

30 August 2022

Z B Hober & M J Smith
17 Dan Hart Lane,
Mossman 4873

Town Planning

Proposed Works - FILLING AND EXCAVATION AT LOT 11 DE MEIO DRIVE LOWER DAINTREE, (LOT 11 ON SP152485)

To rectify the existing issues that do not align with the Douglas Shire planning scheme, we would need to carry out further excavation works.

The works would consist of,

- 1) Further excavation work to cut 1 to reduce it from a 60 degree slope, to a 33 degree slope. This slope would then be capable of supporting native vegetation and would reduce the risk of any potential landslides
- 2) Further excavation works to cut 2 was not recommended by the geotechnical engineer. He has suggested that a retaining wall be utilized to reduce the risk of potential landslide. An engineer has assessed the site and provided a suitable design.
- 3) Further excavation works to cut 3 was not recommended by the geotechnical engineer, however I intended to put a 1 meter retaining wall in to reduce the angle of the slope to make it more capable of supporting vegetation
- 4) All cuts and batters will be revegetated with native vegetation. I have just purchased 100 plants from the Mossman nursery as part of my landscaping plan.

These works would be carried out upon successfully obtaining an operations permit.

Thank you for your consideration.

Kind Regards,

Z B Hober & M J Smith

DA Form 1 – Development application details

Approved form (version 1.3 effective 28 September 2020) made under section 282 of the Planning Act 2016.

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

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

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

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

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

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

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

PART 1 – APPLICANT DETAILS

1) Applicant details	
Applicant name(s) (individual or company full name)	Matthew smith & Zoe Hober
Contact name (only applicable for companies)	
Postal address (P.O. Box or street address)	17 Dan Hart Lane
Suburb	Mossman
State	Qld
Postcode	4873
Country	Australia
Contact number	0451535050
Email address (non-mandatory)	Mattsmith94@icloud.com
Mobile number (non-mandatory)	
Fax number (non-mandatory)	
Applicant's reference number(s) (if applicable)	

2) Owner's consent

2.1) Is written consent of the owner required for this development application?

- ☐ Yes – the written consent of the owner(s) is attached to this development application
- ☒ No – proceed to 3)



Queensland
Government

PART 2 – LOCATION DETAILS

3) Location of the premises (complete 3.1) or 3.2), and 3.3) as applicable)

Note: Provide details below and attach a site plan for any or all premises part of the development application. For further information, see [DA Forms Guide: Relevant plans](#).

3.1) Street address and lot on plan

- ☐ Street address **AND** lot on plan (all lots must be listed), **or**
☐ Street address **AND** lot on plan for an adjoining or adjacent property of the premises (appropriate for development in water but adjoining or adjacent to land e.g. jetty, pontoon. All lots must be listed).

a)	Unit No.	Street No.	Street Name and Type	Suburb
		68	De Meio Drive	Lower Daintree
	Postcode	Lot No.	Plan Type and Number (e.g. RP, SP)	Local Government Area(s)
	4873	11	SP 152485	Leichardt
b)	Unit No.	Street No.	Street Name and Type	Suburb
	Postcode	Lot No.	Plan Type and Number (e.g. RP, SP)	Local Government Area(s)

3.2) Coordinates of premises (appropriate for development in remote areas, over part of a lot or in water not adjoining or adjacent to land e.g. channel dredging in Moreton Bay)

Note: Place each set of coordinates in a separate row.

- ☐ Coordinates of premises by longitude and latitude

Longitude(s)	Latitude(s)	Datum	Local Government Area(s) (if applicable)
		<input type="checkbox"/> WGS84 <input type="checkbox"/> GDA94 <input type="checkbox"/> Other:	

- ☐ Coordinates of premises by easting and northing

Easting(s)	Northing(s)	Zone Ref.	Datum	Local Government Area(s) (if applicable)
		<input type="checkbox"/> 54 <input type="checkbox"/> 55 <input type="checkbox"/> 56	<input type="checkbox"/> WGS84 <input type="checkbox"/> GDA94 <input type="checkbox"/> Other:	

3.3) Additional premises

- ☐ Additional premises are relevant to this development application and the details of these premises have been attached in a schedule to this development application
☐ Not required

4) Identify any of the following that apply to the premises and provide any relevant details

- ☐ In or adjacent to a water body or watercourse or in or above an aquifer

Name of water body, watercourse or aquifer:

- ☐ On strategic port land under the *Transport Infrastructure Act 1994*

Lot on plan description of strategic port land:

Name of port authority for the lot:

- ☐ In a tidal area

Name of local government for the tidal area (if applicable):

Name of port authority for tidal area (if applicable):

- ☐ On airport land under the *Airport Assets (Restructuring and Disposal) Act 2008*

Name of airport:

<input type="checkbox"/> Listed on the Environmental Management Register (EMR) under the <i>Environmental Protection Act 1994</i>	
EMR site identification:	
<input type="checkbox"/> Listed on the Contaminated Land Register (CLR) under the <i>Environmental Protection Act 1994</i>	
CLR site identification:	

5) Are there any existing easements over the premises?

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

- ☐ Yes – All easement locations, types and dimensions are included in plans submitted with this development application
- ☐ No

PART 3 – DEVELOPMENT DETAILS

Section 1 – Aspects of development

6.1) Provide details about the first development aspect
a) What is the type of development? <i>(tick only one box)</i>
<input type="checkbox"/> Material change of use <input type="checkbox"/> Reconfiguring a lot <input checked="" type="checkbox"/> Operational work <input type="checkbox"/> Building work
b) What is the approval type? <i>(tick only one box)</i>
<input checked="" type="checkbox"/> Development permit <input type="checkbox"/> Preliminary approval <input type="checkbox"/> Preliminary approval that includes a variation approval
c) What is the level of assessment?
<input checked="" type="checkbox"/> Code assessment <input type="checkbox"/> Impact assessment <i>(requires public notification)</i>
d) Provide a brief description of the proposal <i>(e.g. 6 unit apartment building defined as multi-unit dwelling, reconfiguration of 1 lot into 3 lots):</i>
Excavating existing lot
e) Relevant plans
<i>Note: Relevant plans are required to be submitted for all aspects of this development application. For further information, see DA Forms guide: Relevant plans.</i>
<input type="checkbox"/> Relevant plans of the proposed development are attached to the development application
6.2) Provide details about the second development aspect
a) What is the type of development? <i>(tick only one box)</i>
<input type="checkbox"/> Material change of use <input type="checkbox"/> Reconfiguring a lot <input type="checkbox"/> Operational work <input type="checkbox"/> Building work
b) What is the approval type? <i>(tick only one box)</i>
<input type="checkbox"/> Development permit <input type="checkbox"/> Preliminary approval <input type="checkbox"/> Preliminary approval that includes a variation approval
c) What is the level of assessment?
<input type="checkbox"/> Code assessment <input type="checkbox"/> Impact assessment <i>(requires public notification)</i>
d) Provide a brief description of the proposal <i>(e.g. 6 unit apartment building defined as multi-unit dwelling, reconfiguration of 1 lot into 3 lots):</i>
e) Relevant plans
<i>Note: Relevant plans are required to be submitted for all aspects of this development application. For further information, see DA Forms Guide: Relevant plans.</i>
<input type="checkbox"/> Relevant plans of the proposed development are attached to the development application
6.3) Additional aspects of development
<input type="checkbox"/> Additional aspects of development are relevant to this development application and the details for these aspects that would be required under Part 3 Section 1 of this form have been attached to this development application
<input type="checkbox"/> Not required

