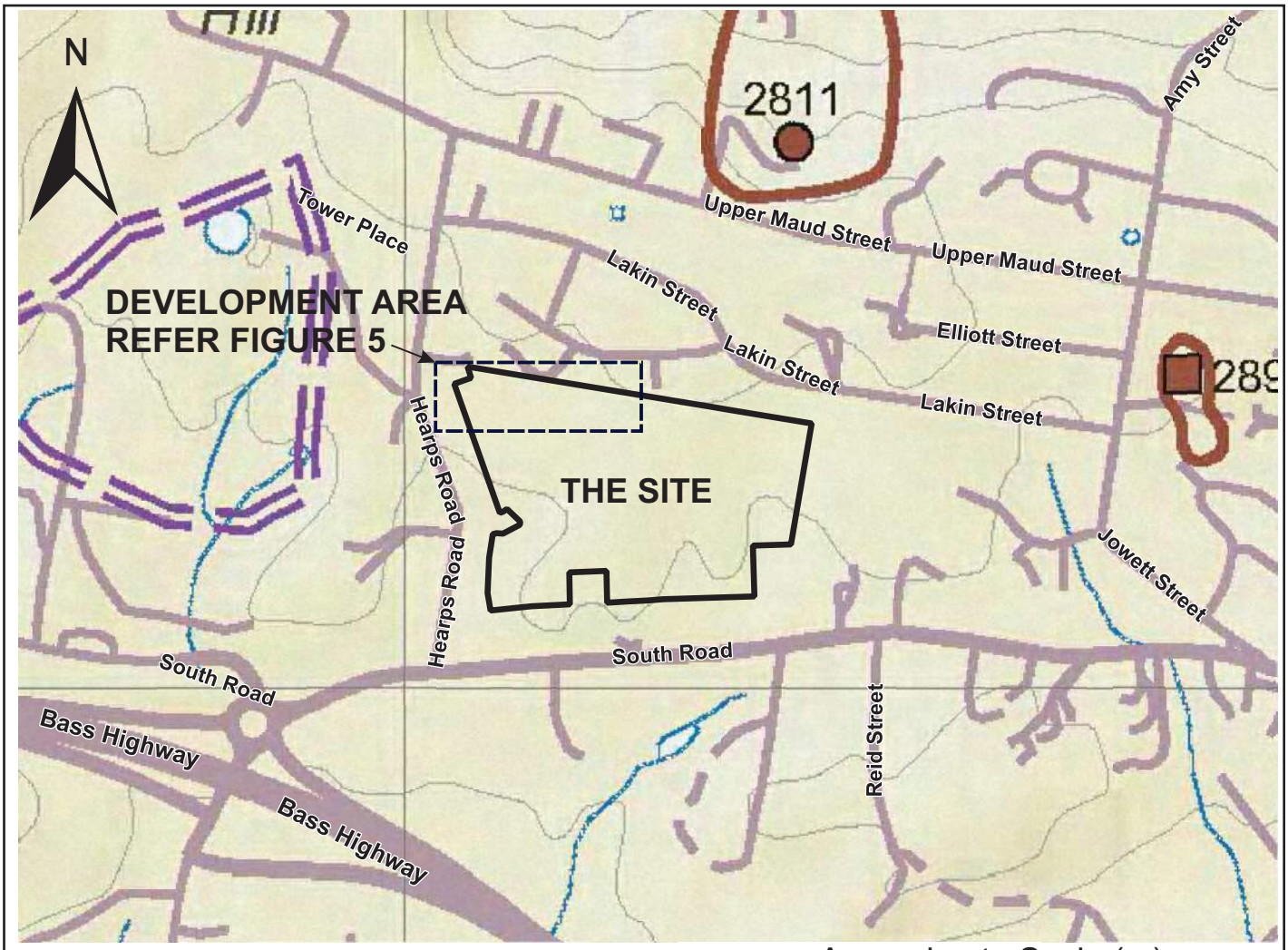
Client: FUTURE DEVELOPMENTS GROUP PTY LTD

Project: 4 HEARPS ROAD SUBDIVISION ULVERSTONE

Title: LOCALITY PLAN

Project no: GL24219A

Figure no. 1



MAP EXTRACT FROM - MRT TASMANIAN LANDSLIDE MAP SERIES : ULVERSTONE-LANDSLIDE INVENTORY

Approximate Scale (m)

100 0 100 200 300 m

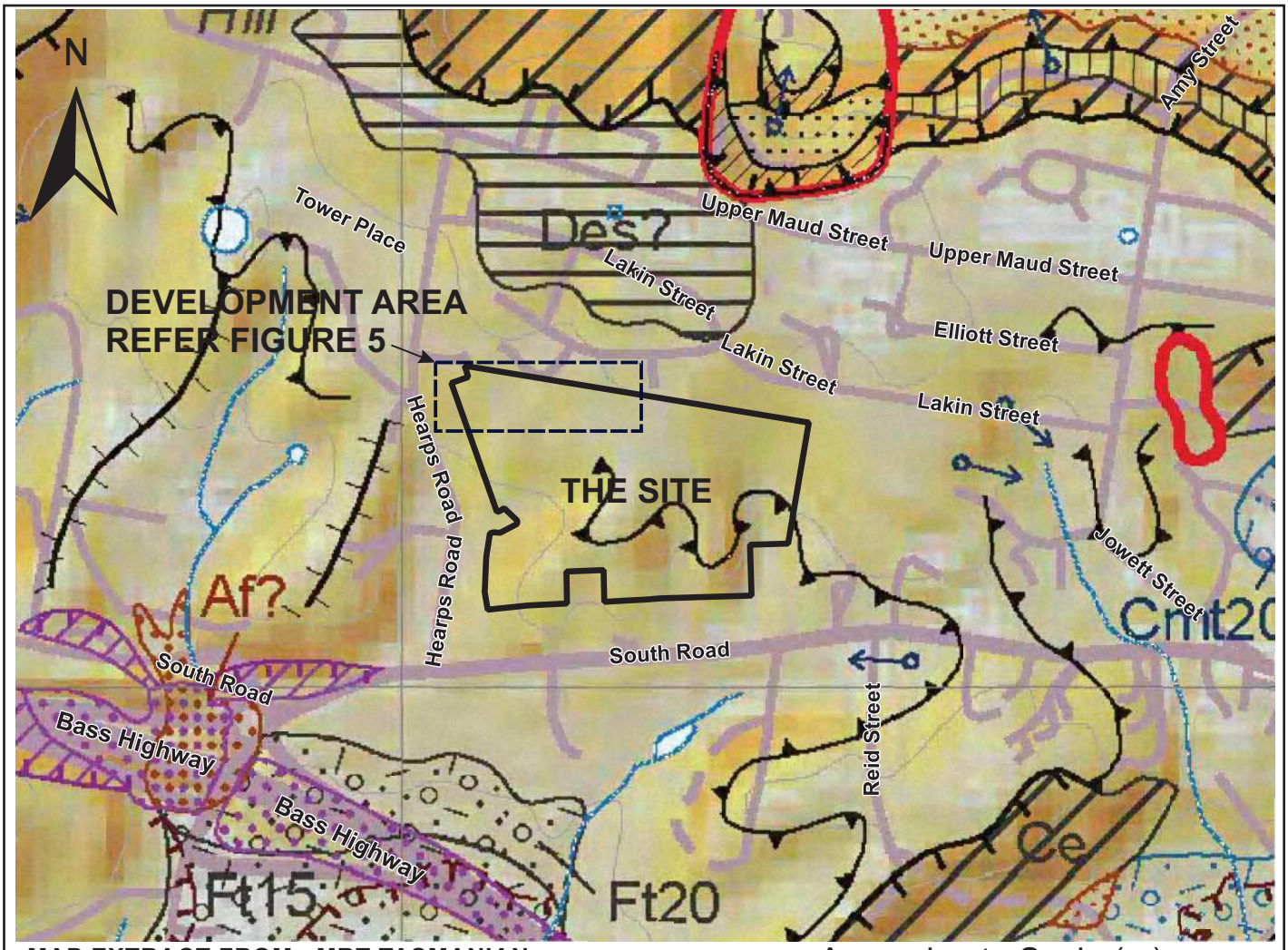
Landslide Features

- Landslide, recent or active
- Landslide, activity unknown
- Possible landslide

- Recent or active earth or debris flow.
- Recent or active rock or soil slide.
- Recent or active rock fall.
- Recent or active unclassified.
- Possible landslide, activity not specified.

- Earth or debris flow, activity unknown.
- Rock or soil slide, activity unknown
- Rock fall, activity unknown.
- Unclassified type, activity unknown.
- Block or complex spread, activity unknown.

GEOTON Pty Ltd		client:	FUTURE DEVELOPMENTS GROUP PTY LTD
		project:	4 HEARPS ROAD SUBDIVISION ULVERSTONE
date	21/05/2024	drawn	SS
scale	As Shown	approved	TB
		title:	LANDSLIDE INVENTORY SHEET
original size	A4	rev	
		project no:	GL24219A
		figure no.	2

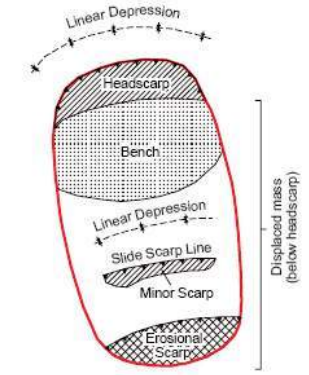


MAP EXTRACT FROM - MRT TASMANIAN LANDSLIDE MAP SERIES: ULVERSTONE - GEOMORPHOLOGY

Approximate Scale (m)

100 0 100 200 300 m

Landslide Components



Affected area of landslide

Affected area of Possible Landslide

Landslide shown as a point where too small for map's scale (eg. small earth and debris flows)

Slope Categories

0-2 degrees

2-7 degrees

7-13 degrees

13-35 degrees

35-42 degrees

>42 degrees

Hill Country Units

Ce — Abandoned coastal cliff

Des — Elevated semiplanar landscape surface of uncertain origin

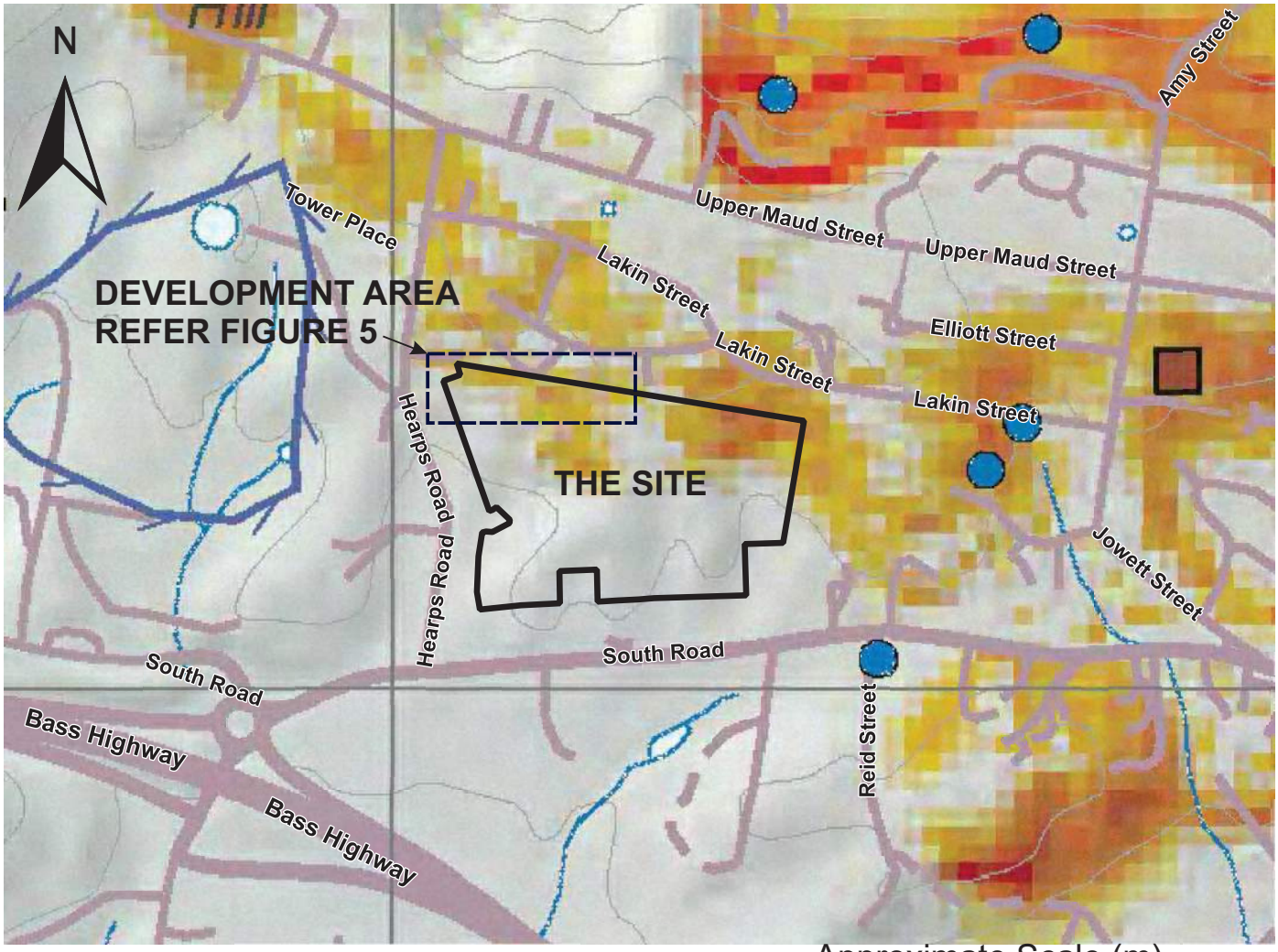
Linear Geomorphic Features

Major convex break in slope

Minor or rounded convex break in slope

Spring or seep (may be concealed under dam or fill)

GEOTON Pty Ltd		client:	FUTURE DEVELOPMENTS GROUP PTY LTD
		project:	4 HEARPS ROAD SUBDIVISION ULVERSTONE
date	21/05/2024	drawn	SS
scale	As Shown	approved	TB
		title:	GEOMORPHOLOGY
original size	A4	rev	
		project no:	GL24219A
		figure no.	3



MAP EXTRACT FROM - MRT TASMANIAN LANDSLIDE MAP SERIES : ULVERSTONE - DEVONPORT SLIDE AND FLOW SUSCEPTIBILITY

Approximate Scale (m)

100 0 100 200 300 m

Susceptibility Zones

- High susceptibility source area
- Moderate susceptibility source area
- Low susceptibility source area
- Flow runout area

Source area: An area of hillside with the potential to form a slope failure, identified largely on the basis of slope angle and geology

Runout area: An area down-slope of a source area where the moving earth, debris or rock can potentially travel

Shallow Slide or Flow Features

- Shallow slide or flow affected area
- Shallow slide, recent or active
- Shallow slide, activity unknown
- Earth or debris flow, recent or active
- Earth or debris flow, activity unknown
- Unclassified shallow slides or flows
- Spring or seep - which have a known association with landslides in many cases

GEOTON Pty Ltd		client:	FUTURE DEVELOPMENTS GROUP PTY LTD
		project:	4 HEARPS ROAD SUBDIVISION ULVERSTONE
date	21/05/2024	drawn	SS
scale	As Shown	approved	TB
		title:	SHALLOW SLIDE AND FLOW SUSCEPTIBILITY
original size	A4	rev	
		project no:	GL24219A
		figure no.	4

Legend

- BH 1 — Approximate Borehole Location
- Contour in Metres (LiDAR Derived)
- Cadastral Parcels
- Low Landslide Hazard Band (LIST)
- Cuts Being Carried Out On-Site (07/05/2024)
- Proposed Cut Batters

Approximate Scale

10 0 10 20 30 m

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Date	21/05/2024	Drawn	SS
Scale	As Shown	Approved	TB
Original size	A3	Rev	

Client: FUTURE DEVELOPMENTS GROUP PTY LTD

Project: 4 HEARPS ROAD SUBDIVISION ULVERSTONE

Title: SITE PLAN

Project no: GL24219A

Figure no. 5

Appendix A

Borehole Logs

ENGINEERING BOREHOLE LOG

GEOTON Pty Ltd
Geotechnical Consultants
PO Box 522 Prospect TAS 7250
Unit 24, 16-18 Goodman Court, Invermay TAS
T (03) 6326 5001

Borehole no. BH 1
Sheet no. 1 of 1
Job no. GL24219A

Client : Future Developments Group Pty Ltd
Project : Geotechnical Investigation
Location : 4 Hearps Road Subdivision, Ulverstone

Date : 07/05/2024
Logged By : SS

Drill model : DrillTech
Hole diameter : 150mm
Easting:
Northing:
Slope: 90°
Bearing: -
RL Surface :
Datum :

Method	Support	Penetration	Water	Notes Samples Tests	Depth (m)	Graphic log	Classification Symbol	Material Description	Moisture condition	Consistency density, index	Structure, additional observations
ADV	N							TOPSOIL - Clayey SILT, dark brown, root fibres	M	F	
					0.50		ML	Clayey SILT - low plasticity, orange/ brown, with fine to medium grained sand	M	VSt	W < PL V = Refusal
					1.00						V = Refusal
					1.50		MH	Clayey SILT - high plasticity, brown/ orange, trace fine to medium grained sand	M	VSt	
					2.00						V = Refusal
					2.50						
					3.00						
					3.50		CH	Silty CLAY - high plasticity, pale grey mottled pale brown, trace fine to medium grained sand trace cobbles	M	St	W > PL PP = 120 - 130kPa PP = 300 - 380kPa
					4.00		XW	Extremely weathered material, sandy clay properties, low plasticity, pale brown	M/D	VSt /Fr	
					4.50			Borehole BH1 auger refusal @ 4.0m on inferred highly weathered rock			
					5.00						

ENGINEERING BOREHOLE LOG

GEOTON Pty Ltd
Geotechnical Consultants
PO Box 522 Prospect TAS 7250
Unit 24, 16-18 Goodman Court, Invermay TAS
T (03) 6326 5001

Borehole no. BH 2
Sheet no. 1 of 1
Job no. GL24219A

Client : Future Developments Group Pty Ltd
Project : Geotechnical Investigation
Location : 4 Hearps Road Subdivision, Ulverstone

Date : 07/05/2024
Logged By : SS

Drill model : DrillTech
Hole diameter : 150mm
Easting:
Northing:
Slope: 90°
Bearing: -
RL Surface :
Datum :

Method	Support	Penetration	Water	Notes Samples Tests	Depth (m)	Graphic log	Classification Symbol	Material Description	Moisture condition	Consistency density, index	Structure, additional observations
ADV	N							TOPSOIL - Clayey SILT, dark brown, root fibres	M	F	
					0.50		MH	Clayey SILT - medium to high plasticity, brown, with fine to medium grained sand	M	VSt	W < PL V = Refusal
					1.00		ML	Clayey SILT - low plasticity, brown/ orange, with fine to medium grained sand	M	VSt	
					1.50						
					2.00						
					2.50		MH	Clayey SILT - high plasticity, brown trace fine to medium grained sand	M	St	
					3.00						
					3.50						
					4.00						
					4.50			trace cobbles			
							XW	Extremely weathered material, clayey silt properties, low plasticity, pale brown, with fine to medium grained sand	M/D	Fr	
					5.00			Borehole BH2 auger refusal @ 4.8m on inferred highly weathered rock			

ENGINEERING BOREHOLE LOG

GEOTON Pty Ltd
Geotechnical Consultants
PO Box 522 Prospect TAS 7250
Unit 24, 16-18 Goodman Court, Invermay TAS
T (03) 6326 5001

Borehole no. BH 3
Sheet no. 1 of 1
Job no. GL24219A

Client : Future Developments Group Pty Ltd
Project : Geotechnical Investigation
Location : 4 Hearps Road Subdivision, Ulverstone

Date : 07/05/2024
Logged By : SS

Drill model : DrillTech
Hole diameter : 150mm

Easting:
Northing:

Slope: 90°
Bearing: -

RL Surface :
Datum :

Method	Support	Penetration	Water	Notes Samples Tests	Depth (m)	Graphic log	Classification Symbol	Material Description	Moisture condition	Consistency density, index	Structure, additional observations
ADV	N							TOPSOIL - Sandy SILT, brown, root fibres	M	F	
					0.50		ML	Clayey SILT - low plasticity, brown mottled pale grey, with fine to medium grained sand	M	VSt	V = Refusal
					1.00						V = Refusal
					1.50		MH	Clayey SILT - high plasticity, brown, trace fine to medium grained sand	M	VSt	
					2.00						V = Refusal
					2.50			Becoming brown mottled dark grey with fine to medium grained sand	M	St	W > PL
					3.00						
					3.50			Borehole BH3 terminated @ 3.4m			
					4.00						
					4.50						
					5.00						

GEOTON Pty Ltd

Investigation Log Explanation Sheet

METHOD – BOREHOLE

TERM	Description
AS	Auger Screwing*
AD	Auger Drilling*
RR	Roller / Tricone
W	Washbore
CT	Cable Tool
HA	Hand Auger
DT	Diatube
B	Blank Bit
V	V Bit
T	TC Bit

* Bit shown by suffix e.g. ADT

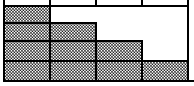
METHOD – EXCAVATION

TERM	Description
N	Natural exposure
X	Existing excavation
H	Backhoe bucket
B	Bulldozer blade
R	Ripper
E	Excavator

SUPPORT

TERM	Description
M	Mud
N	Nil
C	Casing
S	Shoring

PENETRATION

1	2	3	4	
				No resistance ranging to Refusal

WATER

Symbol	Description
	Water inflow
	Water outflow
	17/3/08 water on date shown

NOTES, SAMPLES, TESTS

TERM	Description
U_{50}	Undisturbed sample 50 mm diameter
U_{63}	Undisturbed sample 63 mm diameter
D	Disturbed sample
N	Standard Penetration Test (SPT)
N*	SPT – sample recovered
N_C	SPT with solid cone
V	Vane Shear
PP	Pocket Penetrometer
P	Pressumeter
B_S	Bulk sample
E	Environmental Sample
R	Refusal
DCP	Dynamic Cone Penetrometer (blows/100mm)
PL	Plastic Limit
LL	Liquid Limit
LS	Linear Shrinkage

CLASSIFICATION SYMBOLS AND SOIL DESCRIPTION

Based on AS 1726:2017

MOISTURE

TERM	Description
D	Dry
M	Moist
W	Wet

CONSISTENCY/DENSITY INDEX

TERM	Description
VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fr	friable
VL	very loose
L	loose
MD	medium dense
D	dense
VD	Very dense

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Soil Description Explanation Sheet (1of 2)

DEFINITION

In engineering terms, soil includes every type of uncemented or partially cemented inorganic or organic material found in the ground. In practice, if the material can be remoulded or disintegrated by hand in its field condition or in water it is described as a soil. Other materials are described using rock description terms.

CLASSIFICATION SYMBOL AND SOIL NAME

Soils are described in accordance with the AS 1726: 2017 as shown in the table on Sheet 2.

PARTICLE SIZE DEFINITIONS

NAME	SUBDIVISION	SIZE (mm)
BOULDERS		>200
COBBLES		63 to 200
GRAVEL	Coarse	19 to 63
	Medium	6.7 to 19
	Fine	2.36 to 6.7
SAND	Coarse	0.6 to 2.36
	Medium	0.21 to 0.6
	Fine	0.075 to 0.21
SILT		0.002 to 0.075
CLAY		<0.002

MOISTURE CONDITION

Coarse Grained Soils

Dry Non-cohesive and free running.

Moist Soil feels cool, darkened in colour. Soil tends to stick together.

Wet As for moist but with free water forming when handling.

Fine Grained Soils

Moist, dry of Plastic Limited – w < PL
Hard and friable or powdery.

Moist, near Plastic Limit – w ≈ PL
Soils can be moulded at a moisture content approximately equal to the plastic limit.

Moist, wet of Plastic Limit – w > PL
Soils usually weakened and free water forms on hands when handling.

Wet, near Liquid Limit - w ≈ LL

Wet, wet of Liquid Limit - w > LL

CONSISTENCY TERMS FOR COHESIVE SOILS

TERM	UNDRAINED STRENGTH s_u (kPa)	FIELD GUIDE
Very Soft	≤12	Exudes between the fingers when squeezed in hand
Soft	12 to 25	Can be moulded by light finger pressure
Firm	25 to 50	Can be moulded by strong finger pressure
Stiff	50 to 100	Cannot be moulded by fingers
Very Stiff	100 to 200	Can be indented by thumb nail
Hard	>200	Can be indented with difficulty by thumb nail
Friable	–	Can be easily crumbled or broken into small pieces by hand

RELATIVE DENSITY OF NON-COHESIVE SOILS

TERM	DENSITY INDEX (%)
Very Loose	≤15
Loose	15 to 35
Medium Dense	35 to 65
Dense	65 to 85
Very Dense	> 85

DESCRIPTIVE TERMS FOR ACCESSORY SOIL COMPONENTS

DESIGNATION OF COMPONENT	IN COARSE GRAINED SOILS		IN FINE GRAINED SOILS	TERM
	% Fines	% Accessory coarse fraction	% Sand/ gravel	
Minor	≤5	≤15	≤15	Trace
	>5, ≤12	>15, ≤30	>15, ≤30	With
Secondary	>12	>30	>30	Prefix

SOIL STRUCTURE

ZONING		CEMENTING	
Layer	Continuous across the exposure or sample.	Weakly cemented	Easily disaggregated by hand in air or water.
Lens	Discontinuous layer of different material, with lenticular shape.	Moderately cemented	Effort is required to disaggregate the soil by hand in air or water.
Pocket	An irregular inclusion of different material.		

GEOLOGICAL ORIGIN

WEATHERED IN PLACE SOILS

Extremely Weathered material	Material is weathered to such an extent that it has soil properties. Structure and/or fabric of parent rock material retained and visible.
Residual soil	Structure and/or fabric of parent rock material not retained and visible.

TRANSPORTED SOILS

Aeolian soil	Carried and deposited by wind.
Alluvial soil	Deposited by streams and rivers.
Colluvial soil	Soil and rock debris transported downslope by gravity.
Estuarine soil	Deposited in coastal estuaries, and including sediments carried by inflowing rivers and streams, and tidal currents.
Fill	Man-made deposit. Fill may be significantly more variable between tested locations than naturally occurring soils.
Lacustrine soil	Deposited in freshwater lakes.
Marine soil	Deposited in a marine environment.

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Soil Description Explanation Sheet (2 of 2)

SOIL CLASSIFICATION INCLUDING IDENTIFICATION AND DESCRIPTION

FIELD IDENTIFICATION PROCEDURES (Excluding particles larger than 63 mm and basing fractions on estimated mass)						**GROUP SYMBOL**	**PRIMARY NAME**
COARSE GRAINED SOIL More than 65% of soil excluding oversize fraction is larger than 0.075 mm	(A 0.075 mm particle is about the smallest particle visible to naked eyes)	GRAVEL More than half of coarse fraction is larger than 2.36 mm	CLEAN GRAVEL (Little or no fines)	Wide range in grain size and substantial amounts of all intermediate particle sizes		GW	GRAVEL
				Predominantly one size or a range of sizes with some intermediate sizes missing		GP	GRAVEL
			GRAVEL WITH FINES (Appreciable amount of fines)	Non-plastic fines (for identification procedures see ML and MH below)		GM	Silty GRAVEL
				Plastic fines (for identification procedures see CL, CI and CH below)		GC	Clayey GRAVEL
		SAND More than half of coarse fraction is smaller than 2.36 mm	CLEAN SAND (Little or no fines)	Wide range in grain size and substantial amounts of all intermediate sizes		SW	SAND
				Predominantly one size or a range of sizes with some intermediate sizes missing		SP	SAND
			SAND WITH FINES (Appreciable amount of fines)	Non-plastic fines (for identification procedures see ML and MH below)		SM	Silty SAND
				Plastic fines (for identification procedures see CL, CI and CH below)		SC	Clayey SAND
FINE GRAINED SOIL More than 35% of soil excluding oversize fraction is smaller than 0.075 mm		IDENTIFICATION PROCEDURES ON FRACTIONS <0.075 mm					
			DRY STRENGTH	**DILATANCY**	**TOUGHNESS**		
		SILT & CLAY (low to medium plasticity, LL ≤ 50)	None to Low	Slow to Rapid	Low	ML	SILT
			Medium to High	None to Slow	Medium	CL, CI	CLAY
			Low to Medium	Slow	Low	OL	ORGANIC SILT
		SILT & CLAY (high plasticity, LL > 50)	Low to Medium	None to Slow	Low to Medium	MH	SILT
			High to Very High	None	High	CH	CLAY
			Medium to High	None to Very Slow	Low to Medium	OH	ORGANIC CLAY
		Highly Organic Soil	Readily identified by colour, odour, spongy feel and frequently by fibrous texture.			Pt	PEAT

● LL – Liquid Limit.

COMMON DEFECTS IN SOILS

TERM	**DEFINITION**	**DIAGRAM**
PARTING	A surface or crack across which the soil has little or no tensile strength. Parallel or sub parallel to layering (e.g. bedding). May be open or closed.	
FISSURE	A surface or crack across which the soil has little or no tensile strength, but which is not parallel or sub parallel to layering. May be open or closed. May include desiccation cracks.	
SHEARED SEAM	Zone in clayey soil with roughly parallel near planar, curved or undulating boundaries containing closely spaced, smooth or slickensided, curved intersecting fissures which divide the mass into lenticular or wedge-shaped blocks.	
SHEARED SURFACE	A near planar curved or undulating, smooth, polished or slickensided surface in clayey soil. The polished or slickensided surface indicates that movement (in many cases very little) has occurred along the defect.	

TERM	**DEFINITION**	**DIAGRAM**
SOFTENED ZONE	A zone in clayey soil, usually adjacent to a defect in which the soil has a higher moisture content than elsewhere.	
TUBE	Tubular cavity. May occur singly or as one of a large number of separate or inter-connected tubes. Walls often coated with clay or strengthened by denser packing of grains. May contain organic matter.	
TUBE CAST	An infilled tube. The infill may be uncemented or weakly cemented soil or have rock properties.	
INFILLED SEAM	Sheet or wall like body of soil substance or mass with roughly planar to irregular near parallel boundaries which cuts through a soil mass. Formed by infilling of open defects.	

Appendix B

Qualitative Terminology for Use in Assessing Risk to Property

QUALITATIVE TERMINOLOGY FOR USE IN ASSESSING RISK TO PROPERTY

QUALITATIVE MEASURES OF LIKELIHOOD

Approximate Annual Probability		Implied Indicative Landslide Recurrence Interval		Description	Descriptor	Level
Indicative Value	Notional Boundary					
10^{-1}	5x10-2	10 years	20 years	The event is expected to occur over the design life.	ALMOST CERTAIN	A
10-2	5x10-3	100 years	200 years	The event will probably occur under adverse conditions over the design life.	LIKELY	B
10-3	5x10-4	1000 years	2000 years	The event could occur under adverse conditions over the design life.	POSSIBLE	C
10-4	5x10-5	10,000 years	20,000 years	The event might occur under very adverse circumstances over the design life.	UNLIKELY	D
10-5	5x10-6	100,000 years	200,000 years	The event is conceivable but only under exceptional circumstances over the design life.	RARE	E
10-6		1,000,000 years		The event is inconceivable or fanciful over the design life.	BARELY CREDIBLE	F

Note: (1) The table should be used from left to right; use Approximate Annual Probability or Description to assign Descriptor, not *vice versa*.

QUALITATIVE MEASURES OF CONSEQUENCES TO PROPERTY

Approximate Cost of Damage		Description	Descriptor	Level
Indicative Value	Notional Boundary			
200%	100%	Structure(s) completely destroyed and/or large scale damage requiring major engineering works for stabilisation. Could cause at least one adjacent property major consequence damage.	CATASTROPHIC	1
60%	40%	Extensive damage to most of structure, and/or extending beyond site boundaries requiring significant stabilisation works. Could cause at least one adjacent property medium consequence damage.	MAJOR	2
20%	10%	Moderate damage to some of structure, and/or significant part of site requiring large stabilisation works. Could cause at least one adjacent property minor consequence damage.	MEDIUM	3
5%	1%	Limited damage to part of structure, and/or part of site requiring some reinstatement stabilisation works.	MINOR	4
0.5%		Little damage. (Note for high probability event (Almost Certain), this category may be subdivided at a notional boundary of 0.1%. See Risk Matrix.)	INSIGNIFICANT	5

Notes: (2) The Approximate Cost of Damage is expressed as a percentage of market value, being the cost of the improved value of the unaffected property which includes the land plus the unaffected structures.

(3) The Approximate Cost is to be an estimate of the direct cost of the damage, such as the cost of reinstatement of the damaged portion of the property (land plus structures), stabilization works required to render the site to tolerable risk level for the landslide which has occurred and professional design fees, and consequential costs such as legal fees, temporary accommodation. It does not include additional stabilisation works to address other landslides which may affect the property.

(4) The table should be used from left to right; use Approximate Cost of Damage or Description to assign Descriptor, not vice versa

QUALITATIVE TERMINOLOGY FOR USE IN ASSESSING RISK TO PROPERTY (CONTINUED)

QUALITATIVE RISK ANALYSIS MATRIX – LEVEL OF RISK TO PROPERTY

LIKELIHOOD		CONSEQUENCES TO PROPERTY (With Indicative Approximate Cost of Damage)				
	Indicative Value of Approximate Annual Probability	1: CATASTROPHIC 200%	2: MAJOR 60%	3: MEDIUM 20%	4: MINOR 5%	5: INSIGNIFICANT 0.5%
A – ALMOST CERTAIN	10^{-1}	VH	VH	VH	H	M or L (5)
B - LIKELY	10^{-2}	VH	VH	H	M	L
C - POSSIBLE	10^{-3}	VH	H	M	M	VL
D - UNLIKELY	10^{-4}	H	M	L	L	VL
E - RARE	10^{-5}	M	L	L	VL	VL
F - BARELY CREDIBLE	10^{-6}	L	VL	VL	VL	VL

Notes: (5) For Cell A5, may be subdivided such that a consequence of less than 0.1% is Low Risk.
(6) When considering a risk assessment it must be clearly stated whether it is for existing conditions or with risk control measures which may not be implemented at the current time.

RISK LEVEL IMPLICATIONS

Risk Level		Example Implications (7)
VH	VERY HIGH RISK	Unacceptable without treatment. Extensive detailed investigation and research, planning and implementation of treatment options essential to reduce risk to Low; may be too expensive and not practical. Work likely to cost more than value of the property.
H	HIGH RISK	Unacceptable without treatment. Detailed investigation, planning and implementation of treatment options required to reduce risk to Low. Work would cost a substantial sum in relation to the value of the property.
M	MODERATE RISK	May be tolerated in certain circumstances (subject to regulator's approval) but requires investigation, planning and implementation of treatment options to reduce the risk to Low. Treatment options to reduce to Low risk should be implemented as soon as practicable.
L	LOW RISK	Usually acceptable to regulators. Where treatment has been required to reduce the risk to this level, ongoing maintenance is required.
VL	VERY LOW RISK	Acceptable. Manage by normal slope maintenance procedures.

Note: (7) The implications for a particular situation are to be determined by all parties to the risk assessment and may depend on the nature of the property at risk; these are only given as a general guide

Appendix C

Certificate Forms

GEOTON Pty Ltd
Geotechnical Consultants

Engineering Certificate

To:	Future Developments Group Pty Ltd		*Owner /Agent*
	PO Box 2150		*Address*
	Howrah Tas	7018	*Suburb/postcode*

Certifier details:

From:	Geoton Pty Ltd		
Address:	PO Box 522	Phone No:	(03) 6326 5001
	Prospect 7250	Fax No:	
Accreditation No: *(if applicable)*		Email address:	tbarriera@geoton.com.au
Or qualifications and Insurance details:	Tony Barriera – BEng, MSc, CPEng, NER – IEAust 471929 Civil, Geotechnical Certain Underwriters at Lloyd's- ENG 23 000330		*(description from Column 4 of the Director of Building Control's determination)*
Speciality area of expertise:	Geotechnical Engineering Landslide Risk Assessments		*(description from Column 5 of the Director of Building Control's determination)*

Details of work:

Address:	4 Hearps Road Subdivision	Lot No:	1000
	Ulverstone Tas 7315	Certificate of title No:	183648/1000
The work related to this certificate:	Landslide Risk Assessment		*(description of the work or part work being certified)*

Certificate details:

Certificate type:	Geotechnical	*(description from Column 2 of the Director of Building Control's determination)*

In issuing this certificate the following matters are relevant –

Documents:	Geoton Pty Ltd, Report Reference No. GL24219Ab Rev.1, dated 24/05/2024.
Relevant calculations:	Refer to report
References:	Australian Geomechanics Society – Practice Note Guidelines for Landslide Risk Management, 2007

GEOTON Pty Ltd
Geotechnical Consultants

Substance of Certificate:

Findings and recommendations of report (Report Reference No. GL24219Ab Rev.1).

From the Tasmanian Planning Scheme (TPS) the site is mapped partially within a low Landslide Hazard Band. As such, a landslide risk assessment is required to determine if a tolerable risk can be achieved and maintained for the type, scale and intended life of use of the development.

The landslide risk assessment was conducted in accordance with Australian Geomechanics Society (AGS) – Practice Note Guidelines for Landslide Risk Management, 2007. Our report concluded that the qualitative landslide risk for the site is at worst a VERY LOW risk provided the development of the site is in accordance with the recommendations within our report and the implementation of any required treatment works. In our experience, regulating authorities allow developments to proceed with VERY LOW to LOW risk.

Therefore, provided the development of the site is in accordance with the recommendations within our report, then we consider that an acceptable level of risk can be achieved for the development of the site in accordance with section C15.6.1 (Building and works within a landslip hazard area) of the Landslide Hazard Code of the TPS – Central Coast. That is, the level of likely risk from exposure to the natural hazard (landslide) is considered to be tolerable for the proposed residential development.

Scope or Limitations

The report provides a qualitative landslide risk assessment which identifies the landslide risks at the site and provides recommendations to maintain, improve and possibly reduce the risk of landslides so as not cause or contribute to the risk of landslides on the site and lands in the locality.

The site is within an area of inherent doubtful slope stability and landslides are a natural ongoing geological process. There will be always some level of landslide risk within an area of inherent doubtful slope stability. The recommendations of the report are provided to maintain, improve and possibly reduce the risk of landslides on the site and lands in the locality.

The recommendations for the design of the proposed works are in accordance with prevailing geological conditions described in the report for the site, assessed landslide risks and recommended good hillside practices.

I certify the matters described in this certificate.

	Signed:	*Date:*	*Certificate No.*
Certifier:		24/05/2024	GL24219Ab Rev.1

CSE TASMANIA PTY LTD
civil • structural • environmental engineering

FUTURE DEVELOPMENTS PTY LTD
STAGES 02B, 03 & 04, 4 HEARPS ROAD, WEST ULVERSTONE
CENTRAL COAST COUNCIL

CSE TASMANIA REF: 4806-43
MAY / 2022

0 50 100 150 200 250m
SCALE 1:2500

LOCALITY PLAN
SCALE: 1:2500

DRAWING SCHEDULE

DRAWING No.	DRAWING NAME	REVISIONS
4806-43_G101	COVER SHEET AND LOCALITY PLAN	Rev 3
4806-43_G102	GENERAL DETAILS PLAN	Rev 3
4806-43_G103	GENERAL NOTES PLAN	Rev 3
4806-43_G104	GENERAL ARRANGEMENT LAYOUT PLAN SHEET 01	Rev 3
4806-43_G105	GENERAL ARRANGEMENT LAYOUT PLAN SHEET 02	Rev 3
4806-43_G106	GENERAL ARRANGEMENT LAYOUT PLAN SHEET 03	Rev 3
4806-43_G107	GENERAL ARRANGEMENT LAYOUT PLAN SHEET 04	Rev 3
4806-43_G108	LOT LAYOUT PLAN	Rev 3
4806-43_C101	ROAD 01 LAYOUT AND LONG SECTION PLAN SHEET 01	Rev 3
4806-43_C102	ROAD 01 LAYOUT AND LONG SECTION PLAN SHEET 02	Rev 3
4806-43_C103	ROAD 01 CROSS SECTIONS PLAN	Rev 3
4806-43_C104	ROAD 02 LAYOUT AND LONG SECTION PLAN SHEET 01	Rev 3
4806-43_C105	ROAD 02 LAYOUT AND LONG SECTION PLAN SHEET 02	Rev 3
4806-43_C106	ROAD 02 CROSS SECTIONS PLAN SHEET 01	Rev 3
4806-43_C107	ROAD 02 CROSS SECTIONS PLAN SHEET 02	Rev 3
4806-43_C108	ROAD 03 LAYOUT AND LONG SECTION PLAN	Rev 3
4806-43_C109	ROAD 03 CROSS SECTIONS PLAN SHEET 01	Rev 3
4806-43_C110	ROAD 03 CROSS SECTIONS PLAN SHEET 02	Rev 3
4806-43_C111	ROAD 04 LAYOUT AND LONG SECTION PLAN	Rev 3
4806-43_C112	ROAD 04 CROSS SECTIONS PLAN	Rev 3
4806-43_C113	LUMEAH AVENUE LAYOUT AND LONG SECTION PLAN	Rev 3
4806-43_C114	LUMEAH AVENUE CROSS SECTIONS PLAN	Rev 3
4806-43_C115	KERB RETURN LAYOUT AND LONG SECTIONS PLAN SHEET 01	Rev 3
4806-43_C116	KERB RETURN LAYOUT AND LONG SECTIONS PLAN SHEET 02	Rev 3
4806-43_C117	KERB RETURN LAYOUT AND LONG SECTIONS PLAN SHEET 03	Rev 3
4806-43_C118	CUL DE SAC LAYOUT AND LONG SECTION PLAN SHEET 01	Rev 3
4806-43_C119	CUL DE SAC LAYOUT AND LONG SECTION PLAN SHEET 02	Rev 3
4806-43_C120	CONSTRUCTION DETAILS PLAN	Rev 3
4806-43_C121	STORMWATER LAYOUT PLAN SHEET 01	Rev 3
4806-43_C122	STORMWATER LAYOUT PLAN SHEET 02	Rev 3
4806-43_C123	STORMWATER LAYOUT PLAN SHEET 03	Rev 3
4806-43_C124	STORMWATER LAYOUT PLAN SHEET 04	Rev 3
4806-43_C125	STORMWATER LONG SECTIONS PLAN SHEET 01	Rev 3
4806-43_C126	STORMWATER LONG SECTIONS PLAN SHEET 02	Rev 3
4806-43_C127	STORMWATER LONG SECTIONS PLAN SHEET 03	Rev 3
4806-43_C128	STORMWATER LONG SECTIONS PLAN SHEET 04	Rev 3
4806-43_C129	STORMWATER LONG SECTIONS PLAN SHEET 05	Rev 3
4806-43_C130	STORMWATER LONG SECTIONS PLAN SHEET 06	Rev 3
4806-43_C131	STORMWATER LONG SECTIONS PLAN SHEET 07	Rev 3
4806-43_C132	STORMWATER LONG SECTIONS PLAN SHEET 08	Rev 3
4806-43_C133	STORMWATER CATCHMENTS LAYOUT PLAN	Rev 3
4806-43_C134	SEWER RETICULATION LAYOUT PLAN SHEET 01	Rev 3
4806-43_C135	SEWER RETICULATION LAYOUT PLAN SHEET 02	Rev 3
4806-43_C136	SEWER RETICULATION LAYOUT PLAN SHEET 03	Rev 3
4806-43_C137	SEWER RETICULATION LAYOUT PLAN SHEET 04	Rev 3
4806-43_C138	SEWER LONG SECTIONS PLAN SHEET 01	Rev 3
4806-43_C139	SEWER LONG SECTIONS PLAN SHEET 02	Rev 3
4806-43_C140	SEWER LONG SECTIONS PLAN SHEET 03	Rev 3
4806-43_C141	SEWER LONG SECTIONS PLAN SHEET 04	Rev 3
4806-43_C142	SEWER LONG SECTIONS PLAN SHEET 05	Rev 3
4806-43_C143	SEWER LONG SECTIONS PLAN SHEET 06	Rev 3
4806-43_C144	SEWER LONG SECTIONS PLAN SHEET 07	Rev 3
4806-43_C145	SEWER LONG SECTIONS PLAN SHEET 08	Rev 3
4806-43_C146	LOT 16 SEWER CONNECTION LONG SECTION PLAN	Rev 3
4806-43_C147	LOT 20 SEWER CONNECTION LONG SECTION PLAN	Rev 3
4806-43_C148	LOT 21 SEWER CONNECTION LONG SECTION PLAN	Rev 3
4806-43_C149	LOT 30 SEWER CONNECTION LONG SECTION PLAN	Rev 3
4806-43_C150	LOT 40 SEWER CONNECTION LONG SECTION PLAN	Rev 3
4806-43_C151	LOT 52 SEWER CONNECTION LONG SECTION PLAN	Rev 3
4806-43_C152	WATER RETICULATION LAYOUT PLAN SHEET 01	Rev 3
4806-43_C153	WATER RETICULATION LAYOUT PLAN SHEET 02	Rev 3
4806-43_C154	WATER RETICULATION LAYOUT PLAN SHEET 03	Rev 3
4806-43_C155	WATER RETICULATION LAYOUT PLAN SHEET 04	Rev 3
4806-43_C156	WATER RETICULATION DETAILS PLAN SHEET 01	Rev 3
4806-43_C157	WATER RETICULATION DETAILS PLAN SHEET 02	Rev 3
4806-43_C158	STAGING LAYOUT PLAN	Rev 3
4806-43_C159	EARTHWORKS LAYOUT PLAN	Rev 3
4806-43_C160	EARTHWORKS CROSS SECTIONS PLAN	Rev 3

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PO Box 49, Turners Beach TAS 7315
127 Leith Road, Leith TAS 7315
ACN 118 678 667
m 0429 418 739
chris@csetas.com.au

DO NOT SCALE | Original Size A3

FOR CONSTRUCTION

Scale	1:2500
Designed	CHRIS MARTIN
Drawn	CJG
Accred. No.	CC4109V
Approved	CHRIS MARTIN
Date	MAY 2022

No	Revision	Drawn	Date
3	ROAD, STORMWATER AND SEWER DESIGNS UPDATED	CJG	25/09/25
2	DRAWING UPDATED WITH COMMENTS FROM TASWATER	CJG	23/07/22
1	DRAWING UPDATED WITH COMMENTS FROM COUNCIL	CJG	12/07/2022
0	DRAWING UPDATED FOR CONSTRUCTION	CJG	30/06/22

Client: FUTURE DEVELOPMENTS PTY LTD
Project: STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title: COVER SHEET AND LOCALITY PLAN

Drawing No: 4806-43_G101 | Revision: 3

TYPICAL LEGEND:

- PROPOSED LOT BOUNDARIES
- EXISTING LOT BOUNDARIES
- PROPOSED EASEMENTS
- PROPOSED BUILDING ENVELOPES
- PROPOSED PAVEMENT SAW CUT EDGE
- PROPOSED CONCRETE DRIVEWAY/FOOTPATHS
- PROPOSED CONTOURS
- EXISTING CONTOURS
- EXISTING FENCE LINE
- EXISTING GATE
- EXISTING TOP OF BANK
- EXISTING TOE OF BANK
- PROPOSED STORMWATER DRAINAGE LINE
- PROPOSED STORMWATER PIT
- PROPOSED STORMWATER MANHOLE
- EXISTING STORMWATER DRAINAGE LINE
- EXISTING STORMWATER MANHOLE
- PROPOSED WATER MAIN
- PROPOSED WATER METER
- PROPOSED WATER STOP VALVE
- EXISTING WATER MAIN
- PROPOSED SEWER MAIN
- PROPOSED SEWER MANHOLE
- EXISTING SEWER MAIN
- EXISTING SEWER MANHOLE
- EXISTING ELECTRICAL LINE
- EXISTING ELECTRICAL POLE
- EXISTING TREES
- EXISTING TREES TO BE REMOVED

STANDARD ROAD, DRAINAGE SEWER & WATER DOCUMENTS

DOCUMENTS AS LISTED IN TASWATER SUPPLEMENTS TO

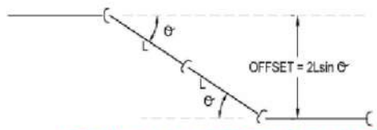
- WATER SUPPLY CODE OF AUSTRALIA (WSA 03-2011-3.1 MRWA V2.0)
- SEWERAGE SUPPLY CODE OF AUSTRALIA (WSA 02-2014-3.1 MRWA)

DOCUMNETS AS LISTED FOR ROAD AND STORMWATER DRAWINGS (TSD)

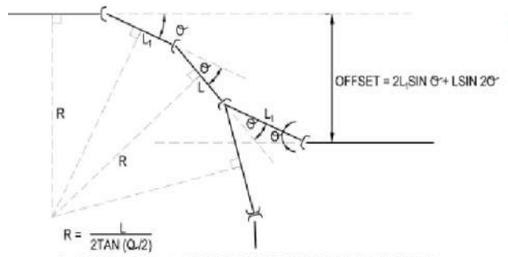
- TASMANIAN STANDARD DRAWINGS (TSD)-v3
- TASMANIAN SUBDIVISION GUIDELINES (Oct 2013)

NOTE - FOLLOWING DEFLECTION VALUES MUST BE AMENDED FOR TASWATER TO 0.75% OF THE 1 DEGREE MANUFACTURERS DEFLECTION

DETAIL A: 1 PIPE DEFLECTION OFFSET



DETAIL B: 2 PIPE DEFLECTION OFFSET



L = R 2TAN (α /2) (ie CUT PIPE LENGTH FOR REQUIRED RADIUS R)

TO REDUCE THE DISTANCE OVER WHICH THE DEFLECTION IS MADE, THE LENGTH OF L_1 MAY BE REDUCED UP TO $\frac{L}{2}$

DETAIL C: 3 PIPE DEFLECTION OFFSET or CURVED MAIN

TABLE 3: DEFLECTIONS

	PIPE / JOINT TYPE			
	TYPICAL RETIC PVC PIPE	TYPICAL RETIC DI PIPE	TYPICAL PVC PIPE + DOUBLE SOC CONNECTOR	COMMENTS
TYPICAL FULL LENGTH FOR L (m)	6	5.5	6 (PVC)	
TYPICAL MINIMUM LENGTH FOR L (m)	3	2.25	3 (PVC)	
TYPICAL θ MAX (degrees)	1	3.5	7	VARIES DEPENDING ON MANUFACTURER
MAX 1 PIPE MAX OFFSET (mm) 1	100	(340)	◇730◇	HORIZONTAL OR VERTICAL DEFLECTION
MAX 2 PIPE MAX OFFSET (mm) 1	210	◇670◇	◇146◇	2 or 3 PIPE HORIZONTAL DEFLECTION USUALLY NOT PREFERRED ALONG STRAIGHT ROADS DUE TO DISRUPTION OF OTHER ASSETS
MAX 3 PIPE MAX OFFSET (mm) 1	(420)	◇1340◇	◇2910◇	
TYPICAL MIN R (m)	344	90	49	ASSUMING USE OF FULL PIPE LENGTHS
VERTICAL BLOCKING REQUIREMENTS	NO THRUST BLOCK REQUIRED	THRUST CALCULATION REQUIRED 2	THRUST CONTROL REQUIRED 3	VERTICAL BLOCKS REQUIRE WATER AGENCY APPROVAL 5
HORIZONTAL BLOCKING REQUIREMENTS	NO THRUST BLOCK REQUIRED	THRUST CALCULATION REQUIRED 2	THRUST BLOCK REQUIRED 4	

NOTES ON TABLE 3:

ALL FIGURES HAVE BEEN CALCULATED ASSUMING FULL PIPE LENGTHS

1 MAX OFFSETS CALCULATED USING FULL LENGTH PIPES.
2 THRUST CONTROL REQUIREMENTS NEED TO BE CALCULATED AS PER THE METHOD DESCRIBED IN MRWA-W-204.
3 BLOCK AS PER TABLE 1 OF MRWA-W-205A USING ½ OF THE MASS VOLUME OF THE 11.25° BEND.
4 BLOCK AS PER 6 DEG BENDS OF MRWA-W-204.
5 FLANGED OR WELDED BENDS PREFERRED TO VERTICAL BLOCKS.