Section 2 – Further development details

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

Division 1 – Material change of use

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

8.1) Describe the proposed material change of use			
Provide a general description of the proposed use	Provide the planning scheme definition (include each definition in a new row)	Number of dwelling units (if applicable)	Gross floor area (m ²) (if applicable)
8.2) Does the proposed use involve the use of existing buildings on the premises?			
<input type="checkbox"/> Yes			
<input type="checkbox"/> No			

Division 2 – Reconfiguring a lot

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

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

10) Subdivision				
10.1) For this development, how many lots are being created and what is the intended use of those lots:				
Intended use of lots created	Residential	Commercial	Industrial	Other, please specify:
Number of lots created				
10.2) Will the subdivision be staged?				
<input type="checkbox"/> Yes – provide additional details below				
<input type="checkbox"/> No				
How many stages will the works include?				
What stage(s) will this development application apply to?				

11) Dividing land into parts by agreement – how many parts are being created and what is the intended use of the parts?

Intended use of parts created	Residential	Commercial	Industrial	Other, please specify:
Number of parts created				

12) Boundary realignment

12.1) What are the current and proposed areas for each lot comprising the premises?

Current lot		Proposed lot	
Lot on plan description	Area (m ²)	Lot on plan description	Area (m ²)

12.2) What is the reason for the boundary realignment?

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13) What are the dimensions and nature of any existing easements being changed and/or any proposed easement? (attach schedule if there are more than two easements)

Existing or proposed?	Width (m)	Length (m)	Purpose of the easement? (e.g. pedestrian access)	Identify the land/lot(s) benefitted by the easement

Division 3 – Operational work

Note: This division is only required to be completed if any part of the development application involves operational work.

14.1) What is the nature of the operational work?

- | | | |
|--|--|--|
| <input type="checkbox"/> Road work | <input type="checkbox"/> Stormwater | <input type="checkbox"/> Water infrastructure |
| <input type="checkbox"/> Drainage work | <input checked="" type="checkbox"/> Earthworks | <input type="checkbox"/> Sewage infrastructure |
| <input type="checkbox"/> Landscaping | <input type="checkbox"/> Signage | <input type="checkbox"/> Clearing vegetation |
| <input type="checkbox"/> Other – please specify: _____ | | |

14.2) Is the operational work necessary to facilitate the creation of new lots? (e.g. subdivision)

- ☐ Yes – specify number of new lots: _____
- ☒ No

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

\$ 11,000.00

PART 4 – ASSESSMENT MANAGER DETAILS

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

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

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

PART 5 – REFERRAL DETAILS

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

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

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

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

- ☐ Clearing native vegetation
- ☐ Contaminated land (*unexploded ordnance*)
- ☐ Environmentally relevant activities (ERA) (*only if the ERA has not been devolved to a local government*)
- ☐ Fisheries – aquaculture
- ☐ Fisheries – declared fish habitat area
- ☐ Fisheries – marine plants
- ☐ Fisheries – waterway barrier works
- ☐ Hazardous chemical facilities
- ☐ Heritage places – Queensland heritage place (*on or near a Queensland heritage place*)
- ☐ Infrastructure-related referrals – designated premises
- ☐ Infrastructure-related referrals – state transport infrastructure
- ☐ Infrastructure-related referrals – State transport corridor and future State transport corridor
- ☐ Infrastructure-related referrals – State-controlled transport tunnels and future state-controlled transport tunnels
- ☐ Infrastructure-related referrals – near a state-controlled road intersection
- ☐ Koala habitat in SEQ region – interfering with koala habitat in koala habitat areas outside koala priority areas
- ☐ Koala habitat in SEQ region – key resource areas
- ☐ Ports – Brisbane core port land – near a State transport corridor or future State transport corridor
- ☐ Ports – Brisbane core port land – environmentally relevant activity (ERA)
- ☐ Ports – Brisbane core port land – tidal works or work in a coastal management district
- ☐ Ports – Brisbane core port land – hazardous chemical facility
- ☐ Ports – Brisbane core port land – taking or interfering with water
- ☐ Ports – Brisbane core port land – referable dams
- ☐ Ports – Brisbane core port land – fisheries
- ☐ Ports – Land within Port of Brisbane's port limits (*below high-water mark*)
- ☐ SEQ development area
- ☐ SEQ regional landscape and rural production area or SEQ rural living area – tourist activity or sport and recreation activity
- ☐ SEQ regional landscape and rural production area or SEQ rural living area – community activity
- ☐ SEQ regional landscape and rural production area or SEQ rural living area – indoor recreation
- ☐ SEQ regional landscape and rural production area or SEQ rural living area – urban activity
- ☐ SEQ regional landscape and rural production area or SEQ rural living area – combined use
- ☐ Tidal works or works in a coastal management district
- ☐ Reconfiguring a lot in a coastal management district or for a canal
- ☐ Erosion prone area in a coastal management district
- ☐ Urban design
- ☐ Water-related development – taking or interfering with water
- ☐ Water-related development – removing quarry material (*from a watercourse or lake*)
- ☐ Water-related development – referable dams
- ☐ Water-related development – levees (*category 3 levees only*)
- ☐ Wetland protection area

Matters requiring referral to the **local government:**

- ☐ Airport land
- ☐ Environmentally relevant activities (ERA) (*only if the ERA has been devolved to local government*)

<input type="checkbox"/> Heritage places – Local heritage places
Matters requiring referral to the Chief Executive of the distribution entity or transmission entity:
<input type="checkbox"/> Infrastructure-related referrals – Electricity infrastructure
Matters requiring referral to:
<ul style="list-style-type: none"> • The Chief Executive of the holder of the licence, if not an individual • The holder of the licence, if the holder of the licence is an individual
<input type="checkbox"/> Infrastructure-related referrals – Oil and gas infrastructure
Matters requiring referral to the Brisbane City Council:
<input type="checkbox"/> Ports – Brisbane core port land
Matters requiring referral to the Minister responsible for administering the Transport Infrastructure Act 1994:
<input type="checkbox"/> Ports – Brisbane core port land <i>(where inconsistent with the Brisbane port LUP for transport reasons)</i>
<input type="checkbox"/> Ports – Strategic port land
Matters requiring referral to the relevant port operator , if applicant is not port operator:
<input type="checkbox"/> Ports – Land within Port of Brisbane's port limits <i>(below high-water mark)</i>
Matters requiring referral to the Chief Executive of the relevant port authority:
<input type="checkbox"/> Ports – Land within limits of another port <i>(below high-water mark)</i>
Matters requiring referral to the Gold Coast Waterways Authority:
<input type="checkbox"/> Tidal works or work in a coastal management district <i>(in Gold Coast waters)</i>
Matters requiring referral to the Queensland Fire and Emergency Service:
<input type="checkbox"/> Tidal works or work in a coastal management district <i>(involving a marina (more than six vessel berths))</i>

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

PART 6 – INFORMATION REQUEST

19) Information request under Part 3 of the DA Rules
<input checked="" type="checkbox"/> I agree to receive an information request if determined necessary for this development application
<input type="checkbox"/> I do not agree to accept an information request for this development application
Note: By not agreeing to accept an information request I, the applicant, acknowledge: <ul style="list-style-type: none"> • that this development application will be assessed and decided based on the information provided when making this development application and the assessment manager and any referral agencies relevant to the development application are not obligated under the DA Rules to accept any additional information provided by the applicant for the development application unless agreed to by the relevant parties • Part 3 of the DA Rules will still apply if the application is an application listed under section 11.3 of the DA Rules. Further advice about information requests is contained in the <u>DA Forms Guide</u> .

PART 7 – FURTHER DETAILS

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

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

List of approval/development application references	Reference number	Date	Assessment manager
<input type="checkbox"/> Approval <input type="checkbox"/> Development application	MCUC 2021_2527/1		
<input type="checkbox"/> Approval <input type="checkbox"/> Development application			

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

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

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

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

- ☒ Yes – show cause or enforcement notice is attached
☐ No

23) Further legislative requirements

Environmentally relevant activities

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

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

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

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

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

Hazardous chemical facilities

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

- ☐ Yes – Form 69: Notification of a facility exceeding 10% of schedule 15 threshold is attached to this development application
☒ No

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

Clearing native vegetation

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

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

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

Environmental offsets

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

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

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

Koala habitat in SEQ Region

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

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

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

Water resources

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

- ☐ Yes – the relevant template is completed and attached to this development application and I acknowledge that a relevant authorisation or licence under the *Water Act 2000* may be required prior to commencing development
☒ No

Note: Contact the Department of Natural Resources, Mines and Energy at www.dnrme.qld.gov.au for further information.

DA templates are available from <https://planning.dsdmip.qld.gov.au/>. If the development application involves:

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

Waterway barrier works

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

- ☐ Yes – the relevant template is completed and attached to this development application
☒ No

DA templates are available from <https://planning.dsdmip.qld.gov.au/>. For a development application involving waterway barrier works, complete DA Form 1 Template 4.

Marine activities

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

- ☐ Yes – an associated resource allocation authority is attached to this development application, if required under the *Fisheries Act 1994*
☒ No

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

Quarry materials from a watercourse or lake

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

- ☐ Yes – I acknowledge that a quarry material allocation notice must be obtained prior to commencing development
☒ No

Note: Contact the Department of Natural Resources, Mines and Energy at www.dnrme.qld.gov.au and www.business.qld.gov.au for further information.

Quarry materials from land under tidal waters

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

- ☐ Yes – I acknowledge that a quarry material allocation notice must be obtained prior to commencing development
☒ No

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

Referable dams

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

- ☐ Yes – the 'Notice Accepting a Failure Impact Assessment' from the chief executive administering the *Water Supply Act* is attached to this development application
☒ No

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

Tidal work or development within a coastal management district

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

- ☐ Yes – the following is included with this development application:
☐ Evidence the proposal meets the code for assessable development that is prescribed tidal work (*only required if application involves prescribed tidal work*)
☐ A certificate of title
☒ No

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

Queensland and local heritage places

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

- ☐ Yes – details of the heritage place are provided in the table below
☒ No

Note: See guidance materials at www.des.qld.gov.au for information requirements regarding development of Queensland heritage places.

Name of the heritage place:		Place ID:	
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Brothels

23.14) Does this development application involve a **material change of use for a brothel**?

- ☐ Yes – this development application demonstrates how the proposal meets the code for a development application for a brothel under Schedule 3 of the *Prostitution Regulation 2014*
☒ No

Decision under section 62 of the Transport Infrastructure Act 1994

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

- ☐ Yes – this application will be taken to be an application for a decision under section 62 of the *Transport Infrastructure Act 1994* (subject to the conditions in section 75 of the *Transport Infrastructure Act 1994* being satisfied)
☒ No

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

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

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

☒ No

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

PART 8 – CHECKLIST AND APPLICANT DECLARATION

24) Development application checklist

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

☒ Yes

Note: See the Planning Regulation 2017 for referral requirements

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

☐ Yes

☒ Not applicable

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

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

☒ Yes

Relevant plans of the development are attached to this development application

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

☒ Yes

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

☐ Yes

☒ Not applicable

25) Applicant declaration

☐ By making this development application, I declare that all information in this development application is true and correct

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

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

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

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

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

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

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

Date received: Reference number(s):

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

QLeave notification and payment			
<i>Note: For completion by assessment manager if applicable</i>			
Description of the work			
QLeave project number			
Amount paid (\$)		Date paid (dd/mm/yy)	
Date receipted form sighted by assessment manager			
Name of officer who sighted the form			

ENQUIRIES: Rebecca Taranto
OUR REF: Doc Id: 1090790

Administration Office
64 - 66 Front St Mossman
P 07 4099 9444
F 07 4098 2902

8 June 2022

Z B Hober & M J Smith
43 Lavers Road
Lower Daintree QLD 4873

Sir/Madam

**SHOW CAUSE FOR: CARRYING OUT ASSESSABLE DEVELOPMENT WITHOUT
PERMIT- FILLING AND EXCAVATION AT LOT 11 DE MEIO DRIVE LOWER DAINTREE,
(LOT 11 ON SP152485)**

As the Owner of Lot 11 De Meio Drive Lower Daintree, also described as Lot 11 on SP152485 (*the Premises*), please find enclosed a Show Cause Notice for carrying out assessable development without permit.

Under the *2018 Douglas Shire Planning Scheme*, (the Planning Scheme) the Premises is located within the Environmental Management zone. Council has a record of a Material Change of Use- Dwelling House development approval over the subject Premises. The development approval reference is MCUC 2021_4528/1 (Council Doc Id: 1056020). No further development permits have been issued authorising the work.

As a result of a complaints relating to Operational Works- Excavation and Filling, Council undertook an investigation into the matter. A site visit revealed Operational Work- Filling and Excavation has occurred on 1 and 2 June 2022. For this reason, Council reasonably believes that the development contravenes the Planning Scheme and section 163 of the *Planning Act 2016*.

You are invited to show cause as to why an Enforcement Notice should not be issued to you pursuant to section 163 of the *Planning Act 2016*.