TO REDUCE EXCAVATION DEPTHS AND / OR LIMIT DISRUPTION TO HORIZONTAL ALIGNMENTS, THE FOLLOWING ARRANGEMENTS ARE GENERALLY PREFERRED:

(○) FIGURES IN CIRCLES INDICATED THAT THIS OFFSET IS NORMALLY BETTER ACHIEVED USING 22½° BENDS (FOR 300 TO 600 OFFSETS).

◇ FIGURES IN DIAMONDS INDICATE THAT THIS OFFSET IS NORMALLY BETTER ACHIEVED USING 45° BENDS (FOR > 600 OFFSETS).

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CJG	CC4109V
Approved	CHRIS MARTIN
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No	Revision	Drawn	Date
3	ROAD, STORMWATER AND SEWER DESIGNS UPDATED	CJG	25/09/25
2	DRAWING UPDATED WITH COMMENTS FROM TASWATER	CJG	23/07/22
1	DRAWING UPDATED WITH COMMENTS FROM COUNCIL	CJG	12/07/2022
0	DRAWING UPDATED FOR CONSTRUCTION	CJG	30/06/22

Client FUTURE DEVELOPMENTS PTY LTD
Project STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title GENERAL DETAILS PLAN

Drawing No: 4806-43_G102 | Revision: 3

NOTES (GENERAL, EARTHWORKS & LANDSCAPING)

GENERAL

1. T.W. - TAS WATER
2. ALL SETOUT BY A LICENSED SURVEYOR.
3. LEVEL DATUM - AHD
4. PRIOR TO ANY EXCAVATION, CONTRACTOR IS TO LOCATE ALL EXISTING UNDERGROUND SERVICES
5. ALL EXISTING MANHOLES AND SERVICE PITS / LIDS AFFECTED BY THE WORKS TO BE RAISED TO SUIT DESIGN LEVELS. WORK TO BE CARRIED OUT BY THE RELEVANT AUTHORITY AT DEVELOPERS EXPENSE.
6. CONTRACTOR TO ARRANGE PROVISION OF 'AS CONSTRUCTED' INFORMATION. SURVEY CO-ORDINATES TO BE RECORDED IN GDA94 & AHD AND PROVIDED IN ELECTRONIC AND HARD COPY FORMAT IN ACCORDANCE WITH THE REQUIREMENTS OF COUNCIL & T.W.
7. SERVICE OFFSETS AS PER TAS STANDARD DRAWINGS.
8. ALL ROAD AND STORMWATER WORKS IN ACCORDANCE WITH TAS STANDARD DRAWINGS.

EARTHWORKS

9. STRIP TOPSOIL FROM ENTIRE AREA OF ROADWAYS AND EXTERNAL AREAS THAT ARE TO BE CUT OR FILLED. TOPSOIL SHALL BE STOCKPILED ON SITE WHERE DIRECTED.
10. REDUNDANT OPEN DRAINS TO BE FILLED TO SUIT SURROUNDING NATURAL SURFACE.
11. AREAS OF FILL GREATER THAN 300mm IN DEPTH SHALL BE FILLED AND COMPACTED IN ACCORDANCE WITH AS3798. CONTRACTOR TO APPOINT A GEOTECHNICAL TESTING AUTHORITY AND PROVIDE TESTING IN ACCORDANCE WITH TYPE 2 OR TYPE 3 EARTHWORKS. SUPERINTENDENT TO WITNESS PROOF ROLL OF STRIPPED SITE AND PLACEMENT OF FILL TO AS 3798.
12. NO FILLING OVER SERVICE MAINS IS PERMITTED. ALL FILLING TO BE DONE PRIOR TO PIPE TRENCHING AND INSTALLATION.

LANDSCAPING

13. ALL DISTURBED SURFACES SHALL BE REVEGETATED AND STABILISED WITH STABILISATION GRASS MIX.
14. GOOD QUALITY TOPSOIL TO BE USED ON NATURE STRIP AREAS. GRASS SEED TYPES TO BE ADVISED BY COUNCIL
15. ADVISORY NOTE - LANDSCAPING DESIGN, INCLUDING STREET FURNITURE AND BOLLARDS TO BE CONFIRMED.

NOTES (ROADWORKS & DRAINAGE)

ROADWORKS

1. SERVICE TRENCHES UNDER TRAFFICKED AREAS SHALL BE BACKFILLED WITH COMPACTED PAVEMENT SUB BASE MATERIAL.
2. ALL DRIVEWAYS TO BE TYPE KCS AS PER TASMANIAN STANDARD DRAWING TSD-R14.
3. KCM MODIFIED KERB TO BE USED FROM PRAM RAMPS AROUND CUL-DE-SAC HEADS, FOOTPATH TO BE DRIVEWAY STANDARD IN THESE AREAS.

STORMWATER

1. FULL HEIGHT BENCHING TO BE USED IN ACCORDANCE WITH TSD SW03.
2. PROVIDE ELECTROMAGNETIC, METAL IMPREGNATED TAPE IN ALL NON METALLIC PIPE TRENCHES. ENSURE TAPE TERMINATIONS ARE ACCESSIBLE.
3. TOPS OF MANHOLES SHALL BE FINISHED TO MATCH ADJACENT FINISHED SURFACE LEVELS AND GRADES.
4. PIPE BEDDING AND HAUNCHING - AS PER TSD-G01.
5. 20mm CRUSHED ROCK BEDDING TO BE USED IN STORMWATER TRENCHES WITH SUB-SOIL DRAINS.
6. NEW PIPEWORK SHALL BE:
   - AS SPECIFIED ON STORMWATER LONG SECTIONS
   - PROPERTY CONNECTIONS: 150mmØ P.V.C. (SN8)AS PER TSD-SW25.
7. ALL PIPES GREATER THAN 100mmØ ARE TO BE RUBBER RING JOINTED AND LAID ON A MINIMUM OF 75mm SAND BEDDING EXTENDING TO 150mm ABOVE THE TOP OF PIPE.
8. ALL STORMWATER LOT CONNECTIONS SHALL BE BROUGHT NOMINALLY 100mm ABOVE SURROUNDING SURFACE AND SEALED WITH A GLUED END CAP. CAPS SHALL BE PAINTED GREEN. LOCATIONS OF CONNECTION POINTS TO BE MARKED WITH STAR PICKETS.
9. PROVIDE ELECTROMAGNETIC, METAL IMPREGNATED TAPE IN ALL NON CONDUCTIVE PIPE TRENCHES. ENSURE TAPE TERMINATIONS ARE ACCESSIBLE.
10. STORM WATER MANHOLE BENCHING IN ACCORDANCE WITH TSD-SW03.
11. SIDE ENTRY PITS TO TSD-SW10 - TYPE 4 UNLESS UNO.
12. MANHOLE, LIDS AND SURROUNDS:
    - IN THE ROAD RESERVATION AND TRAFFICKED AREAS - CLASS D - 'GATIC' HEAVY DUTY OR APPROVED EQUIVALENT.
    - NON TRAFFICKED AREAS - 'GATIC' LIGHT DUTY OR APPROVED EQUIVALENT.

NOTES (SEWER & WATER)

SEWER

1. ALL SEWER SUPPLY CONSTRUCTION TO:
   - SEWERAGE SUPPLY CODE OF AUSTRALIA (WSA 02 2014 3.1 MRWA) - PART 3: CONSTRUCTION AS AMENDED BY THE TASWATER SUPPLEMENT
2. NEW PIPEWORK SHALL BE:
   - AS SPECIFIED ON SEWER LONG SECTIONS
3. PROPERTY CONNECTIONS: 100 DIA. P.V.C. (SN10) SCJ AND IN ACCORDANCE WITH TYPE 4 ... MRWA-S-304 INCLUDING A SURFACE AS SHOWN.
   NOTE - INSPECTION OPENINGS SHALL BE 0.5m INSIDE THE PROPERTY BOUNDARY NOT OUTSIDE THE BOUNDARY.
   - TASWATER APPROVED PRODUCTS ARE CONTAINED ON THE CITY WEST WATER WEBSITE HTTP://WWW.MRWA.COM.AU/PAGES/PRODUCTS.ASPX
   - INSPECTED PRIOR TO BACKFILL
4. PROVIDE ELECTROMAGNETIC, METAL IMPREGNATED TAPE IN ALL NON METALLIC PIPE TRENCHES. ENSURE TAPE TERMINATIONS ARE ACCESSIBLE.
5. ALL LIVE CONNECTIONS BY TW AT DEVELOPERS COST.
6. VISUAL INSPECTION OF SEWER MANHOLES AND SEWER LINES PRIOR TO BACKFILLING.
7. ACCEPTANCE TESTING GENERALLY IN ACCORDANCE WITH SECTION 21 OF THE SEWERAGE CODE OF AUSTRALIA WSA03-2014-3.1, MELBOURNE RETAIL WATER AGENCIES EDITION - VERSION 2, PART 2 CONSTRUCTION - SECTION 21.4.2.2.
8. AIR PRESSURE TESTING IN ACCORDANCE WITH SECTION 21.4.1 OF THE SEWERAGE CODE OF AUSTRALIA WSA03-2014-3.1 MELBOURNE RETAIL WATER AGENCIES EDITION - VERSION 2. TABLE 21.10 PROVIDES A SUMMARY OF THE REQUIRED TESTING PRESSURES.

WATER

1. ALL WATER SUPPLY CONSTRUCTION TO:
   - WATER SUPPLY CODE OF AUSTRALIA (WSA 03-2011-3.1 VERSION MRWA EDITION V2.0) - PART 2: CONSTRUCTION AS AMENDED BY THE THE TASWATER SUPPLEMENT.
   - TASWATER'S STANDARD DRAWINGS TWS-W-0002 SERIES
   - WATER METERING POLICY/METERING GUIDELINES
   - BOUNDARY BACKFLOW CONTAINMENT REQUIREMENTS AND AS3500.1:2018.
2. NEW PIPEWORK SHALL BE:
   - SERIES 2 OPVC PN16 - SIZE AS INDICATED ON THE DRAWINGS
   - 63mm O.D. PE100 PN16 (SDR11)
   - ALL FITTINGS SHALL BE PN16 RATED
   - TASWATER APPROVED PRODUCTS ARE CONTAINED ON THE CITY WEST WATER WEBSITE HTTP://WWW.MRWA.COM.AU/PAGES/PRODUCTS.ASPX
   - INSPECTED PRIOR TO BACKFILL
   - BACKFILLED UNDER ROADWAYS IN COMPACTED SUBBASE 1 GRAVEL AT OMC COMPACTED IN 150mm LAYERS.
3. PROVIDE THRUST BLOCKS AT ALL BENDS AND TEES.
4. ALL LIVE CONNECTIONS BY TW AT DEVELOPERS COST.
5. ALL STOP VALVES TO BE CLOCKWISE CLOSING, EXCEPT FOR DEVONPORT CITY COUNCIL WHICH REQUIRE COUNTER CLOCKWISE CLOSING.
6. PROVIDE C.I. VALVE BOX COVERS TO ALL VALVES AND FIRE PLUG.
7. STOP VALVES AND FIRE PLUGS SHALL BE MARKED IN ACCORDANCE WITH THE IPWEA FIRE HYDRANT GUIDELINES: TASMANIA DIVISION.
8. FIRE PLUGS AND VALVE POSITIONS TO BE MARKED IN ACCORDANCE WITH THE WSA CODE AND TASWATER SUPPLEMENT.
9. PROVIDE ELECTROMAGNETIC, METAL IMPREGNATED TAPE IN ALL NON METALLIC PIPE TRENCHES. ENSURE TAPE TERMINATIONS ARE ACCESSIBLE.
10. MINIMUM COVER:- UNDER ROADWAYS (EXCLUDING MAJOR ROADS) FOR PIPES UP TO AND INCLUDING 225 DIA 600mm. COVER IN RESIDENTIAL PIPELINE EASEMENTS CAN REDUCE TO 450mm.
11. ALL PROPERTY CONNECTIONS SHALL BE CONSTRUCTED IN ACCORDANCE WITH TASWATER STANDARD DRAWING TWS-W-0002 SERIES - INCLUDING THE REQUIREMENT FOR A DN100 SLEEVE UNDER ALL TRAFFICABLE ROADS. THEY SHALL BE DN25(I.D.20) HDPE (PE100) SDR 11 PN16 PIPE.
12. ALL FITTINGS TO BE F.B.E.
13. FIRE PLUGS TO HAVE 100mm RISERS WITH SPRING TYPE PLUGS.
14. VISUAL INSPECTION OF WATER LINE BEDDING AND HAUNCHING PRIOR TO BACKFILLING.
15. ACCEPTANCE TESTING GENERALLY IN ACCORDANCE WITH PART 2 CONSTRUCTION, SECTION 19 OF THE WATER SUPPLY CODE OF AUSTRALIA WSA03-2011-3.1 MELBOURNE RETAIL WATER AGENCIES EDITIONS - VERSION 2.
16. HYDROSTATIC PRESSURE TESTING GENERALLY IN ACCORDANCE WITH PART 2 CONSTRUCTION, SECTION 19.4 OF THE WATER SUPPLY CODE OF AUSTRALIA WSA03-2011-3.1 MELBOURNE RETAIL WATER AGENCIES EDITIONS - VERSION 2.
17. MAIN TO BE DISINFECTED PRIOR TO CONNECTION TO THE RETICULATION NETWORK. REFER TO WSA CODE FOR DETAILS.
18. PLACEMENT OF WATER MAINS IN FILL REQUIRES THE CONTRACTOR TO PROVIDE DOCUMENTARY EVIDENCE INCLUDING:-
    - 18.1. THE COMPOSITION OF FILL MATERIAL, VERIFYING THAT IT CONTAINS NO ORGANIC OR OTHER MATERIALS THAT DECOMPOSE OR OTHERWISE LEAD TO LONG TERM SETTLEMENT
    - 18.2. THE PLACED LAYER THICKNESS
    - 18.3. THE COMPACTION METHOD USED
    - 18.4. THE DEPTH BELOW THE SURFACE OF EACH COMPACTED LAYER AT WHICH EACH FIELD DENSITY WAS MEASURED.
    - 18.5. THE FIELD DENSITY CALCULATION SHEETS AND RESULTS FOR ALL OF THE FILL BELOW THE INVERT OF THE PROPOSED WATER MAIN, VERIFYING THAT IT HAS AN IN-SITU DENSITY OF NOT LESS THAN 95% OF ITS STANDARD MAXIMUM DRY DENSITY (AS1289.5.1.1).

NOTES FOR SURVEYOR

- WHERE MARKED ON THE SEWERAGE DRAWINGS THAT SEWER SERVICES DON'T CONTROL THE WHOLE LOT THE PLAN OF SUBDIVISION COUNCIL ENDORSEMENT PAGE IS TO NOTE, PURSUANT TO SECTION 83 OF THE LOCAL GOVERNMENT (BUILDING AND MISCELLANEOUS PROVISIONS) ACT 1993, THAT TASWATER CANNOT GUARANTEE CUSTOMERS SANITARY DRAINS WILL BE ABLE TO DISCHARGE VIA GRAVITY INTO TASWATER'S SEWERAGE SYSTEM,
- TASWATER EASEMENTS SHALL BE CREATED IN ACCORDANCE WITH TASWATER'S PIPELINE AND SERVICES EASEMENT DEFINITION - SEE TASWATER WEBSITE HTTP://WWW.TASWATER.COM.AU/ARTICLEDOCUMENTS/489/PIPELINE%20AND%20SERVICES%20EASEMENT%20PRECEDENT%20FOR%20USE%20WITH%20SCHEDULE%200F%20EASEMENTS.PDF.ASPX
- COUNCIL STORMWATER EASEMENT TO BE PROVIDED AS PER SURVEY PLAN

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Client: FUTURE DEVELOPMENTS PTY LTD
Project: STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title: GENERAL NOTES PLAN
Drawing No: 4806-43_G103
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CENTRAL COAST COUNCIL
LAND USE PLANNING

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THERE MAY BE EXISTING SERVICES WITHIN THE WORKS AREA THAT ARE NOT SHOWN ON THESE PLANS.
THE CONTRACTOR IS TO LOCATE ALL SERVICES PRIOR TO THE COMMENCEMENT OF WORKS.

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NORTH

TYPICAL 3.6m WIDE CONCRETE DRIVEWAYS TO BE INSTALLED IN ACCORDANCE WITH DRAWING TSD-R14-v3 FOR URBAN ROADS (FOR ALL PROPOSED DRIVEWAYS). ALL DRIVEWAYS TO INCLUDE PATH CHAMFERS INSTALLED IN ACCORDANCE WITH DRAWING TSD-R09-v3

PROPOSED 3.0m WIDE EASEMENT FOR SEWER

PROPOSED 3.0m WIDE EASEMENT FOR SEWER

PROPOSED 1.5m WIDE FOOTPATH TO BE INSTALLED

PROPOSED 3.0m WIDE EASEMENT FOR SEWER AND STORMWATER

PROPOSED KERB RAMPS TO BE INSTALLED

PROPOSED 3.0m WIDE EASEMENT FOR SEWER AND STORMWATER

ROAD 01

ROAD 02

1 1229.0m2
2 624.6m2
3 626.3m2
4 628.0m2
5 629.7m2
16 682.5m2
17 615.7m2
18 651.4m2
19 868.7m2
20 807.8m2
21 564.4m2
22 584.4m2
23 589.7m2
24 589.8m2
25 590.0m2
26 595.7m2
31 637.5
32 637.5m2
33 637.5m2
34 614.7m2

0 10 20 30 40 50m
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Client FUTURE DEVELOPMENTS PTY LTD
Project STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title GENERAL ARRANGEMENT LAYOUT PLAN SHEET 01

Drawing No: 4806-43_G104 | Revision: 3

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NORTH

ROAD 01

ROAD 03

ROAD 04

PROPOSED 3.0m WIDE EASEMENT FOR SEWER AND STORMWATER

PROPOSED 3.0m WIDE EASEMENT FOR SEWER AND STORMWATER

PROPOSED KERB RAMPS TO BE INSTALLED

TYPICAL 3.6m WIDE CONCRETE DRIVEWAYS TO BE INSTALLED IN ACCORDANCE WITH DRAWING TSD-R14-v3 FOR URBAN ROADS (FOR ALL PROPOSED DRIVEWAYS). ALL DRIVEWAYS TO INCLUDE PATH CHAMFERS INSTALLED IN ACCORDANCE WITH DRAWING TSD-R09-v3

PROPOSED 1.5m WIDE FOOTPATH TO BE INSTALLED

TEMPORARY TURNING HEAD TO BE INSTALLED AT END OF ROAD 03
LIMIT OF WORKS REFER TO DRAWING 4806-43_C120 FOR DETAIL

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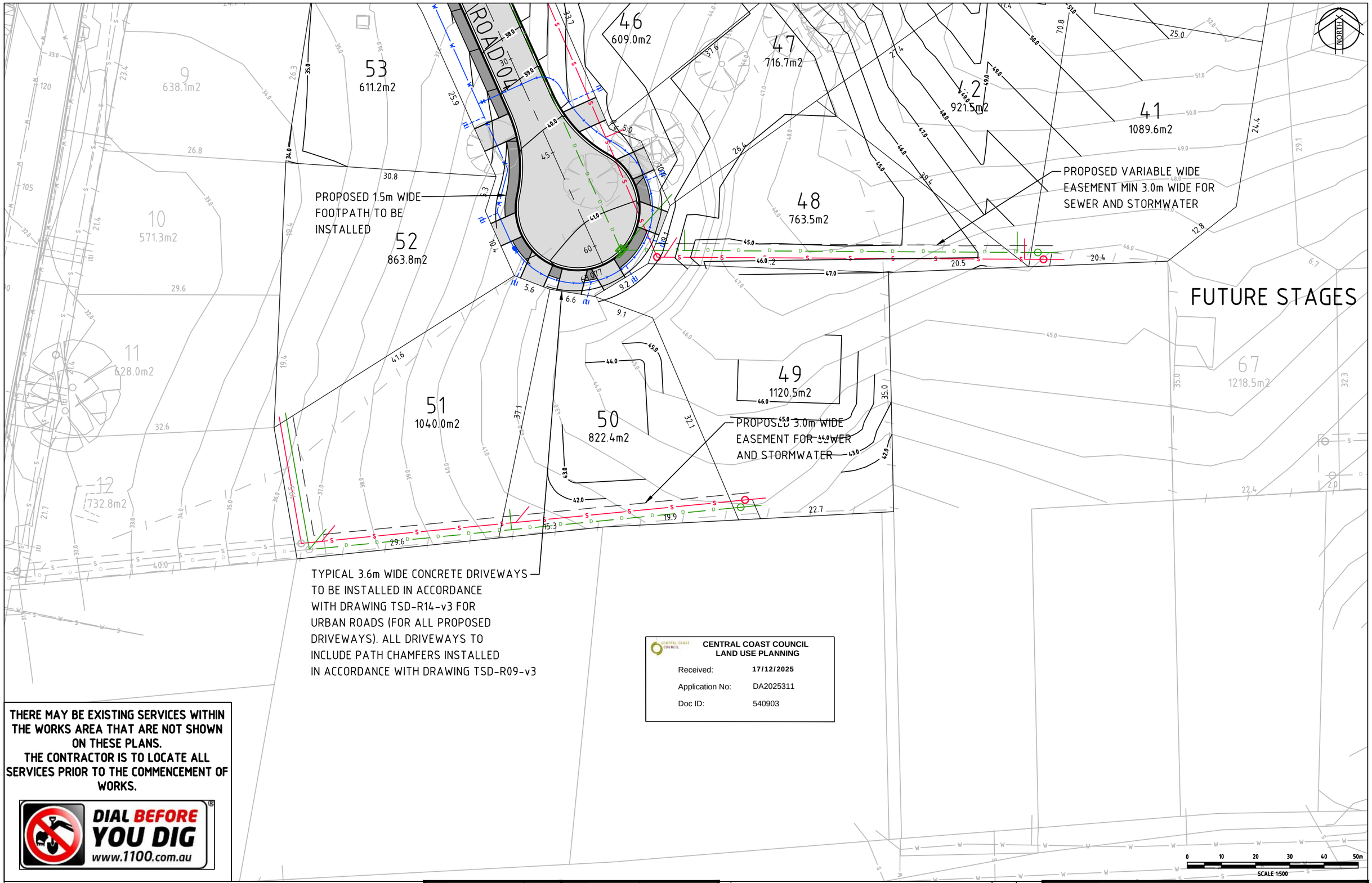
Client FUTURE DEVELOPMENTS PTY LTD
Project STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title GENERAL ARRANGEMENT LAYOUT PLAN SHEET 02

Drawing No: 4806-43_G105 Revision: 3



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Client: FUTURE DEVELOPMENTS PTY LTD
Project: STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title: GENERAL ARRANGEMENT LAYOUT PLAN SHEET 03

Drawing No: 4806-43_G106 | Revision: 3

THERE MAY BE EXISTING SERVICES WITHIN THE WORKS AREA THAT ARE NOT SHOWN ON THESE PLANS.
THE CONTRACTOR IS TO LOCATE ALL SERVICES PRIOR TO THE COMMENCEMENT OF WORKS.

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NORTH

PROPOSED 2.5m WIDE EASEMENT FOR SEWER

PROPOSED 3.0m WIDE EASEMENT FOR SEWER

PROPOSED 1.5m WIDE FOOTPATH TO BE INSTALLED

MATCH INTO EXISTING KERB AND GUTTER WITH PROPOSED KERB AND GUTTER AND MAKE GOOD

TYPICAL 3.6m WIDE CONCRETE DRIVEWAYS TO BE INSTALLED IN ACCORDANCE WITH DRAWING TSD-R14-v3 FOR URBAN ROADS (FOR ALL PROPOSED DRIVEWAYS). ALL DRIVEWAYS TO INCLUDE PATH CHAMFERS INSTALLED IN ACCORDANCE WITH DRAWING TSD-R09-v3

PROPOSED KERB RAMPS TO BE INSTALLED

PROPOSED 3.0m WIDE EASEMENT FOR SEWER AND STORMWATER

FUTURE STAGES

ROAD 02

ROAD 03

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LAND USE PLANNING
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Client: FUTURE DEVELOPMENTS PTY LTD
Project: STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title: GENERAL ARRANGEMENT LAYOUT PLAN SHEET 04

Drawing No: 4806-43_G107
Revision: 3

PROPOSED 3m WIDE EASEMENT FOR SEWER

PROPOSED 3m WIDE EASEMENT FOR SEWER

PROPOSED 2.5m WIDE EASEMENT FOR SEWER

LUMEAH AVENUE

NORTH

PROPOSED 3m WIDE EASEMENT FOR SEWER AND STORMWATER

ROAD 01

ROAD 02

ROAD 03

ROAD 04

ROAD 05

HEARPS ROAD

PROPOSED 3m WIDE EASEMENT FOR SEWER AND STORMWATER

PROPOSED VARIABLE WIDE EASEMENT MIN 3.0m WIDE FOR SEWER AND STORMWATER

PROPOSED 3m WIDE EASEMENT FOR SEWER AND STORMWATER

FUTURE STAGES

CENTRAL COAST COUNCIL
LAND USE PLANNING

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Client FUTURE DEVELOPMENTS PTY LTD

Project STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE

Title LOT LAYOUT PLAN

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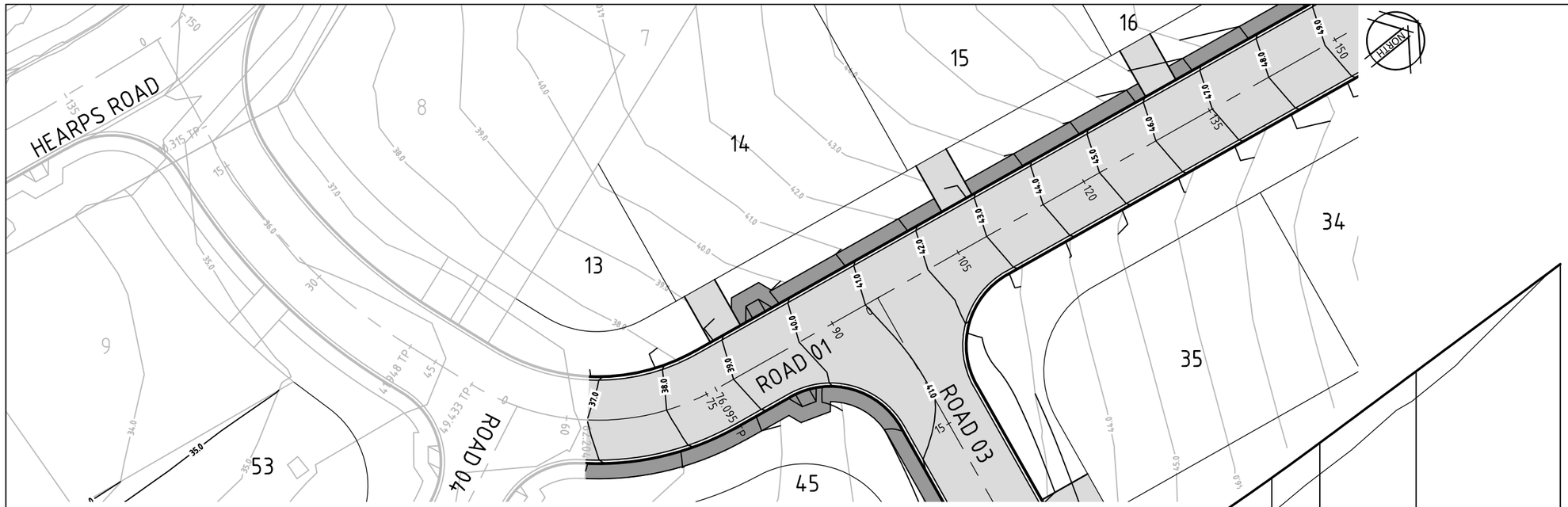
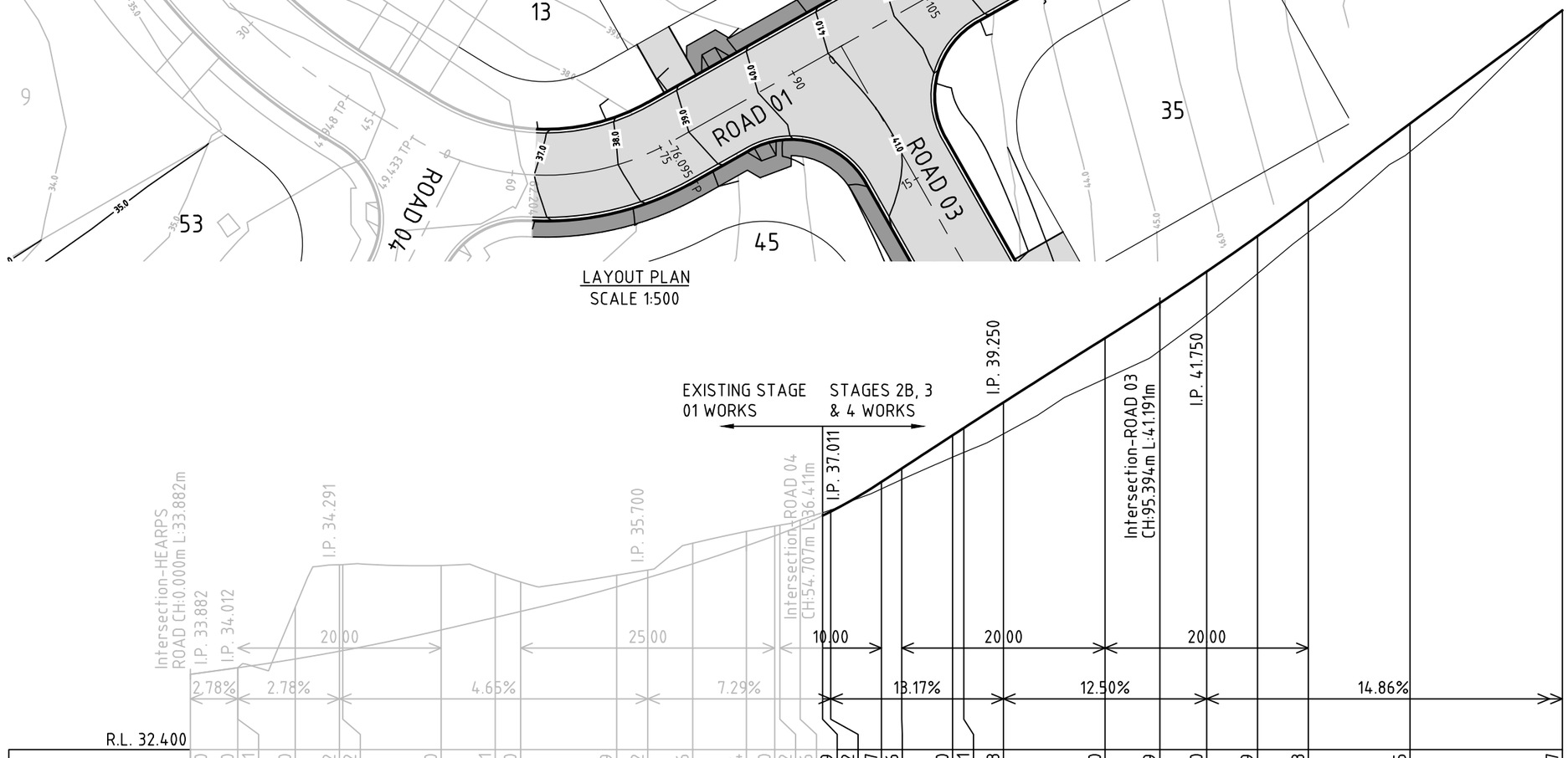


LAYOUT PLAN
SCALE 1:500



R.L. 32.400

CHAINAGE	EXISTING LEVELS	DESIGN LEVELS	CUT/FILL DEPTHS
0.000	33.882	33.882	-0.000
4.666	34.012	34.012	-0.000
4.667	34.013	34.012	+0.001
10.315	35.204	34.184	+1.020
14.667	36.039	34.337	+1.702
15.000	36.042	34.350	+1.692
24.667	36.025	34.755	+1.270
30.000	35.864	35.003	+0.861
32.500	35.699	35.119	+0.580
41.948	35.834	35.605	+0.229
45.000	35.935	35.783	+0.152
49.433	36.463	36.057	+0.406
54.707	36.695	36.411	+0.284
57.500	36.801	36.611	+0.190
58.000	36.819	36.647	+0.172
60.000	36.921	36.805	+0.116
62.204	37.064	37.005	+0.059
63.000	37.117	37.085	+0.032
68.000	37.533	37.670	-0.137
70.000	37.717	37.933	-0.216
75.000	38.157	38.587	-0.430
76.095	38.249	38.730	-0.481
80.000	38.615	39.233	-0.618
90.000	39.700	40.500	-0.800
95.394	40.252	41.191	-0.939
100.000	40.949	41.809	-0.860
105.000	41.769	42.508	-0.739
110.000	42.583	43.236	-0.653
120.000	44.167	44.722	-0.555
135.000	46.957	46.950	+0.007

LONGITUDINAL SECTION ROAD 01 CH 0.000 TO 150.000
SCALES: HORIZ 1:500 VERT 1:100

0 2 4 6 8 10m
SCALE 1:100

0 10 20 30 40 50m
SCALE 1:500

CSE TASMANIA PTY LTD
civil • structural • environmental engineering
PO Box 49, Turners Beach TAS 7315
127 Leith Road, Leith TAS 7315
ACN 118 678 667
m 0429 418 739
chris@csetas.com.au

DO NOT SCALE | Original Size A3

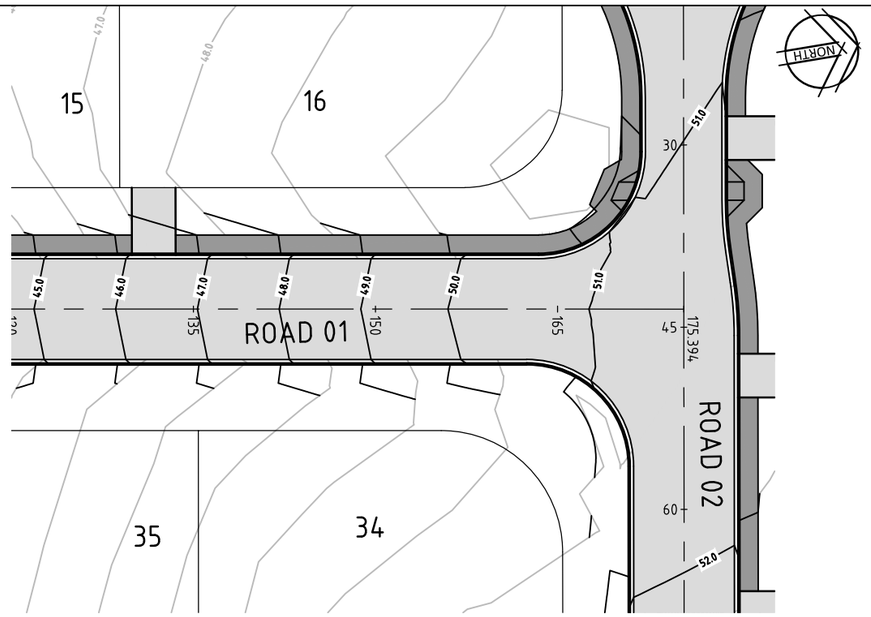
FOR CONSTRUCTION

Scale	AS NOTED
Designed	CHRIS MARTIN
Drawn	CJG
Accred. No.	CC4109V
Approved	CHRIS MARTIN
Date	MAY 2022

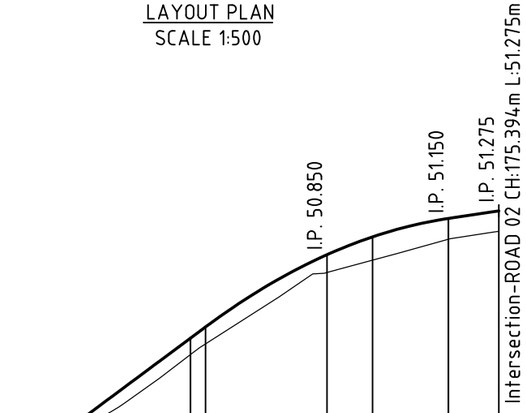
No	Revision	Drawn	Date
3	ROAD, STORMWATER AND SEWER DESIGNS UPDATED	CJG	25/09/25
2	DRAWING UPDATED WITH COMMENTS FROM TASWATER	CJG	23/07/22
1	DRAWING UPDATED WITH COMMENTS FROM COUNCIL	CJG	12/07/2022
0	DRAWING UPDATED FOR CONSTRUCTION	CJG	30/06/22

Client FUTURE DEVELOPMENTS PTY LTD
Project STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title ROAD 01 LAYOUT AND LONG SECTION PLAN SHEET 01

Drawing No: 4806-43_C101 | Revision: 3



LAYOUT PLAN
SCALE 1:500



R.L. 44.900

CUT/FILL DEPTHS	+0.007	-0.270	-0.279	-0.293	-0.384	-0.341	-0.341	-0.337
DESIGN LEVELS	46.950	49.179	49.364	50.553	50.847	51.150	51.150	51.275
EXISTING LEVELS	46.957	48.909	49.085	50.260	50.463	50.809	50.809	50.938
CHAINAGE	135.000	150.000	151.243	161.243	165.000	171.243	171.244	175.394

LONGITUDINAL SECTION ROAD 01 CH 150.000 TO 175.394
SCALES: HORIZ 1:500 VERT 1:100

0 2 4 6 8 10m
SCALE 1:100
0 10 20 30 40 50m
SCALE 1:500

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DO NOT SCALE | Original Size A3

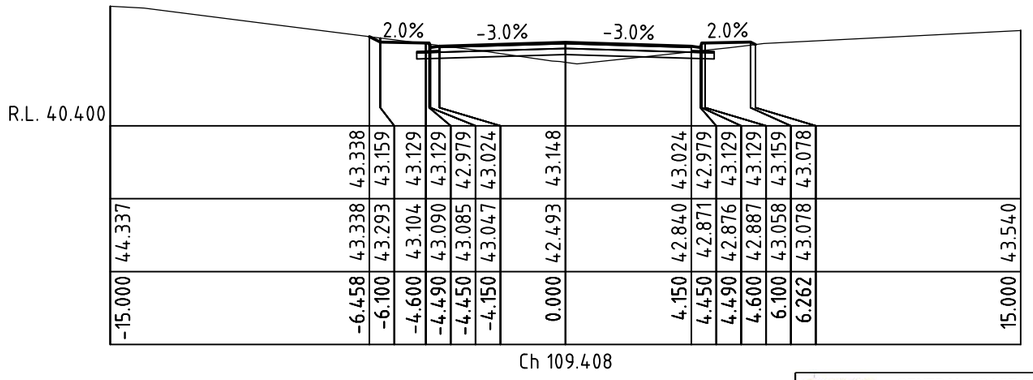
FOR CONSTRUCTION

Scale	AS NOTED
Designed	CHRIS MARTIN
Drawn	CJG
Accred. No.	CC4109V
Approved	CHRIS MARTIN
Date	MAY 2022