Any representations about the show cause are to be provided in writing. If you have any questions please do not hesitate to contact Rebecca Taranto on (07) 4099 9444.


Yours faithfully



Paul Hoyer
Manager Environment and Planning

Show Cause Notice

1. Authorising legislation	<p>Planning Act 2016</p> <p>Section 167</p>
2. Recipient Name and address	<p>ZB Hober & MJ Smith 43 Lavers Road Lower Daintree QLD 4873</p>
3. Date	<p>8 June 2022</p>
4. Premises	<p>Lot 11 De Meio Drive, Lower Daintree, Lot 11 on SP152485</p>
5. Authorising power/ description of offence	<p>This Show Cause Notice is given to you pursuant to section 167 of the <i>Planning Act 2016 (Act)</i>. You are invited to show cause why an Enforcement Notice under section 168 of the Act should not be given to you.</p> <p>Douglas Shire Council (Council) reasonably believes that you have committed a development offence by contravening section 163 of the Act.</p> <p>Section 163 the Act states as follows:</p> <p>163 A person must not carry out assessable development, unless all necessary development permits are in effect for the development.</p> <p><i>(Maximum penalty – 4500 penalty units (\$600,525)).</i></p>
6. Fact and circumstances	<p>The facts and circumstances that form the basis of the Council's belief that an Enforcement Notice should be given to you are set out below:</p> <ol style="list-style-type: none"> You are the owner of Lot 11 De Meio Driver, Lower Daintree, being described as Lot 11 on SP152485 (Premises). The Premises has an area of 4003m² and frontage to De Meio Drive. Under the <i>2018 Douglas Shire Planning Scheme</i> (the Planning Scheme), the Premises is located within the Environmental Management Zone. Council received a complaint in relation to Operational Work- Filling and Excavation at the Premises. Upon investigating the complaint, Council gathered information that supports the allegations including: <ol style="list-style-type: none"> A site inspection revealed that in excess of the 50 cubic metre accepted development threshold for filling and excavation had occurred; Photographic evidence of Operational Work-Filling and Excavation that exceeds the scope of the Material Change of Use development approval approved drawings; Council has records of the following planning considerations; <ol style="list-style-type: none"> Material Change of Use- Dwelling House- Approval number MCUC 2021_4527 dated 20 December 2021.

	<p>7. Approval MCUC 2021_4527 permits filling and excavation at the Premises as detailed in the drawings attached to the Approval.</p> <p>8. A Council Officer attended the Premises on 2 June 2022 and observed Filling and Excavation that exceeds the approved earthworks detailed in the Plans attached the Material change of Use development approval.</p> <p>9. There is no Development Permit for Building Work authorising earthworks within the scope of what is detailed in the set of approved plans on Councils records.</p> <p>10. There is no Development Permit for Operational Works authorising the scope of earthworks that you have undertaken on the land on Councils records.</p> <p>11. On this basis Council reasonably believes you have committed a development offence contrary to the Planning Act 2016 section 163.</p> <p>12. The maximum penalty for contravening section 163 of the <i>Planning Act 2016</i> is 4,500 penalty units (\$600,525).</p> <p>13. For these reasons, Council believes that an Enforcement Notice should be given to you.</p>
<p>6. Representations may be made</p>	<p>You may make representations to the Council about this Show Cause Notice.</p> <p>If you choose to make representations, they must be in writing and posted to the following address:</p> <p>Chief Executive Officer Douglas Shire Council PO Box 723 MOSSMAN QLD 4873</p> <p>Representations must be received by Council by no later than 5pm on 12 July 2022 Council is not obliged to consider any representations received after this time.</p> <p>An Enforcement Notice under section 168 of the Act may be given to you if you do not show cause within the time required under this notice, or if Council believes that an Enforcement Notice is still appropriate after consideration of all representations made by you within the required timeframe.</p> <p>Failure to comply with an Enforcement Notice is an offence under section 168(5) of the Act. The maximum penalty for contravening an Enforcement Notice is 4,500 penalty units (\$600,525).</p>
<p>7. Signatory</p>	 <hr/> <p>Paul Hoyer Manager Environment and Planning</p> <p>Contact Officer: Phone No: 07 4099 9531 Doc ID: 1090790</p>

6.2.4 Environmental management zone code

6.2.4.1 Application

- (1) This code applies to assessing development in the Environmental management zone.
- (2) When using this code, reference should be made to Part 5.

6.2.4.2 Purpose

- (1) The purpose of the Environmental management zone code is to recognise environmentally sensitive areas and provide for houses on lots and other low impact activities where suitable.

These areas are protected from intrusion of any urban, suburban, centre or industrial land use.

- (2) The local government purpose of the code is to:

- (a) implement the policy direction set in the Strategic Framework, in particular:
 - (i) Theme 2 : Environment and landscape values, Element 3.5.3 – Biodiversity, Element 3.5.5 – Scenic amenity.

- (b) protect and buffer areas of environmental significance from inappropriate development.

- (3) The purpose of the code will be achieved through the following overall outcomes:

- (a) Development is generally restricted to a dwelling house;
- (b) Adverse impacts on natural systems, both on-site and on adjoining land are minimised through the location, design and management of development;
- (c) Development reflects and responds to the natural features and environmental values of the area;
- (d) Visual impacts are minimised through the location and design of development;
- (e) Development does not adversely affect water quality;
- (f) Development responds to land constraints, including but not limited to topography, vegetation, bushfire, landslide and flooding.

Criteria for assessment

Table 6.2.4.3.a – Environmental management zone – assessable development

Performance outcomes		Acceptable outcomes		Applicant response
For self-assessable and assessable development				
PO1 The height of all buildings and structures is in keeping with the natural characteristics of the site. Buildings and structures are low-rise and not unduly visible from external sites.	AO1.1 Buildings and structures are not more than 8.5 metres and two storeys in height. Note – Height is inclusive of the roof height. AO1.2 Buildings have a roof height not less than 2 metres.	Complies with AO1.1 The development would only be one storey and approximately 6 metres high. Complies with AO1.2 The development would have a roof height of greater than 2 metres.		
PO2 Buildings and structures are set back to: (a) maintain the natural character of the area; (b) achieve separation from neighbouring buildings and from road frontages.	AO2 Buildings and structures are set back not less than: (a) 40 metres from the frontage of a state-controlled road; (b) 25 metres from the frontage to Cape Tribulation Road; (c) 6 metres from any other road; (d) 6 metres from the side and rear boundaries of the site.	Complies with AO2 The development would be setback a minimum of 6 metres from all boundaries.		
For assessable development				
PO3 Development is consistent with the purpose of the Environmental management zone and protects the zone from the intrusion of inconsistent uses.	AO3 Inconsistent uses as identified in Table 6.2.4.3.b are not established in the Environmental management zone.	Complies with AO3 A dwelling house is not intended as an inconsistent use.		
PO4 The site coverage of all buildings and structures and associated services do not have an adverse effect on the environmental or scenic values of the site.	PO4 No acceptable outcomes are prescribed.	Complies with PO4 Cuts and batters will be obscured by Dwelling and vegetation.		
PO5 Development is located, designed, operated and managed to respond to the characteristics, features and constraints of the site and its surrounds.	AO5.1 Buildings, structures and associated access, infrastructure and private open space are sited: (a) within areas of the site which are already cleared; or (b) within areas of the site which are environmentally degraded; (c) to minimise additional vegetation clearing.	Complies with AO5.1 The development and associated infrastructure would be sited on already cleared land.		

Note - Planning scheme policy – Site assessments provides guidance on identifying the characteristics, features and constraints of a site and its surrounds.

Note - Planning scheme policy – Site assessments provides guidance on identifying the characteristics, features and constraints of a site and its surrounds.



Performance outcomes	Acceptable outcomes	Applicant response
	<p>AO5.2 Buildings and structures and associated infrastructure are not located on slopes greater than 1 in 6 (16.6%) or on a ridge line.</p>	<p>Complies with AO5.2 The development would occur on part of the site with an average slope of 16.6%.</p>
<p>PO6 Buildings and structures are responsive to steep slope through innovative construction techniques so as to:</p> <ul style="list-style-type: none"> (a) maintain the geotechnical stability of slopes; (b) minimise cut and/or fill; (c) minimise the overall height of development. 	<p>AO6.1 Where development on land steeper than 1 in 6 (16.6%) cannot be avoided, development follows the natural contours of the land and single plane concrete slab on-ground methods of construction are not utilised.</p> <p>AO6.2 Access and vehicle manoeuvring and parking areas are constructed and maintained to:</p> <ul style="list-style-type: none"> (a) minimise erosion; (b) minimise cut and fill; (c) follow the natural contours of the site. 	<p>Not applicable The development would occur on part of the site with an average slope of 16.6%.</p> <p>Complies with AO6.2 The access would be constructed of gravel consistent with existing driveways in the locality and will allow for the infiltration of rainwater and minimise run-off, erosion and sedimentation.</p>
<p>PO7 The exterior finishes of buildings and structures are consistent with the surrounding natural environment.</p>	<p>PO7 The exterior finishes and colours of buildings and structures are non-reflective and are moderately dark to darker shades of grey, green, blue and brown or the development is not visible external to the site.</p>	<p>Able to comply with AO7 The development external finish has not been confirmed. Council are invited to attach a condition to any approval issue if appropriate.</p>
<p>PO8 Development does not adversely affect the amenity of the zone and adjoining land uses in terms of traffic, noise, dust, odour, lighting or other physical or environmental impacts.</p>	<p>AO8 No acceptable outcomes are prescribed.</p>	<p>Complies with PO8 The development would be consistent with the existing amenity of the zone.</p>
<p>PO9 The density of development ensures that the environmental and scenic amenity values of the site and surrounding area are not adversely affected.</p>	<p>AO9 The maximum residential density is one dwelling house per lot.</p>	<p>Complies with AO9 The development will consist of one Dwelling House.</p>
<p>PO10 Lot reconfiguration results in no additional lots. Note - Boundary realignments to resolve encroachments and lot amalgamation are considered appropriate.</p>	<p>AO10 No acceptable outcomes are prescribed.</p>	<p>Complies with AO10 The lot will remain as a single lot.</p>

Table 6.2.4.3.b – Inconsistent uses within the Environmental management zone

Inconsistent uses		
<ul style="list-style-type: none"> • Adult store • Agricultural supplies store • Air services • Aquaculture • Bar • Brothel • Bulk landscape supplies • Car wash • Caretaker's accommodation • Cemetery • Child care centre • Club • Community care centre • Community residence • Community use • Crematorium • Cropping • Detention facility • Dual occupancy • Dwelling unit • Educational establishment • Food and drink outlet • Function facility • Garden centre 	<ul style="list-style-type: none"> • Hardware and trade supplies • Health care services • High impact industry • Hospital • Hotel • Indoor sport and entertainment • Intensive animal industry • Intensive horticulture • Landing • Low impact industry • Major electricity infrastructure • Major sport, recreation and entertainment facility • Marine industry • Market • Motor sport facility • Multiple dwelling • Nightclub entertainment facility • Office • Outdoor sales • Outstation • Parking station • Place of worship • Port services 	<ul style="list-style-type: none"> • Renewable energy facility • Relocatable home park • Research and technology industry • Residential care facility • Resort complex • Retirement facility • Rooming accommodation • Rural industry • Rural workers accommodation • Sales office • Service Station • Shop • Shopping centre • Short-term accommodation • Showroom • Special industry • Substation • Theatre • Transport depot • Utility installation • Veterinary services • Warehouse • Wholesale nursery • Winery

Note – This table does not imply that all other uses not listed in the table are automatically consistent uses within the zone. Assessable development must still demonstrate consistency through the assessment process.

9.4.4 Filling and Excavation code

9.4.4.1 Application

- (1) This code applies to assessing:
 - (a) Operational work for filling or excavation which is self-assessable or code assessable development if this code is an applicable code identified in the assessment criteria column of a table of assessment; or
 - (b) a material change of use or reconfiguring a lot if:
 - (i) assessable development where this code is identified as a prescribed secondary code in the assessment criteria column of a table of assessment; or
 - (ii) impact assessable development, to the extent relevant.

Note—This code does not apply to building work that is regulated under the Building Code of Australia.

- (2) When using this code, reference should be made to Part 5.

9.4.4.2 Purpose

- (1) The purpose of the Filling and excavation code is to assess the suitability of development for filling or excavation.
- (2) The purpose of the code will be achieved through the following overall outcomes:
 - (a) filling or excavation does not impact on the character or amenity of the site and surrounding areas;
 - (b) filling and excavation does not adversely impact on the environment;
 - (c) filling and excavation does not impact on water quality or drainage of upstream,

- downstream or adjoining properties;
- (d) filling and excavation is designed to be fit for purpose and does not create land stability issues;
- (e) filling and excavation works do not involve complex engineering solutions.

9.4.4.3 Criteria for assessment

Table 9.4.4.3a – Filling and excavation code – for self-assessable and assessable development

Performance outcomes		Acceptable outcomes	Applicant response
For self-assessable and assessable development			
Filling and excavation - General			
PO1 All filling and excavation work does not create a detrimental impact on the slope stability, erosion potential or visual amenity of the site or the surrounding area.	AO1.1 The height of cut and/or fill, whether retained or not, does not exceed 2 metres in height. and Cuts in excess of those stated in A1.1 above separated by benches/ terraces with a minimum width of 1.2 metres that incorporate drainage provisions and screen planting. AO1.2 Cuts are supported by batters, retaining or rock walls and associated benches/terraces are capable of supporting mature vegetation. AO1.3 Cuts are screened from view by the siting of the building/structure, wherever possible.	Complies with AO1.2 Cut one is 2m in height and will be a gradient of 33 degrees and will be supported by a batter capable of supporting mature vegetation once further earth works are completed. Cut 2 is 4.2m high with a gradient of 50 degrees and will be retained with a 2m high Engineered retaining wall. Cut 3 is 2.1m and a gradient of 52 degrees, it will be supported by a 1m high retaining wall. Fill on front LH batter is a gradient of 32 degrees and with be supported with native vegetation. See attached Engineer reports for recommendations. Complies with AO1.3 Cuts would be screened by the Dwelling House.	