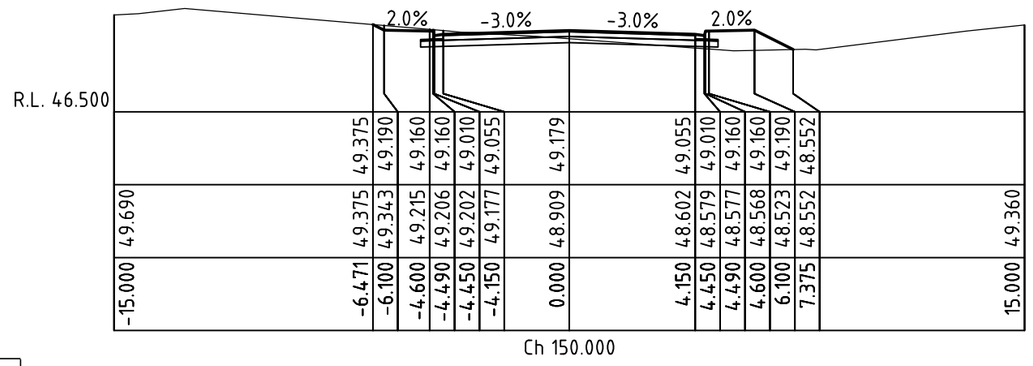
No	Revision	Drawn	Date
3	ROAD, STORMWATER AND SEWER DESIGNS UPDATED	CJG	25/09/25
2	DRAWING UPDATED WITH COMMENTS FROM TASWATER	CJG	23/07/22
1	DRAWING UPDATED WITH COMMENTS FROM COUNCIL	CJG	12/07/2022
0	DRAWING UPDATED FOR CONSTRUCTION	CJG	30/06/22

Client FUTURE DEVELOPMENTS PTY LTD
Project STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title ROAD 01 LAYOUT AND LONG SECTION PLAN SHEET 02

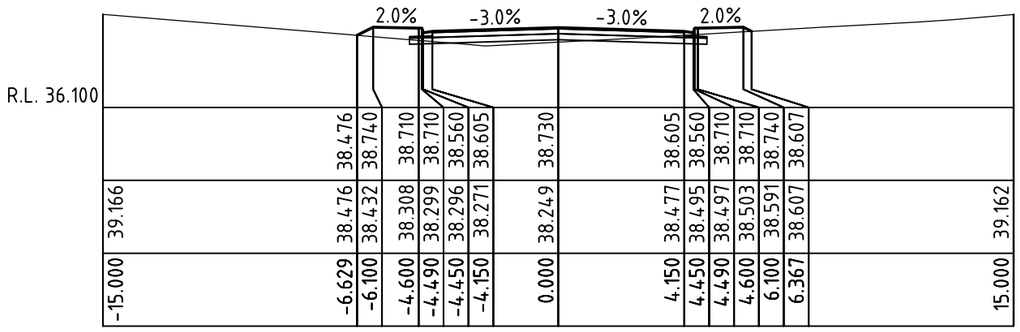
Drawing No: 4806-43_C102 | Revision: 3



Ch 109.408

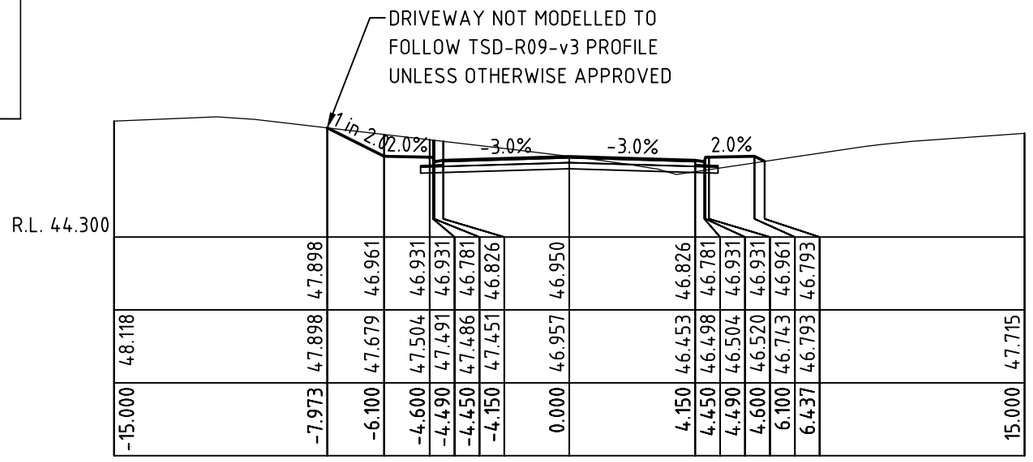


Ch 150.000

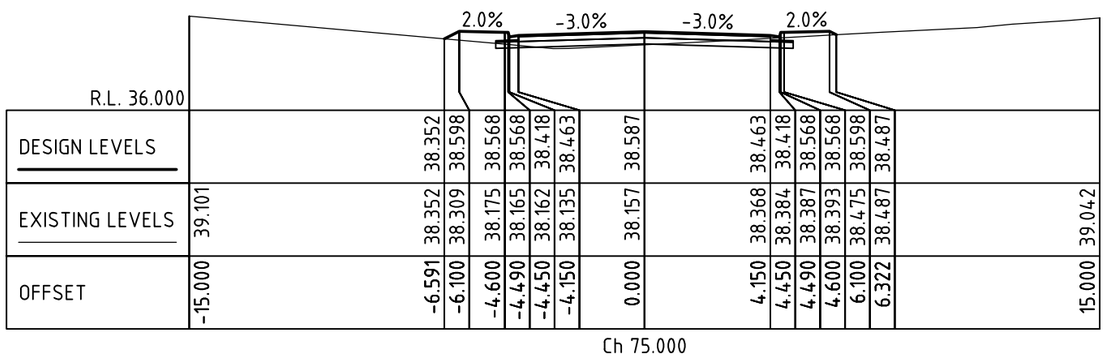


Ch 76.095

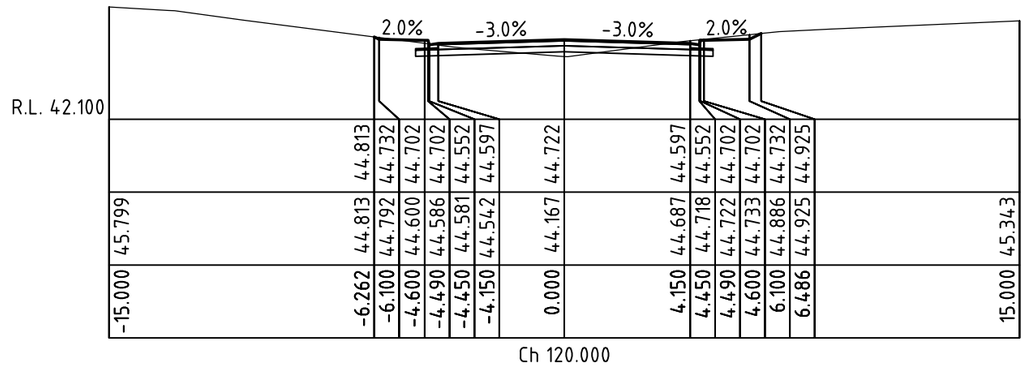
DRIVEWAY NOT MODELLED TO
FOLLOW TSD-R09-v3 PROFILE
UNLESS OTHERWISE APPROVED



Ch 135.000



Ch 75.000



Ch 120.000

ROAD 01 CROSS SECTIONS

SCALE 1:200H 1:200V

0 5 10 15 20m
SCALE 1:200

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ACN 118 678 667
m 0429 418 739
chris@csetas.com.au

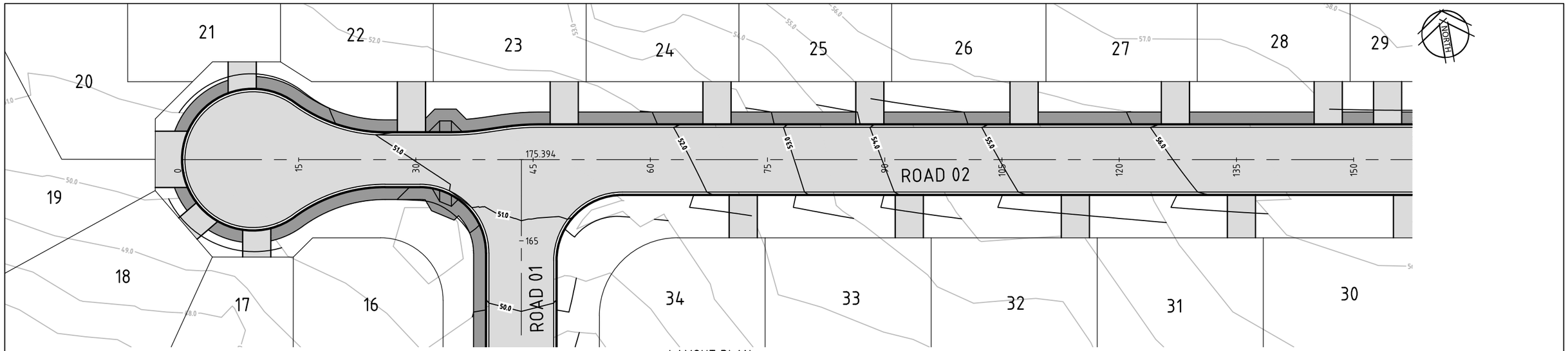
DO NOT SCALE | Original Size A3

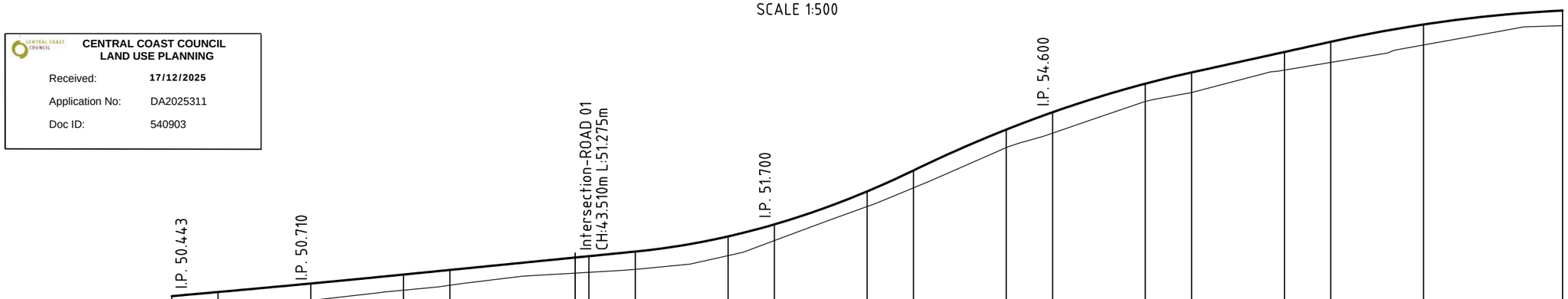
FOR CONSTRUCTION

Scale	1:200H 1:200V
Designed	CHRIS MARTIN
Drawn	CJG
Accred. No.	CC4109V
Approved	CHRIS MARTIN
Date	MAY 2022

No	Revision	Drawn	Date
3	ROAD, STORMWATER AND SEWER DESIGNS UPDATED	CJG	25/09/25
2	DRAWING UPDATED WITH COMMENTS FROM TASWATER	CJG	23/07/22
1	DRAWING UPDATED WITH COMMENTS FROM COUNCIL	CJG	12/07/2022
0	DRAWING UPDATED FOR CONSTRUCTION	CJG	30/06/22

Client FUTURE DEVELOPMENTS PTY LTD
Project STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title ROAD 01 CROSS SECTIONS PLAN
Drawing No: 4806-43_C103
Revision: 3





LAYOUT PLAN
SCALE 1:500

CENTRAL COAST COUNCIL
LAND USE PLANNING
Received: 17/12/2025
Application No: DA2025311
Doc ID: 540903

CUT/FILL DEPTHS	-0.237	-0.388	-0.365	-0.336	-0.329	-0.337	-0.348	-0.384	-0.413	-0.349	-0.327	-0.375	-0.388	-0.449	-0.385	-0.433	-0.390	-0.445	-0.441	-0.326
DESIGN LEVELS	50.443	50.532	50.715	50.908	51.007	51.275	51.304	51.403	51.729	51.988	52.699	53.150	54.029	54.403	55.018	55.260	55.700	55.920	56.292	56.593
EXISTING LEVELS	50.206	50.144	50.350	50.572	50.678	50.938	50.956	51.019	51.316	51.639	52.372	52.775	53.641	53.953	54.633	54.827	55.310	55.475	55.851	56.267
CHAINAGE	0.000	5.000	15.000	25.000	30.000	43.510	45.000	50.000	60.000	65.000	75.000	80.000	90.000	95.000	105.000	110.000	120.000	125.000	135.000	150.000

LONGITUDINAL SECTION ROAD 02 CH 0.000 TO 150.000
SCALES: HORIZ 1:500 VERT 1:100

CSE TASMANIA PTY LTD
civil • structural • environmental engineering

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127 Leith Road, Leith TAS 7315
ACN 118 678 667
m 0429 418 739
chris@csetas.com.au

DO NOT SCALE
Original Size A3

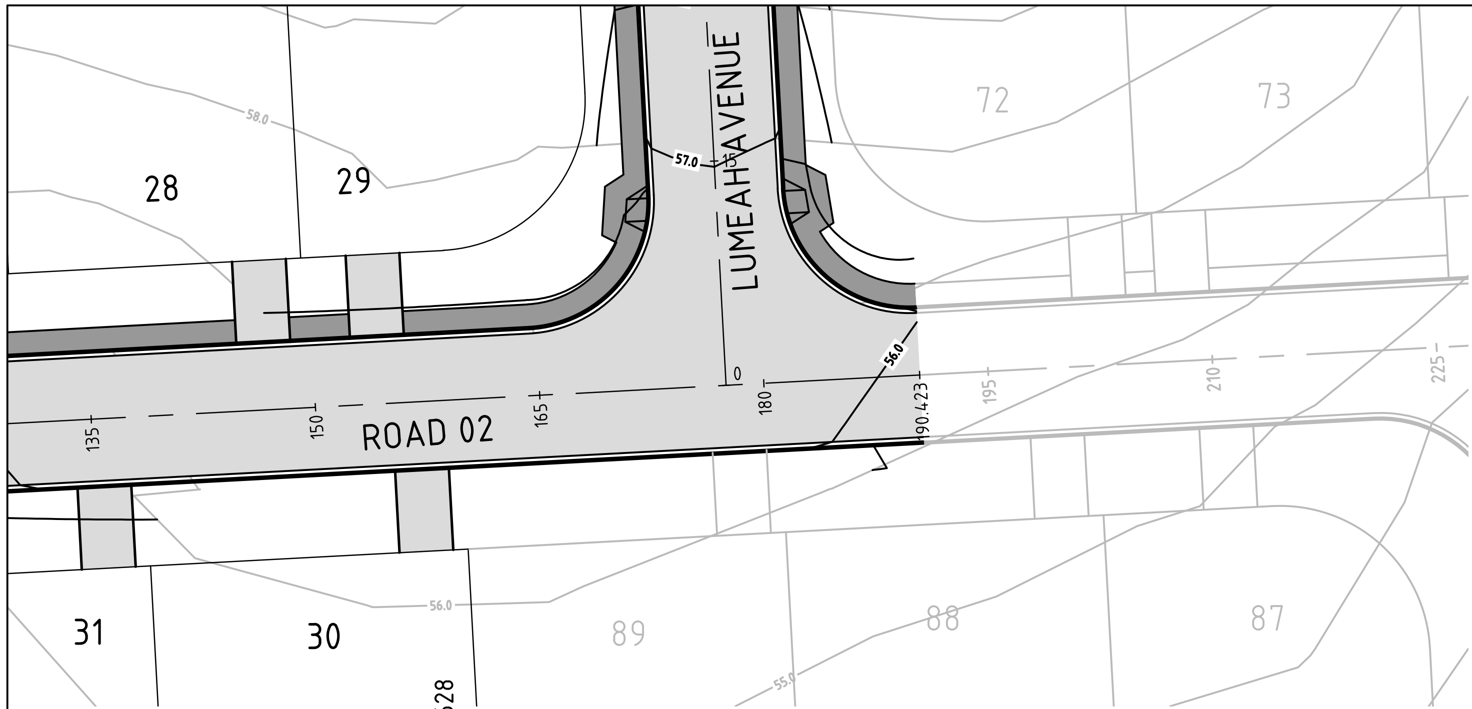
FOR CONSTRUCTION

Scale: AS NOTED
Designed: CHRIS MARTIN
Drawn: CJG
Accred. No.: CC4109V
Approved: CHRIS MARTIN
Date: MAY 2022

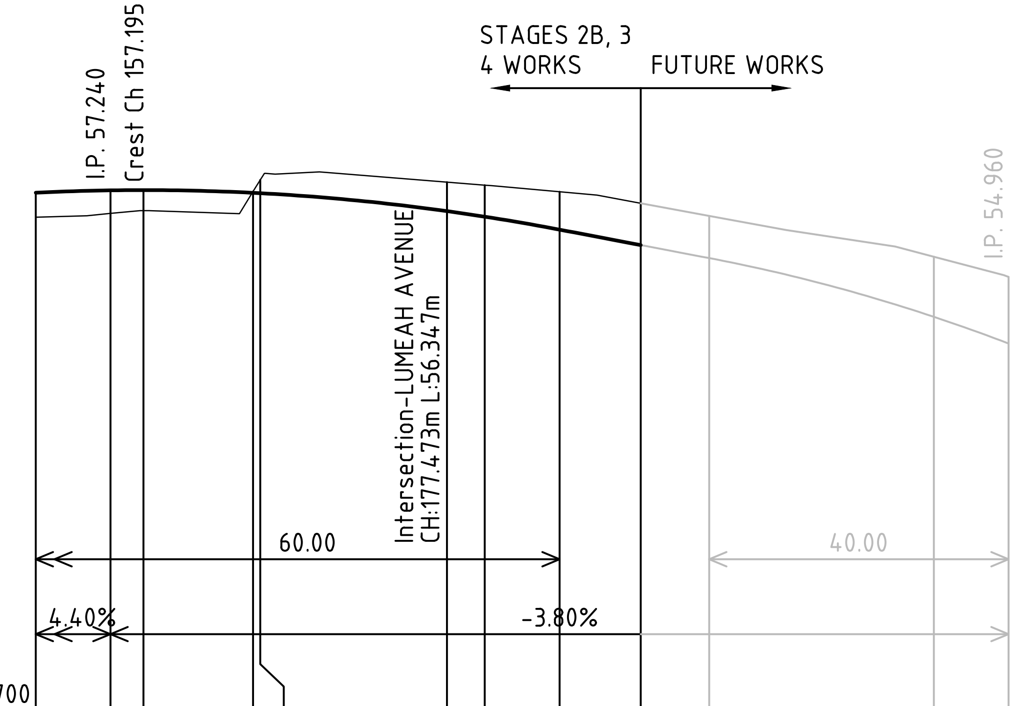
No	Revision	Drawn	Date
3	ROAD, STORMWATER AND SEWER DESIGNS UPDATED	CJG	25/09/25
2	DRAWING UPDATED WITH COMMENTS FROM TASWATER	CJG	23/07/22
1	DRAWING UPDATED WITH COMMENTS FROM COUNCIL	CJG	12/07/2022
0	DRAWING UPDATED FOR CONSTRUCTION	CJG	30/06/22

Client: **FUTURE DEVELOPMENTS PTY LTD**
Project: **STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE**
Title: **ROAD 02 LAYOUT AND LONG SECTION PLAN SHEET 01**
Drawing No: **4806-43_C104**
Revision: **3**

CENTRAL COAST COUNCIL
LAND USE PLANNING
Received: 17/12/2025
Application No: DA2025311
Doc ID: 540903



LAYOUT PLAN
SCALE 1:500



CUT/FILL DEPTHS	-0.326	-0.309	-0.274	+0.018	+0.177	+0.387	+0.421	+0.506	+0.559	+0.564	+0.803	+0.889
DESIGN LEVELS	56.593	56.625	56.628	56.592	56.587	56.347	56.273	56.100	55.894	55.720	54.936	54.580
EXISTING LEVELS	56.267	56.316	56.354	56.610	56.764	56.734	56.694	56.606	56.453	56.284	55.739	55.469
CHAINAGE	150.000	155.000	157.195	164.523	165.000	177.473	180.000	185.000	190.423	195.000	210.000	215.000

LONGITUDINAL SECTION ROAD 02 CH 150.000 TO 300.000
SCALES: HORIZ 1:500 VERT 1:100

SCALE 1:100 (0 2 4 6 8 10m)
SCALE 1:500 (0 10 20 30 40 50m)

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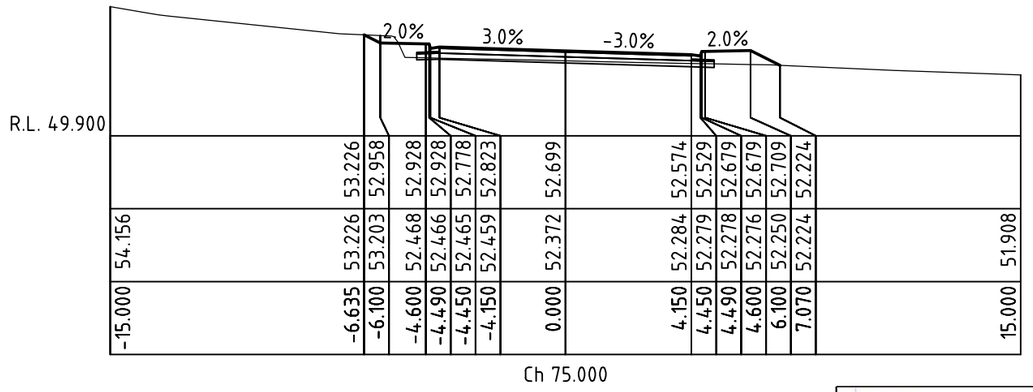
m 0429 418 739
chris@csetas.com.au

DO NOT SCALE | Original Size A3
FOR CONSTRUCTION

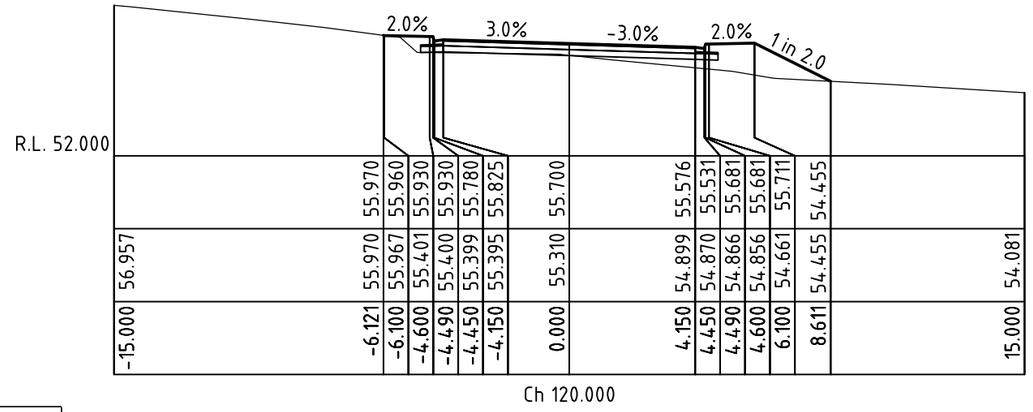
Scale	AS NOTED	Designed	CHRIS MARTIN
Drawn	CJG	Accred. No.	CC4109V
Approved	CHRIS MARTIN		
Date	MAY 2022		

No	Revision	Drawn	Date
3	ROAD, STORMWATER AND SEWER DESIGNS UPDATED	CJG	25/09/25
2	DRAWING UPDATED WITH COMMENTS FROM TASWATER	CJG	23/07/22
1	DRAWING UPDATED WITH COMMENTS FROM COUNCIL	CJG	12/07/2022
0	DRAWING UPDATED FOR CONSTRUCTION	CJG	30/06/22

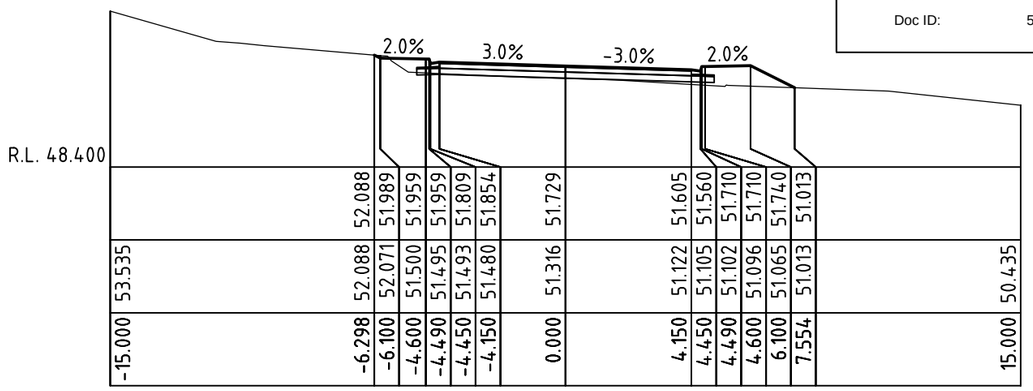
Client: FUTURE DEVELOPMENTS PTY LTD
Project: STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title: ROAD 02 LAYOUT AND LONG SECTION PLAN SHEET 02
Drawing No: 4806-43_C105 | Revision: 3



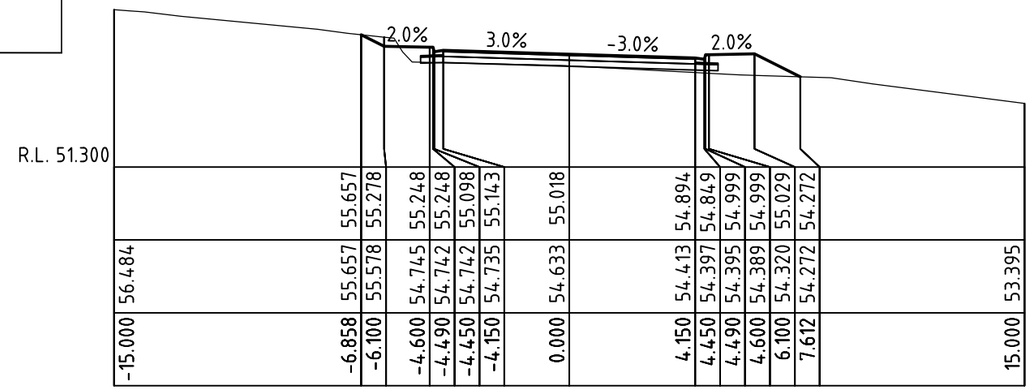
Ch 75.000



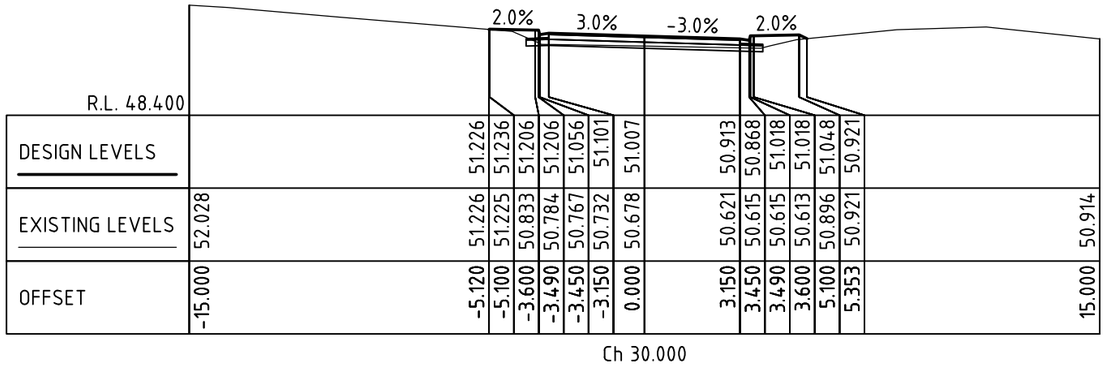
Ch 120.000



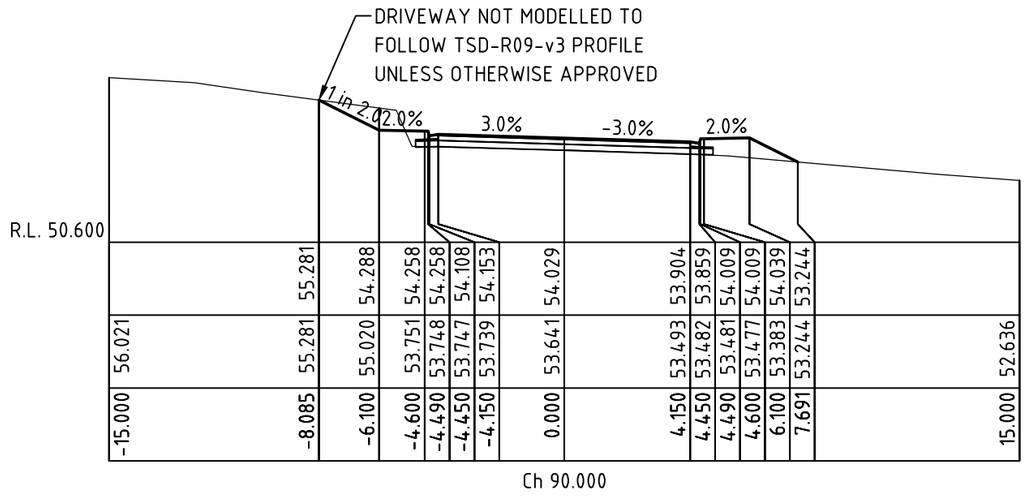
Ch 60.000



Ch 105.000



Ch 30.000



Ch 90.000

ROAD 02 CROSS SECTIONS

SCALE 1:200H 1:200V

0 5 10 15 20m
SCALE 1:200

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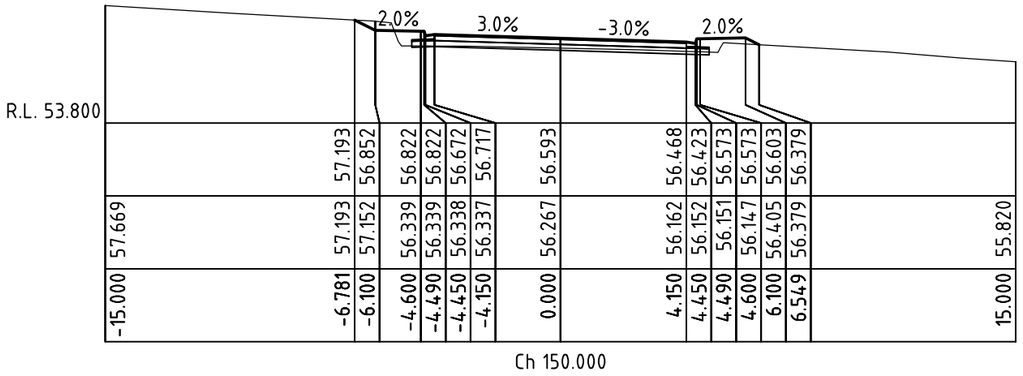
DO NOT SCALE | Original Size A3

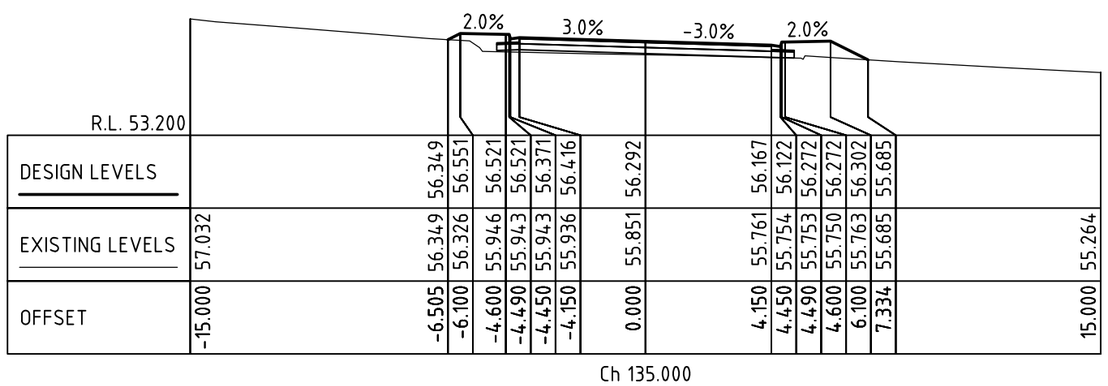
FOR CONSTRUCTION

Scale	1:200H 1:200V
Designed	CHRIS MARTIN
Drawn	CJG
Accred. No.	CC4109V
Approved	CHRIS MARTIN
Date	MAY 2022

No	Revision	Drawn	Date
3	ROAD, STORMWATER AND SEWER DESIGNS UPDATED	CJG	25/09/25
2	DRAWING UPDATED WITH COMMENTS FROM TASWATER	CJG	23/07/22
1	DRAWING UPDATED WITH COMMENTS FROM COUNCIL	CJG	12/07/2022
0	DRAWING UPDATED FOR CONSTRUCTION	CJG	30/06/22

Client FUTURE DEVELOPMENTS PTY LTD
Project STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title ROAD 02 CROSS SECTIONS PLAN SHEET 01
Drawing No: 4806-43_C106
Revision: 3





ROAD 02 CROSS SECTIONS
SCALE 1:200H 1:200V

0 5 10 15 20m
SCALE 1:200

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m 0429 418 739
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DO NOT SCALE | Original Size A3

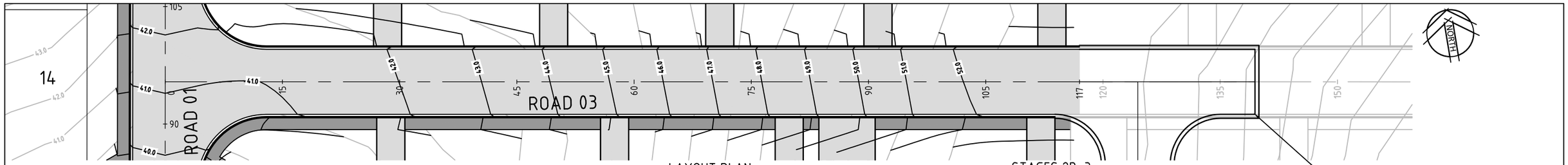
FOR CONSTRUCTION

Scale	1:200H 1:200V
Designed	CHRIS MARTIN
Drawn	CJG
Accred. No.	CC4109V
Approved	CHRIS MARTIN
Date	MAY 2022

No	Revision	Drawn	Date
3	ROAD, STORMWATER AND SEWER DESIGNS UPDATED	CJG	25/09/25
2	DRAWING UPDATED WITH COMMENTS FROM TASWATER	CJG	23/07/22
1	DRAWING UPDATED WITH COMMENTS FROM COUNCIL	CJG	12/07/2022
0	DRAWING UPDATED FOR CONSTRUCTION	CJG	30/06/22

Client FUTURE DEVELOPMENTS PTY LTD
Project STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title ROAD 02 CROSS SECTIONS PLAN SHEET 02

Drawing No: 4806-43_C107 | Revision: 3

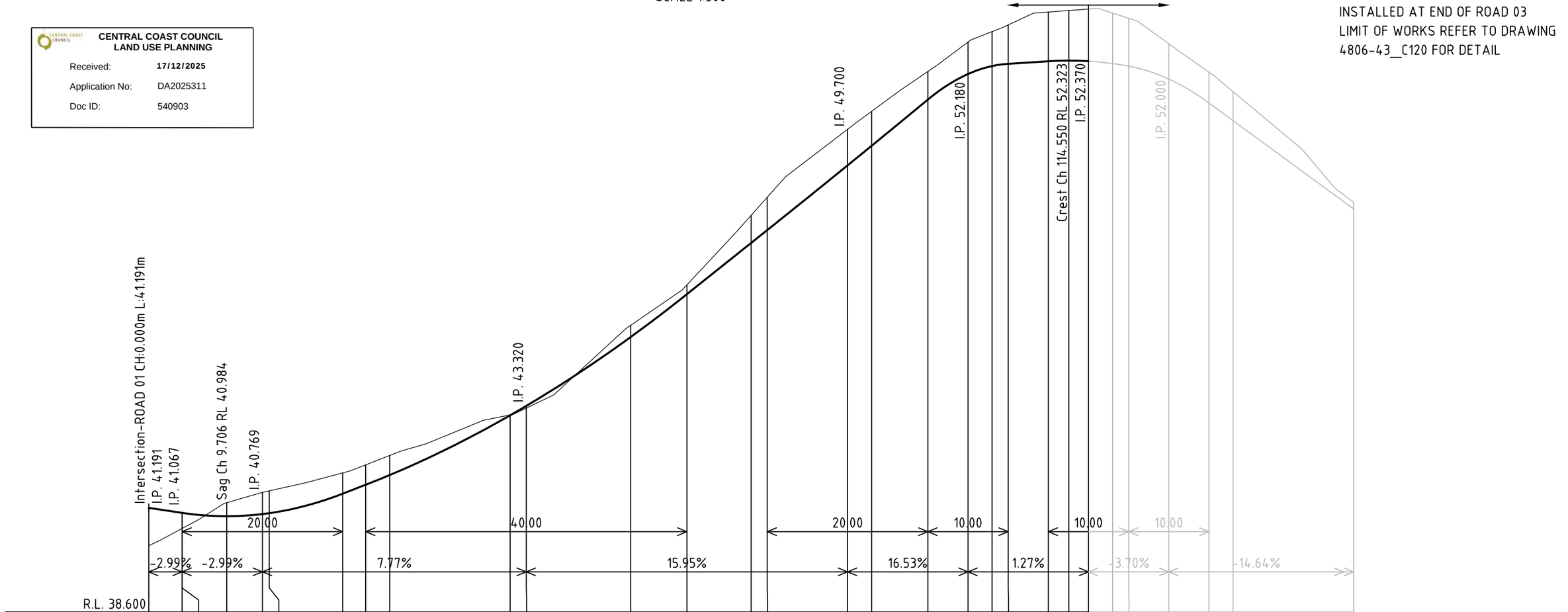


LAYOUT PLAN
SCALE 1:500

STAGES 2B, 3
4 WORKS

FUTURE WORKS

TEMPORARY TURNING HEAD TO BE INSTALLED AT END OF ROAD 03 LIMIT OF WORKS REFER TO DRAWING 4806-43_C120 FOR DETAIL



CHAINAGE	0.000	4.150	4.151	9.706	14.151	15.000	24.151	27.000	30.000	45.000	47.000	60.000	67.000	75.000	77.000	87.000	90.000	97.000	102.000	105.000	107.000	112.000	114.550	117.000	120.000	122.000	127.000	132.000	135.000	150.000
EXISTING LEVELS	40.252	40.679	40.680	41.320	41.577	41.615	42.063	42.261	42.495	43.504	43.675	45.735	46.743	48.474	48.922	50.613	51.061	52.053	52.785	53.043	53.210	53.531	53.569	53.605	53.506	53.376	52.743	52.033	51.550	48.795
DESIGN LEVELS	41.191	41.067	41.067	40.984	41.038	41.060	41.545	41.767	42.009	43.496	43.729	45.444	46.510	47.786	48.105	49.715	50.203	51.353	51.989	52.187	52.243	52.307	52.323	52.308	52.249	52.185	51.863	51.268	50.829	48.634
CUT/FILL DEPTHS	-0.939	-0.388	-0.387	+0.336	+0.539	+0.555	+0.518	+0.494	+0.486	+0.008	-0.054	+0.291	+0.233	+0.688	+0.817	+0.898	+0.858	+0.700	+0.796	+0.856	+0.967	+1.224	+1.246	+1.297	+1.257	+1.191	+0.880	+0.765	+0.721	+0.161

LONGITUDINAL SECTION ROAD 03 CH 0.000 TO 150.000
SCALES: HORIZ 1:500 VERT 1:100

SCALE 1:100
0 2 4 6 8 10m
SCALE 1:500
0 10 20 30 40 50m

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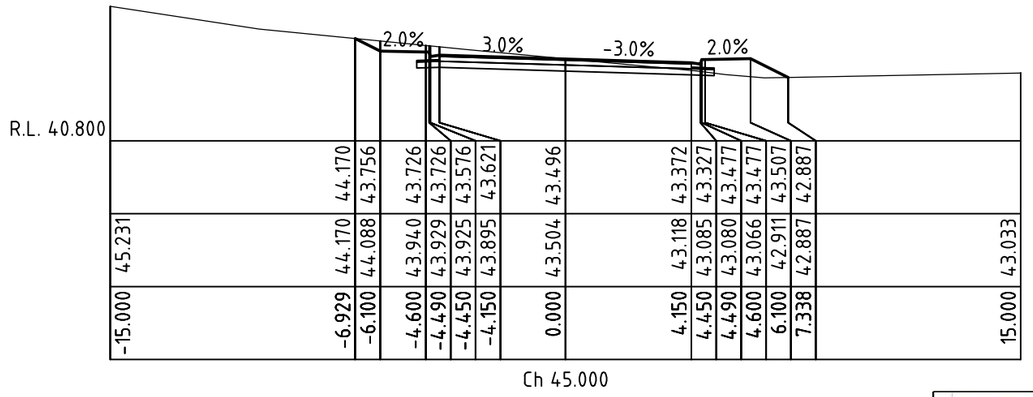
DO NOT SCALE | Original Size A3

FOR CONSTRUCTION

Scale	AS NOTED
Designed	CHRIS MARTIN
Drawn	CJG
Accred. No.	CC4109V
Approved	CHRIS MARTIN
Date	MAY 2022

No	Revision	Drawn	Date
3	ROAD, STORMWATER AND SEWER DESIGNS UPDATED	CJG	25/09/25
2	DRAWING UPDATED WITH COMMENTS FROM TASWATER	CJG	23/07/22
1	DRAWING UPDATED WITH COMMENTS FROM COUNCIL	CJG	12/07/2022
0	DRAWING UPDATED FOR CONSTRUCTION	CJG	30/06/22

Client: FUTURE DEVELOPMENTS PTY LTD
Project: STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title: ROAD 03 LAYOUT AND LONG SECTION PLAN
Drawing No: 4806-43_C108
Revision: 3



	44.170	43.756	43.726	43.726	43.576	43.621	43.496	43.372	43.327	43.477	43.477	43.507	42.887	
45.231	44.170	44.088	43.940	43.929	43.925	43.895	43.504	43.118	43.085	43.080	43.066	42.911	42.887	43.033
-15.000	-6.929	-6.100	-4.600	-4.490	-4.450	-4.150	0.000	4.150	4.450	4.490	4.600	6.100	7.338	15.000

Ch 45.000

	50.672	50.463	50.433	50.433	50.283	50.328	50.203	50.079	50.034	50.184	50.184	50.214	51.590	
50.544	50.672	50.697	50.787	50.793	50.796	50.813	51.061	51.309	51.327	51.329	51.336	51.425	51.590	52.201
-15.000	-6.519	-6.100	-4.600	-4.490	-4.450	-4.150	0.000	4.150	4.450	4.490	4.600	6.100	8.852	15.000

Ch 90.000

CENTRAL COAST COUNCIL
LAND USE PLANNING
Received: 17/12/2025
Application No: DA2025311
Doc ID: 540903

DRIVEWAY NOT MODELLED TO
FOLLOW TSD-R09-v3 PROFILE
UNLESS OTHERWISE APPROVED

	43.667	42.268	42.238	42.238	42.088	42.133	42.009	41.884	41.839	41.989	41.989	42.019	41.538	
44.467	43.667	43.310	43.117	43.103	43.098	43.059	42.495	41.881	41.837	41.831	41.815	41.628	41.538	40.830
-15.000	-8.896	-6.100	-4.600	-4.490	-4.450	-4.150	0.000	4.150	4.450	4.490	4.600	6.100	7.063	15.000

Ch 30.000

	48.294	48.046	48.016	48.016	47.866	47.911	47.786	47.662	47.617	47.767	47.767	47.797	48.688	
48.378	48.294	48.308	48.349	48.352	48.353	48.361	48.474	48.587	48.595	48.596	48.599	48.640	48.688	49.127
-15.000	-6.598	-6.100	-4.600	-4.490	-4.450	-4.150	0.000	4.150	4.450	4.490	4.600	6.100	7.884	15.000

Ch 75.000

DRIVEWAY NOT MODELLED TO
FOLLOW TSD-R09-v3 PROFILE
UNLESS OTHERWISE APPROVED

DESIGN LEVELS		42.881	41.319	41.289	41.289	41.139	41.184	41.060	40.935	40.890	41.040	41.040	41.070	40.615	
EXISTING LEVELS	43.683	42.881	42.453	42.249	42.234	42.229	42.188	41.615	41.014	40.971	40.965	40.949	40.732	40.615	39.555
OFFSET	-15.000	-9.224	-6.100	-4.600	-4.490	-4.450	-4.150	0.000	4.150	4.450	4.490	4.600	6.100	7.011	15.000

Ch 15.000

	45.916	45.703	45.673	45.673	45.523	45.568	45.444	45.319	45.274	45.424	45.424	45.454	45.559	
46.518	45.916	45.904	45.863	45.860	45.858	45.850	45.735	45.619	45.611	45.610	45.607	45.565	45.559	45.995
-15.000	-6.526	-6.100	-4.600	-4.490	-4.450	-4.150	0.000	4.150	4.450	4.490	4.600	6.100	6.311	15.000

Ch 60.000

ROAD 03 CROSS SECTIONS

SCALE 1:200H 1:200V

0 5 10 15 20m
SCALE 1:200

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DO NOT SCALE

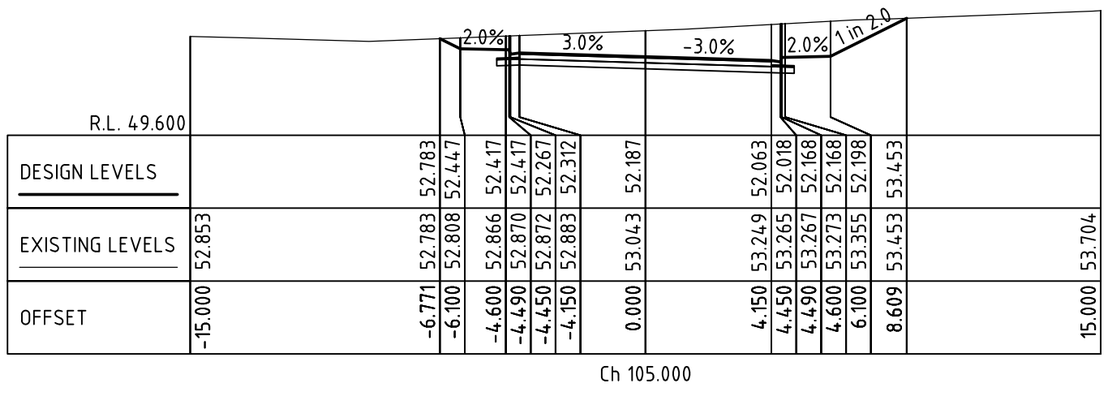
Original Size A3

FOR CONSTRUCTION

Scale	Designed
1:200H 1:200V	CHRIS MARTIN
Drawn CJG	Accred. No. CC4109V
Approved CHRIS MARTIN	
Date MAY 2022	