Performance outcomes	Acceptable outcomes	Applicant response
	<p>AO1.4 Topsoil from the site is retained from cuttings and reused on benches/terraces.</p> <p>AO1.5 No crest of any cut or toe of any fill, or any part of any retaining wall or structure is closer than 600mm to any boundary of the property, unless the prior written approval of the adjoining landowner has been obtained.</p> <p>AO1.6 Non-retained cut and/or fill on slopes are stabilised and protected against scour and erosion by suitable measures, such as grassing, landscaping or other protective/aesthetic measures.</p>	<p>Complies with AO1.5 Front LH batter toe is 700mm from boundary. Cut 2 crest is 650 from LH boundary</p> <p>Complies with AO1.6 Cut and fill will be retained with native plants and or engineered retaining walls. See attached Engineered retaining wall plan.</p>
<p>Visual Impact and Site Stability</p> <p>PO2 Filling and excavation are carried out in a manner that the visual/scenic amenity and the privacy and stability of adjoining properties is not compromised.</p>	<p>AO2.1 The extent of filling and excavation does not exceed 40% of the site area, or 500m² whichever is the lesser, except that AO2.1 does not apply to reconfiguration of 5 lots or more.</p> <p>AO2.2 Filling and excavation does not occur within 2 metres of the site boundary.</p>	<p>Can comply with PO2 Filling and excavation will be carried out in a manner that the visual/scenic amenity and the privacy and stability of adjoining properties are not compromised.</p> <p>All cuts and batters will be re-vegetated with native plants to retain the visual/scenic amenity.</p>

Performance outcomes		Acceptable outcomes		Applicant response
Flooding and drainage				
PO3 Filling and excavation does not result to the run off characteristics of a site have a detrimental impact on the site land or adjacent road reserves.	AO3.1 Filling and excavation does not result in the ponding of water on a site or adjacent land or road reserves. AO3.2 Filling and excavation does not result in an increase in the flow of water across a site or any other land or road reserves. AO3.3 Filling and excavation does not result in an increase in the volume of water or concentration of water in a watercourse and overland flow paths. AO3.4 Filling and excavation complies with the specifications set out in Planning Scheme Policy No SC5 – FNQROC Development Manual.	Complies with AO3.1 Filling and excavation would not result in the ponding of water on site or adjacent land and would incorporate drainage within the terrace to redirect stormwater back to its natural flow path. See attached site drainage plan		
Water quality				
PO4 Filling and excavation does not result in a reduction of the water quality of receiving waters	AO4 Water quality is maintained to comply with the specifications set out in Planning Scheme Policy No SC5 – FNQROC Development Manual.	Complies with AO4 Filling and excavation would be engineered and would comply with the FNQROC Development manual guidelines.		
Infrastructure				
PO5 Excavation and filling does not impact on Public Utilities.	AO5 Excavation and filling is clear of the zone of influence of public utilities.	Complies with AO5 Excavation and filling would not be near public utilities.		

8.2.5 Hillslopes overlay code

8.2.5.1 Application

- (1) This code applies to assessing a material change of use, reconfiguring a lot, operational work or building work within the Hillslopes overlay, if:
 - (a) self assessable or assessable development where the code is identified as being applicable in the Assessment criteria for the Overlay Codes contained in the Levels of Assessment Tables in section 5.6;
 - (b) impact assessable development.
- (2) Land in the Hillslopes overlay is identified on the Hillslopes overlay map in Schedule 2 and includes the following sub-categories:
 - (a) Hillslopes constraint sub-category.
- (3) When using this code, reference should be made to Part 5.

8.2.5.2 Purpose

- (1) The purpose of the Hillslopes overlay code is to:
 - (a) implement the policy direction in the Strategic Framework, in particular:
 - (i) Theme 1 - Settlement pattern: Element 3.4.7 Mitigation of hazards;
 - (ii) Theme 2 – Environment and landscape values: Element 3.5.5 Scenic amenity.
 - (b) enable an assessment of whether development is suitable on land within the Hillslopes sub-categories.
- (2) The purpose of the code will be achieved through the following overall outcomes:
 - (a) development on hillslopes is safe, serviceable and accessible;
 - (b) the ecological values, landscape character and visual quality of the hillslopes are protected from development so as to retain the scenic backdrop to the region;
 - (c) Development on hillslopes is appropriate, having regard to the topographic constraints and environmental characteristics of the land;
 - (d) Development responds to the constraints of the site including gradient and slope stability;
 - (e) Works do not involve complex engineering solutions.

Criteria for assessment

Table 8.2.5.3.a – Hillslopes overlay code –assessable development

Performance outcomes		Acceptable outcomes		Applicant response
For self-assessable development				
PO1 The landscape character and visual amenity quality of hillslopes areas is retained to protect the scenic backdrop to the region.		AO1.1 Development is located on parts of the site that are not within the Hillslopes constraint sub-category as shown on the Hillslopes overlay Maps contained in schedule 2.		Complies with PO1 The site is wholly located within the hillslopes overlay. Notwithstanding, the Dwelling House would be located on the lower cleared portion of the site at an elevation consistent with the adjacent and adjoining Dwelling Houses. It would not affect the scenic backdrop of the region.
For assessable development				
PO2 The landscape character and visual amenity quality of hillslopes areas is retained to protect the scenic backdrop to the region.	AO2.1 Development does not occur on land with a gradient in excess of 1 in 6 (16.6%) or AO2.2 Where development on land steeper than 1 in 6 (16.6%) cannot be avoided, development follows the natural contours of the site. AO2.3 Access ways and driveways are: (a) constructed with surface materials that blend with the surrounding environment; (b) landscaped with dense planting to minimise the visual impact of the construction; (c) provided with erosion control measures immediately after construction.		Complies with AO2.3 The access would be constructed of gravel consistent with existing driveways in the locality and will allow for the infiltration of rainwater and limit erosion.	