No	Revision	Drawn	Date
3	ROAD, STORMWATER AND SEWER DESIGNS UPDATED	CJG	25/09/25
2	DRAWING UPDATED WITH COMMENTS FROM TASWATER	CJG	23/07/22
1	DRAWING UPDATED WITH COMMENTS FROM COUNCIL	CJG	12/07/2022
0	DRAWING UPDATED FOR CONSTRUCTION	CJG	30/06/22

Client **FUTURE DEVELOPMENTS PTY LTD**
Project **STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE**
Title **ROAD 03 CROSS SECTIONS PLAN SHEET 01**
Drawing No: **4806-43_C109**
Revision: **3**



ROAD 03 CROSS SECTIONS
SCALE 1:200H 1:200V

0 5 10 15 20m
SCALE 1:200

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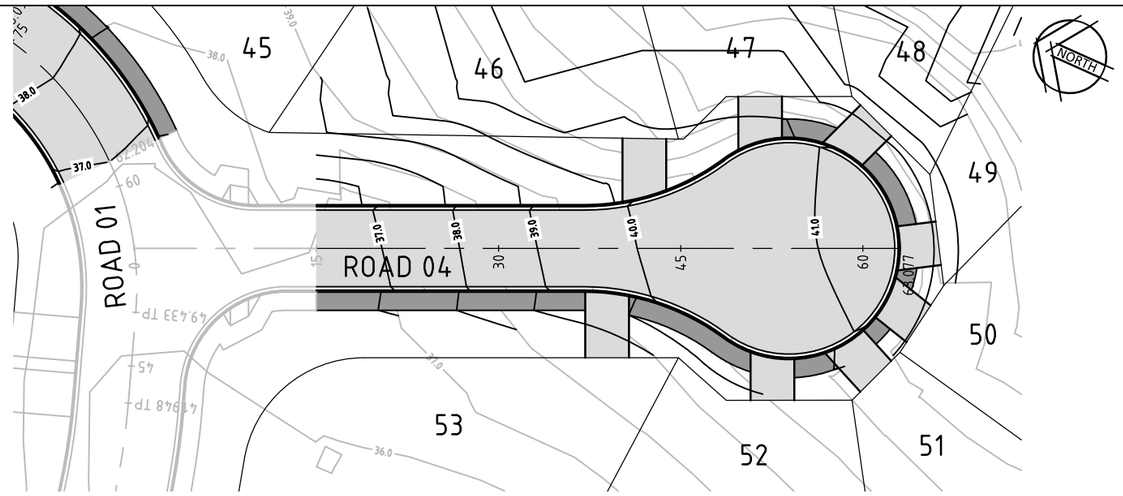
DO NOT SCALE | Original Size A3

FOR CONSTRUCTION

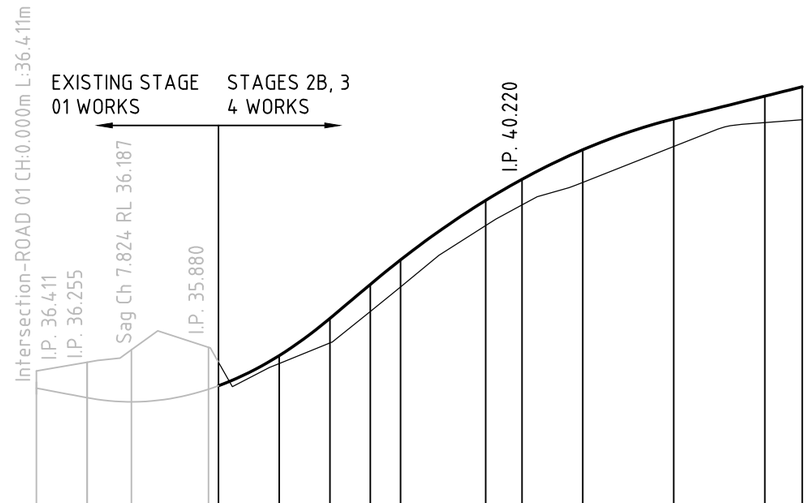
Scale	1:200H 1:200V
Designed	CHRIS MARTIN
Drawn	CJG
Accred. No.	CC4109V
Approved	CHRIS MARTIN
Date	MAY 2022

No	Revision	Drawn	Date
3	ROAD, STORMWATER AND SEWER DESIGNS UPDATED	CJG	25/09/25
2	DRAWING UPDATED WITH COMMENTS FROM TASWATER	CJG	23/07/22
1	DRAWING UPDATED WITH COMMENTS FROM COUNCIL	CJG	12/07/2022
0	DRAWING UPDATED FOR CONSTRUCTION	CJG	30/06/22

Client FUTURE DEVELOPMENTS PTY LTD
Project STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title ROAD 03 CROSS SECTIONS PLAN SHEET 02
Drawing No: 4806-43_C110 Revision: 3



LAYOUT PLAN
SCALE 1:500



R.L. 32.100

CHAINAGE	0.000	4.177	4.178	7.824	14.178	15.000	20.000	24.178	27.500	30.000	37.012	40.000	45.000	52.500	60.000	63.077
EXISTING LEVELS	36.695	36.839	36.839	37.043	37.084	36.838	36.817	37.157	37.674	38.079	39.090	39.428	39.799	40.392	40.785	40.832
DESIGN LEVELS	36.411	36.255	36.255	36.187	36.394	36.451	36.948	37.561	38.119	38.525	39.504	39.851	40.337	40.845	41.220	41.374
CUT/FILL DEPTHS	+0.284	+0.584	+0.584	+0.856	+0.690	-0.387	-0.131	-0.404	-0.445	-0.446	-0.414	-0.423	-0.538	-0.453	-0.435	-0.542

LONGITUDINAL SECTION ROAD 04 CH 0.000 TO 63.077
SCALES: HORIZ 1:500 VERT 1:100

0 2 4 6 8 10m
SCALE 1:100
0 10 20 30 40 50m
SCALE 1:500

CENTRAL COAST COUNCIL
LAND USE PLANNING
Received: 17/12/2025
Application No: DA2025311
Doc ID: 540903

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DO NOT SCALE | Original Size A3

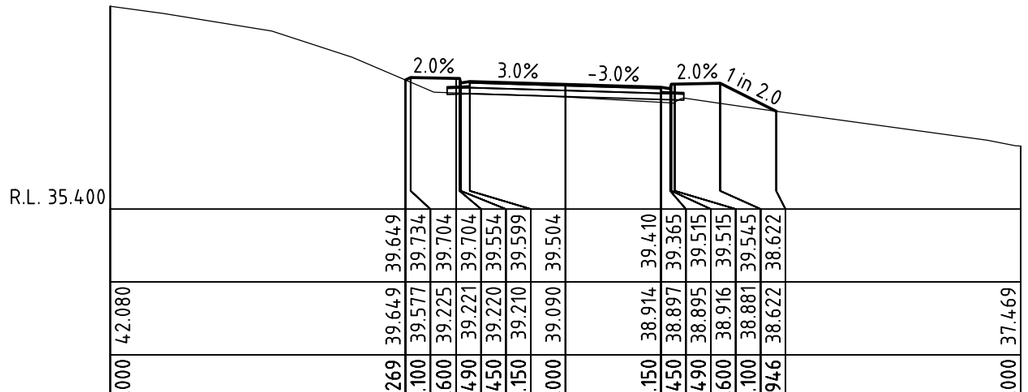
FOR CONSTRUCTION

Scale	AS NOTED
Designed	CHRIS MARTIN
Drawn	CJG
Accred. No.	CC4109V
Approved	CHRIS MARTIN
Date	MAY 2022

No	Revision	Drawn	Date
3	ROAD, STORMWATER AND SEWER DESIGNS UPDATED	CJG	25/09/25
2	DRAWING UPDATED WITH COMMENTS FROM TASWATER	CJG	23/07/22
1	DRAWING UPDATED WITH COMMENTS FROM COUNCIL	CJG	12/07/2022
0	DRAWING UPDATED FOR CONSTRUCTION	CJG	30/06/22

Client FUTURE DEVELOPMENTS PTY LTD
Project STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title ROAD 04 LAYOUT AND LONG SECTION PLAN

Drawing No: 4806-43_C111 | Revision: 3



CENTRAL COAST COUNCIL
LAND USE PLANNING
Received: 17/12/2025
Application No: DA2025311
Doc ID: 540903

DESIGN LEVELS		39.649	39.734	39.704	39.704	39.554	39.599	39.504	39.410	39.365	39.515	39.515	39.545	38.622	
EXISTING LEVELS	42.080	39.649	39.577	39.225	39.221	39.220	39.210	39.090	38.914	38.897	38.895	38.916	38.881	38.622	37.469
OFFSET	-15.000	-5.269	-5.100	-3.600	-3.490	-3.450	-3.150	0.000	3.150	3.450	3.490	3.600	5.100	6.946	15.000

Ch 37.012

DESIGN LEVELS		38.720	38.754	38.724	38.724	38.574	38.619	38.525	38.430	38.385	38.535	38.535	38.565	37.799	
EXISTING LEVELS	41.085	38.720	38.698	38.291	38.284	38.282	38.264	38.079	37.904	37.887	37.885	37.879	37.972	37.799	36.880
OFFSET	-15.000	-5.167	-5.100	-3.600	-3.490	-3.450	-3.150	0.000	3.150	3.450	3.490	3.600	5.100	6.632	15.000

Ch 30.000

ROAD 04 CROSS SECTIONS

SCALE 1:200H 1:200V

0 5 10 15 20m
SCALE 1:200

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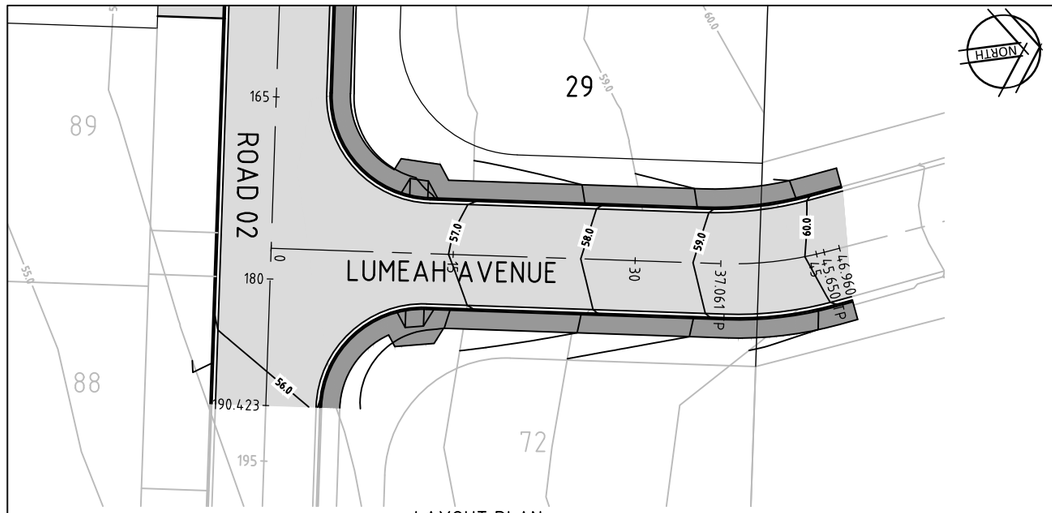
DO NOT SCALE
Original Size A3

FOR CONSTRUCTION

Scale: 1:200H 1:200V
Designed: CHRIS MARTIN
Drawn: CJG
Accred. No.: CC4109V
Approved: CHRIS MARTIN
Date: MAY 2022

No	Revision	Drawn	Date
3	ROAD, STORMWATER AND SEWER DESIGNS UPDATED	CJG	25/09/25
2	DRAWING UPDATED WITH COMMENTS FROM TASWATER	CJG	23/07/22
1	DRAWING UPDATED WITH COMMENTS FROM COUNCIL	CJG	12/07/2022
0	DRAWING UPDATED FOR CONSTRUCTION	CJG	30/06/22

Client: **FUTURE DEVELOPMENTS PTY LTD**
Project: **STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE**
Title: **ROAD 04 CROSS SECTIONS PLAN**
Drawing No: **4806-43_C112**
Revision: **3**



LAYOUT PLAN
SCALE 1:500

CUT/FILL DEPTHS	+0.387	+0.621	+0.621	+0.891	+0.892	+0.747	+0.526	+0.226	+0.020	+0.014	-0.000
DESIGN LEVELS	56.347	56.472	56.472	56.967	57.027	57.852	58.484	59.247	60.105	60.175	60.317
EXISTING LEVELS	56.734	57.093	57.093	57.858	57.919	58.599	59.010	59.473	60.125	60.189	60.317
CHAINAGE	0.000	4.150	4.151	14.151	15.000	24.151	30.000	37.061	45.000	45.650	46.960

LONGITUDINAL SECTION LUMEAH AVENUE CH 0.000 TO 46.960
SCALES: HORIZ 1:500 VERT 1:100

0 2 4 6 8 10m
SCALE 1:100
0 10 20 30 40 50m
SCALE 1:500

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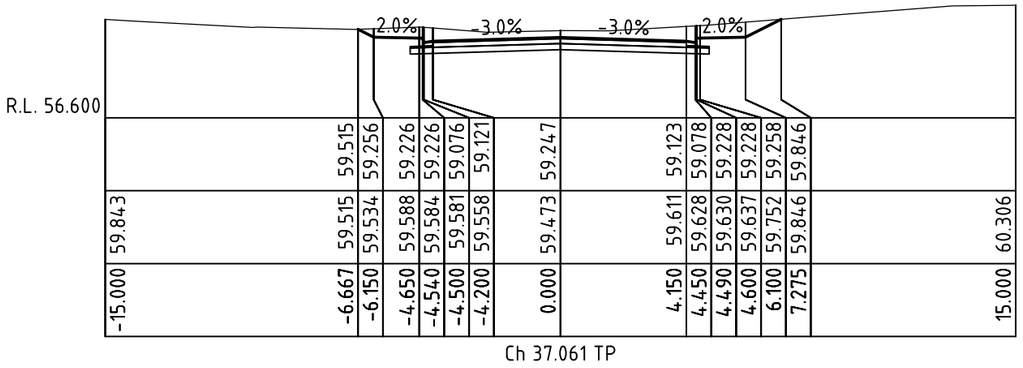
DO NOT SCALE
Original Size A3

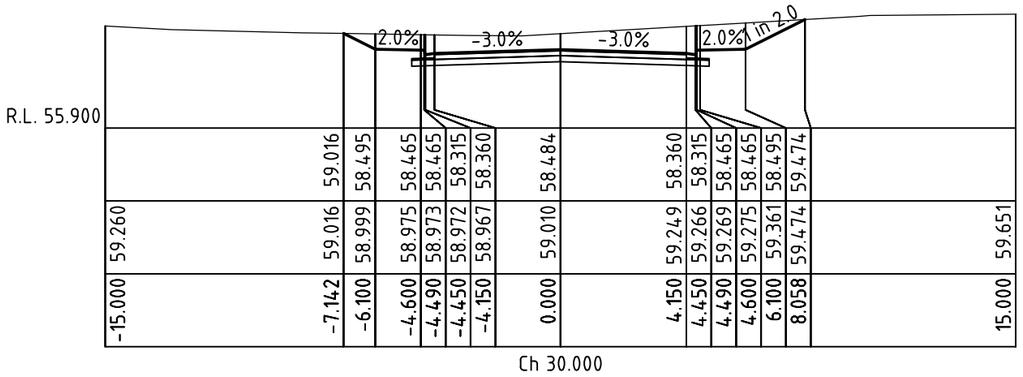
FOR CONSTRUCTION

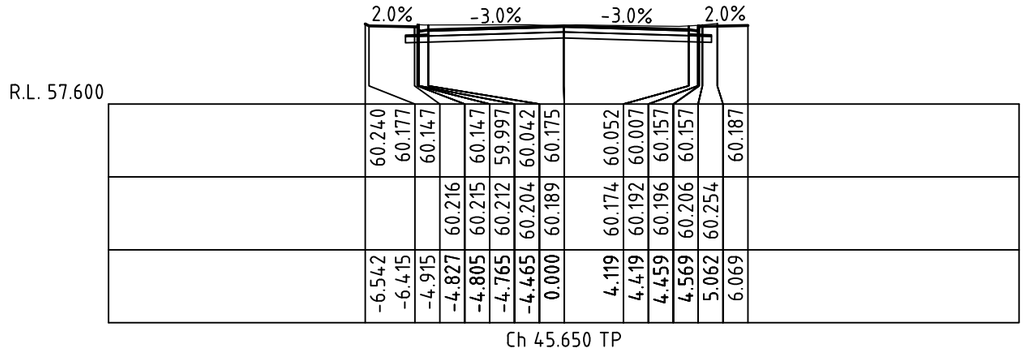
Scale: AS NOTED	Designed: CHRIS MARTIN
Drawn: CJG	Accred. No.: CC4109V
Approved: CHRIS MARTIN	
Date: MAY 2022	

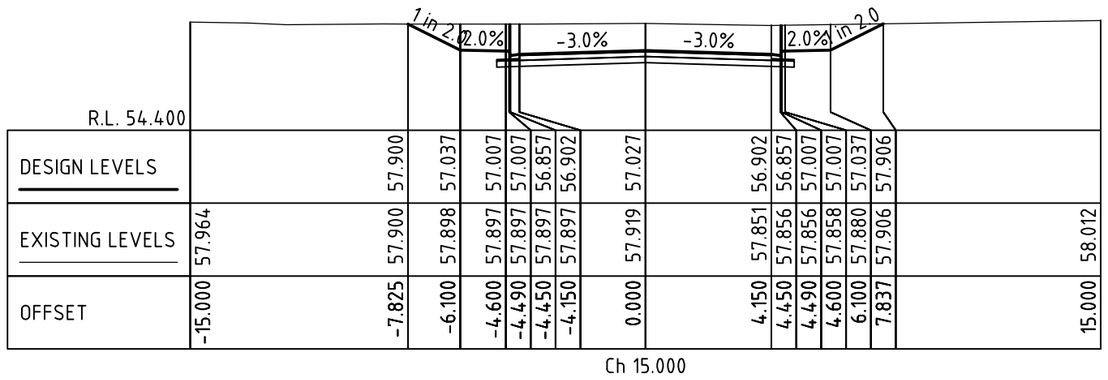
No	Revision	Drawn	Date
3	ROAD, STORMWATER AND SEWER DESIGNS UPDATED	CJG	25/09/25
2	DRAWING UPDATED WITH COMMENTS FROM TASWATER	CJG	23/07/22
1	DRAWING UPDATED WITH COMMENTS FROM COUNCIL	CJG	12/07/2022
0	DRAWING UPDATED FOR CONSTRUCTION	CJG	30/06/22

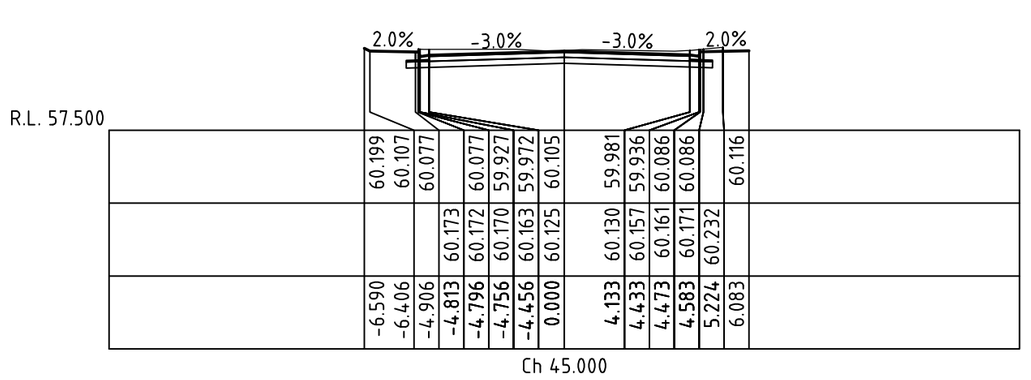
Client **FUTURE DEVELOPMENTS PTY LTD**
Project **STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE**
Title **LUMEAH AVENUE LAYOUT AND LONG SECTION PLAN**
Drawing No: 4806-43_C113
Revision: 3











LUMEAH AVENUE CROSS SECTIONS

SCALE 1:200H 1:200V

0 5 10 15 20m
SCALE 1:200

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DO NOT SCALE | Original Size A3

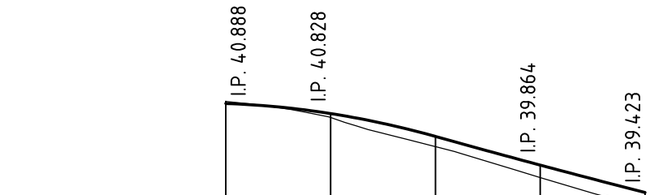
FOR CONSTRUCTION

Scale	1:200H 1:200V
Designed	CHRIS MARTIN
Drawn	CJG
Accred. No.	CC4109V
Approved	CHRIS MARTIN
Date	MAY 2022

No	Revision	Drawn	Date
3	ROAD, STORMWATER AND SEWER DESIGNS UPDATED	CJG	25/09/25
2	DRAWING UPDATED WITH COMMENTS FROM TASWATER	CJG	23/07/22
1	DRAWING UPDATED WITH COMMENTS FROM COUNCIL	CJG	12/07/2022
0	DRAWING UPDATED FOR CONSTRUCTION	CJG	30/06/22

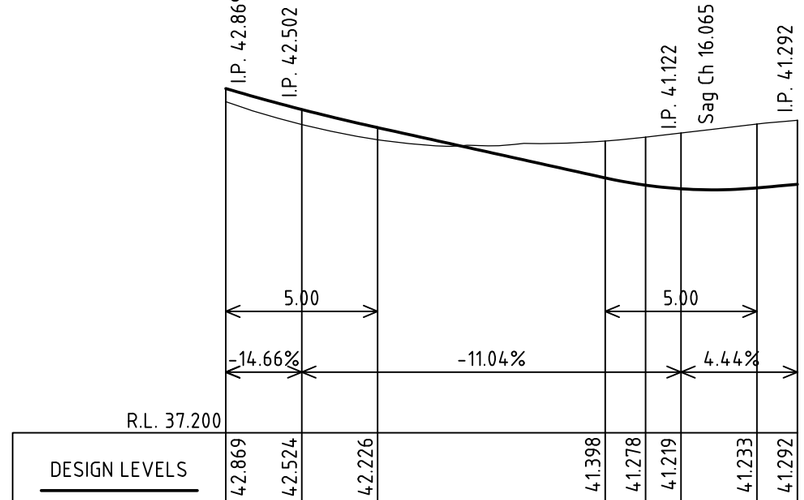
Client FUTURE DEVELOPMENTS PTY LTD
Project STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title LUMEAH AVENUE CROSS SECTIONS PLAN
Drawing No: 4806-43_C114
Revision: 3

INTERSECTION LAYOUT PLAN
SCALE 1:250



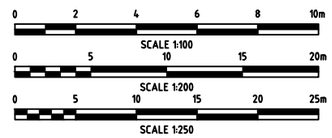
R.L. 35.100					
DESIGN LEVELS	40.888	40.723	40.346	39.874	39.423
EXISTING LEVELS	40.922	40.658	40.178	39.669	39.165
CHAINAGE	0.000	3.454	6.907	10.361	13.814

LONGITUDINAL SECTION KR05 CH 0.000 TO 13.814
SCALES: HORIZ 1:200 VERT 1:100



R.L. 37.200								
DESIGN LEVELS	42.869	42.524	42.226	41.398	41.278	41.219	41.233	41.292
EXISTING LEVELS	42.653	42.277	42.026	42.005	42.069	42.138	42.284	42.348
CHAINAGE	0.000	2.503	5.003	12.500	13.832	15.000	17.500	18.833

LONGITUDINAL SECTION KR06 CH 0.000 TO 18.833
SCALES: HORIZ 1:200 VERT 1:100



CENTRAL COAST COUNCIL
LAND USE PLANNING
Received: 17/12/2025
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DO NOT SCALE | Original Size A3

FOR CONSTRUCTION

Scale	Designed
AS NOTED	CHRIS MARTIN
Drawn: CJG	Accred. No.: CC4109V
Approved: CHRIS MARTIN	
Date: MAY 2022	

No	Revision	Drawn	Date
3	ROAD, STORMWATER AND SEWER DESIGNS UPDATED	CJG	25/09/25
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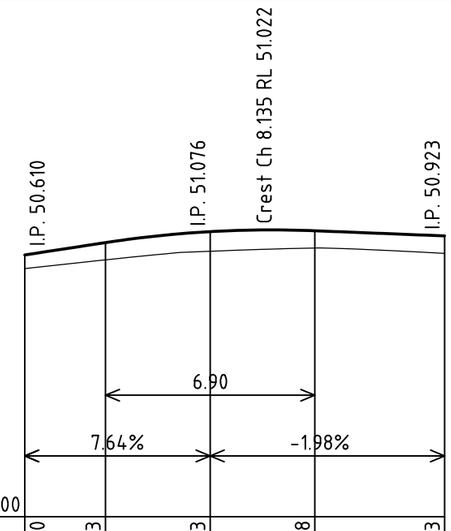
1	DRAWING UPDATED WITH COMMENTS FROM COUNCIL	CJG	12/07/2022
0	DRAWING UPDATED FOR CONSTRUCTION	CJG	30/06/22

Client: FUTURE DEVELOPMENTS PTY LTD
Project: STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title: KERB RETURN LAYOUT AND LONG SECTIONS PLAN SHEET 01
Drawing No: 4806-43_C115
Revision: 3

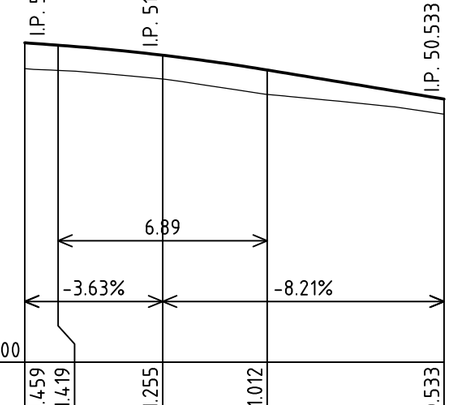
INTERSECTION LAYOUT PLAN
SCALE 1:250



R.L. 46.300

DESIGN LEVELS	50.610	50.813	50.993	51.008	50.923
EXISTING LEVELS	50.386	50.529	50.670	50.724	50.636
CHAINAGE	0.000	2.659	6.107	9.555	13.832

LONGITUDINAL SECTION KR07 CH 0.000 TO 13.832
SCALES: HORIZ 1:200 VERT 1:100



R.L. 46.200

DESIGN LEVELS	51.459	51.419	51.255	51.012	50.533
EXISTING LEVELS	51.035	51.005	50.863	50.609	50.284
CHAINAGE	0.000	1.099	4.542	7.986	13.814

LONGITUDINAL SECTION KR08 CH 0.000 TO 13.814
SCALES: HORIZ 1:200 VERT 1:100

0 2 4 6 8 10m
SCALE 1:100
0 5 10 15 20m
SCALE 1:200
0 5 10 15 20 25m
SCALE 1:250

CENTRAL COAST COUNCIL
LAND USE PLANNING
Received: 17/12/2025
Application No: DA2025311
Doc ID: 540903

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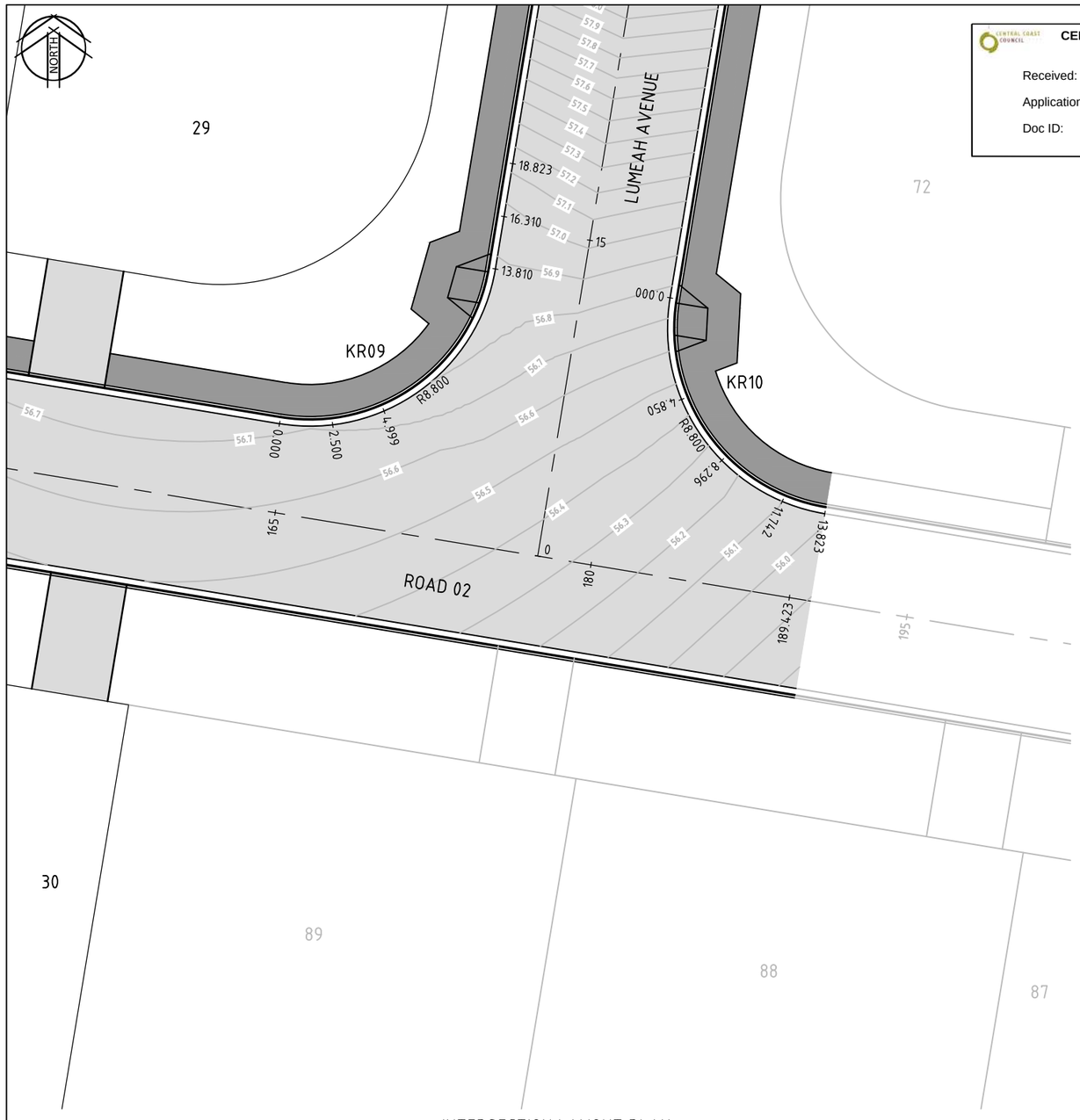
DO NOT SCALE | Original Size A3

FOR CONSTRUCTION

Scale	AS NOTED
Designed	CHRIS MARTIN
Drawn	CJG
Accred. No.	CC4109V
Approved	CHRIS MARTIN
Date	MAY 2022

No	Revision	Drawn	Date
3	ROAD, STORMWATER AND SEWER DESIGNS UPDATED	CJG	25/09/25
2	DRAWING UPDATED WITH COMMENTS FROM TASWATER	CJG	23/07/22
1	DRAWING UPDATED WITH COMMENTS FROM COUNCIL	CJG	12/07/2022
0	DRAWING UPDATED FOR CONSTRUCTION	CJG	30/06/22

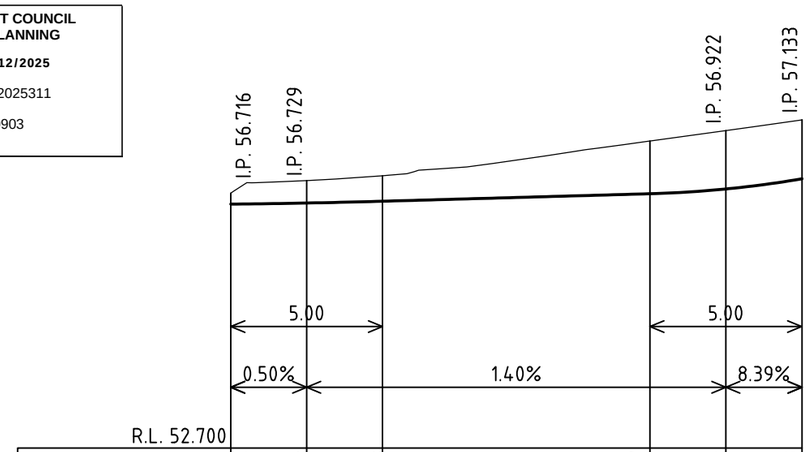
Client: FUTURE DEVELOPMENTS PTY LTD
Project: STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title: KERB RETURN LAYOUT AND LONG SECTIONS PLAN SHEET 02
Drawing No: 4806-43_C116
Revision: 3



INTERSECTION LAYOUT PLAN
SCALE 1:250

CENTRAL COAST COUNCIL
LAND USE PLANNING

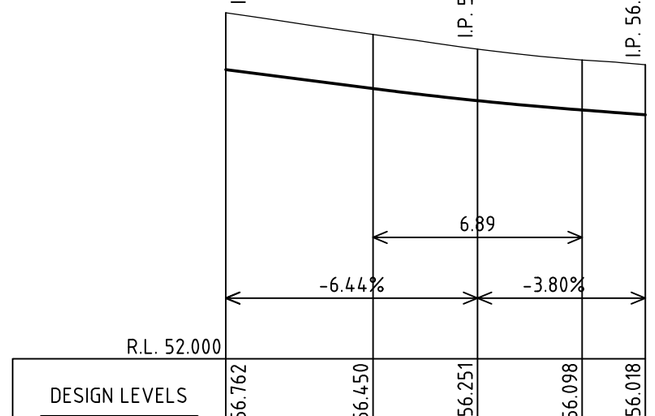
Received: 17/12/2025
Application No: DA2025311
Doc ID: 540903



R.L. 52.700

DESIGN LEVELS	56.716	56.734	56.764	56.887	56.966	57.133
EXISTING LEVELS	56.896	57.104	57.184	57.755	57.927	58.104
CHAINAGE	0.000	2.500	4.999	13.810	16.310	18.823

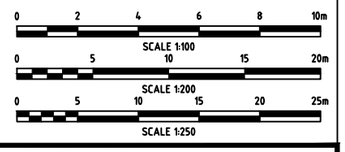
LONGITUDINAL SECTION KR09 CH 0.000 TO 18.823
SCALES: HORIZ 1:200 VERT 1:100



R.L. 52.000

DESIGN LEVELS	56.762	56.450	56.251	56.098	56.018
EXISTING LEVELS	57.699	57.341	57.099	56.921	56.844
CHAINAGE	0.000	4.850	8.296	11.742	13.823

LONGITUDINAL SECTION KR10 CH 0.000 TO 13.823
SCALES: HORIZ 1:200 VERT 1:100



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Date	MAY 2022

No	Revision	Drawn	Date
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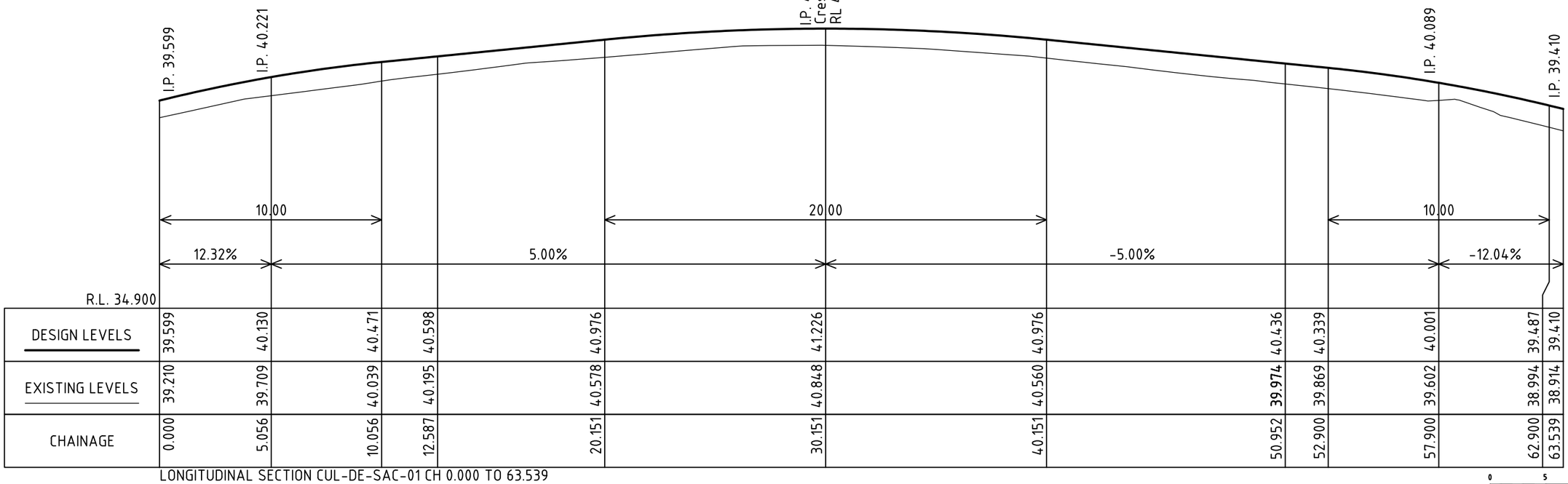
0	DRAWING UPDATED FOR CONSTRUCTION	CJG	30/06/22

Client FUTURE DEVELOPMENTS PTY LTD
Project STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title KERB RETURN LAYOUT AND LONG SECTIONS PLAN SHEET 03
Drawing No: 4806-43_C117 Revision: 3

CUL-DE-SAC LAYOUT PLAN
SCALE 1:250

CENTRAL COAST COUNCIL
LAND USE PLANNING
Received: 17/12/2025
Application No: DA2025311
Doc ID: 540903



DESIGN LEVELS	39.599	40.130	40.471	40.598	40.976	41.226	40.976	40.436	40.339	40.001	39.487	39.410
EXISTING LEVELS	39.210	39.709	40.039	40.195	40.578	40.848	40.560	39.974	39.869	39.602	38.994	38.914
CHAINAGE	0.000	5.056	10.056	12.587	20.151	30.151	40.151	50.952	52.900	57.900	62.900	63.539

LONGITUDINAL SECTION CUL-DE-SAC-01 CH 0.000 TO 63.539
SCALES: HORIZ 1:200 VERT 1:100

SCALE 1:200
SCALE 1:100
SCALE 1:250

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FOR CONSTRUCTION

Scale: AS NOTED
Designed: CHRIS MARTIN
Drawn: CJG
Accred. No.: CC4109V
Approved: CHRIS MARTIN
Date: MAY 2022

No	Revision	Drawn	Date
3	ROAD, STORMWATER AND SEWER DESIGNS UPDATED	CJG	25/09/25
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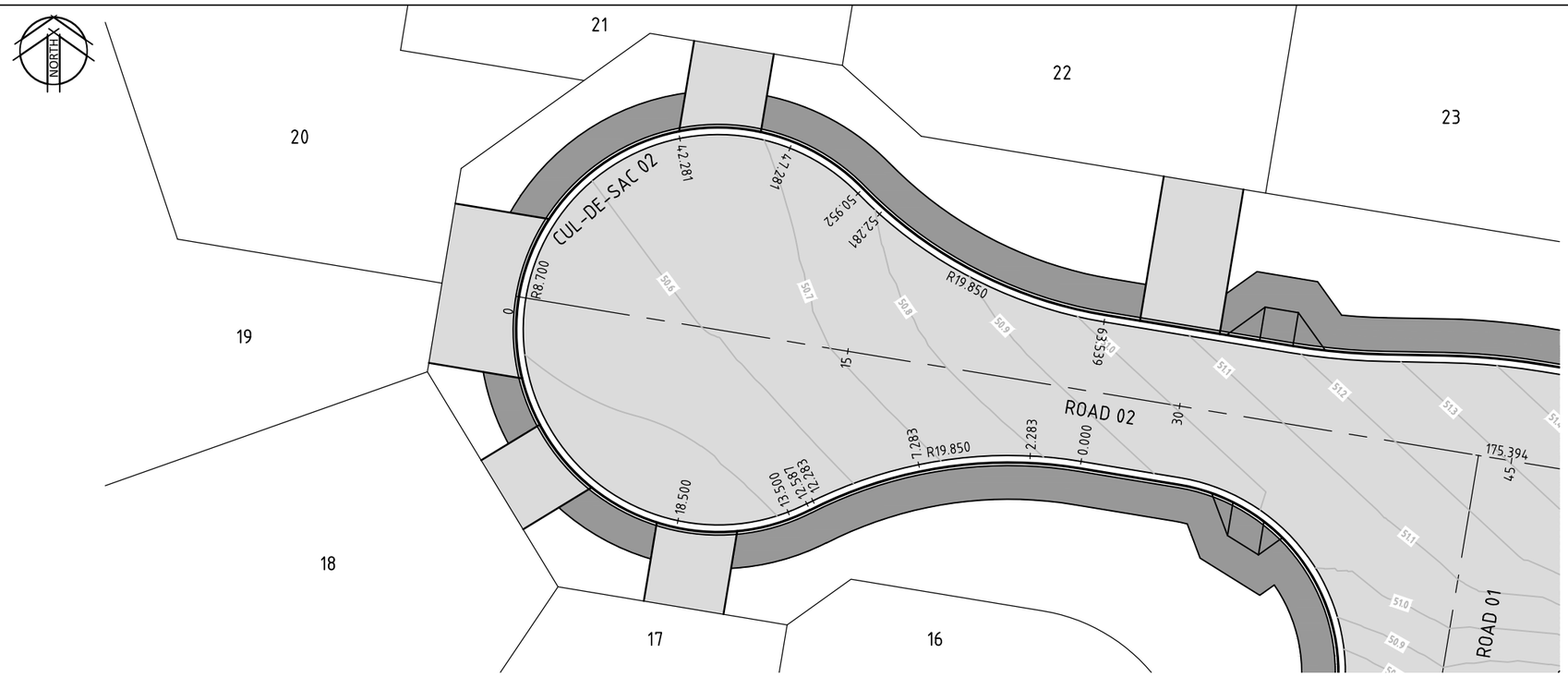
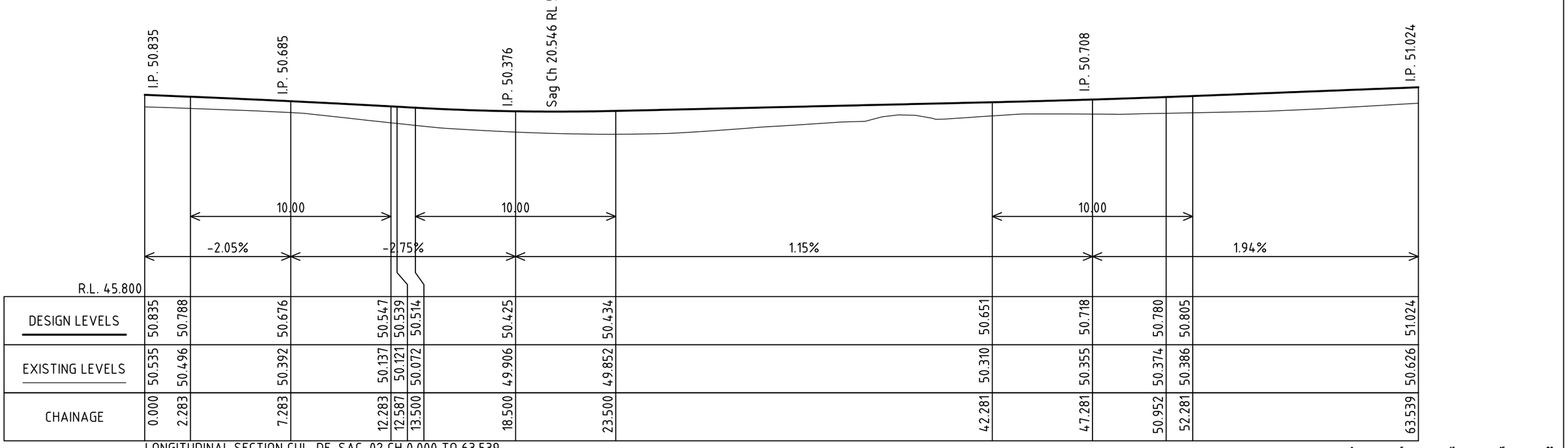
0	DRAWING UPDATED FOR CONSTRUCTION	CJG	30/06/22

Client **FUTURE DEVELOPMENTS PTY LTD**
Project **STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE**
Title **CUL DE SAC LAYOUT AND LONG SECTION PLAN SHEET 01**
Drawing No: **4806-43_C118**
Revision: **3**



CUL-DE-SAC LAYOUT PLAN
SCALE 1:250



LONGITUDINAL SECTION CUL-DE-SAC-02 CH 0.000 TO 63.539
SCALES: HORIZ 1:200 VERT 1:100

0 5 10 15 20m
SCALE 1:200

0 2 4 6 8 10m
SCALE 1:100

0 5 10 15 20 25m
SCALE 1:250

CENTRAL COAST COUNCIL
LAND USE PLANNING
Received: 17/12/2025
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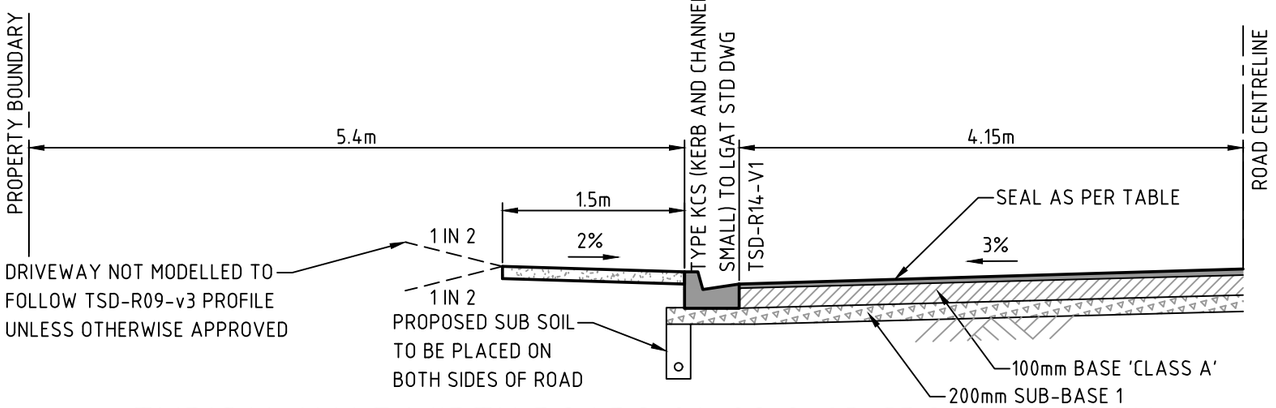
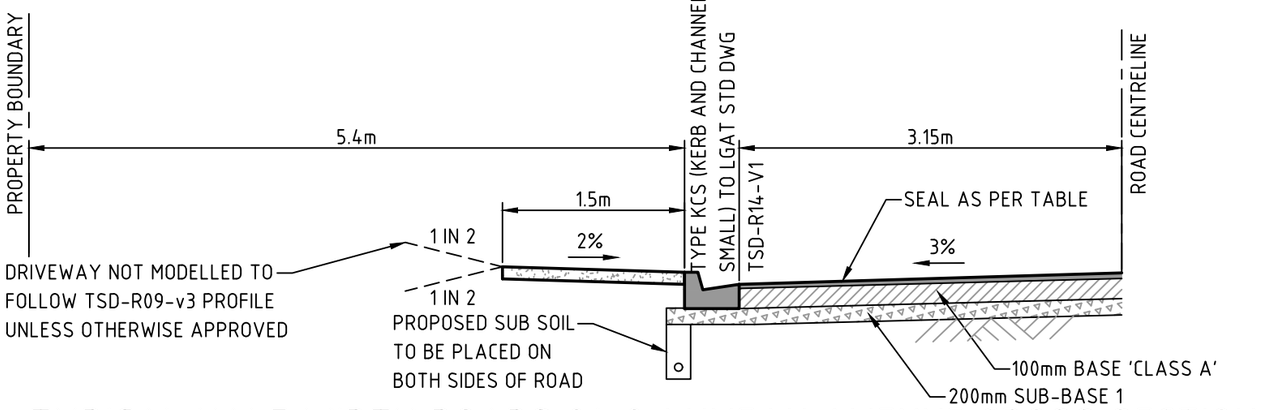
Client: FUTURE DEVELOPMENTS PTY LTD
Project: STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title: CUL DE SAC LAYOUT AND LONG SECTION PLAN SHEET 02
Drawing No: 4806-43_C119
Revision: 3



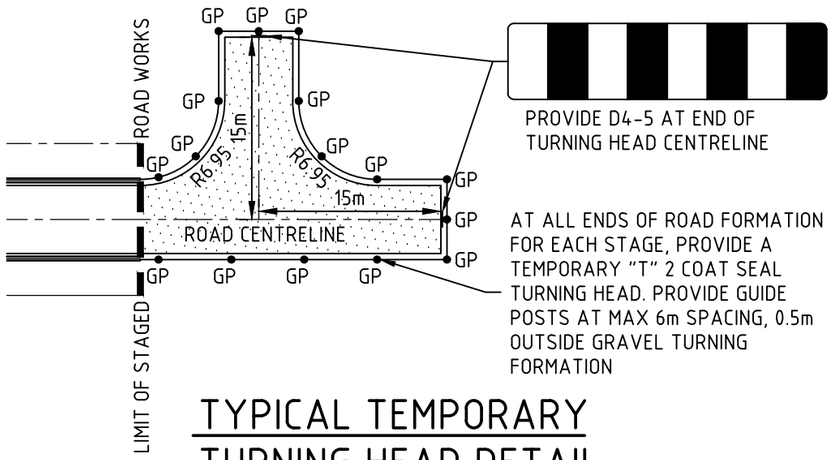
TYPICAL HALF WIDTH ROADS 01, 02 & 03 CROSS SECTION

SCALE: 1:50



TYPICAL HALF WIDTH ROADS 04 & LUMEAH AVENUE CROSS SECTION

SCALE: 1:50



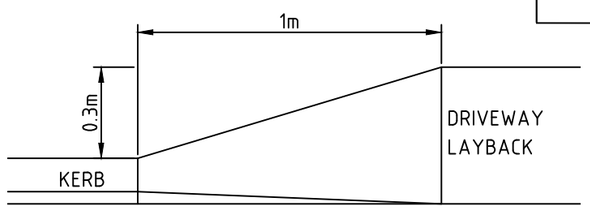
PROVIDE D4-5 AT END OF TURNING HEAD CENTRELINE

AT ALL ENDS OF ROAD FORMATION FOR EACH STAGE, PROVIDE A TEMPORARY "T" 2 COAT SEAL TURNING HEAD. PROVIDE GUIDE POSTS AT MAX 6m SPACING, 0.5m OUTSIDE GRAVEL TURNING FORMATION

TYPICAL TEMPORARY TURNING HEAD DETAIL

SCALE 1:500

FOOTPATH TO BE MAINTAINED AT A WIDTH OF 1.5m AT DRIVEWAY LAYBACKS



TYPICAL DRIVEWAY AND FOOTPATH OUTSTAND DETAIL

SCALE: 1:20

CBR TESTING NOTES:

CBR TESTING TO BE UNDERTAKEN WHEN BOX OUT TO 340mm BELOW FSL IS COMPLETED.