Performance outcomes	Acceptable outcomes	Applicant response
	<p>AO2.4 The clearing or disturbance of vegetation is limited to clearing and disturbance that:</p> <ul style="list-style-type: none"> (a) is necessary for the construction of driveways; (b) is necessary to contain the proposed development; (c) minimises canopy clearing or disturbance; (d) minimises riparian clearing or disturbance. <p>AO2.5 On land with slopes greater than 1 in 6 (16.6%) or greater, alternative construction methods to concrete slab on ground are utilised (i.e. split level or post and beam constructed buildings that minimise modification to the natural terrain of the land).</p> <p>AO2.6 Development does not alter the sky line.</p> <p>AO2.7 Buildings and structures:</p> <ul style="list-style-type: none"> (a) are finished predominantly in the following exterior colours or surfaces: (b) moderately dark to darker shades of olive green, brown, green, blue, or charcoal; or (c) moderately dark to darker wood stains that blend with the colour and hues of the surrounding vegetation and landscape; (d) are not finished in the following exterior colours or surfaces: (e) pastel or terracotta colours, reds, yellows, shades of white or beige, or other bright colours that do not blend with the surrounding vegetation and landscape; (f) reflective surfaces. 	<p>Not applicable No clearing of vegetation is proposed.</p> <p>Not applicable The development would be located on part of the site with an average slope of 16.6%.</p> <p>Complies with AO2.6 The development would not alter the sky line.</p> <p>Able to comply with AO2.7 The external finish is yet to be confirmed. Council is invited to attach a condition to any approval issue if appropriate.</p>

Performance outcomes	Acceptable outcomes	Applicant response
	<p>AO2.8 Exterior colour schemes limit the use of white or other light colours to exterior trim and highlighting of architectural features</p> <p>AO2.9 Areas between the first floor (including outdoor deck areas) and ground level are screened from view.</p> <p>AO2.10 Recreational or ornamental features (including tennis courts, ponds or swimming pools) do not occur on land:</p> <p>(a) with a gradient of 1 in 6 (16.6%) or more;</p> <p>(b) are designed to be sited and respond to the natural constraints of the land and require minimal earthworks</p>	<p>Able to comply with AO2.8 The external finish is yet to be confirmed. Council is invited to attach a condition to any approval issue if appropriate.</p> <p>Able to comply with AO2.9 The deck area would be a maximum 900mm above ground. The area between the floor level and the ground can be screened if required. Council is invited to attach a condition to any approval issue if necessary.</p> <p>Not applicable The development would not involve recreational or ornamental features.</p>
<p>PO3 Excavation or filling does not have an adverse impact on the amenity, safety, stability or function of the site or adjoining premises through:</p> <p>(a) loss of privacy;</p> <p>(b) loss of access to sunlight;</p> <p>(c) intrusion of visual or overbearing impacts;</p> <p>(d) complex engineering solutions.</p>	<p>AO3 Excavation or fill:</p> <p>(a) is not more than 1.2 metres in height for each batter or retaining wall;</p> <p>(b) is setback a minimum of 2 metres from property boundaries;</p> <p>(c) is stepped with a minimum 2 metre wide berm to incorporate landscaping in accordance with Planning scheme policy SC6.7 – Landscaping; does not exceed a maximum of 3 batters and 3 berms (i.e. not greater than 3.6 metres in height) on any one lot.</p>	<p>Able to comply with PO3 Excavation and filling will be carried out in accordance with Geotechnical Engineers recommendations and plan. See attached Geotechnical Engineer report for recommendations on batters that have exceeded 1.2m.</p>

Performance outcomes	Acceptable outcomes	Applicant response
<p>Lot reconfiguration</p> <p>PO4 For development that involves reconfiguring a lot, lot layout and design is responsive to the natural constraints of the land and each lot is capable of being used for its intended purpose.</p>	<p>AO4.1 The frontage and depth of all lots is of sufficient width to:</p> <p>(a) allow driveways to follow the natural contours of the site and not exceed a gradient of 1 in 6 (16.6%);</p> <p>(b) accommodate any changes in gradient between the road and lot within the lot boundary and not within the road reserve.</p> <p>AO4.2 Development does not create new lots containing land of greater than 1 in 6 (16.6%), except where a rectangular area of land of lesser grade is contained within the new lots to accommodate the intended land use, with the balance left in its natural state to the greatest extent possible.</p> <p>Note – The size of rectangular areas is outlined within each zone code.</p> <p>AO4.3 Development does not alter ridgelines.</p> <p>AO4.4 Lots are designed to ensure rooflines of future buildings and structures do not protrude above a ridgeline.</p>	<p>Not applicable The development would be for a Material Change of Use only.</p> <p>Not applicable The development would be for a Material Change of Use only.</p> <p>Not applicable The development would be for a Material Change of Use only.</p>

8.2.9 Potential landslide hazard overlay code

8.2.9.1 Application

- (1) This code applies to assessing a material change of use, reconfiguring a lot, operational work or building work within the Potential landslide hazard overlay, if
 - (a) self-assessable or assessable development where the code is identified as being applicable in the Assessment criteria for the Overlay Codes contained in the Levels of Assessment Tables in section 5.6;
 - (b) impact assessable development.
- (2) Land in the Potential landslide hazard overlay is identified on the Potential landslide hazard overlay maps in Schedule 2 and includes the following sub-categories:
 - (a) Places of potential landslide hazard sub-category.
- (3) When using this code, reference should be made to Part 5.

Note – The Potential landslide hazard overlay shows modelled areas where the factors contributing to landslip potential accumulate to provide a moderate or higher risk if certain factors are exacerbated (e.g. factors include significant vegetation clearing, filling and excavation, changes to soil characteristics, changes to overland water flow, or changes to sub-surface water flow). It shows areas that the Council has identified where landslides may occur and where land may be impacted by a landslide, but does not mean that landslides will occur or that the land will be impacted by a landslide. Other areas not contained within the potential landslide hazard overlay may sustain landslides or be impacted by landslides and consideration should be given to this issue, where appropriate.

8.2.5.2 Purpose

- (1) The purpose of the Potential landslide hazard overlay code is:
 - (a) implement the policy direction of the Strategic Framework, in particular:
 - (i) Theme 1: Settlement pattern Element 3.4.7 Mitigation of hazards.
 - (b) enable an assessment of whether development is suitable on land within the Potential landslip hazard overlay.
- (2) The purpose of the code will be achieved through the following overall outcomes:
 - (a) development is located, designed and constructed to not put at risk the safety of people, property and the environment;
 - (b) development is not at risk from and does not pose a risk to adjacent and nearby sites from landslides;
 - (c) ensures that community infrastructure is protected from the effects of potential landslides;
 - (d) ensures that vegetation clearing, stormwater management and filling and/or excavation does not create a landslide hazard and/or rectifies potential pre-existing landslide risks;

- (e) development does not occur where works to provide a solution for safety of people, property or the environment involves complex engineering solutions to overcome the risk, or would result in a built form or outcome that causes an adverse visual impact on the Hillslopes or Landscape values of Douglas Shire.