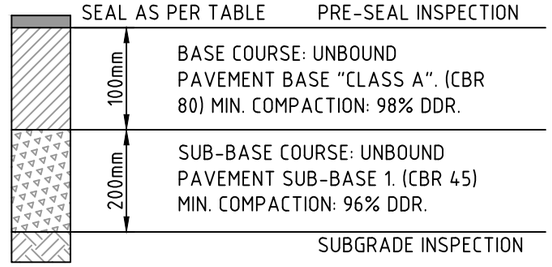
ALL IN-SITU CBR READINGS ARE TO BE ADJUSTED IN ACCORDANCE WITH THE TABLE R23.2 OF DEPARTMENT OF STATE GROWTH SPECIFICATION R23 (REPRODUCED RIGHT) WHERE SUBGRADE IS IN A DRY CONDITION TO ACCOUNT FOR STRENGTH DECREASE WHEN SATURATED.

CBR TESTS TO BE PERFORMED EVERY 200m² OF PAVEMENT AREA BY THE DESIGN ENGINEER. SOFT AREAS MAY BE PLOTTED ON SITE FOR ADDITIONAL EXCAVATION.

PROVIDE MINIMUM 24 HOURS NOTICE TO THE ENGINEER PRIOR TO STRIPPING THE SITE TO SUB-GRADE LEVEL TO FACILITATE CBR TESTING.

PENETROMETER CBR ADJUSTMENT

SOURCE: STATE GROWTH SPECIFICATION R23 - TABLE R23.2	
IN-SITU CBR FROM PENETROMETER (CORRELATION FROM CONE RESISTANCE)	ADJUSTED CBR VALUE
2	1
3	2
4	3
5	4
6	4
7	5
8	6



NATURAL SUBGRADE MIN. COMPACTION: 95% DDR FOR FILL PLACED TO WITHIN 300mm OF LEVEL AND 97% DDR FOR THE TOP 300mm BELOW THE Finished SUBGRADE LEVEL.

TYPICAL PAVEMENT DETAIL

SCALE: N.T.S.

SEALED PAVEMENT CONSTRUCTION DETAILS
BASED ON CBR4 & DESA OF $4x10^4$
TOTAL DEPTH - 300mm MIN
WEARING COURSE - 40mm DG10 AC

STABILISATION GRASS MIX FOR SURFACE DRAINS & BATTERS:

STERILE RYECORN:	3.0 g/m2
RYEGRASS VAR VICTORIAN:	1.5 g/m2
RYECORN VAR CONCORDE:	1.5 g/m2
CHEWING FESCUE:	0.5 g/m2
HARD FESCUE:	0.5 g/m2
SHEEP FESCUE:	0.5 g/m2
WHITE CLOVER VAR HUIA:	1.0 g/m2
SUB CLOVER VAR TRIKKALA:	0.5 g/m2
BROWNTOP BENT:	0.5 g/m2
RED CREEPING FESCUE:	0.5 g/m2
TOTAL:	10.0 g/m2
FERTILISER	
N : P : K = 8 : 4 : 10 @	50.0g/m2

NOTES:

PAVEMENT

1. SUBGRADE - PASS PROOF ROLL AND WHERE MOVEMENT EXISTS UNDERTAKE CBR TESTING TO VERIFY ADDITIONAL PAVEMENT DEPTH.
2. DESIGN PAVEMENT DEPTHS BASED ON CBR 4 - FINAL PAVEMENT DEPTHS TO BE DEEPENED IN ACCORDANCE WITH THE ON SITE CBR TESTING DETAILS AND TABLE AS DIRECTED BY THE SUPERINTENDENT.
3. ALL BATTERS TO BE CONSTRUCTED IN ACCORDANCE WITH THE B.C.A. - TABLE 3.1.1.1

0 1 2 3 4 5m
SCALE 1:50

0 0.5 1 1.5 2m
SCALE 1:20

0 10 20 30 40 50m
SCALE 1:500

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DO NOT SCALE | Original Size A3

FOR CONSTRUCTION

Scale	Designed
AS NOTED	CHRIS MARTIN
Drawn	Accred. No.
CJG	CC4109V
Approved	CHRIS MARTIN
Date	MAY 2022

No	Revision	Drawn	Date
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0	DRAWING UPDATED FOR CONSTRUCTION	CJG	30/06/22

Client FUTURE DEVELOPMENTS PTY LTD
Project STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title CONSTRUCTION DETAILS PLAN
Drawing No: 4806-43_C120
Revision: 3

CENTRAL COAST COUNCIL
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NORTH

PROPOSED 3.0m WIDE EASEMENT FOR SEWER

PROPOSED 3.0m WIDE EASEMENT FOR SEWER

TYPICAL PROPOSED HOUSE
ϕ150 STUB TO BE INSTALLED

PROPOSED 3.0m WIDE EASEMENT FOR SEWER AND STORMWATER

PROPOSED 3.0m WIDE EASEMENT FOR SEWER AND STORMWATER

ROAD 01

ROAD 02

1 2 3 4 5 16 17 18 19 20 21 22 23 24 25 26 31 32 33 34

ϕ225 ϕ300

0 10 20 30 40 50m
SCALE 1:500

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Client FUTURE DEVELOPMENTS PTY LTD
Project STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title STORMWATER LAYOUT PLAN SHEET 01

Drawing No: 4806-43_C121
Revision: 3

PROPOSED 3.0m WIDE EASEMENT FOR SEWER AND STORMWATER

PROPOSED 3.0m WIDE EASEMENT FOR SEWER AND STORMWATER

PROPOSED 3.0m WIDE EASEMENT FOR SEWER AND STORMWATER

TYPICAL PROPOSED HOUSE Ø150 STUB TO BE INSTALLED

CONNECT PROPOSED STORMWATER LINES INTO EXISTING STAGE 01 STORMWATER PITS

CONNECT PROPOSED STORMWATER LINES INTO EXISTING STAGE 01 STUBS

ROAD 01

ROAD 03

ROAD 04

NORTH

SCALE 1:500

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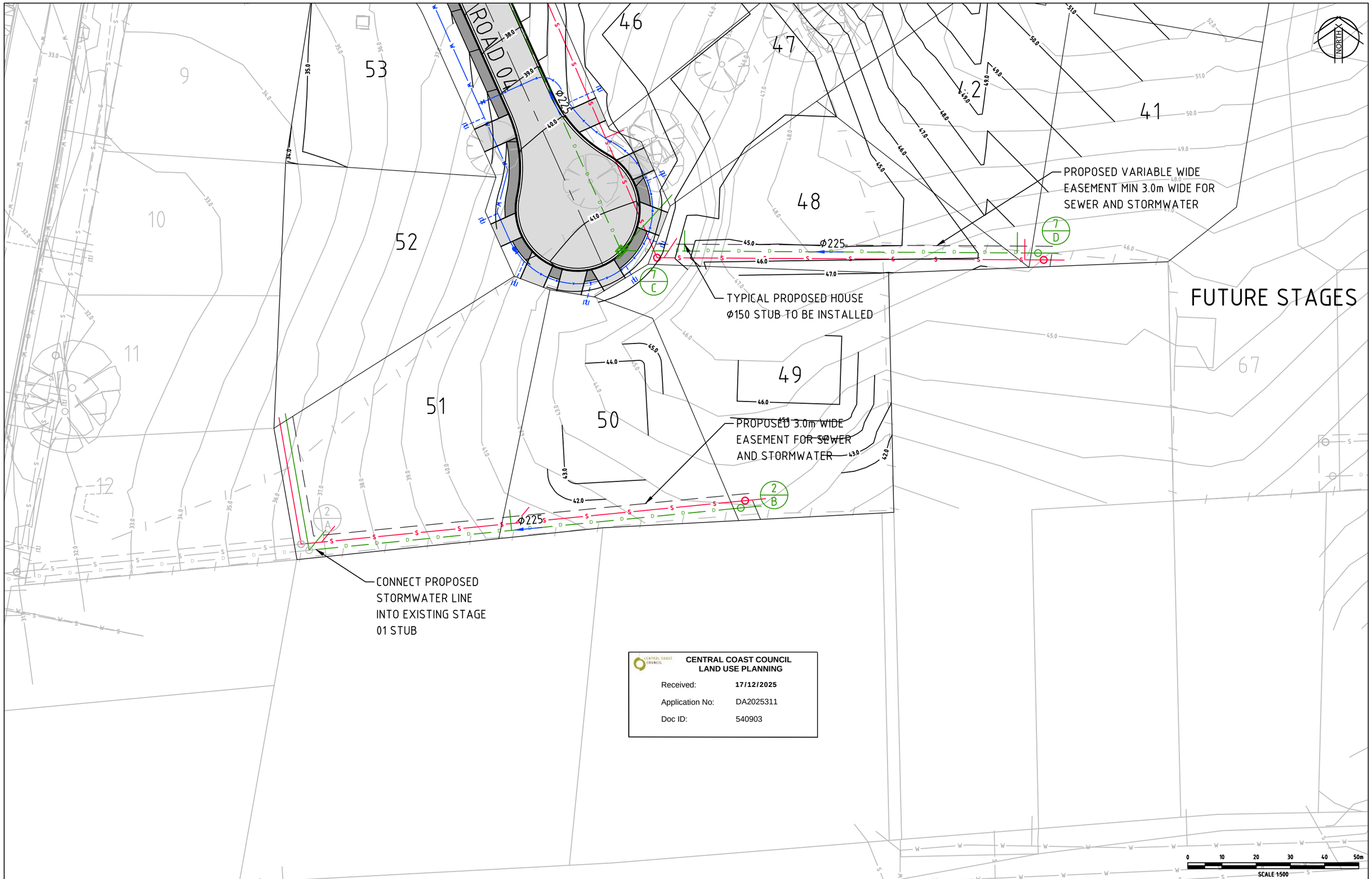
Client FUTURE DEVELOPMENTS PTY LTD
Project STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title STORMWATER LAYOUT PLAN SHEET 02

Drawing No: 4806-43_C122 | Revision: 3



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Date	MAY 2022

No	Revision	Drawn	Date
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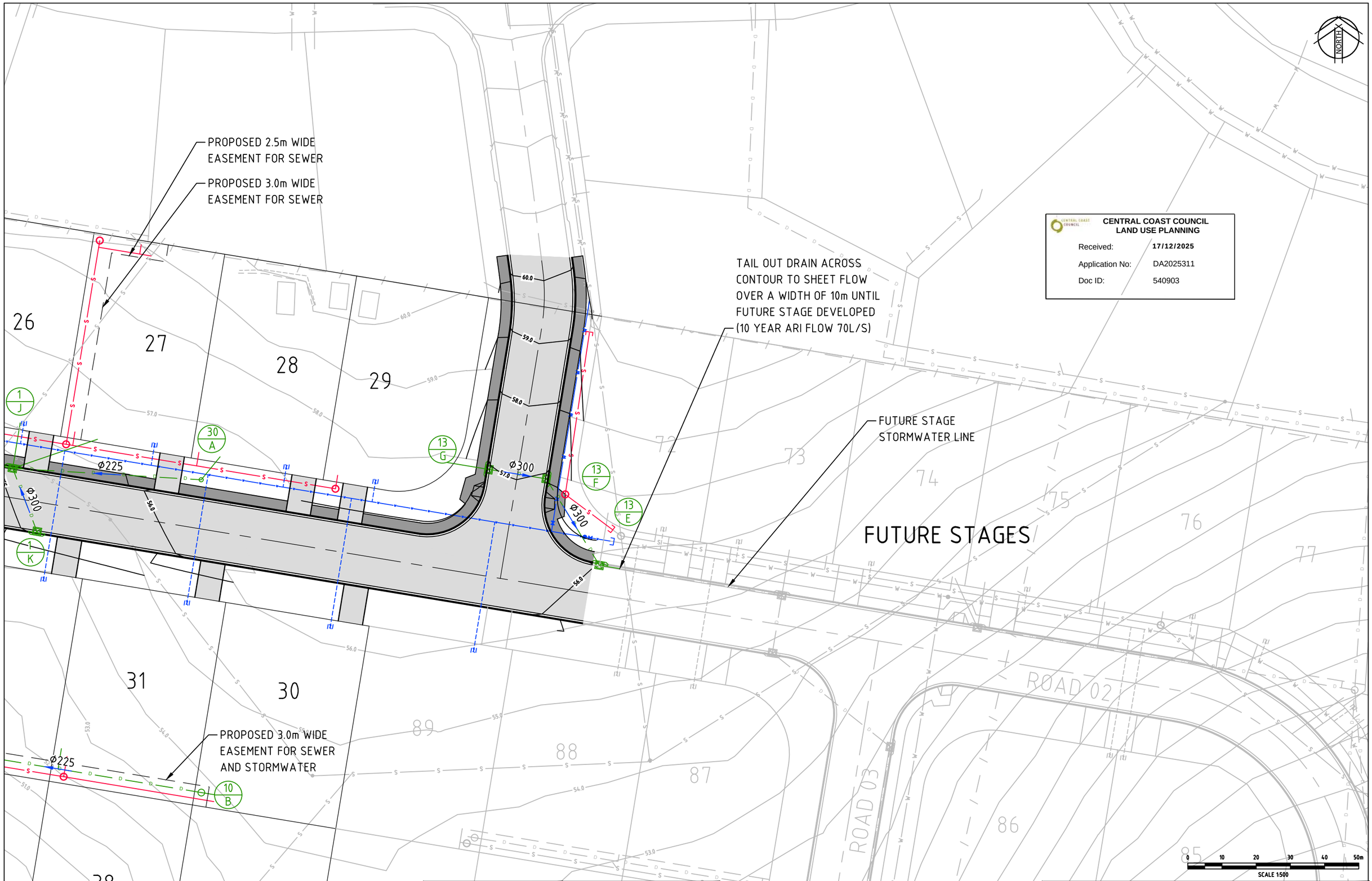
0	DRAWING UPDATED FOR CONSTRUCTION	CJG	30/06/22

Client: **FUTURE DEVELOPMENTS PTY LTD**

Project: **STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE**

Title: **STORMWATER LAYOUT PLAN SHEET 03**

Drawing No: 4806-43_C123 **Revision:** 3



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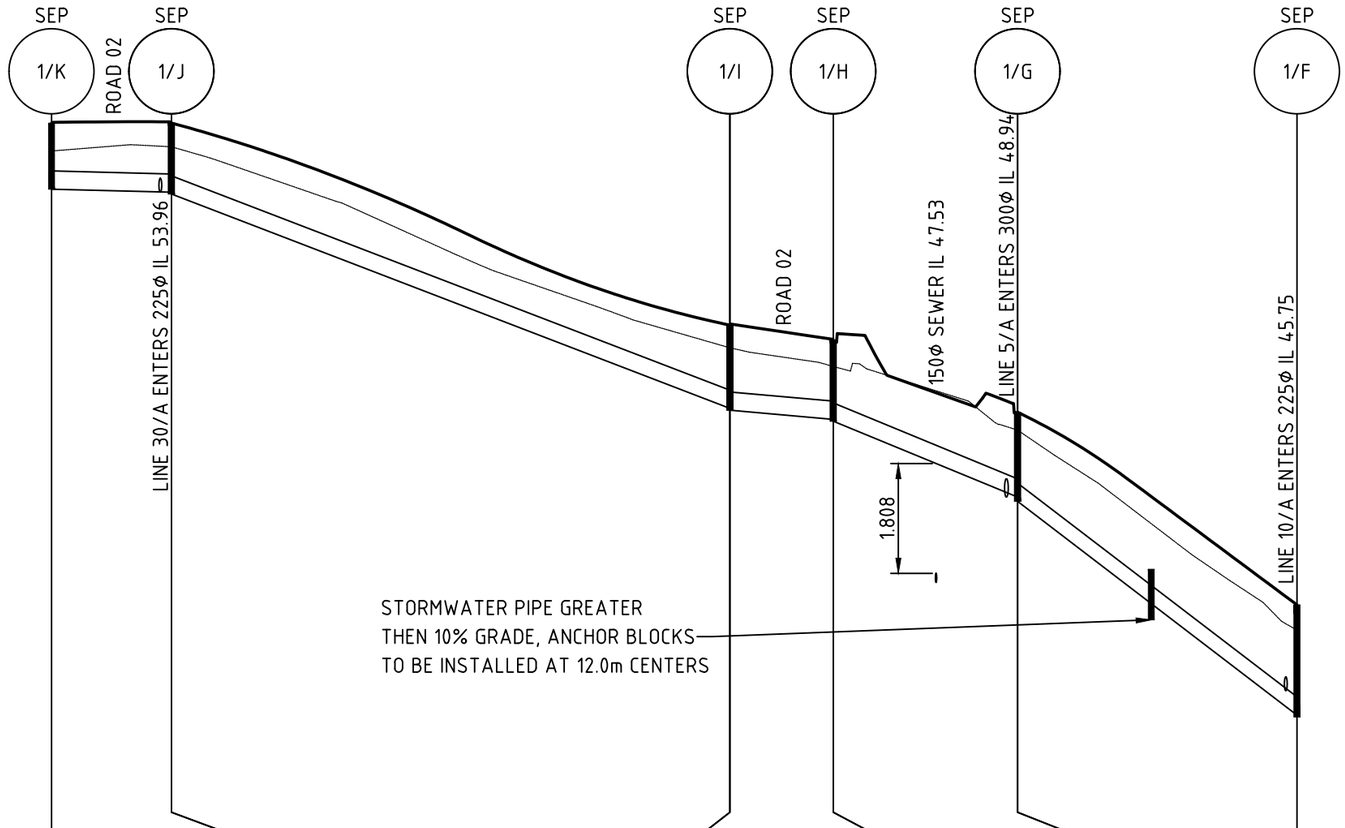
Client: FUTURE DEVELOPMENTS PTY LTD
Project: STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title: STORMWATER LAYOUT PLAN SHEET 04

Drawing No: 4806-43_C124
Revision: 3



PIPE DETAILS										
SLOPE/GRADE	300Ø BLACKMAX OR SIMILAR 0.5%		300Ø BLACKMAX OR SIMILAR 7.7%		300Ø BLACKMAX OR SIMILAR 1.8%		300Ø BLACKMAX OR SIMILAR 8.2%		375Ø STORMPRO OR SIMILAR 15.3%	
DATUM RL 41.3										
EXISTING SURFACE	54.64	54.71	51.40		51.09		50.04		46.75	
FINISHED SURFACE	55.10	55.10	51.77		51.52		50.34		47.17	
INVERT LEVEL	54.01	53.96	53.93	50.40	50.37	50.22	50.19	48.94	48.87	45.35
LENGTH	9.87		46.00		8.51		15.18		23.01	

DRAINAGE LONGITUDINAL SECTION FOR LINE 1

SCALES: HORIZONTAL 1:500 VERTICAL 1:100

LEGEND:

EX SEP	EXISTING SIDE ENTRY PIT
SEP	SIDE ENTRY PIT WITH 1.2m LINTEL ALL LINTELS ARE TO BE; • TYPE 1 FOR ALL PITS ON-GRADE • TYPE 3 FOR ALL SAG PITS UNO.
LGE LINTEL	TYPE 2 FOR ALL PITS ON GRADE TYPE 4 FOR ALL SAG PITS
LGE SEP	REFER TSD-SW30 (1.55x0.90 PIT)
GP	GRATED PIT TO TSD-SW15
MH	Ø1050 SHAFT MANHOLE U.N.O.
IC	INSPECTION CHAMBER

NOTES:

1. ALL SEP's GREATER THAN 1500mm DEEP TO BE CONSTRUCTED TO THE LARGE SIDE ENTRY PIT DETAIL TSD-SW30.
2. ALL MANHOLES THAT DO NOT HAVE TRAFFIC LOADING TO HAVE LIGHT DUTY COVER.
3. ALL TRAFFICABLE MANHOLES TO HAVE CLASS D IC LIDS.
4. FCR BACKFILL UNDER ALL ROADWAYS.
5. ALL LOT CONNECTIONS TO BE 150Ø UPVC.

0 2 4 6 8 10m
SCALE 1:100
0 10 20 30 40 50m
SCALE 1:500

CSE TASMANIA PTY LTD
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DO NOT SCALE | Original Size A3

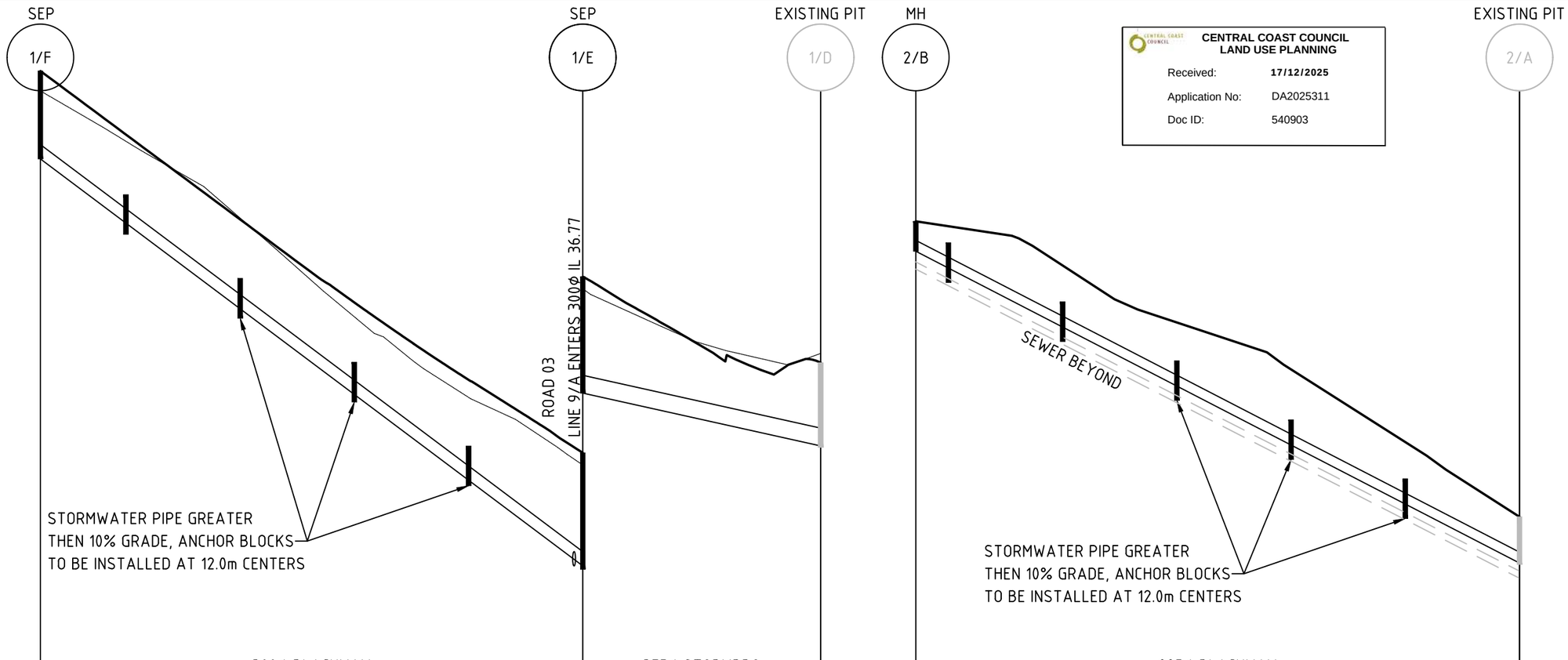
FOR CONSTRUCTION

Scale	1:500H 1:100V
Designed	CHRIS MARTIN
Drawn	CJG
Accred. No.	CC4109V
Approved	CHRIS MARTIN
Date	MAY 2022

No	Revision	Drawn	Date
3	ROAD, STORMWATER AND SEWER DESIGNS UPDATED	CJG	25/09/25
2	DRAWING UPDATED WITH COMMENTS FROM TASWATER	CJG	23/07/22
1	DRAWING UPDATED WITH COMMENTS FROM COUNCIL	CJG	12/07/2022
0	DRAWING UPDATED FOR CONSTRUCTION	CJG	30/06/22

Client FUTURE DEVELOPMENTS PTY LTD
Project STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title STORMWATER LONG SECTIONS PLAN SHEET 01

Drawing No: 4806-43_C125 Revision: 3



PIPE DETAILS	300ø BLACKMAX OR SIMILAR	375ø STORMPRO OR SIMILAR
SLOPE/GRADE	15.0%	4.4%
DATUM RL 32.8		RL 29.1
EXISTING SURFACE	46.75 ... 38.89	37.53
FINISHED SURFACE	47.17 ... 39.15	37.34
INVERT LEVEL	45.32 ... 36.77	36.70 ... 35.59
LENGTH	56.99	24.99

DRAINAGE LONGITUDINAL SECTION FOR LINE 1
SCALES: HORIZONTAL 1:500 VERTICAL 1:100

	225ø BLACKMAX OR SIMILAR
	10.3%
	RL 31.7
EXISTING SURFACE	42.91 ... 36.70
FINISHED SURFACE	42.91 ... 36.70
INVERT LEVEL	42.28 ... 35.73
LENGTH	63.43

DRAINAGE LONGITUDINAL SECTION FOR LINE 2
SCALES: HORIZONTAL 1:500 VERTICAL 1:100

0 2 4 6 8 10m
SCALE 1:100
0 10 20 30 40 50m
SCALE 1:500

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DO NOT SCALE | Original Size A3

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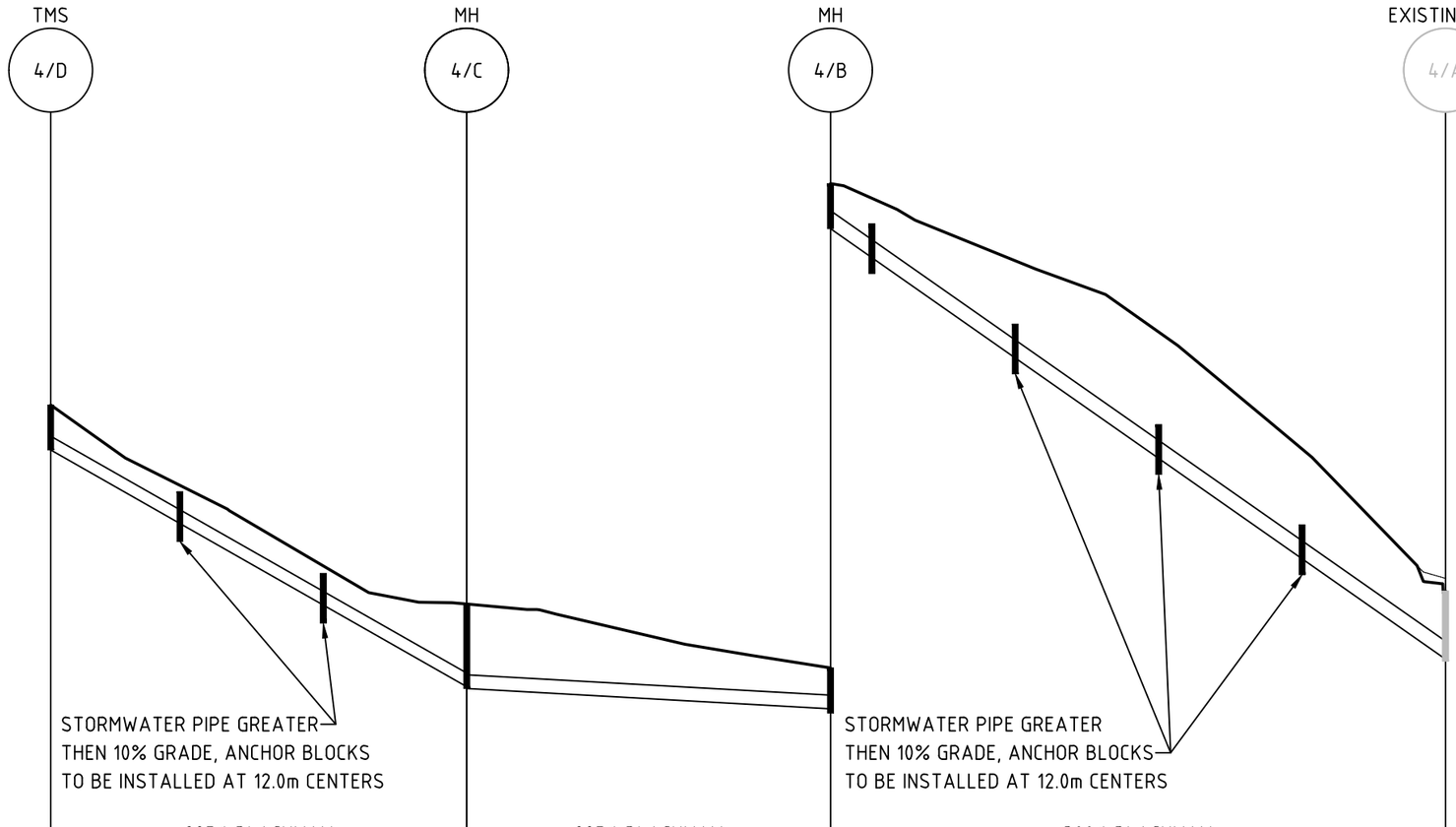
0	DRAWING UPDATED FOR CONSTRUCTION	CJG	30/06/22

Client FUTURE DEVELOPMENTS PTY LTD
Project STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title STORMWATER LONG SECTIONS PLAN SHEET 02

Drawing No: 4806-43_C126 | Revision: 3



PIPE DETAILS			
	225ø BLACKMAX OR SIMILAR	225ø BLACKMAX OR SIMILAR	300ø BLACKMAX OR SIMILAR
SLOPE/GRADE	11.4%	1.1%	14.0%
DATUM RL 38.4			
EXISTING SURFACE	47.45 ... 44.12	43.05	36.45
FINISHED SURFACE	47.45 ... 44.12	43.05	36.24
INVERT LEVEL	46.70 ... 42.74	42.71 ... 42.37	42.30 ... 35.10
LENGTH	34.80	30.44	51.46

DRAINAGE LONGITUDINAL SECTION FOR LINE 4

SCALES: HORIZONTAL 1:500 VERTICAL 1:100

0 2 4 6 8 10m
SCALE 1:100
0 10 20 30 40 50m
SCALE 1:500

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FOR CONSTRUCTION

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Drawn	CJG
Accred. No.	CC4109V
Approved	CHRIS MARTIN
Date	MAY 2022

No	Revision	Drawn	Date
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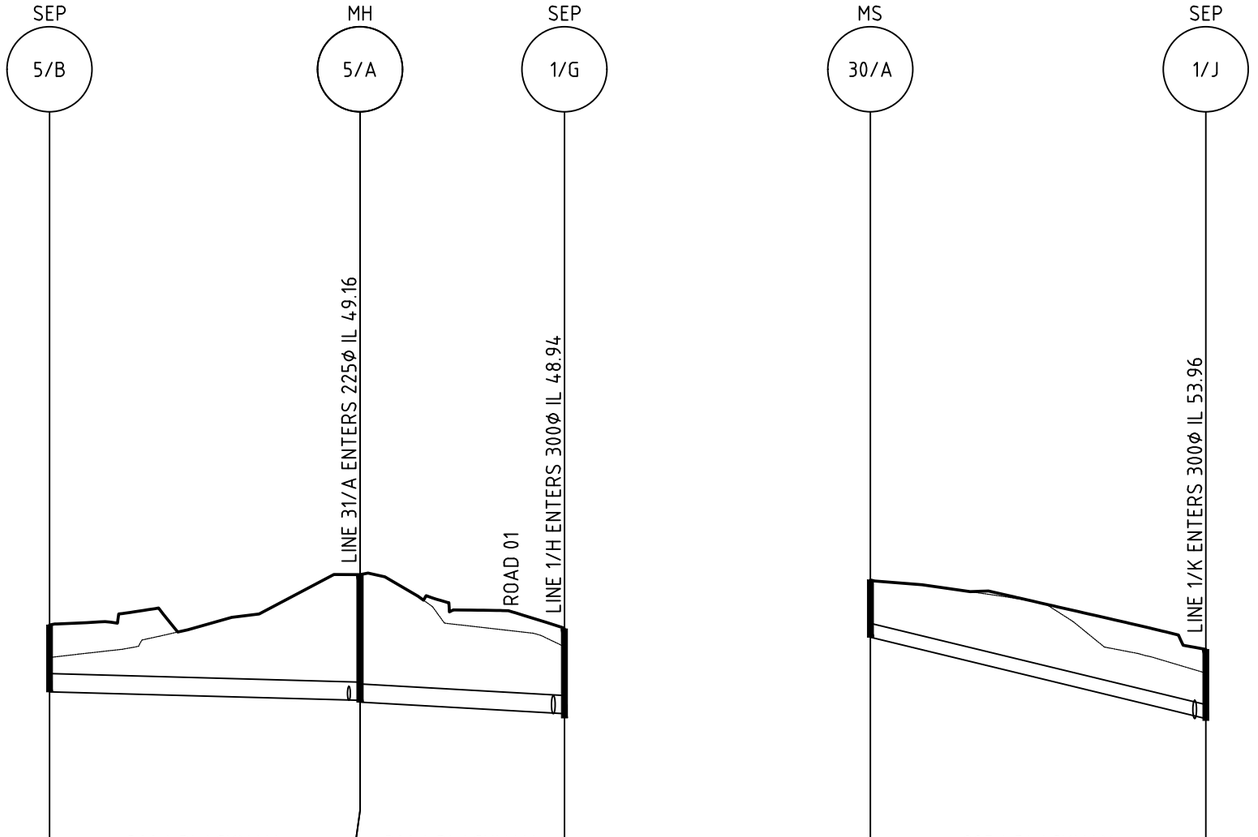
0	DRAWING UPDATED FOR CONSTRUCTION	CJG	30/06/22

Client FUTURE DEVELOPMENTS PTY LTD
Project STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title STORMWATER LONG SECTIONS PLAN SHEET 03
Drawing No: 4806-43_C127
Revision: 3



PIPE DETAILS		
SLOPE/GRADE	300ø BLACKMAX OR SIMILAR 0.5%	300ø BLACKMAX OR SIMILAR 1.1%
DATUM RL 44.9		
EXISTING SURFACE	49.86 / 51.23	50.04
FINISHED SURFACE	50.40 / 51.23	50.34
INVERT LEVEL	49.30 / 49.16	49.13 / 48.94
LENGTH	25.57	16.84

DRAINAGE LONGITUDINAL SECTION FOR LINE 5
SCALES: HORIZONTAL 1:500 VERTICAL 1:100

RL 50	
EXISTING SURFACE	56.24 / 54.71
FINISHED SURFACE	56.24 / 55.10
INVERT LEVEL	55.30 / 53.96
LENGTH	27.63

DRAINAGE LONGITUDINAL SECTION FOR LINE 30
SCALES: HORIZONTAL 1:500 VERTICAL 1:100

0 2 4 6 8 10m
SCALE 1:100
0 10 20 30 40 50m
SCALE 1:500

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Date	MAY 2022

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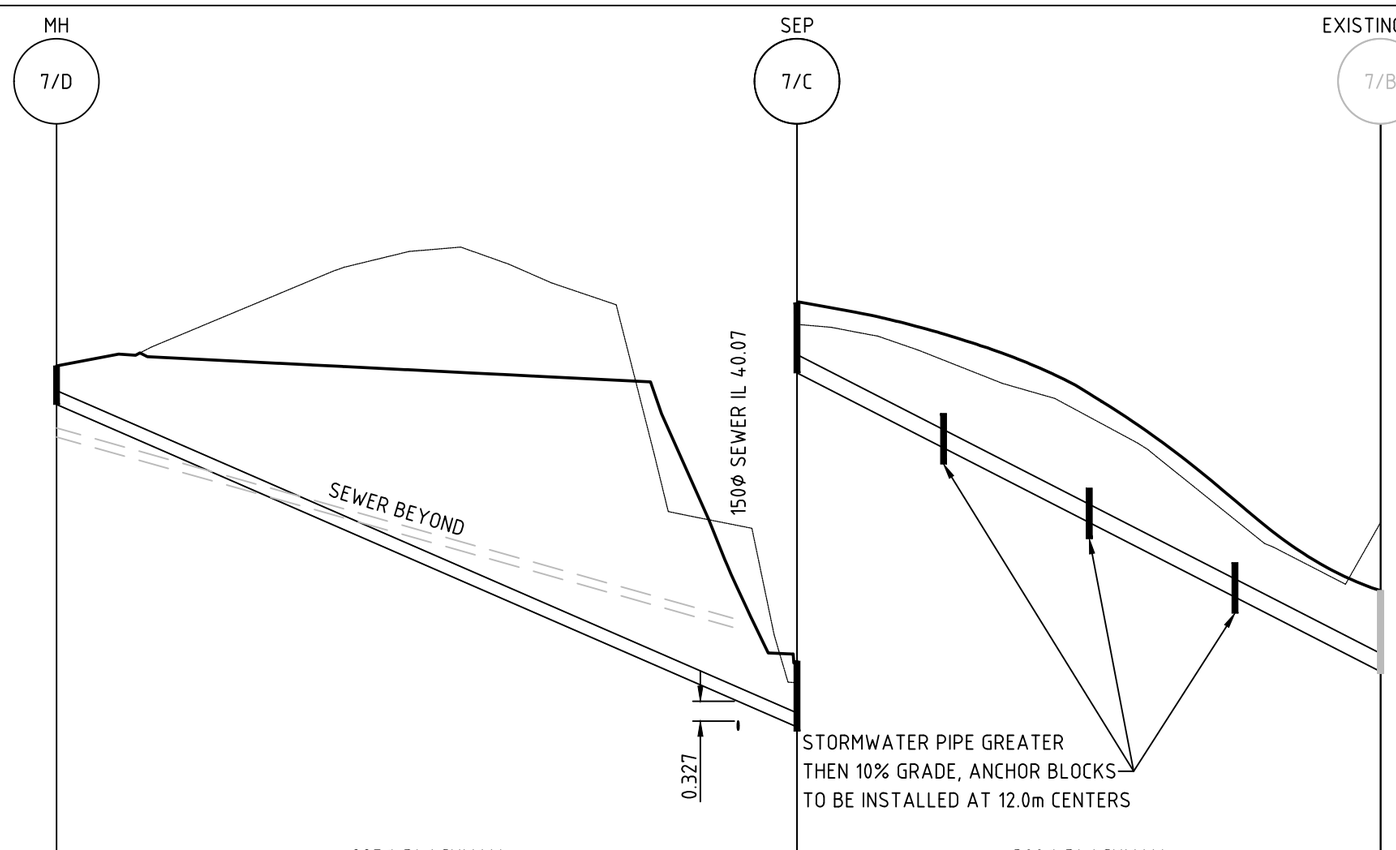
Client FUTURE DEVELOPMENTS PTY LTD
Project STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title STORMWATER LONG SECTIONS PLAN SHEET 04

Drawing No: 4806-43_C128 Revision: 3



PIPE DETAILS	225ø BLACKMAX OR SIMILAR		300ø BLACKMAX OR SIMILAR	
SLOPE/GRADE	8.7%		10.2%	
DATUM RL 36.1			RL 30.2	
EXISTING SURFACE	46.06	40.85		37.59
FINISHED SURFACE	46.06	41.20		36.47
INVERT LEVEL	45.43	40.12	40.05	35.13
LENGTH	60.99		48.07	

DRAINAGE LONGITUDINAL SECTION FOR LINE 7

SCALES: HORIZONTAL 1:500 VERTICAL 1:100

SCALE 1:100 (0, 2, 4, 6, 8, 10m)

SCALE 1:500 (0, 10, 20, 30, 40, 50m)

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DO NOT SCALE | Original Size A3

FOR CONSTRUCTION

Scale	1:500H 1:100V
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Drawn	CJG
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Approved	CHRIS MARTIN
Date	MAY 2022

No	Revision	Drawn	Date
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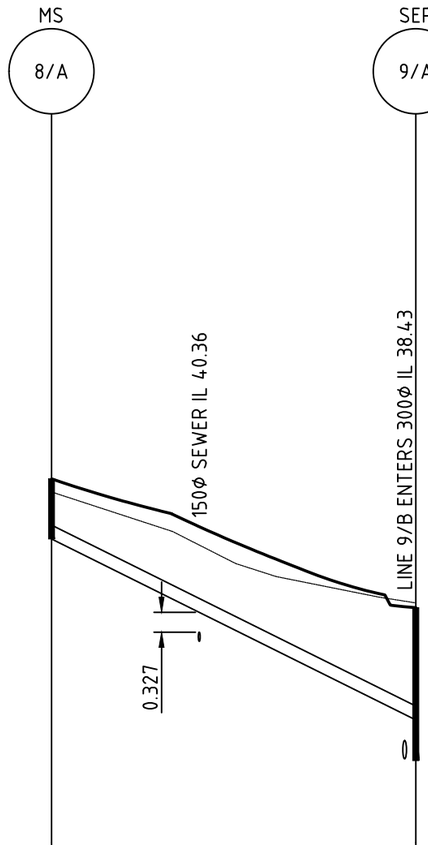
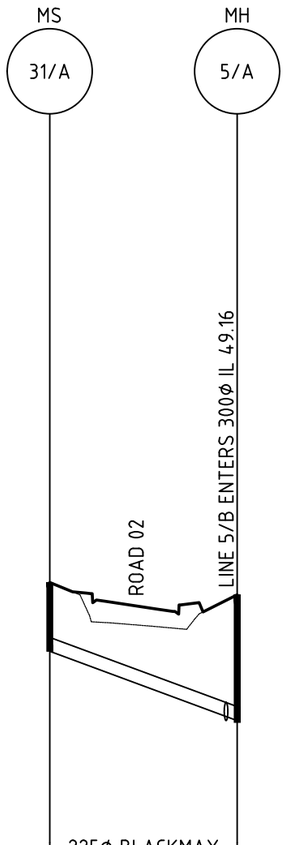
Client FUTURE DEVELOPMENTS PTY LTD
Project STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title STORMWATER LONG SECTIONS PLAN SHEET 05

Drawing No: 4806-43_C129 Revision: 3



PIPE DETAILS		
SLOPE/GRADE	9.9%	
DATUM RL 35.1		
EXISTING SURFACE	42.85	41.00
FINISHED SURFACE	43.04	40.92
INVERT LEVEL	42.05	39.07
LENGTH	30.00	

DRAINAGE LONGITUDINAL SECTION FOR LINE 8
SCALES: HORIZONTAL 1:500 VERTICAL 1:100



RL 45.2		
	51.43	51.23
	51.43	51.23
	50.30	49.16
	15.44	

DRAINAGE LONGITUDINAL SECTION FOR LINE 31
SCALES: HORIZONTAL 1:500 VERTICAL 1:100

0 2 4 6 8 10m
SCALE 1:100
0 10 20 30 40 50m
SCALE 1:500

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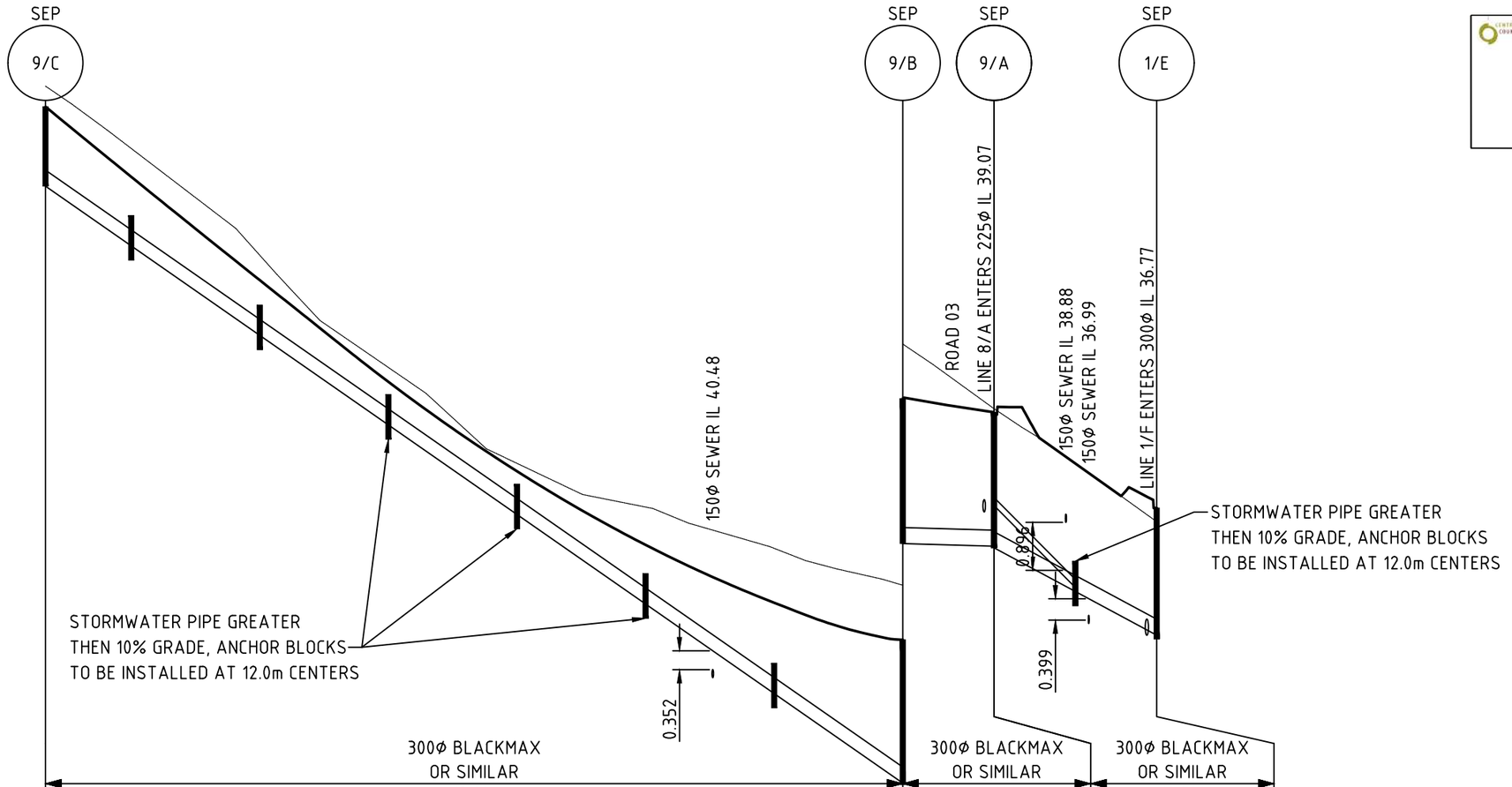
0	DRAWING UPDATED FOR CONSTRUCTION	CJG	30/06/22

Client FUTURE DEVELOPMENTS PTY LTD
Project STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title STORMWATER LONG SECTIONS PLAN SHEET 06
Drawing No: 4806-43_C130 Revision: 3



PIPE DETAILS				
SLOPE/GRADE		13.9%	0.6%	10.7%
DATUM RL 37.3			RL 32.8	
EXISTING SURFACE	51.52	42.20	41.00	38.89
FINISHED SURFACE	51.13	41.19	40.92	39.15
INVERT LEVEL	49.65	38.51	38.48 / 38.43	38.40 / 36.77
LENGTH		80.00	8.52	15.18

DRAINAGE LONGITUDINAL SECTION FOR LINE 9

SCALES: HORIZONTAL 1:500 VERTICAL 1:100

SCALE 1:100 (0 2 4 6 8 10m)

SCALE 1:500 (0 10 20 30 40 50m)

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Scale	1:500H 1:100V
Designed	CHRIS MARTIN
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Approved	CHRIS MARTIN
Date	MAY 2022

No	Revision	Drawn	Date
3	ROAD, STORMWATER AND SEWER DESIGNS UPDATED	CJG	25/09/25
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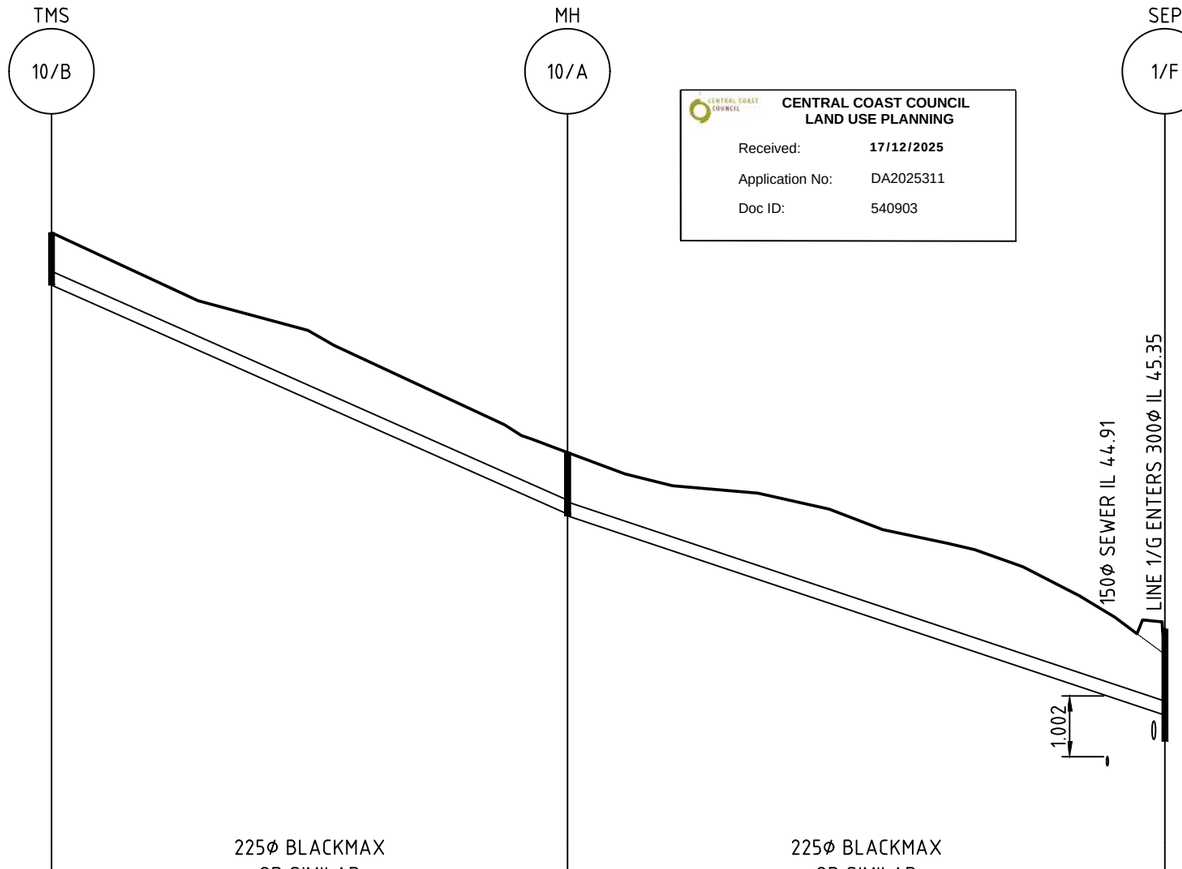
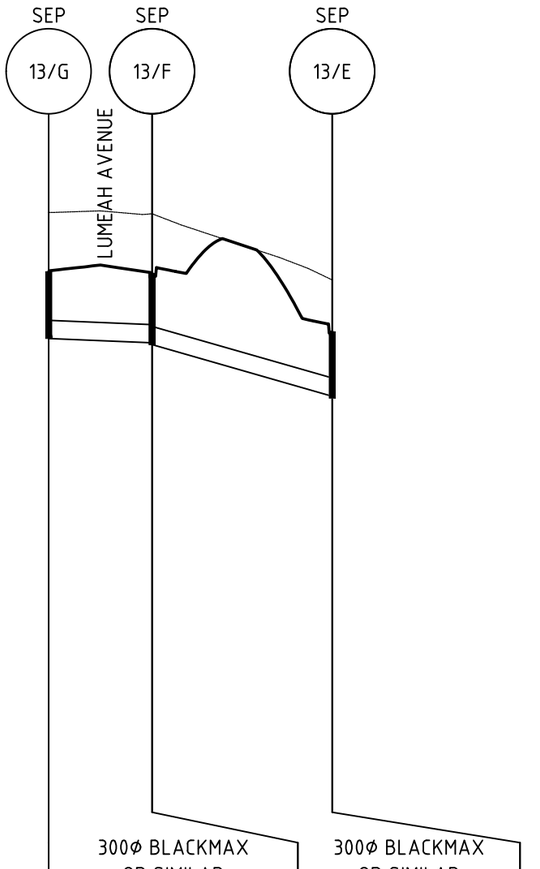
0	DRAWING UPDATED FOR CONSTRUCTION	CJG	30/06/22

Client FUTURE DEVELOPMENTS PTY LTD
Project STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title STORMWATER LONG SECTIONS PLAN SHEET 07

Drawing No: 4806-43_C131 | Revision: 3





	10/B		10/A		1/F	13/G		13/F		13/E
PIPE DETAILS		225Ø BLACKMAX OR SIMILAR		225Ø BLACKMAX OR SIMILAR			300Ø BLACKMAX OR SIMILAR		300Ø BLACKMAX OR SIMILAR	
SLOPE/GRADE		8.9%		6.7%			0.8%		5.7%	
DATUM RL 41.7	RL 41.7					RL 45.6				
EXISTING SURFACE	53.69		50.07		46.75	57.93		57.90		56.82
FINISHED SURFACE	53.69		50.07		47.17	56.95		56.92		55.96
INVERT LEVEL	52.83		49.06 49.03		45.75	55.85		55.78 55.75		54.90
LENGTH		42.50		49.21			8.51		14.84	

DRAINAGE LONGITUDINAL SECTION FOR LINE 10
SCALES: HORIZONTAL 1:500 VERTICAL 1:100

DRAINAGE LONGITUDINAL SECTION FOR LINE 13
SCALES: HORIZONTAL 1:500 VERTICAL 1:100

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Scale	Designed
1:500H 1:100V	CHRIS MARTIN
Drawn	Accred. No.
CJG	CC4109V
Approved CHRIS MARTIN	
Date MAY 2022	

No	Revision	Drawn	Date
3	ROAD, STORMWATER AND SEWER DESIGNS UPDATED	CJG	25/09/25
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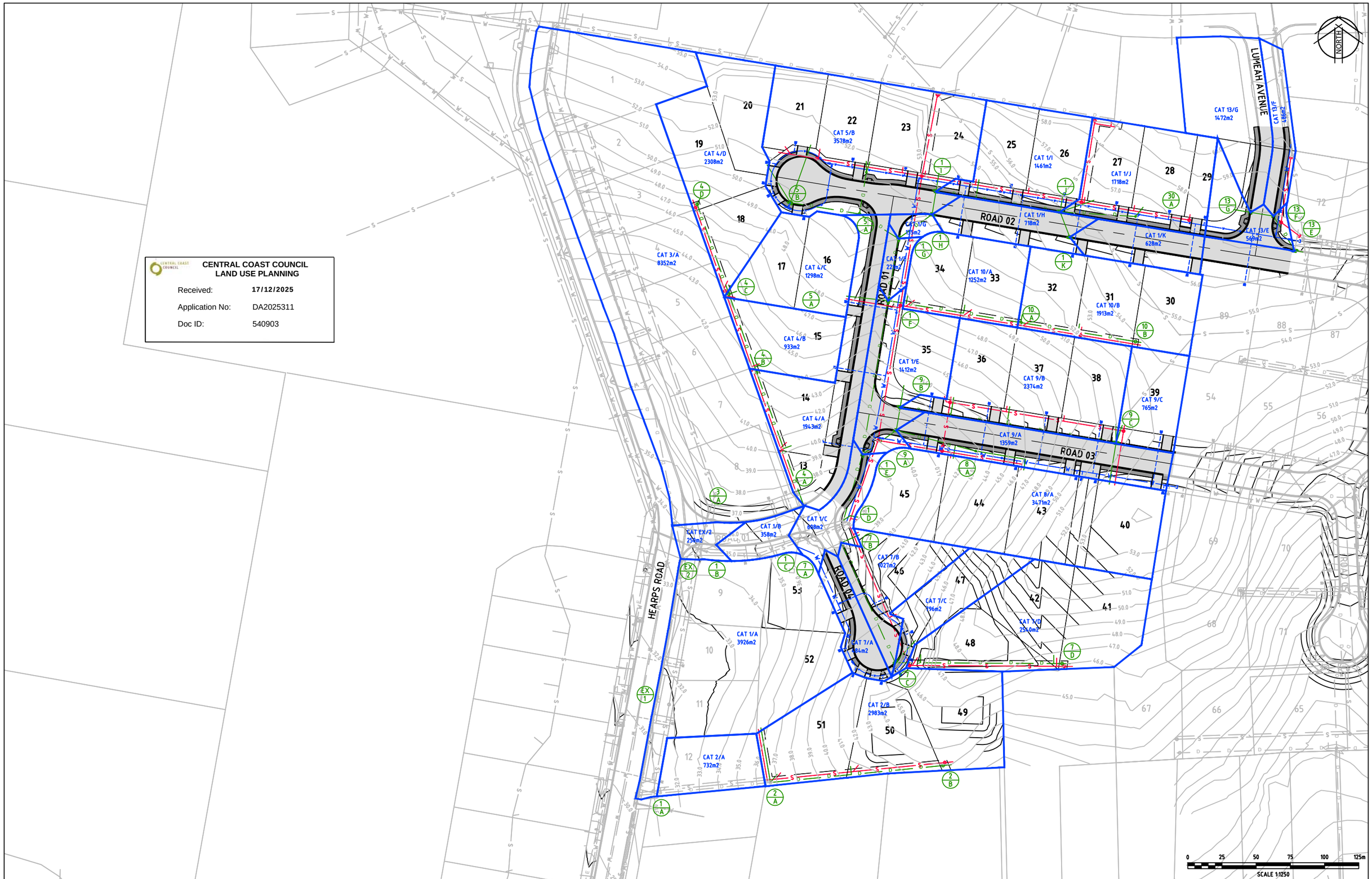
0	DRAWING UPDATED FOR CONSTRUCTION	CJG	30/06/22

Client **FUTURE DEVELOPMENTS PTY LTD**
Project **STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE**
Title **STORMWATER LONG SECTIONS PLAN SHEET 08**
Drawing No: **4806-43_C132**
Revision: **3**



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Scale	1:1250
Designed	CHRIS MARTIN
Drawn	CJG
Accred. No.	CC4109V
Approved	CHRIS MARTIN
Date	MAY 2022

No	Revision	Drawn	Date
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Client FUTURE DEVELOPMENTS PTY LTD
Project STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title STORMWATER CATCHMENTS LAYOUT PLAN

Drawing No: 4806-43_C133 | Revision: 3

CENTRAL COAST COUNCIL
LAND USE PLANNING

Received: 17/12/2025
Application No: DA2025311
Doc ID: 540903

PROPOSED NEW SEWER MANHOLE SHAFT TO BE INSTALLED ONTO EXISTING SEWER MAIN LINE BY DEVELOPER BENCHING BY TASWATER AT DEVELOPERS COST

CAP REDUNDANT SEWER TO HERE IN STAGE 02, LIQUID FILL OR REMOVE LINE UP TO DIVERSIONS

TYPICAL ⌀100 JUNCTION TO SERVICE LOT AT 1 IN 60 GRADE

EXISTING SEWER LOT CONNECTION (LOT 190 DP10179) TO BE EXTENDED AND CONNECTED INTO NEW SEWER MAIN

PROPOSED ⌀150 PVC SEWER MAIN (LINE I)

PROPOSED 3.0m WIDE EASEMENT FOR SEWER

PROPOSED ⌀150 PVC SEWER MAIN (LINE X)

PROPOSED ⌀150 PVC SEWER MAINS (LINE A)

PROPOSED 3.0m WIDE EASEMENT FOR SEWER

PROPOSED ⌀150 PVC SEWER MAIN (LINE A)

PROPOSED 3.0m WIDE EASEMENT FOR SEWER AND STORMWATER

PROPOSED ⌀150 PVC SEWER MAIN (LINE D)

EXISTING SEWER MAINS TO BE LIQUID FILLED OR REMOVED

PROPOSED ⌀150 PVC SEWER MAIN (LINE A)

PROPOSED ⌀150 PVC SEWER MAIN (LINE H)

PROPOSED 3.0m WIDE EASEMENT FOR SEWER AND STORMWATER

ROAD 01

ROAD 02

1 2 3 4 5 16 17 18 19 20 21 22 23 24 25 26 31 32 33 34

SCALE 1:500

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Client FUTURE DEVELOPMENTS PTY LTD
Project STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title SEWER RETICULATION LAYOUT PLAN SHEET 01

Drawing No: 4806-43_C134 Revision: 3

CENTRAL COAST COUNCIL
LAND USE PLANNING

Received: 17/12/2025
Application No: DA2025311
Doc ID: 540903

PROPOSED Ø150 PVC SEWER MAIN (LINE A)

PROPOSED Ø150 PVC SEWER MAIN (LINE H)

PROPOSED 3.0m WIDE EASEMENT FOR SEWER AND STORMWATER

EXISTING SEWER MAINS TO BE LIQUID FILLED OR REMOVED

PROPOSED Ø150 PVC SEWER MAIN (LINE H)

PROPOSED 3.0m WIDE EASEMENT FOR SEWER AND STORMWATER

PROPOSED Ø150 PVC SEWER MAIN (LINE D)

PROPOSED Ø150 PVC SEWER MAIN (LINE A)

TEMPORARY END CAP TO BE INSTALLED AT STAGE EXTENTS

PROPOSED Ø150 PVC SEWER MAINS (LINE G)

PROPOSED Ø150 PVC SEWER MAIN (LINE A)

TYPICAL Ø100 JUNCTION TO SERVICE LOT AT 1 IN 60 GRADE

CONNECT PROPOSED SEWER MAIN INTO EXISTING STAGE 01 STUB

STAGES 2 AND 3 LIMIT OF WORKS

PROPOSED Ø150 PVC SEWER MAINS (LINE Z)

CONNECT PROPOSED SEWER MAIN INTO EXISTING STAGE 01 STUBS

STAGES 1 AND 2 LIMIT OF WORKS

PROPOSED Ø150 PVC SEWER MAIN (LINE E)

ROAD 01

ROAD 02

ROAD 03

NORTH

SCALE 1:500

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Client: FUTURE DEVELOPMENTS PTY LTD
Project: STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title: SEWER RETICULATION LAYOUT PLAN SHEET 02

Drawing No: 4806-43_C135
Revision: 3

PROPOSED Ø150 PVC
SEWER MAIN (LINE E)

PROPOSED VARIABLE WIDE
EASEMENT MIN 3.0m WIDE FOR
SEWER AND STORMWATER

PROPOSED Ø150 PVC
SEWER MAIN (LINE E)

FUTURE STAGES

TYPICAL Ø100 JUNCTION
TO SERVICE LOT AT
1 IN 60 GRADE

PROPOSED 3.0m WIDE
EASEMENT FOR SEWER
AND STORMWATER

CONNECT PROPOSED
SEWER MAIN INTO
EXISTING STAGE 01
SEWER MANHOLE

PROPOSED Ø150 PVC
SEWER MAIN (LINE B)

CENTRAL COAST COUNCIL
LAND USE PLANNING

Received: 17/12/2025

Application No: DA2025311

Doc ID: 540903

SCALE 1:500

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Scale	1:500
Designed	CHRIS MARTIN
Drawn	CJG
Accred. No.	CC4109V
Approved	CHRIS MARTIN
Date	MAY 2022

No	Revision	Drawn	Date
3	ROAD, STORMWATER AND SEWER DESIGNS UPDATED	CJG	25/09/25
2	DRAWING UPDATED WITH COMMENTS FROM TASWATER	CJG	23/07/22
1	DRAWING UPDATED WITH COMMENTS FROM COUNCIL	CJG	12/07/2022
0	DRAWING UPDATED FOR CONSTRUCTION	CJG	30/06/22

Client FUTURE DEVELOPMENTS PTY LTD
Project STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title SEWER RETICULATION LAYOUT PLAN SHEET 03

Drawing No: 4806-43_C136 Revision: 3

PROPOSED 3.0m WIDE
EASEMENT FOR SEWER

PROPOSED 2.5m WIDE
EASEMENT FOR SEWER

EXISTING SEWER LOT CONNECTIONS
(LOT 154 AND 154 DP8777)
TO BE EXTENDED AND CONNECTED
INTO NEW SEWER MAIN

TYPICAL ⌀100 JUNCTION
TO SERVICE LOT AT
1 IN 60 GRADE

INSTALL NEW SEWER UP
TO EXISTING MANHOLE

TEMPORARY END CAP
TO BE INSTALLED

PROPOSED ⌀150 PVC SEWER
MAIN (LINE K) CUTOVER TO NEW
MANHOLES TO REMOVE LOT 72
SEWER IN FUTURE STAGE

REMOVE REDUNDANT SEWER
LINE FROM LOT 72 IN FUTURE
STAGE

EXISTING SEWER MAIN
TO BE LIQUID FILLED OR
REMOVED

PROPOSED ⌀150 PVC
SEWER MAIN (LINE A)

PROPOSED ⌀150 PVC
SEWER MAIN (LINE J)

TEMPORARY END CAP
TO BE INSTALLED

PROPOSED NEW SEWER MANHOLE
IN FUTURE STAGE

FUTURE STAGES

FUTURE STAGE
SEWER MAIN

PROPOSED 3.0m WIDE
EASEMENT FOR SEWER
AND STORMWATER

PROPOSED ⌀150 PVC
SEWER MAIN (LINE H)

EXISTING SEWER MAINS
TO BE LIQUID FILLED OR
REMOVED

CAP REDUNDANT SEWER TO
HERE IN STAGE 02, LIQUID
FILL OR REMOVE LINE UP TO
DIVERSIONS

NORTH

CENTRAL COAST COUNCIL
LAND USE PLANNING
Received: 17/12/2025
Application No: DA2025311
Doc ID: 540903

SCALE 1:500

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DO NOT SCALE | Original Size A3

FOR CONSTRUCTION

Scale	1:500
Designed	CHRIS MARTIN
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Accred. No.	CC4109V
Approved	CHRIS MARTIN
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No	Revision	Drawn	Date
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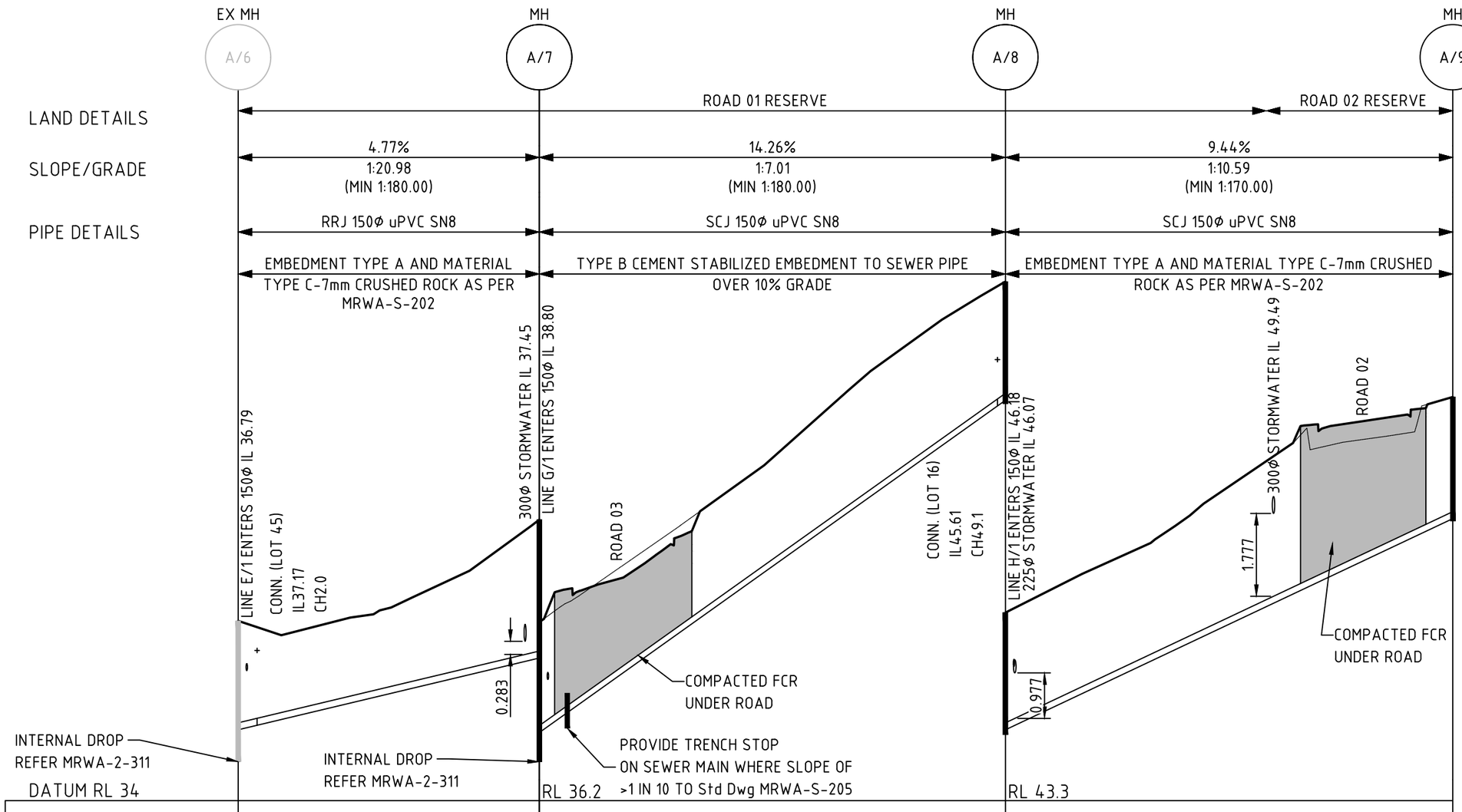
Client FUTURE DEVELOPMENTS PTY LTD
Project STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title SEWER RETICULATION LAYOUT PLAN SHEET 04

Drawing No: 4806-43_C137 | Revision: 3



NATURAL SURFACE		37.86		40.03			47.33			51.96
DESIGN SURFACE		37.86		40.03			47.33			51.96
INVERT LEVEL	34.84	35.52		37.06	37.66		44.79	44.82		49.35
DEPTH TO INVERT	3.02	2.34		2.97	2.37		2.54	2.51		2.61
LENGTH/CHAINAGE		CH199.09	32.30	CH231.39		50.00	CH281.39		47.99	CH329.38

SEWER LONGITUDINAL SECTION FOR LINE A

SCALES: HORIZONTAL 1:500 VERTICAL 1:100

LEGEND:

- MH 1050Ø MANHOLE.
  REFER MRWA-S-300
- MS 300Ø MAINTENANCE SHAFT.
  REFER MRWA-S-300

NOTES:

1. ALL SEWER MANHOLES 1050 Ø MASTIC JOINTED SHAFT TYPE P2 WITH CONVERSION SLAB TO MRWA-S-309 AND MRWA-S-313. FINISH 75mm ABOVE GROUND FSL UNO
2. ALL INSPECTION SHAFTS THAT DO NOT HAVE TRAFFIC LOADING TO HAVE LIGHT DUTY COVER AS PER MRWA-S-305-C.
3. ALL TRAFFICABLE INSPECTION SHAFTS TO HAVE CLASS D CI LIDS AS PER MRWA-S-305-C.
4. ALL PROPERTY SEWER CONNECTIONS TO BE TYPE 4 AS PER MRWA-S-304 WITH I.O. NOMINALLY 1.2m WITHIN EACH LOT UNO.
5. FCR BACKFILL UNDER ALL TRAFFICABLE PAVEMENT INCLUDING DRIVEWAY CROSS OVERS AND ROADWAYS.
6. ALL SEWERAGE PIPES SCJ UNO.
7. STEP IRONS ARE NOT REQUIRED ON MANHOLES
8. ALL INSPECTION SHAFTS TO BE TYPE 1 IN ACCORDANCE WITH MRWA-S-302 UNO.
9. ALL HOUSE CONNECTIONS TO HAVE A MINIMUM COVER OF 450mm AND HAVE A MINIMUM GRADE OF 1 IN 60.
10. CONCRETE BULKHEADS SHALL BE KEYED INTO THE SIDE AND BOTTOM OF THE TRENCH AGAINST BEARING SURFACE OF UNDISTURBED SOIL.
11. SLOPING MAINS AND TRENCH DRAINAGE AS PER STANDARD DRAWING MRWA-S-205.
12. MANHOLES ARE TO BE CAST IN SITU OR OTHER APPROVED EQUIVALENT WHERE WATER TABLES ABOVE THE PIPE INVERT ARE ENCOUNTERED.
13. ALL LONG SECTION GRADES ARE CALCULATED FROM CENTRE OF MANHOLE TO CENTRE OF MANHOLE. CONTRACTOR SHOULD CALCULATE GRADES FROM OUTSIDE OF MANHOLE FOR ACCURATE LAYING GRADES.

0 2 4 6 8 10m
SCALE 1:100

0 10 20 30 40 50m
SCALE 1:500

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DO NOT SCALE

Original Size A3

FOR CONSTRUCTION

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Drawn	CJG	Accred. No.	CC4109V
Approved	CHRIS MARTIN		
Date	MAY 2022		

No	Revision	Drawn	Date
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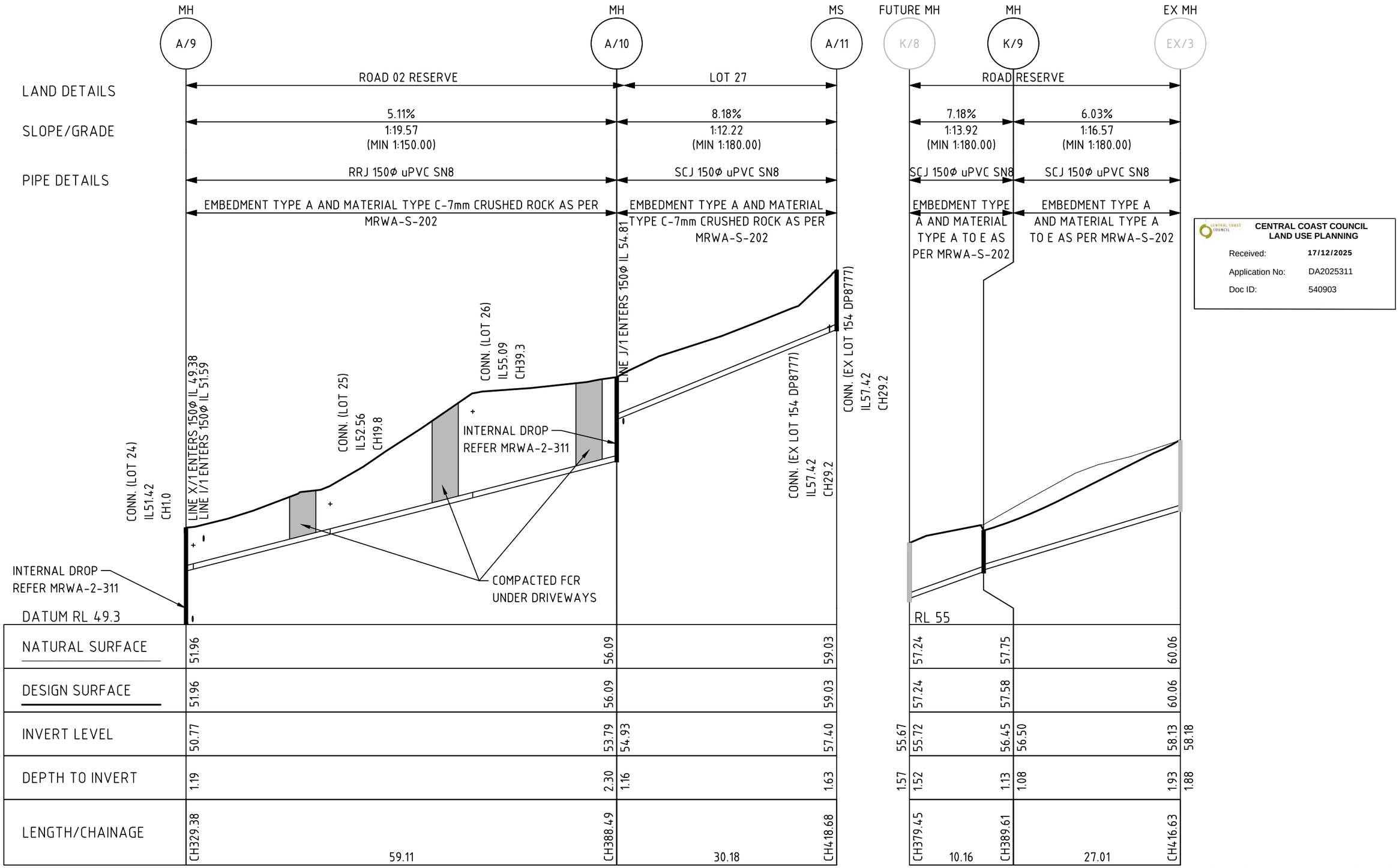
0	DRAWING UPDATED FOR CONSTRUCTION	CJG	30/06/22

Client **FUTURE DEVELOPMENTS PTY LTD**
Project **STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE**
Title **SEWER LONG SECTIONS PLAN SHEET 01**
Drawing No: **4806-43_C138**
Revision: **3**



	A/9		A/10		A/11
NATURAL SURFACE	51.96		56.09		59.03
DESIGN SURFACE	51.96		56.09		59.03
INVERT LEVEL	50.77		53.79 54.93		57.40
DEPTH TO INVERT	1.19		2.30 1.16		1.63
LENGTH/CHAINAGE	CH329.38	59.11	CH388.49	30.18	CH418.68

SEWER LONGITUDINAL SECTION FOR LINE A

SCALES: HORIZONTAL 1:500 VERTICAL 1:100

	K/8	K/9		K/9		EX/3
NATURAL SURFACE		57.24		57.75		60.06
DESIGN SURFACE		57.24		57.58		60.06
INVERT LEVEL	55.67	55.72		56.45 56.50		58.13 58.18
DEPTH TO INVERT	1.57	1.52		1.13 1.08		1.93 1.88
LENGTH/CHAINAGE		CH379.45	10.16	CH389.61	27.01	CH416.63

SEWER LONGITUDINAL SECTION FOR LINE K

SCALES: HORIZONTAL 1:500 VERTICAL 1:100

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Drawn: CJG
Accred. No.: CC4109V
Approved: CHRIS MARTIN
Date: MAY 2022

No	Revision	Drawn	Date
3	ROAD, STORMWATER AND SEWER DESIGNS UPDATED	CJG	25/09/25
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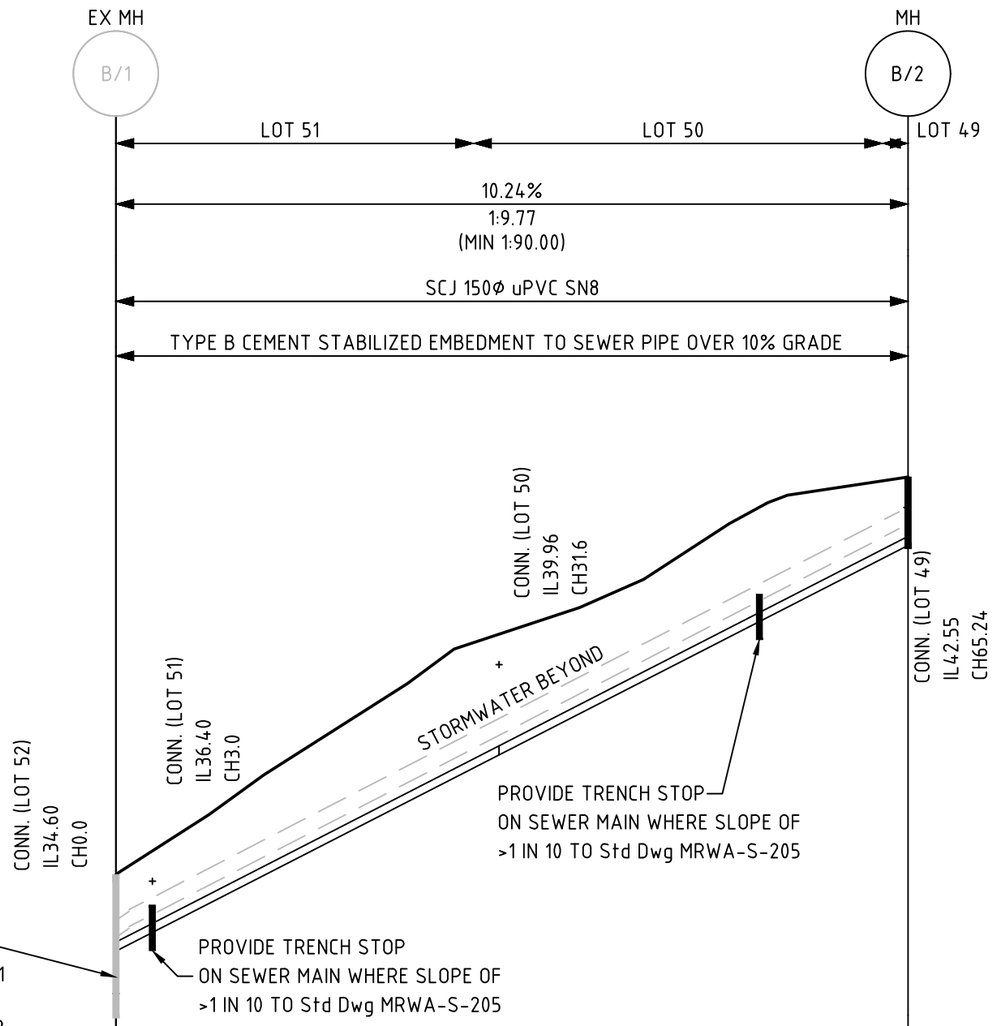
0	DRAWING UPDATED FOR CONSTRUCTION	CJG	30/06/22

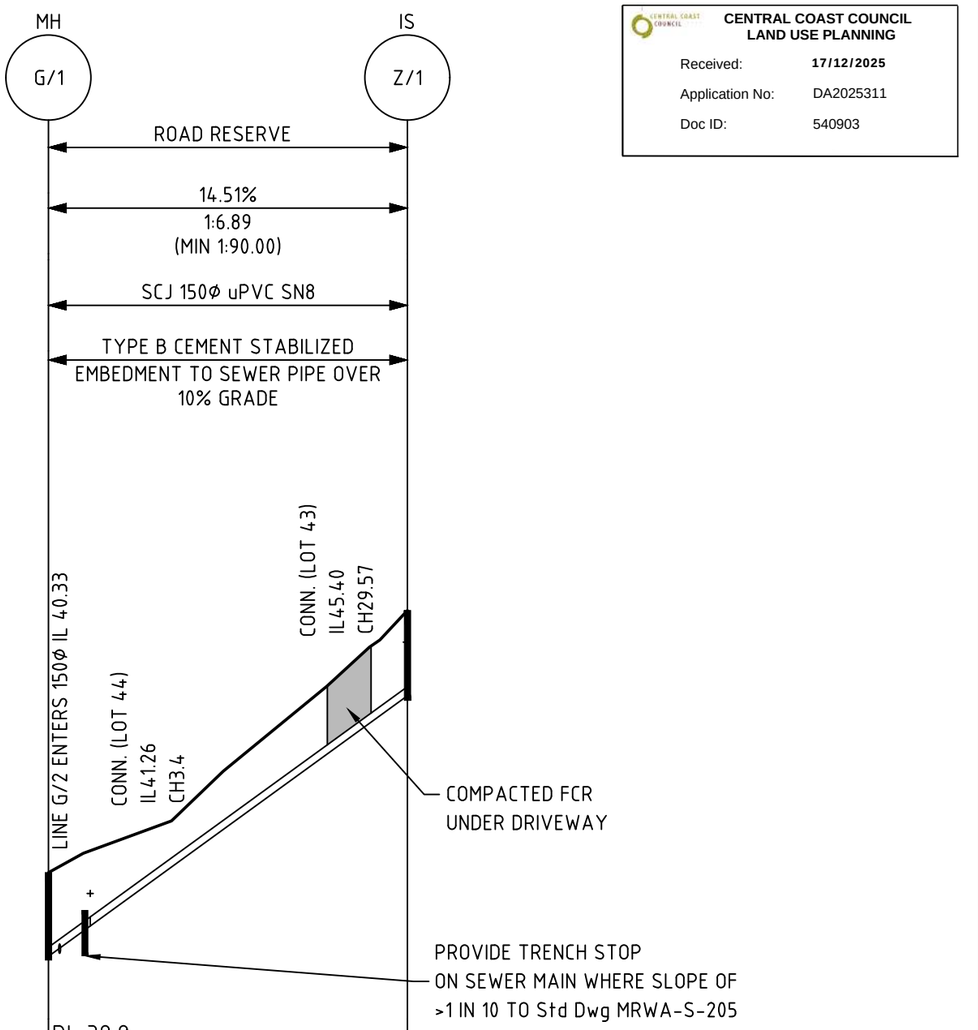
Client: **FUTURE DEVELOPMENTS PTY LTD**
Project: **STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE**
Title: **SEWER LONG SECTIONS PLAN SHEET 02**
Drawing No: **4806-43_C139**
Revision: **3**



NATURAL SURFACE	36.56		43.11
DESIGN SURFACE	36.56		43.11
INVERT LEVEL	35.30		41.98
DEPTH TO INVERT	1.26		1.13
LENGTH/CHAINAGE	CH95.36	65.24	CH160.60

SEWER LONGITUDINAL SECTION FOR LINE B

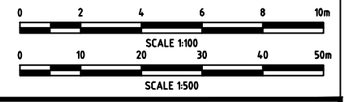
SCALES: HORIZONTAL 1:500 VERTICAL 1:100



	41.66		45.97
	41.66		45.97
	40.28		44.57
	1.38		1.40
	CH255.14	29.57	CH284.70

SEWER LONGITUDINAL SECTION FOR LINE Z

SCALES: HORIZONTAL 1:500 VERTICAL 1:100



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FOR CONSTRUCTION

Scale	1:500H 1:100V
Designed	CHRIS MARTIN
Drawn	CJG
Accred. No.	CC4109V
Approved	CHRIS MARTIN
Date	MAY 2022

No	Revision	Drawn	Date
3	ROAD, STORMWATER AND SEWER DESIGNS UPDATED	CJG	25/09/25
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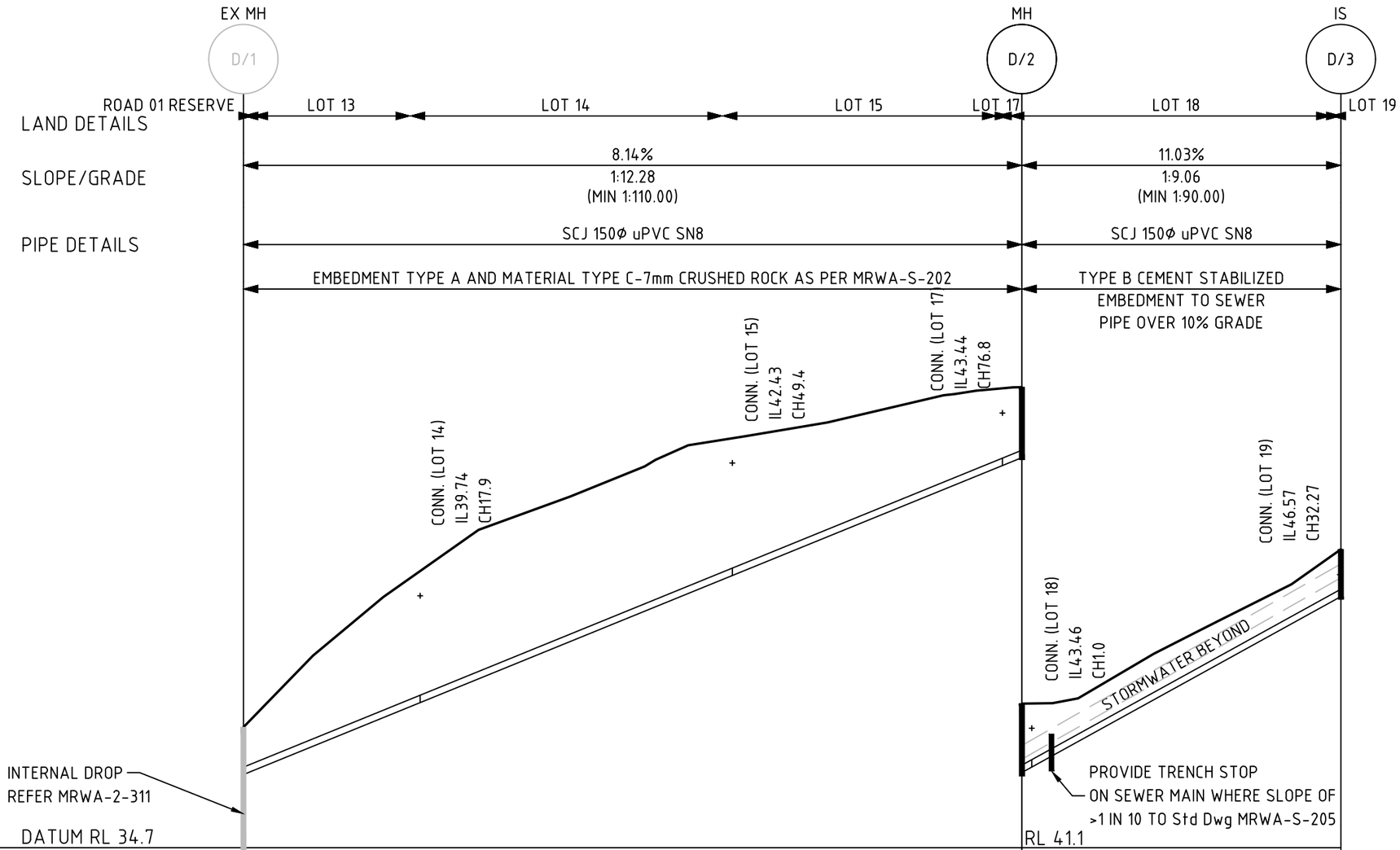
1	DRAWING UPDATED WITH COMMENTS FROM COUNCIL	CJG	12/07/2022
0	DRAWING UPDATED FOR CONSTRUCTION	CJG	30/06/22

Client: FUTURE DEVELOPMENTS PTY LTD
Project: STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title: SEWER LONG SECTIONS PLAN SHEET 03

Drawing No: 4806-43_C140 | Revision: 3



	D/1		D/2	D/2		D/3
NATURAL SURFACE	37.14		44.01			47.14
DESIGN SURFACE	37.14		44.01			47.14
INVERT LEVEL	36.18		42.59	42.62		46.18
DEPTH TO INVERT	0.96		1.42	1.39		0.96
LENGTH/CHAINAGE	CH199.73	78.73	CH278.46		32.27	CH310.73

SEWER LONGITUDINAL SECTION FOR LINE D

SCALES: HORIZONTAL 1:500 VERTICAL 1:100

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Scale: 1:500H 1:100V
Designed: CHRIS MARTIN
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Accred. No.: CC4109V
Approved: CHRIS MARTIN
Date: MAY 2022

No	Revision	Drawn	Date
3	ROAD, STORMWATER AND SEWER DESIGNS UPDATED	CJG	25/09/25
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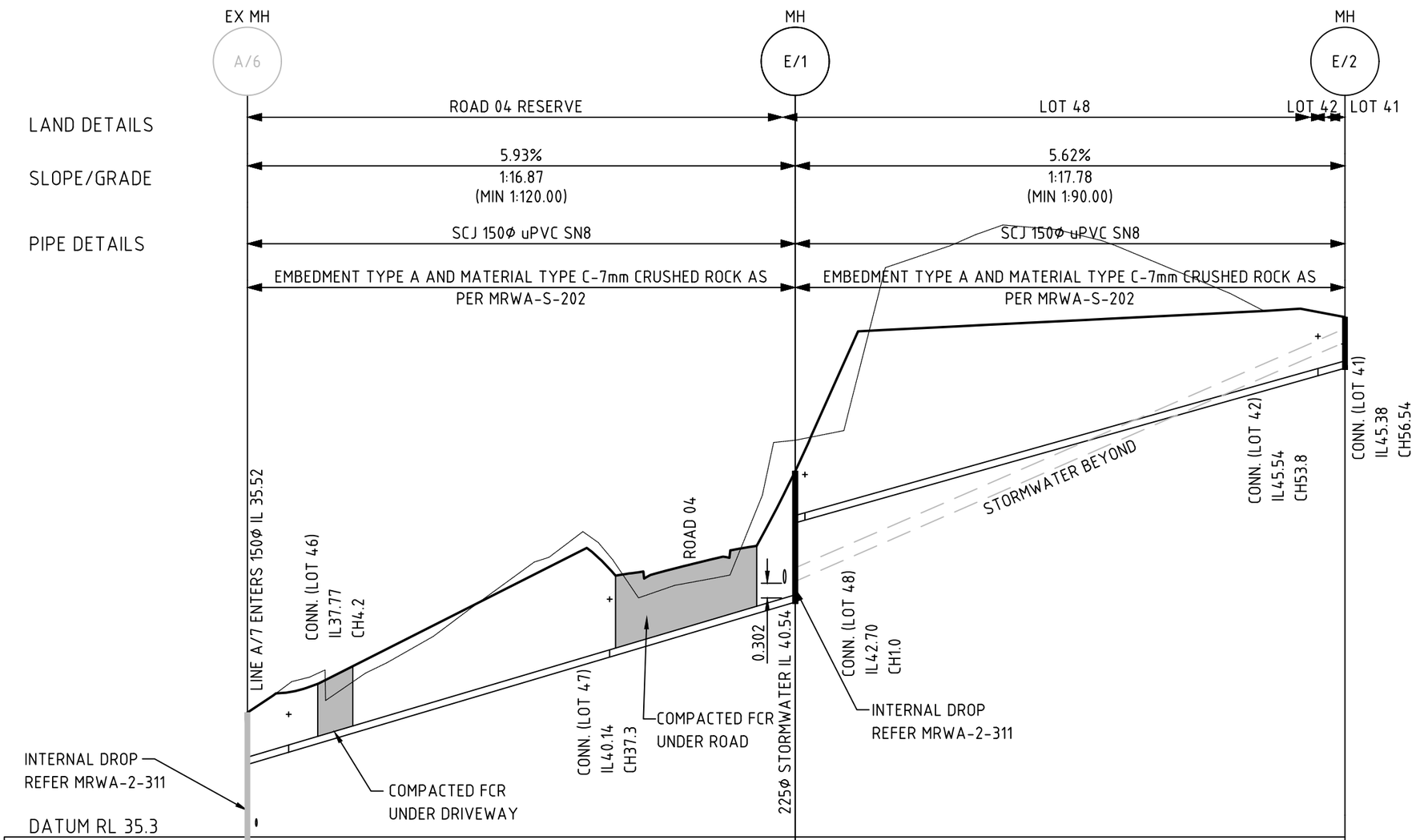
1	DRAWING UPDATED WITH COMMENTS FROM COUNCIL	CJG	12/07/2022
0	DRAWING UPDATED FOR CONSTRUCTION	CJG	30/06/22

Client **FUTURE DEVELOPMENTS PTY LTD**
Project **STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE**
Title **SEWER LONG SECTIONS PLAN SHEET 04**

Drawing No: **4806-43_C141**
Revision: **3**



CENTRAL COAST COUNCIL
LAND USE PLANNING

Received:	17/12/2025
Application No:	DA2025311
Doc ID:	540903

	EX MH A/6		MH E/1			MH E/2
NATURAL SURFACE	37.86		43.46			45.99
DESIGN SURFACE	37.86		42.82			45.99
INVERT LEVEL	36.79		40.13	41.76		44.94
DEPTH TO INVERT	1.07		2.69	1.06		1.05
LENGTH/CHAINAGE	CH199.09	56.34	CH255.42		56.54	CH311.96

SEWER LONGITUDINAL SECTION FOR LINE E

SCALES: HORIZONTAL 1:500 VERTICAL 1:100

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Scale: 1:500H 1:100V	Designed: CHRIS MARTIN
Drawn: CJG	Accred. No.: CC4109V
Approved: CHRIS MARTIN	
Date: MAY 2022	

No	Revision	Drawn	Date
3	ROAD, STORMWATER AND SEWER DESIGNS UPDATED	CJG	25/09/25
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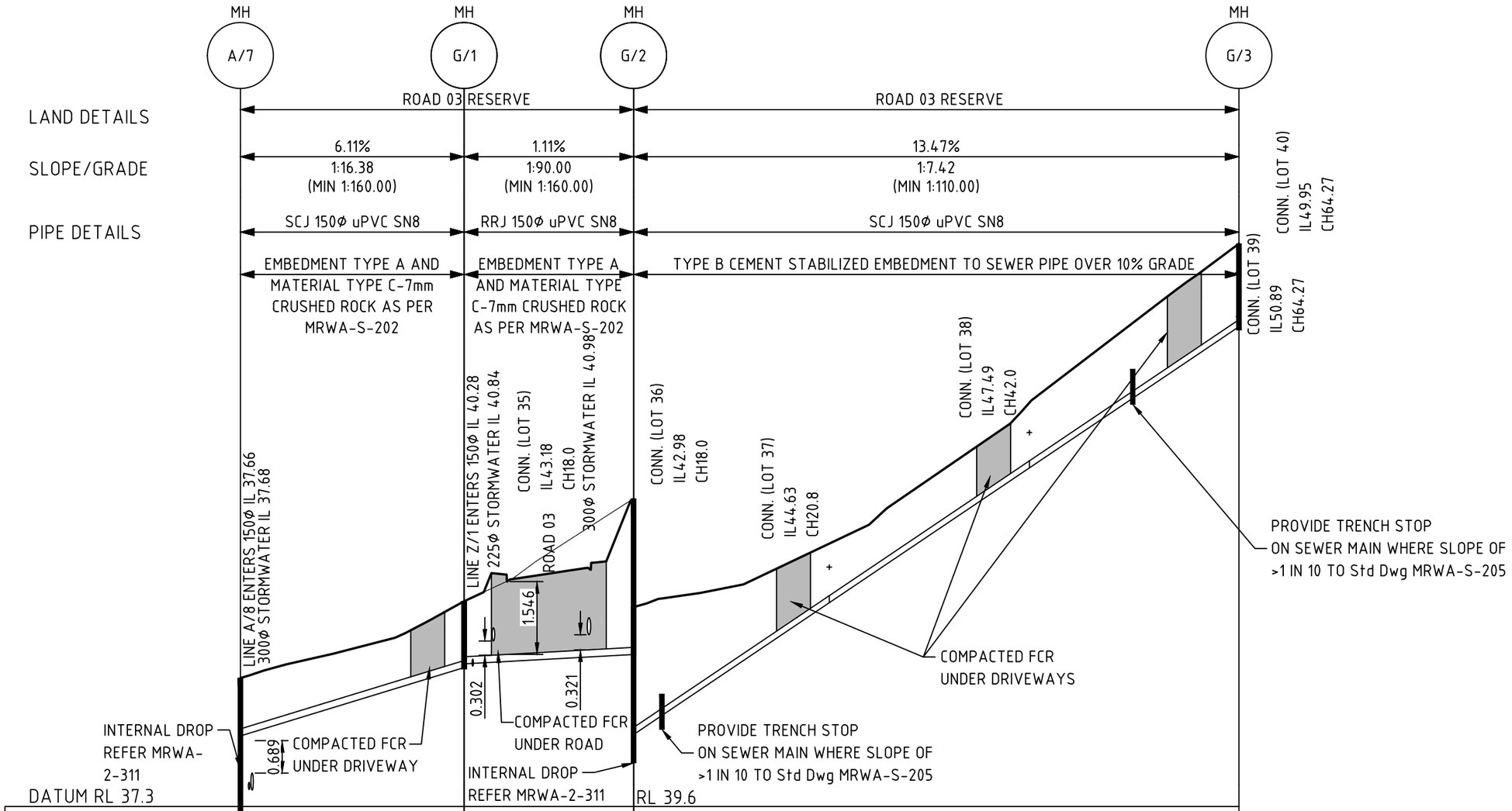
Client **FUTURE DEVELOPMENTS PTY LTD**
Project **STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE**
Title **SEWER LONG SECTIONS PLAN SHEET 05**

Drawing No: **4806-43_C142** Revision: **3**

CENTRAL COAST COUNCIL
LAND USE PLANNING

Received: 17/12/2025
Application No: DA2025311
Doc ID: 540903



NATURAL SURFACE	40.03		41.66			43.84			51.55
DESIGN SURFACE	40.03		41.66			43.84			51.55
INVERT LEVEL	38.80		40.25	40.33		40.53	41.13		49.79
DEPTH TO INVERT	1.23		1.41	1.33		3.31	2.71		1.76
LENGTH/CHAINAGE	CH231.39	23.75	CH255.14		18.00	CH273.14		64.27	CH337.41

SEWER LONGITUDINAL SECTION FOR LINE G

SCALES: HORIZONTAL 1:500 VERTICAL 1:100

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Drawn: CJG
Accred. No.: CC4109V
Approved: CHRIS MARTIN
Date: MAY 2022

No	Revision	Drawn	Date
3	ROAD, STORMWATER AND SEWER DESIGNS UPDATED	CJG	25/09/25
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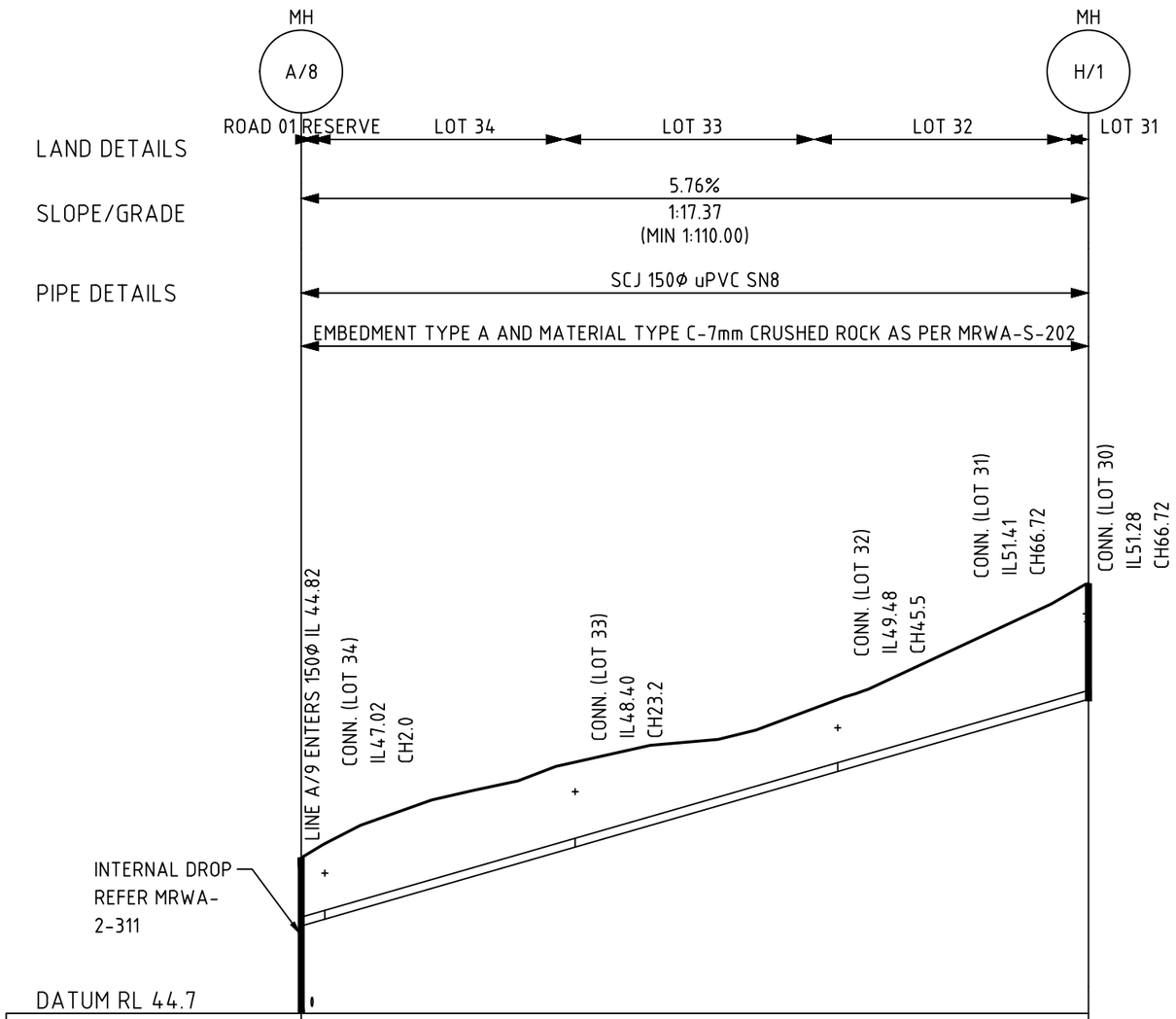
1	DRAWING UPDATED WITH COMMENTS FROM COUNCIL	CJG	12/07/2022
0	DRAWING UPDATED FOR CONSTRUCTION	CJG	30/06/22

Client: FUTURE DEVELOPMENTS PTY LTD
Project: STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title: SEWER LONG SECTIONS PLAN SHEET 06
Drawing No: 4806-43_C143
Revision: 3



NATURAL SURFACE	47.33	51.98
DESIGN SURFACE	47.33	51.98
INVERT LEVEL	46.18	50.02
DEPTH TO INVERT	1.15	1.96
LENGTH/CHAINAGE	CH281.39	CH348.11
	66.72	

SEWER LONGITUDINAL SECTION FOR LINE H

SCALES: HORIZONTAL 1:500 VERTICAL 1:100

0 2 4 6 8 10m
SCALE 1:100
0 10 20 30 40 50m
SCALE 1:500

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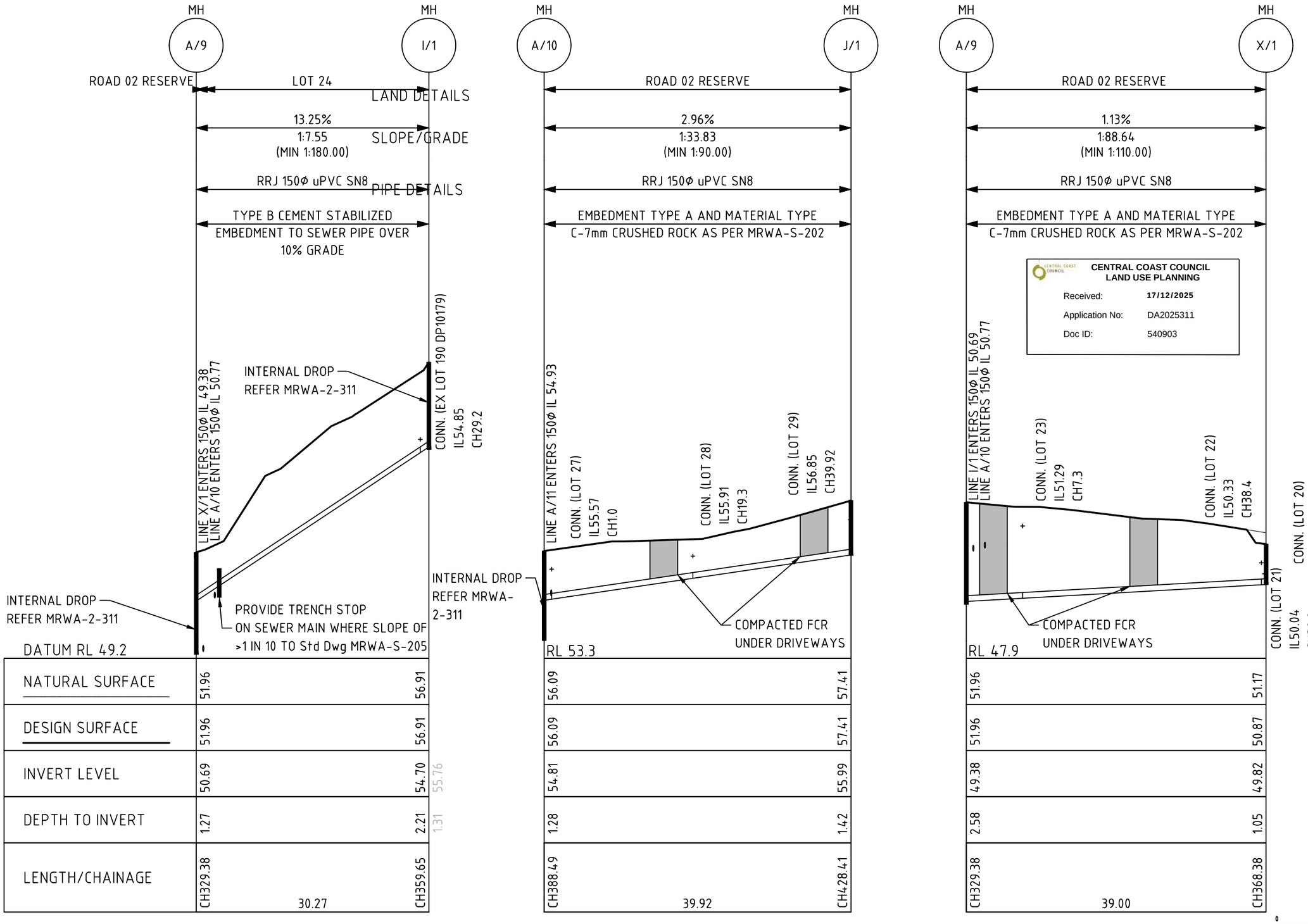
Client FUTURE DEVELOPMENTS PTY LTD
Project STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title SEWER LONG SECTIONS PLAN SHEET 07

Drawing No: 4806-43_C144 Revision: 3



SEWER LONGITUDINAL SECTION FOR LINE I
SCALES: HORIZONTAL 1:500 VERTICAL 1:100

SEWER LONGITUDINAL SECTION FOR LINE J
SCALES: HORIZONTAL 1:500 VERTICAL 1:100

SEWER LONGITUDINAL SECTION FOR LINE X
SCALES: HORIZONTAL 1:500 VERTICAL 1:100

SCALE 1:100 (0 2 4 6 8 10m)
SCALE 1:500 (0 10 20 30 40 50m)

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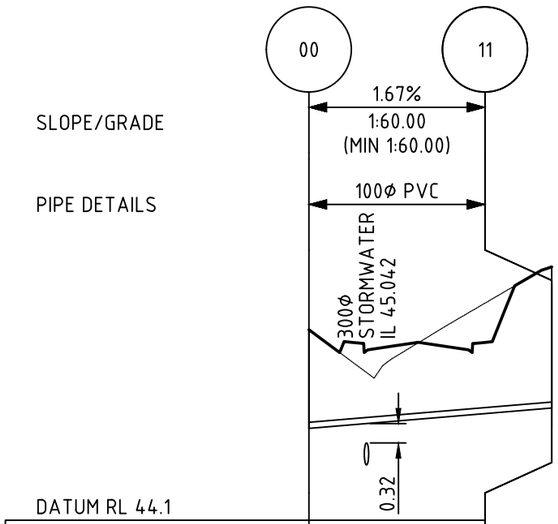
0	DRAWING UPDATED FOR CONSTRUCTION	CJG	30/06/22

Client FUTURE DEVELOPMENTS PTY LTD
Project STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title SEWER LONG SECTIONS PLAN SHEET 08

Drawing No: 4806-43_C145 Revision: 3

INDICATIVE ONLY



DATUM RL 44.1			
NATURAL SURFACE	47.24		48.27
DESIGN SURFACE	47.24		48.27
INVERT LEVEL	45.61		45.95
DEPTH TO INVERT	1.62		2.33
LENGTH/CHAINAGE	CH0.00	20.00	CH20.00

SEWER LONGITUDINAL SECTION HOUSE CONNECTION FOR LOT 16
SCALES: HORIZONTAL 1:500 VERTICAL 1:100

NOTES:

1. DESIGN SEWER LOT CONNECTION INVERTS DO NOT TAKE INTO ACCOUNT ROAD CROSSING CLASHES WITH OTHER SERVICES, ADDITIONAL DEPTH TO BE ADDED TO THE INVERTS WHERE THIS IS AN ISSUE.
2. THESE PLANS SHOW THE CONTROL LEVELS FOR THE NOMINATED LOTS AT 1m INSIDE THE LOT BOUNDARY AND AT A MINIMUM LONGITUDINAL GRADE AND MINIMUM COVER ABOVE THE SEWER MAIN.
3. IT IS EXPECTED THE CONTRACTOR WILL RUN LINES WITH A CONSTANT VERTICAL GRADE TO THIS POINT.
4. ALL CROSSINGS UNDER ROADWAYS REQUIRE COMPACTED FCR BACKFILL.

0 2 4 6 8 10m
SCALE 1:100
0 10 20 30 40 50m
SCALE 1:500

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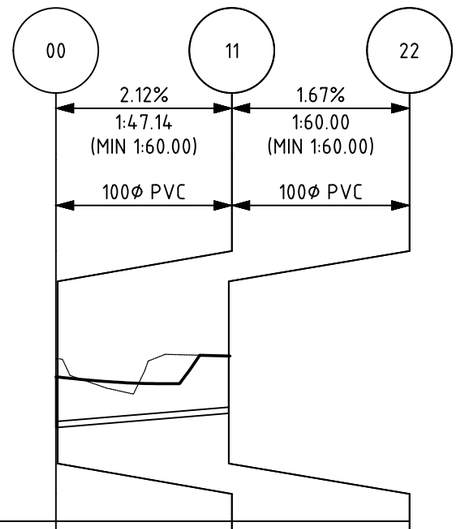
Approved	CHRIS MARTIN
Date	MAY 2022

No	Revision	Drawn	Date
3	ROAD, STORMWATER AND SEWER DESIGNS UPDATED	CJG	25/09/25
2	DRAWING UPDATED WITH COMMENTS FROM TASWATER	CJG	23/07/22
1	DRAWING UPDATED WITH COMMENTS FROM COUNCIL	CJG	12/07/2022
0	DRAWING UPDATED FOR CONSTRUCTION	CJG	30/06/22

Client FUTURE DEVELOPMENTS PTY LTD
Project STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title LOT 16 SEWER CONNECTION LONG SECTION PLAN

Drawing No: 4806-43_C146 | Revision: 3

INDICATIVE ONLY



DATUM RL 48.5			
NATURAL SURFACE	51.17	51.18	51.22
DESIGN SURFACE	50.88	50.88	51.22
INVERT LEVEL	50.04	50.05	50.28
DEPTH TO INVERT	0.83	0.83	0.94
LENGTH/CHAINAGE	CH0.00	CH0.14	CH14.23
	0.14	14.09	

SEWER LONGITUDINAL SECTION HOUSE CONNECTION FOR LOT 20
SCALES: HORIZONTAL 1:500 VERTICAL 1:100

NOTES:

1. DESIGN SEWER LOT CONNECTION INVERTS DO NOT TAKE INTO ACCOUNT ROAD CROSSING CLASHES WITH OTHER SERVICES, ADDITIONAL DEPTH TO BE ADDED TO THE INVERTS WHERE THIS IS AN ISSUE.
2. THESE PLANS SHOW THE CONTROL LEVELS FOR THE NOMINATED LOTS AT 1m INSIDE THE LOT BOUNDARY AND AT A MINIMUM LONGITUDINAL GRADE AND MINIMUM COVER ABOVE THE SEWER MAIN.
3. IT IS EXPECTED THE CONTRACTOR WILL RUN LINES WITH A CONSTANT VERTICAL GRADE TO THIS POINT.
4. ALL CROSSINGS UNDER ROADWAYS REQUIRE COMPACTED FCR BACKFILL.

0 2 4 6 8 10m
SCALE 1:100
0 10 20 30 40 50m
SCALE 1:500

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m 0429 418 739
chris@csetas.com.au

DO NOT SCALE | Original Size A3

FOR CONSTRUCTION

Scale	1:500H 1:100V
Designed	CHRIS MARTIN
Drawn	CJG
Accred. No.	CC4109V
Approved	CHRIS MARTIN
Date	MAY 2022

No	Revision	Drawn	Date
3	ROAD, STORMWATER AND SEWER DESIGNS UPDATED	CJG	25/09/25
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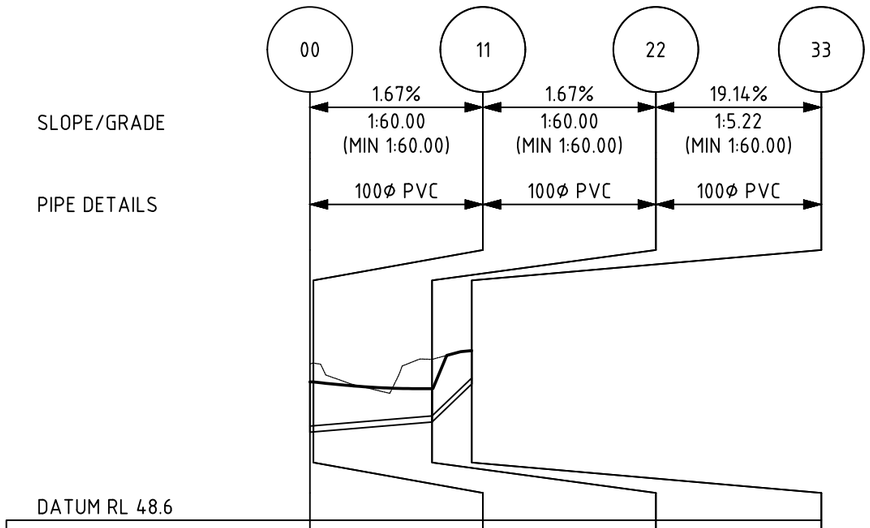
1	DRAWING UPDATED WITH COMMENTS FROM COUNCIL	CJG	12/07/2022
0	DRAWING UPDATED FOR CONSTRUCTION	CJG	30/06/22

Client FUTURE DEVELOPMENTS PTY LTD
Project STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title LOT 20 SEWER CONNECTION LONG SECTION PLAN

Drawing No: 4806-43_C147 | Revision: 3

INDICATIVE ONLY

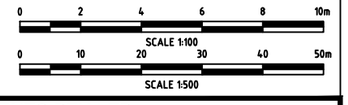


NATURAL SURFACE	51.17	51.19	51.25	51.39
DESIGN SURFACE	50.88	50.88	50.77	51.39
INVERT LEVEL	50.04	50.06	50.22	50.84
DEPTH TO INVERT	0.84	0.82	0.55	0.55
LENGTH/CHAINAGE	CH0.00	0.28 CH0.28	9.78 CH10.06	3.27 CH13.33

SEWER LONGITUDINAL SECTION HOUSE CONNECTION FOR LOT 21
SCALES: HORIZONTAL 1:500 VERTICAL 1:100

NOTES:

1. DESIGN SEWER LOT CONNECTION INVERTS DO NOT TAKE INTO ACCOUNT ROAD CROSSING CLASHES WITH OTHER SERVICES, ADDITIONAL DEPTH TO BE ADDED TO THE INVERTS WHERE THIS IS AN ISSUE.
2. THESE PLANS SHOW THE CONTROL LEVELS FOR THE NOMINATED LOTS AT 1m INSIDE THE LOT BOUNDARY AND AT A MINIMUM LONGITUDINAL GRADE AND MINIMUM COVER ABOVE THE SEWER MAIN.
3. IT IS EXPECTED THE CONTRACTOR WILL RUN LINES WITH A CONSTANT VERTICAL GRADE TO THIS POINT.
4. ALL CROSSINGS UNDER ROADWAYS REQUIRE COMPACTED FCR BACKFILL.



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chris@csetas.com.au

DO NOT SCALE | Original Size A3

FOR CONSTRUCTION

Scale	1:500H 1:100V
Designed	CHRIS MARTIN
Drawn	CJG
Accred. No.	CC4109V
Approved	CHRIS MARTIN
Date	MAY 2022

No	Revision	Drawn	Date
3	ROAD, STORMWATER AND SEWER DESIGNS UPDATED	CJG	25/09/25
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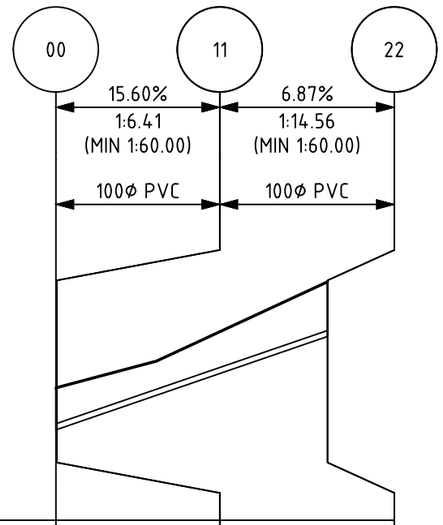
1	DRAWING UPDATED WITH COMMENTS FROM COUNCIL	CJG	12/07/2022
0	DRAWING UPDATED FOR CONSTRUCTION	CJG	30/06/22

Client: FUTURE DEVELOPMENTS PTY LTD
Project: STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title: LOT 21 SEWER CONNECTION LONG SECTION PLAN

Drawing No: 4806-43_C148 | Revision: 3

INDICATIVE ONLY



DATUM RL 49.8			
NATURAL SURFACE	51.97	51.98	53.73
DESIGN SURFACE	51.97	51.98	53.73
INVERT LEVEL	51.28	51.29	52.83
DEPTH TO INVERT	0.69	0.69	0.90
LENGTH/CHAINAGE	CH0.00 0.07	CH0.07 22.30	CH22.37

SEWER LONGITUDINAL SECTION HOUSE CONNECTION FOR LOT 30
SCALES: HORIZONTAL 1:500 VERTICAL 1:100

NOTES:

1. DESIGN SEWER LOT CONNECTION INVERTS DO NOT TAKE INTO ACCOUNT ROAD CROSSING CLASHES WITH OTHER SERVICES, ADDITIONAL DEPTH TO BE ADDED TO THE INVERTS WHERE THIS IS AN ISSUE.
2. THESE PLANS SHOW THE CONTROL LEVELS FOR THE NOMINATED LOTS AT 1m INSIDE THE LOT BOUNDARY AND AT A MINIMUM LONGITUDINAL GRADE AND MINIMUM COVER ABOVE THE SEWER MAIN.
3. IT IS EXPECTED THE CONTRACTOR WILL RUN LINES WITH A CONSTANT VERTICAL GRADE TO THIS POINT.
4. ALL CROSSINGS UNDER ROADWAYS REQUIRE COMPACTED FCR BACKFILL.

0 2 4 6 8 10m
SCALE 1:100
0 10 20 30 40 50m
SCALE 1:500

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DO NOT SCALE | Original Size A3

FOR CONSTRUCTION

Scale	1:500H 1:100V
Designed	CHRIS MARTIN
Drawn	CJG
Accred. No.	CC4109V
Approved	CHRIS MARTIN
Date	MAY 2022

No	Revision	Drawn	Date
3	ROAD, STORMWATER AND SEWER DESIGNS UPDATED	CJG	25/09/25
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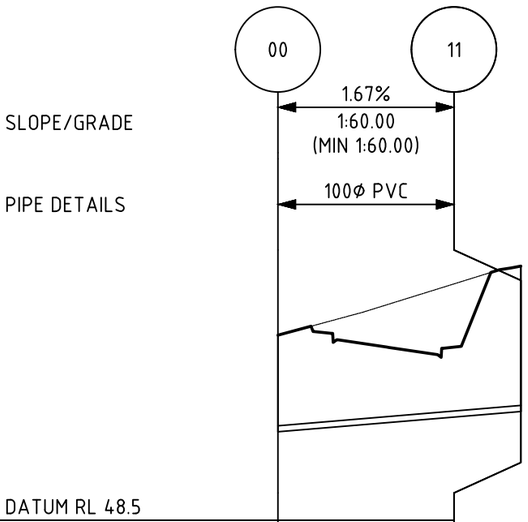
1	DRAWING UPDATED WITH COMMENTS FROM COUNCIL	CJG	12/07/2022
0	DRAWING UPDATED FOR CONSTRUCTION	CJG	30/06/22

Client FUTURE DEVELOPMENTS PTY LTD
Project STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title LOT 30 SEWER CONNECTION LONG SECTION PLAN

Drawing No: 4806-43_C149 Revision: 3

INDICATIVE ONLY



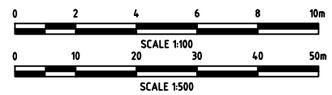
DATUM RL 48.5

NATURAL SURFACE	51.55		52.68
DESIGN SURFACE	51.55		52.68
INVERT LEVEL	49.96		50.29
DEPTH TO INVERT	1.59		2.39
LENGTH/CHAINAGE	CH0.00	20.00	CH20.00

SEWER LONGITUDINAL SECTION HOUSE CONNECTION FOR LOT 40
SCALES: HORIZONTAL 1:500 VERTICAL 1:100

NOTES:

1. DESIGN SEWER LOT CONNECTION INVERTS DO NOT TAKE INTO ACCOUNT ROAD CROSSING CLASHES WITH OTHER SERVICES, ADDITIONAL DEPTH TO BE ADDED TO THE INVERTS WHERE THIS IS AN ISSUE.
2. THESE PLANS SHOW THE CONTROL LEVELS FOR THE NOMINATED LOTS AT 1m INSIDE THE LOT BOUNDARY AND AT A MINIMUM LONGITUDINAL GRADE AND MINIMUM COVER ABOVE THE SEWER MAIN.
3. IT IS EXPECTED THE CONTRACTOR WILL RUN LINES WITH A CONSTANT VERTICAL GRADE TO THIS POINT.
4. ALL CROSSINGS UNDER ROADWAYS REQUIRE COMPACTED FCR BACKFILL.



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DO NOT SCALE | Original Size A3

FOR CONSTRUCTION

Scale	1:500H 1:100V
Designed	CHRIS MARTIN
Drawn	CJG
Accred. No.	CC4109V
Approved	CHRIS MARTIN
Date	MAY 2022

No	Revision	Drawn	Date
3	ROAD, STORMWATER AND SEWER DESIGNS UPDATED	CJG	25/09/25
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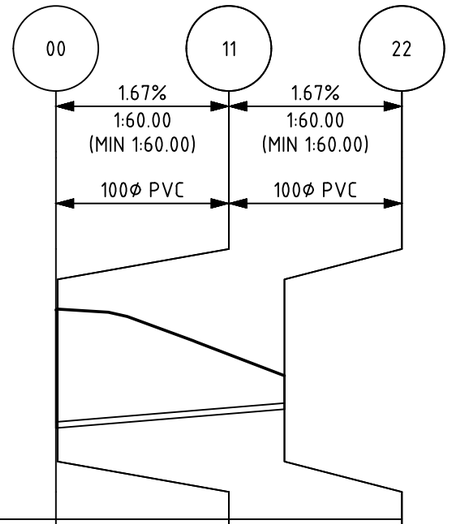
1	DRAWING UPDATED WITH COMMENTS FROM COUNCIL	CJG	12/07/2022
0	DRAWING UPDATED FOR CONSTRUCTION	CJG	30/06/22

Client FUTURE DEVELOPMENTS PTY LTD
Project STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title LOT 40 SEWER CONNECTION LONG SECTION PLAN

Drawing No: 4806-43_C150 | Revision: 3

INDICATIVE ONLY



DATUM RL 33.1			
NATURAL SURFACE	36.55	36.56	35.46
DESIGN SURFACE	36.55	36.56	35.46
INVERT LEVEL	34.60	34.60	34.91
DEPTH TO INVERT	1.94	1.96	0.55
LENGTH/CHAINAGE	CH0.00 0.14	CH0.14 18.69	CH18.82

SEWER LONGITUDINAL SECTION HOUSE CONNECTION FOR LOT 52
SCALES: HORIZONTAL 1:500 VERTICAL 1:100

NOTES:

1. DESIGN SEWER LOT CONNECTION INVERTS DO NOT TAKE INTO ACCOUNT ROAD CROSSING CLASHES WITH OTHER SERVICES, ADDITIONAL DEPTH TO BE ADDED TO THE INVERTS WHERE THIS IS AN ISSUE.
2. THESE PLANS SHOW THE CONTROL LEVELS FOR THE NOMINATED LOTS AT 1m INSIDE THE LOT BOUNDARY AND AT A MINIMUM LONGITUDINAL GRADE AND MINIMUM COVER ABOVE THE SEWER MAIN.
3. IT IS EXPECTED THE CONTRACTOR WILL RUN LINES WITH A CONSTANT VERTICAL GRADE TO THIS POINT.
4. ALL CROSSINGS UNDER ROADWAYS REQUIRE COMPACTED FCR BACKFILL.

0 2 4 6 8 10m
SCALE 1:100
0 10 20 30 40 50m
SCALE 1:500

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DO NOT SCALE | Original Size A3

FOR CONSTRUCTION

Scale	1:500H 1:100V
Designed	CHRIS MARTIN
Drawn	CJG
Accred. No.	CC4109V
Approved	CHRIS MARTIN
Date	MAY 2022

No	Revision	Drawn	Date
3	ROAD, STORMWATER AND SEWER DESIGNS UPDATED	CJG	25/09/25
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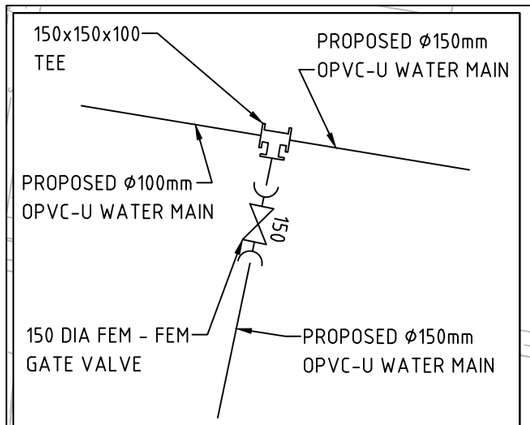
1	DRAWING UPDATED WITH COMMENTS FROM COUNCIL	CJG	12/07/2022
0	DRAWING UPDATED FOR CONSTRUCTION	CJG	30/06/22

Client FUTURE DEVELOPMENTS PTY LTD
Project STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title LOT 52 SEWER CONNECTION LONG SECTION PLAN

Drawing No: 4806-43_C151 Revision: 3



DETAIL A

SCALE: N.T.S.

CENTRAL COAST COUNCIL
LAND USE PLANNING

Received: 17/12/2025
Application No: DA2025311
Doc ID: 540903

PROPOSED ø150x ø150x ø150mm TEE TO BE INSTALLED INCLUDING THRUST BLOCK TO TASWATER STANDARD DRAWING W-300 (REFER DETAIL A)

PROPOSED ø150mm OPVC-U WATER MAIN

PROPOSED STOP VALVE TO BE INSTALLED

PROPOSED WATER METERS TO BE INSTALLED

REFER TO DRAWING 4806-43_C155 FOR DETAILS OF CUL-DE-SAC WATERMAIN LOOP

ROAD 01

ROAD 02

FP

SCALE 1:500

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DO NOT SCALE | Original Size A3

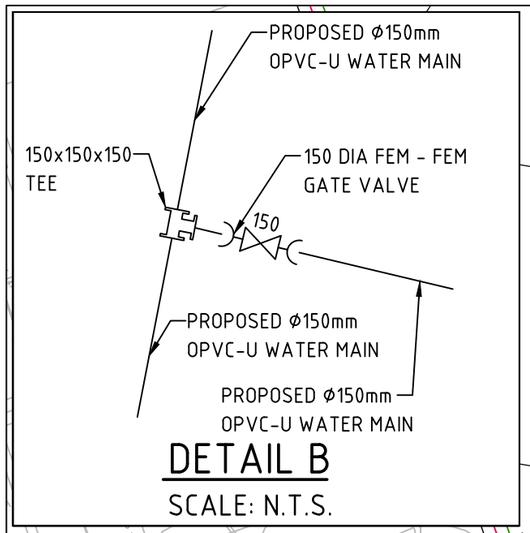
FOR CONSTRUCTION

Scale	1:500
Designed	CHRIS MARTIN
Drawn	CJG
Accred. No.	CC4109V
Approved	CHRIS MARTIN
Date	MAY 2022

No	Revision	Drawn	Date
3	ROAD, STORMWATER AND SEWER DESIGNS UPDATED	CJG	25/09/25
2	DRAWING UPDATED WITH COMMENTS FROM TASWATER	CJG	23/07/22
1	DRAWING UPDATED WITH COMMENTS FROM COUNCIL	CJG	12/07/2022
0	DRAWING UPDATED FOR CONSTRUCTION	CJG	30/06/22

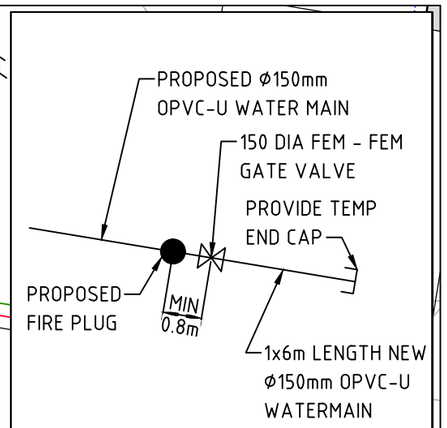
Client: FUTURE DEVELOPMENTS PTY LTD
Project: STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title: WATER RETICULATION LAYOUT PLAN SHEET 01

Drawing No: 4806-43_C152
Revision: 3



DETAIL B

SCALE: N.T.S.



DETAIL D

SCALE: N.T.S.

PROPOSED ϕ150mm OPVC-U WATER MAIN

PROPOSED ϕ150x ϕ150x ϕ100mm TEE TO BE INSTALLED INCLUDING THRUST BLOCK TO TASWATER STANDARD DRAWING W-300 (REFER DETAIL B)

REFER TO DETAIL D

PROPOSED STOP VALVE TO BE INSTALLED

PROPOSED WATER METERS TO BE INSTALLED

PROPOSED 11.25° BEND TO BE INSTALLED

PROPOSED 45° BENDS TO BE INSTALLED

STAGES 1 AND 2 LIMIT OF WORKS

PROPOSED ϕ100mm OPVC-U WATER MAIN

STAGES 2 AND 3 LIMIT OF WORKS

PROPOSED ϕ150mm OPVC-U WATER MAIN

PROPOSED WATER METERS TO BE INSTALLED IN A CLASS (B) BOX

REFER TO DETAIL D

ROAD 01 ROAD 03 ROAD 04

SCALE 1:500

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DO NOT SCALE | Original Size A3

FOR CONSTRUCTION

Scale	1:500
Designed	CHRIS MARTIN
Drawn	CJG
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Approved	CHRIS MARTIN
Date	MAY 2022

No	Revision	Drawn	Date
3	ROAD, STORMWATER AND SEWER DESIGNS UPDATED	CJG	25/09/25
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Client: FUTURE DEVELOPMENTS PTY LTD
Project: STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title: WATER RETICULATION LAYOUT PLAN SHEET 02

Drawing No: 4806-43_C153 | Revision: 3

PROPOSED ϕ100mm
OPVC-U WATER MAIN

ROAD 04

REFER TO DRAWING 4806-43_C154 FOR DETAILS
OF CUL-DE-SAC WATERMAIN LOOP

FUTURE STAGES

NORTH

0 10 20 30 40 50m
SCALE 1:500

CENTRAL COAST COUNCIL
LAND USE PLANNING

Received: 17/12/2025

Application No: DA2025311

Doc ID: 540903

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FOR CONSTRUCTION

Scale	1:500
Designed	CHRIS MARTIN
Drawn	CJG
Accred. No.	CC4109V
Approved	CHRIS MARTIN
Date	MAY 2022

No	Revision	Drawn	Date
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1	DRAWING UPDATED WITH COMMENTS FROM COUNCIL	CJG	12/07/2022
0	DRAWING UPDATED FOR CONSTRUCTION	CJG	30/06/22

Client FUTURE DEVELOPMENTS PTY LTD
Project STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title WATER RETICULATION LAYOUT PLAN SHEET 03

Drawing No: 4806-43_C154 | Revision: 3

CENTRAL COAST COUNCIL
LAND USE PLANNING
Received: 17/12/2025
Application No: DA2025311
Doc ID: 540903

EXISTING Ø100mm AC WATER MAIN

PROPOSED Ø100mm OPVC-U WATER MAIN

PROPOSED Ø150x Ø150x Ø100mm TEE TO BE INSTALLED INCLUDING THRUST BLOCK TO TASWATER STANDARD DRAWING W-300 (REFER DETAIL C)

EXISTING WATER METER TO BE CUT AND SEALED BY TASWATER AT DEVELOPERS EXPENSE

PROPOSED STOP VALVE TO BE INSTALLED

PROPOSED Ø150mm OPVC-U WATER MAIN

REFER TO DETAIL E

FUTURE STAGE WATER MAIN

FUTURE STAGES

PROPOSED WATER METERS TO BE INSTALLED

FUTURE STAGE WATER MAIN

ROAD 02

ROAD 03

26 27 28 29 31 30 72 73 74 75 89 88 87 86 85

NORTH

150x150x100 TEE
PROPOSED Ø100mm OPVC-U WATER MAIN
100 DIA FEM - FEM GATE VALVE
PROPOSED Ø150mm OPVC-U WATER MAIN
100
PROPOSED Ø150mm OPVC-U WATER MAIN

DETAIL C
SCALE: N.T.S.

PROPOSED Ø150mm OPVC-U WATER MAIN
150 DIA FEM - FEM GATE VALVE
PROVIDE TEMP END CAP
PROPOSED FIRE PLUG
MIN 0.8m
1x6m LENGTH NEW Ø150mm OPVC-U WATERMAIN

DETAIL E
SCALE: N.T.S.

0 10 20 30 40 50m
SCALE 1:500

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DO NOT SCALE | Original Size A3

FOR CONSTRUCTION

Scale	1:500
Designed	CHRIS MARTIN
Drawn	CJG
Accred. No.	CC4109V
Approved	CHRIS MARTIN
Date	MAY 2022

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0	DRAWING UPDATED FOR CONSTRUCTION	CJG	30/06/22

Client FUTURE DEVELOPMENTS PTY LTD
Project STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title WATER RETICULATION LAYOUT PLAN SHEET 04

Drawing No: 4806-43_C155
Revision: 3

PROPOSED ϕ100mm OPVC-U
WATER MAIN 2m OFFSET
FROM LOT BOUNDARY

PROPOSED ϕ100 TEE TO BE INSTALLED
INCLUDING THRUST BLOCK TO TASWATER
STANDARD DRAWING W-300. REFER TO
DETAIL (C) FOR CONNECTION DETAILS

PROPOSED WATER
METERS TO BE INSTALLED

PROPOSED 45° BENDS
TO BE INSTALLED

MINIMUM 2m FROM LOT
CONNECTION AND DRIVEWAY

REFER TO DETAIL (B)
FOR CONNECTION DETAILS

PROPOSED WATER
METERS TO BE INSTALLED

PROPOSED 63 O.D. PE
LOOP

PROPOSED WATER
METER TO BE INSTALLED

PROPOSED WATER
METER TO BE INSTALLED

PROPOSED WATER
METERS TO BE INSTALLED

ROAD 04

R3

R18.05

R10.95

9

10

46

47

42

48

49

50

51

52

53

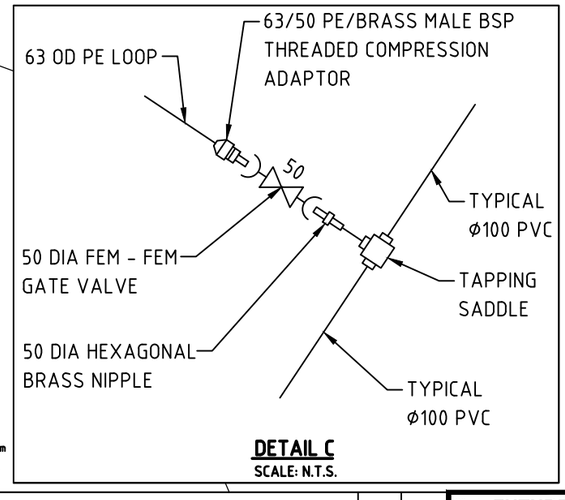
NORTH

CENTRAL COAST COUNCIL
LAND USE PLANNING
Received: 17/12/2025
Application No: DA2025311
Doc ID: 540903

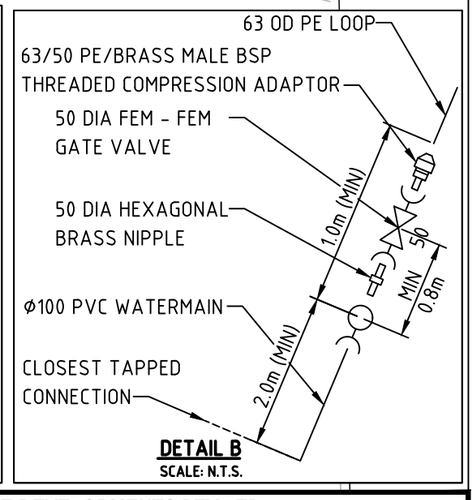
NOTES

1. BASIC REQUIREMENTS:
   - TERMINATE END OF PVC MAIN WITH FIRE PLUG AND TAPPING HYDRANT BLOCK.
   - 63 OD POLYETHYLENE LOOP MAIN CONNECTED BETWEEN HYDRANT BLOCK ONE END TAPPING SADDLE ON PVC MAIN AT THE OTHER END.
   - GATE VALVES EACH END OF POLYETHYLENE LOOP.
   - LOCATE PROPERTY CONNECTIONS ON POLYETHYLENE LOOP, PERPENDICULAR TO METER LOCATION.
   - MAXIMUM NUMBER OF PROPERTY CONNECTIONS ON POLYETHYLENE LOOP - 5.
   - MINIMUM OFFSET BETWEEN FIRE PLUG AND DRIVEWAY EDGE - 1.0m.
   - MINIMUM OFFSET BETWEEN FIRE PLUG AND NEAREST DOMESTIC CONNECTION - 2.0m

0 5 10 15 20 25m
SCALE 1:250



DETAIL C
SCALE: N.T.S.



DETAIL B
SCALE: N.T.S.

CSE TASMANIA PTY LTD
civil • structural • environmental engineering
PO Box 49, Turners Beach TAS 7315
127 Leith Road, Leith TAS 7315
ACN 118 678 667
m 0429 418 739
chris@csetas.com.au

DO NOT SCALE | Original Size A3

FOR CONSTRUCTION

Scale	AS NOTED
Designed	CHRIS MARTIN
Drawn	CJG
Accred. No.	CC4109V
Approved	CHRIS MARTIN
Date	MAY 2022

No	Revision	Drawn	Date
3	ROAD, STORMWATER AND SEWER DESIGNS UPDATED	CJG	25/09/25
2	DRAWING UPDATED WITH COMMENTS FROM TASWATER	CJG	23/07/22
1	DRAWING UPDATED WITH COMMENTS FROM COUNCIL	CJG	12/07/2022
0	DRAWING UPDATED FOR CONSTRUCTION	CJG	30/06/22

Client: FUTURE DEVELOPMENTS PTY LTD
Project: STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title: WATER RETICULATION DETAILS PLAN SHEET 01

Drawing No: 4806-43_C156
Revision: 3

NORTH

20

21

19

22

23

24

PROPOSED WATER METERS TO BE INSTALLED

REFER TO DETAIL (B) FOR CONNECTION DETAILS

MINIMUM 2m FROM LOT CONNECTION AND DRIVEWAY

PROPOSED WATER METER TO BE INSTALLED

PROPOSED Φ100mm OPVC-U WATER MAIN 2m OFFSET FROM LOT BOUNDARY

PROPOSED WATER METER TO BE INSTALLED

PROPOSED STOP VALVE TO BE INSTALLED

R10.95

R2.5

R3

PROPOSED 63 O.D. PE LOOP

PROPOSED WATER METER TO BE INSTALLED IN A CLASS (B) BOX

18

PROPOSED WATER METERS TO BE INSTALLED

PROPOSED SCOUR VALVE AND TEE CONNECT WITH DN80 PN16 PIPE INTO STORMWATER SYSTEM

17

PROPOSED Φ100 TEE TO BE INSTALLED INCLUDING THRUST BLOCK TO TASWATER STANDARD DRAWING W-300. REFER TO DETAIL (C) FOR CONNECTION DETAILS

16

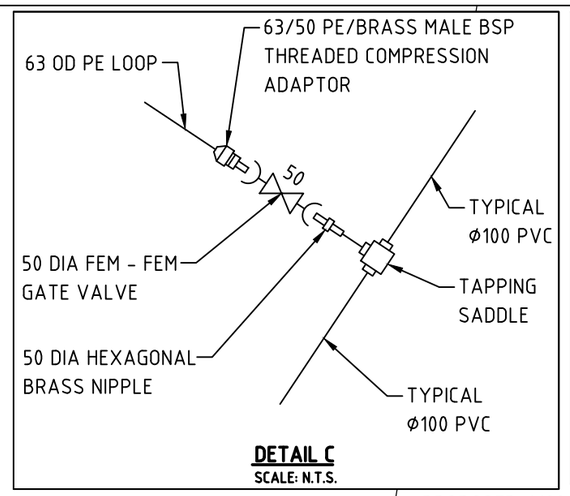
PROPOSED Φ150mm OPVC-U WATER MAIN 2m OFFSET FROM LOT BOUNDARY

34

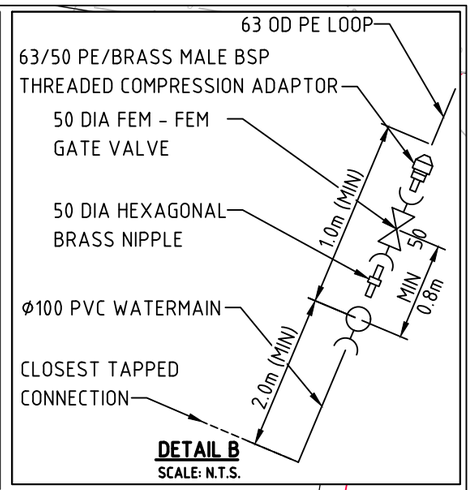
ROAD 01

ROAD 02

FP



DETAIL C
SCALE: N.T.S.



DETAIL B
SCALE: N.T.S.

NOTES

1. BASIC REQUIREMENTS:
   - TERMINATE END OF PVC MAIN WITH FIRE PLUG AND TAPPING HYDRANT BLOCK.
   - 63 OD POLYETHYLENE LOOP MAIN CONNECTED BETWEEN HYDRANT BLOCK ONE END TAPPING SADDLE ON PVC MAIN AT THE OTHER END.
   - GATE VALVES EACH END OF POLYETHYLENE LOOP.
   - LOCATE PROPERTY CONNECTIONS ON POLYETHYLENE LOOP, PERPENDICULAR TO METER LOCATION.
   - MAXIMUM NUMBER OF PROPERTY CONNECTIONS ON POLYETHYLENE LOOP - 5.
   - MINIMUM OFFSET BETWEEN FIRE PLUG AND DRIVEWAY EDGE - 1.0m.
   - MINIMUM OFFSET BETWEEN FIRE PLUG AND NEAREST DOMESTIC CONNECTION - 2.0m

0 5 10 15 20 25m
SCALE 1:250

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1	DRAWING UPDATED WITH COMMENTS FROM COUNCIL	CJG	12/07/2022
0	DRAWING UPDATED FOR CONSTRUCTION	CJG	30/06/22

Client: FUTURE DEVELOPMENTS PTY LTD
Project: STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title: WATER RETICULATION DETAILS PLAN SHEET 02

Drawing No: 4806-43_C157 | Revision: 3

CSE TASMANIA PTY LTD
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DO NOT SCALE | Original Size A3

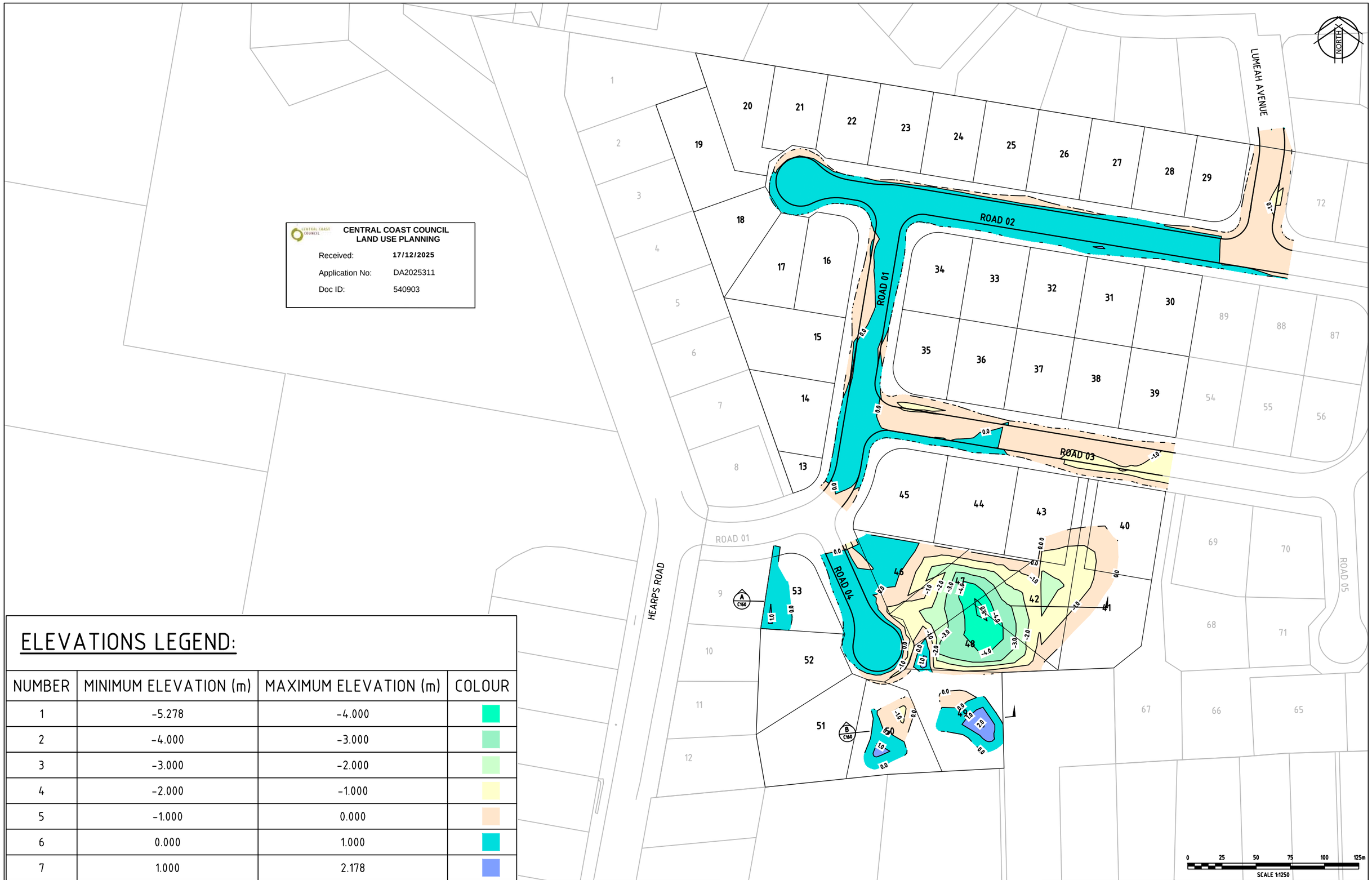
FOR CONSTRUCTION

Scale	1:1250
Designed	CHRIS MARTIN
Drawn	CJG
Accred. No.	CC4109V
Approved	CHRIS MARTIN
Date	MAY 2022

No	Revision	Drawn	Date
3	ROAD, STORMWATER AND SEWER DESIGNS UPDATED	CJG	25/09/25
2	DRAWING UPDATED WITH COMMENTS FROM TASWATER	CJG	23/07/22
1	DRAWING UPDATED WITH COMMENTS FROM COUNCIL	CJG	12/07/2022
0	DRAWING UPDATED FOR CONSTRUCTION	CJG	30/06/22

Client FUTURE DEVELOPMENTS PTY LTD
Project STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title STAGING LAYOUT PLAN

Drawing No: 4806-43_C158 | Revision: 3



CENTRAL COAST COUNCIL
LAND USE PLANNING

Received: 17/12/2025

Application No: DA2025311

Doc ID: 540903

ELEVATIONS LEGEND:

NUMBER	MINIMUM ELEVATION (m)	MAXIMUM ELEVATION (m)	COLOUR
1	-5.278	-4.000	
2	-4.000	-3.000	
3	-3.000	-2.000	
4	-2.000	-1.000	
5	-1.000	0.000	
6	0.000	1.000	
7	1.000	2.178	

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DO NOT SCALE | Original Size A3

FOR CONSTRUCTION

Scale	1:1250
Designed	CHRIS MARTIN
Drawn	CJG
Accred. No.	CC4109V
Approved	CHRIS MARTIN
Date	MAY 2022

No	Revision	Drawn	Date
3	ROAD, STORMWATER AND SEWER DESIGNS UPDATED	CJG	25/09/25
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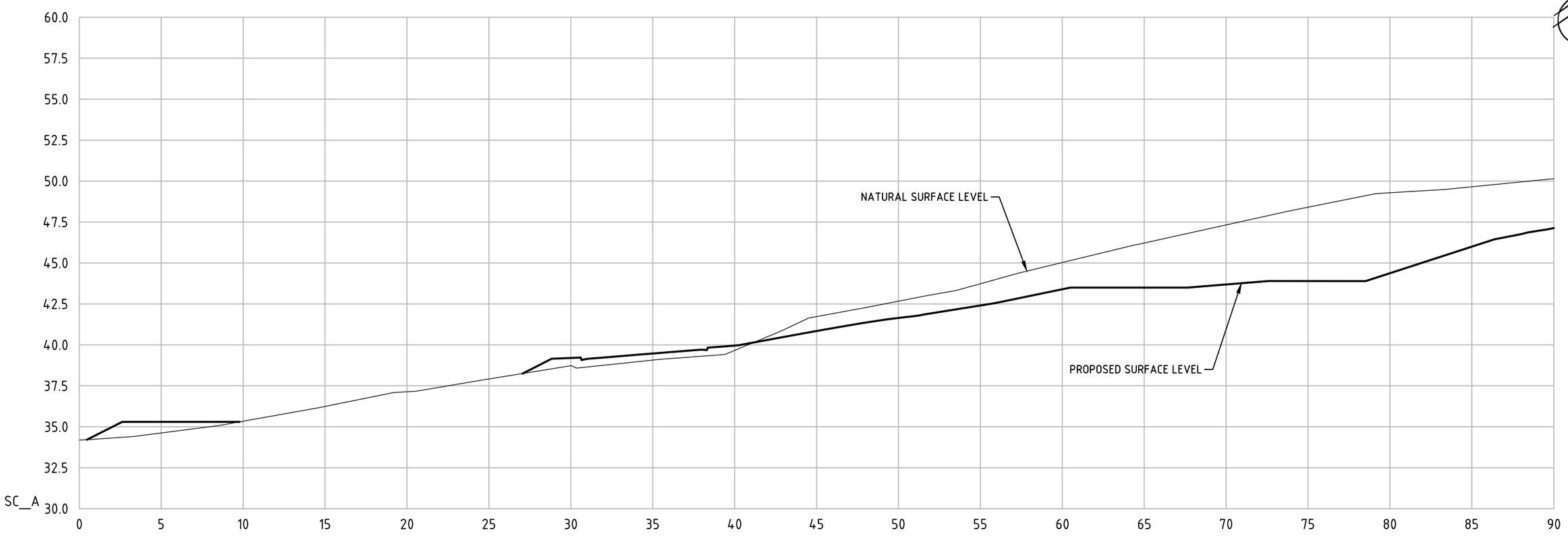
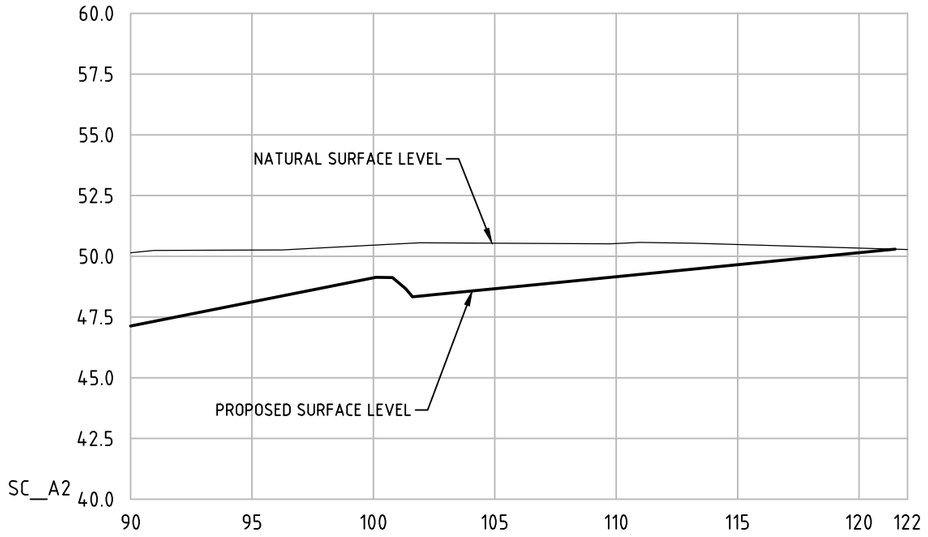
1	DRAWING UPDATED WITH COMMENTS FROM COUNCIL	CJG	12/07/2022
0	DRAWING UPDATED FOR CONSTRUCTION	CJG	30/06/22

Client: FUTURE DEVELOPMENTS PTY LTD
Project: STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title: EARTHWORKS LAYOUT PLAN

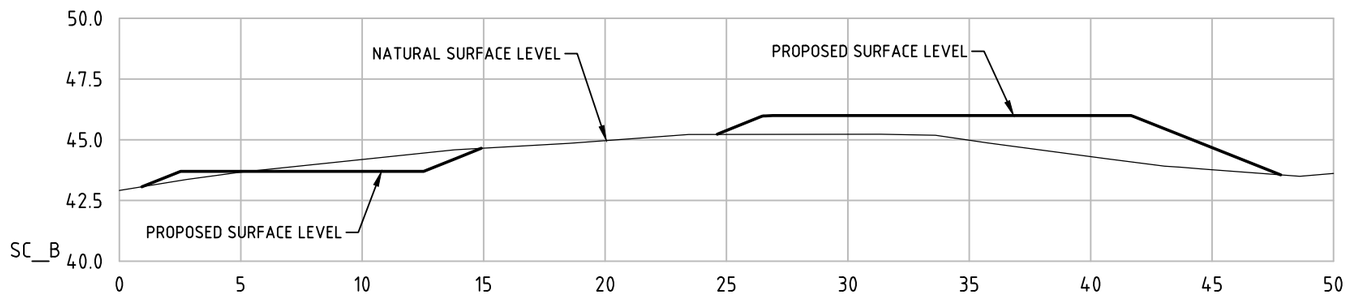
Drawing No: 4806-43_C159 | Revision: 3



SECTION A
SCALE 1:250
C159



SECTION A
SCALE 1:250
C159



SECTION B
SCALE 1:250
C159

0 5 10 15 20 25m
SCALE 1:250

CENTRAL COAST COUNCIL
LAND USE PLANNING
Received: 17/12/2025
Application No: DA2025311
Doc ID: 540903

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chris@csetas.com.au

DO NOT SCALE | Original Size A3

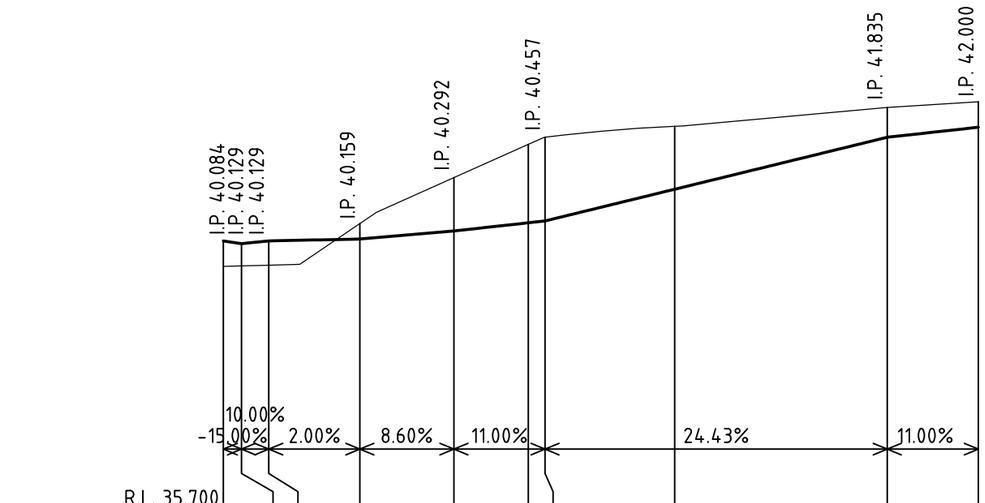
FOR CONSTRUCTION

Scale	1:250
Designed	CHRIS MARTIN
Drawn	CJG
Accred. No.	CC4109V
Approved	CHRIS MARTIN
Date	MAY 2022

No	Revision	Drawn	Date
3	ROAD, STORMWATER AND SEWER DESIGNS UPDATED	CJG	25/09/25
2	DRAWING UPDATED WITH COMMENTS FROM TASWATER	CJG	23/07/22
1	DRAWING UPDATED WITH COMMENTS FROM COUNCIL	CJG	12/07/2022
0	DRAWING UPDATED FOR CONSTRUCTION	CJG	30/06/22

Client FUTURE DEVELOPMENTS PTY LTD
Project STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title EARTHWORKS CROSS SECTIONS PLAN

Drawing No: 4806-43_C160 | Revision: 3



R.L. 35.700									
CUT/FILL DEPTHS	-0.420	-0.367	-0.400	+0.254	+0.879	+1.291	+1.380	+1.037	+0.491	+0.419
DESIGN LEVELS	40.129	40.084	40.129	40.159	40.292	40.427	40.457	40.979	41.835	42.000
EXISTING LEVELS	39.709	39.717	39.729	40.413	41.171	**41.718**	41.837	**42.016**	42.326	**42.419**
CHAINAGE	0.000	0.300	0.750	2.250	3.800	5.024	5.300	7.437	10.939	12.439

LONGITUDINAL SECTION LOT 46 DRIVEWAY CH 0.000 TO 12.439
SCALES: HORIZ 1:100 VERT 1:100

0 2 4 6 8 10m
SCALE 1:100

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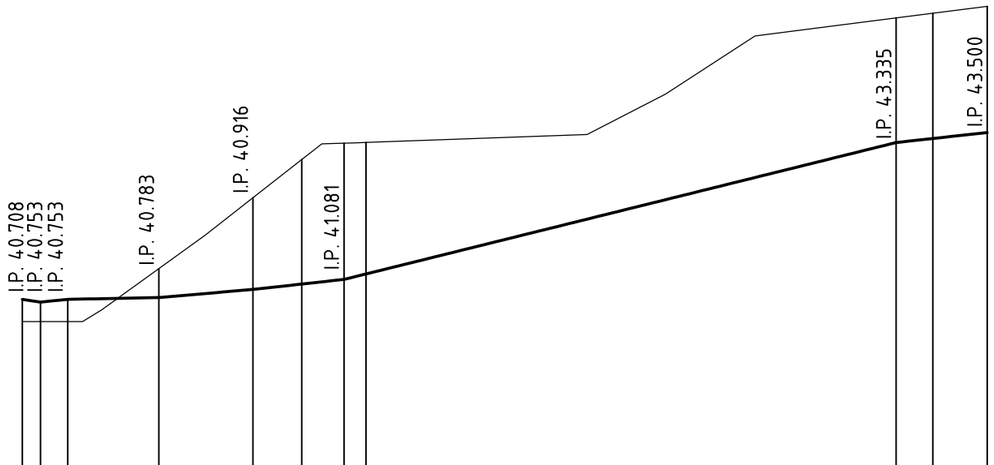
DO NOT SCALE | Original Size A3

PRELIMINARY

Scale 1:100H 1:100V	Designed CHRIS MARTIN
Drawn CJG	Accred. No. CC4109V
Approved CHRIS MARTIN	
Date NOVEMBER 2025	

No	Revision	Drawn	Date
=			

Client FUTURE DEVELOPMENTS PTY LTD
Project STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title LOT 46 DRIVEWAY LONG SECTION PLAN
Drawing No: 4806-43_SK09 Revision: P0



R.L. 36.300										
CUT/FILL DEPTHS	-0.366	-0.321	-0.366	+0.476	+1.510	+2.051	+2.244	+2.166	+2.051	+2.063	+2.078
DESIGN LEVELS	40.753	40.708	40.753	40.783	40.916	41.005	41.081	41.171	43.335	43.401	43.500
EXISTING LEVELS	40.387	40.387	40.387	41.259	42.426	**43.056**	43.325	**43.337**	45.386	45.464	**45.578**
CHAINAGE	0.000	0.300	0.750	2.250	3.800	4.603	5.300	5.663	14.396	15.000	15.895

LONGITUDINAL SECTION LOT 47 DRIVEWAY CH 0.000 TO 15.895
SCALES: HORIZ 1:100 VERT 1:100

0 2 4 6 8 10m
SCALE 1:100

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ACN 118 678 667

m 0429 418 739
chris@csetas.com.au

DO NOT SCALE | Original Size A3

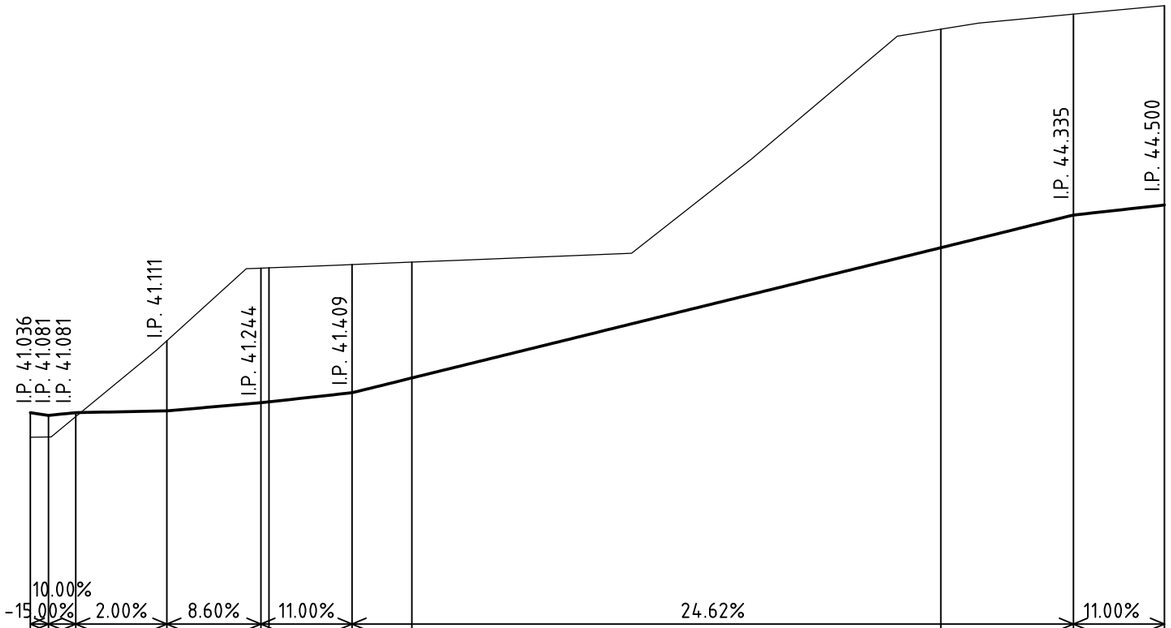
PRELIMINARY

Scale	1:100H 1:100V
Designed	CHRIS MARTIN
Drawn	CJG
Accred. No.	CC4109V
Approved	CHRIS MARTIN
Date	NOVEMBER 2025

No	Revision	Drawn	Date
=			

Client FUTURE DEVELOPMENTS PTY LTD
Project STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title LOT 47 DRIVEWAY LONG SECTION PLAN

Drawing No: 4806-43_SK10 Revision: P0



R.L. 36.600

CUT/FILL DEPTHS	-0.404	-0.355	-0.065	+1.153	+2.216	+2.206	+2.111	+1.908	+3.598	+3.307	+3.283
DESIGN LEVELS	41.081	41.036	41.081	41.111	41.244	41.259	41.409	41.652	43.797	44.335	44.500
EXISTING LEVELS	40.677	40.681	41.016	42.264	43.460	**43.465**	43.520	**43.560**	47.395	47.642	**47.783**
CHAINAGE	0.000	0.300	0.750	2.250	3.800	3.932	5.300	6.287	15.000	17.185	18.685

LONGITUDINAL SECTION LOT 48 DRIVEWAY CH 0.000 TO 18.685
SCALES: HORIZ 1:100 VERT 1:100

0 2 4 6 8 10m
SCALE 1:100

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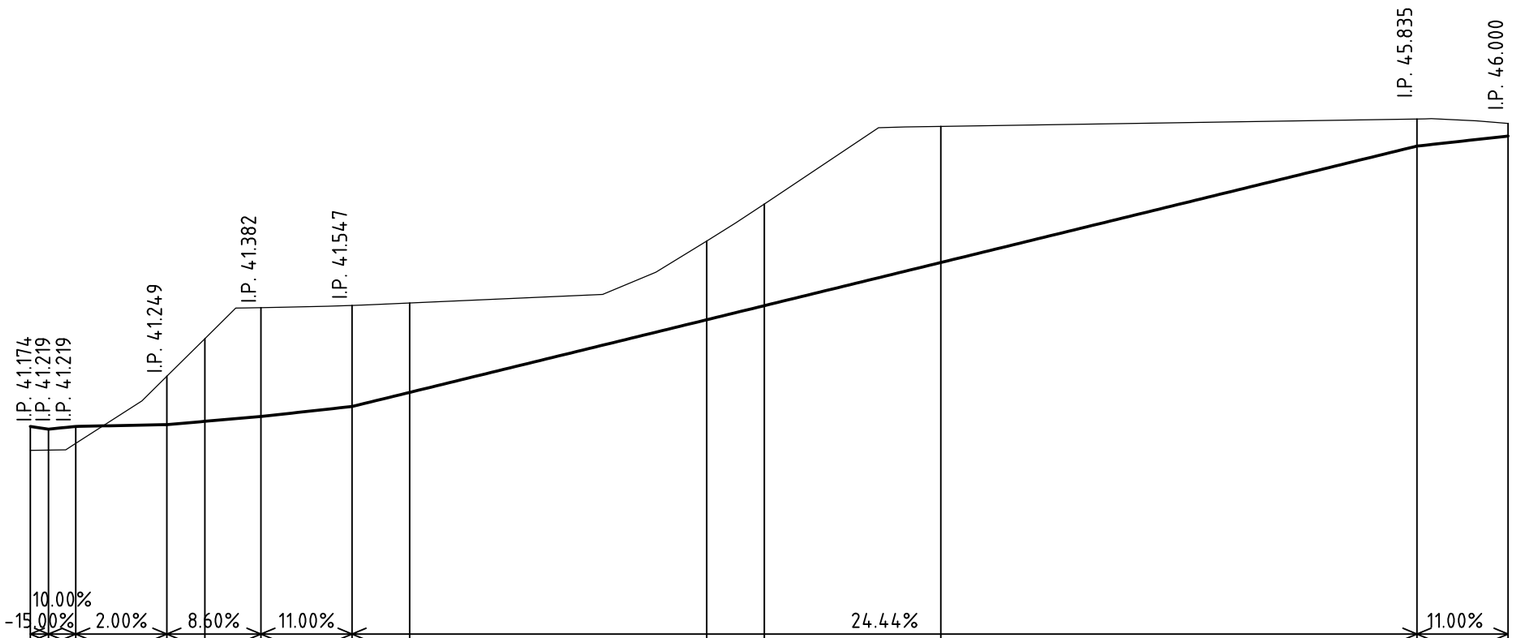
DO NOT SCALE | Original Size A3

PRELIMINARY

Scale 1:100H 1:100V	Designed CHRIS MARTIN
Drawn CJG	Accred. No. CC4109V
Approved CHRIS MARTIN	
Date NOVEMBER 2025	

No	Revision	Drawn	Date
=			

Client FUTURE DEVELOPMENTS PTY LTD
Project STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title LOT 48 DRIVEWAY LONG SECTION PLAN
Drawing No: 4806-43_SK11 Revision: P0



R.L. 36.800

CUT/FILL DEPTHS	-0.395	-0.344	-0.278	+0.796	+1.361	+1.792	+1.664	+1.471	+1.295	+1.672	+2.241	+0.445	+0.208
DESIGN LEVELS	41.219	41.174	41.219	41.249	41.303	41.382	41.547	41.779	42.976	43.208	43.918	45.835	46.000
EXISTING LEVELS	40.824	40.830	40.941	42.045	**42.664**	43.174	43.211	**43.250**	**44.271**	**44.880**	46.159	46.280	**46.208**
CHAINAGE	0.000	0.300	0.750	2.250	2.877	3.800	5.300	6.249	11.144	12.094	15.000	22.845	24.345

LONGITUDINAL SECTION LOT 49 DRIVEWAY CH 0.000 TO 24.345
SCALES: HORIZ 1:100 VERT 1:100

0 2 4 6 8 10m
SCALE 1:100

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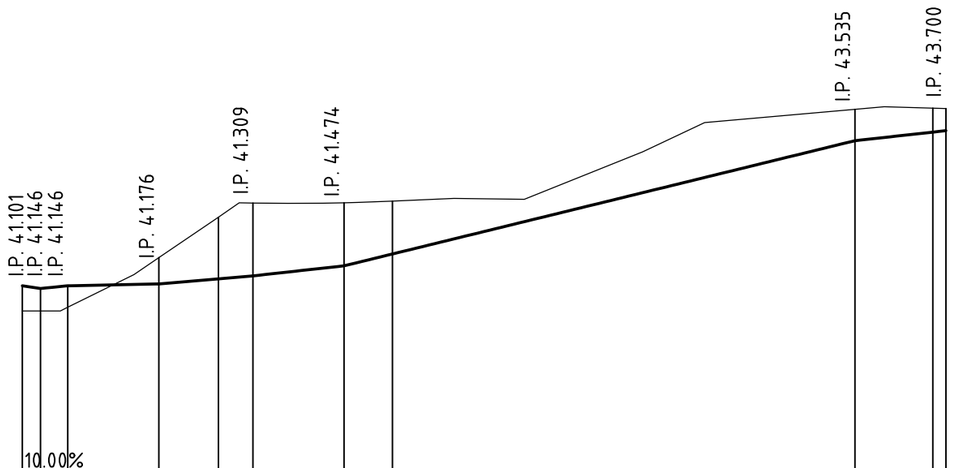
DO NOT SCALE | Original Size A3

PRELIMINARY

Scale 1:100H 1:100V	Designed CHRIS MARTIN
Drawn CJG	Accred. No. CC4109V
Approved CHRIS MARTIN	
Date NOVEMBER 2025	

No	Revision	Drawn	Date
=			

Client FUTURE DEVELOPMENTS PTY LTD
Project STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title LOT 49 DRIVEWAY LONG SECTION PLAN
Drawing No: 4806-43_SK12 Revision: P0



R.L. 36.700											
CUT/FILL DEPTHS	-0.414	-0.369	-0.353	+0.433	+1.015	+1.198	+1.039	+0.870	+0.516	+0.395	+0.365
DESIGN LEVELS	41.146	41.101	41.146	41.176	41.260	41.309	41.474	41.670	43.535	43.676	43.700
EXISTING LEVELS	40.732	40.732	40.793	41.609	42.275	42.507	42.513	42.540	44.051	44.071	44.065
CHAINAGE	0.000	0.300	0.750	2.250	3.231	3.800	5.300	6.098	13.717	15.000	15.217

LONGITUDINAL SECTION LOT 50 DRIVEWAY CH 0.000 TO 15.217
SCALES: HORIZ 1:100 VERT 1:100

0 2 4 6 8 10m
SCALE 1:100

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DO NOT SCALE | Original Size A3

PRELIMINARY

Scale 1:100H 1:100V	Designed CHRIS MARTIN
Drawn CJG	Accred. No. CC4109V
Approved CHRIS MARTIN	
Date NOVEMBER 2025	

No	Revision	Drawn	Date
=			

Client FUTURE DEVELOPMENTS PTY LTD
Project STAGE 2B, 3&4, 4 HEARPS ROAD, WEST ULVERSTONE
Title LOT 50 DRIVEWAY LONG SECTION PLAN

Drawing No: 4806-43_SK13 | Revision: P0