Criteria for assessment

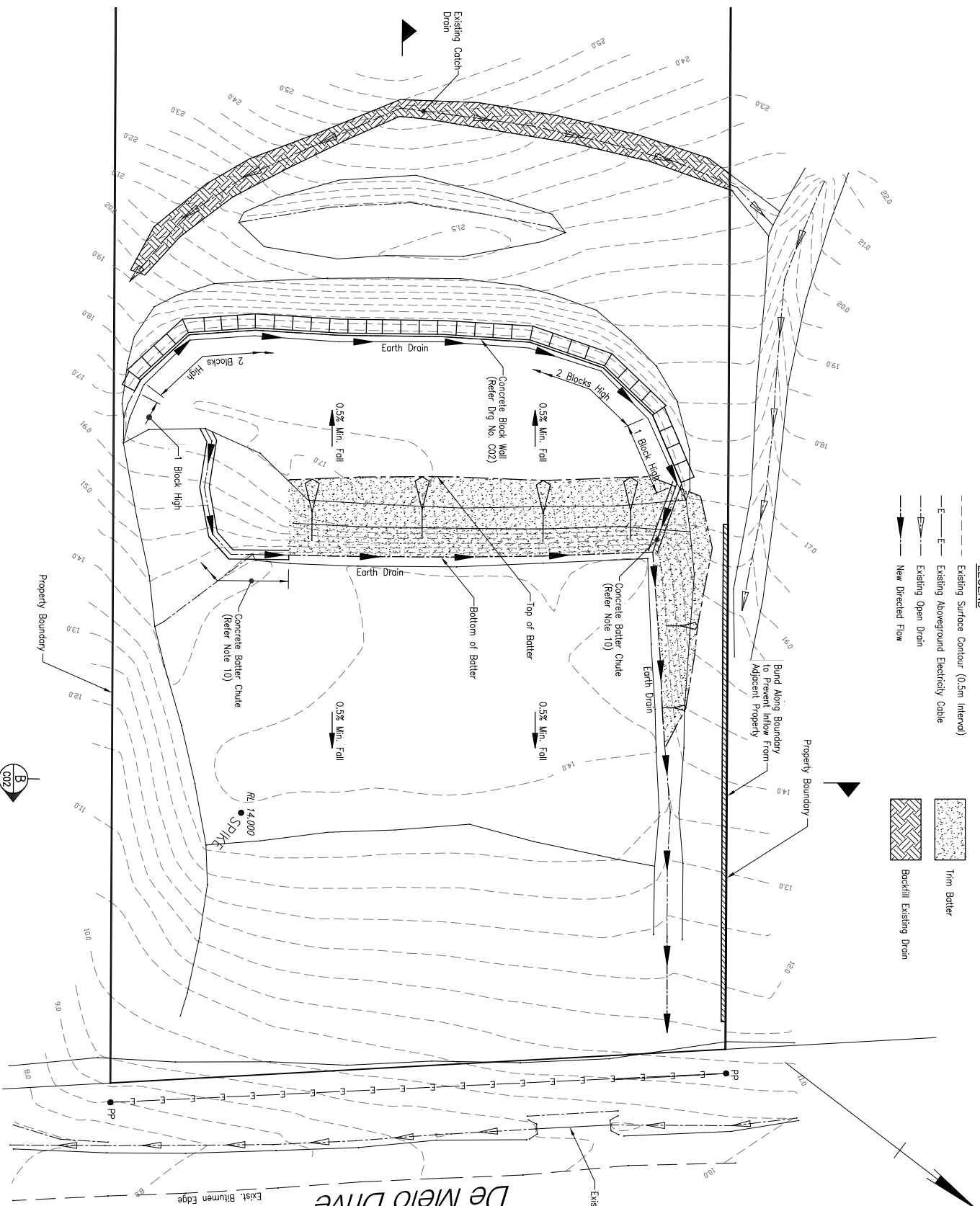
Table 8.2.9.20a – Potential landslide hazard overlay code – assessable development

Performance outcomes	Acceptable outcomes	Applicant response
For self-assessable and assessable development		
PO1 The siting and design of development does not involve complex engineering solutions and does not create or increase the potential landslide hazard risk to the site or adjoining premises through: <ul style="list-style-type: none"> (a) building design; (b) increased slope; (c) removal of vegetation; (d) stability of soil; (e) earthworks; (f) alteration of existing ground water or surface water paths; (g) waste disposal areas. 	AO1.1 Development is located on that part of the site not affected by the Potential landslide hazard overlay. or AO1.2 Development is on an existing stable, benched site and requires no further earthworks or AO1.3 A competent person certifies that: <ul style="list-style-type: none"> (a) the stability of the site, including associated buildings and infrastructure, will be maintained during the course of the development and will remain stable for the life of the development; (b) development of the site will not increase the risk of landslide hazard activity on other land, including land above the site; (c) the site is not subject to the risk of landslide activity on other land; (d) any measures identified in a site-specific geotechnical report for stabilising the site or development have been fully implemented; (e) development does not concentrate existing ground water and surface water paths; (f) development does not incorporate on-site waste water disposal. 	Complies with PO1 The development would be partly on land identified within the Potential landslide hazard overlay. However, the landslide hazard area covers a minor part of the site only and the proposed development would involve a combination of slab on ground and elevated on posts construction to limit the development footprint on the land. The earthworks would involve batters that would be engineer designed to maintain the stability of the land and to manage stormwater paths. The proposed development would not create or increase the potential landslide hazard.

Performance outcomes	Acceptable outcomes	Applicant response
	<p>Note – Planning scheme policy SC6.9 – Natural hazards provides guidance on preparing a site specific geo-technical assessment.</p> <p>Note – Development may alter the conditions of ground water and surface water paths in accordance with a site-specific geotechnical report, but should ensure that its final disbursement is as-per pre-developed conditions. Consideration for location, velocity, volume and quality should be given</p>	
<p>PO2</p> <p>The siting and design of necessary retaining structures does not cause an adverse visual impact on landscape character or scenic amenity quality of the area.</p>	<p>AO2</p> <p>Excavation or fill:</p> <p>(a) is not more than 1.2 metres in height for each batter or retaining wall;</p> <p>(b) is setback a minimum of 2 metres from property boundaries;</p> <p>(c) is stepped with a minimum 2 metre wide berm to incorporate landscaping in accordance with Planning scheme policy SC6.7 – Landscaping; does not exceed a maximum of 3 batters and 3 berms (i.e. Not greater than 3.6 metres in height) on any one lot.</p>	<p>Can comply with PO2</p> <p>Cuts and batters would provide opportunity for drainage and landscaping. It would not be visible from vantage points external to the site and would not adversely affect the landscape character or scenic amenity quality of the area.</p>
<p>Additional requirements for Community infrastructure</p> <p>PO3</p> <p>Development for community infrastructure:</p> <p>(a) is not at risk from the potential landslide hazard areas;</p> <p>(b) will function without impediment from a landslide;</p> <p>(c) provides access to the infrastructure without impediment from the effects of a landslide;</p> <p>(d) does not contribute to an elevated risk of a landslide to adjoining properties.</p>	<p>AO3</p> <p>Development is designed in accordance with the recommendations of a site-specific geotechnical assessment which makes reference to the community infrastructure and its needs and function.</p> <p>Note - A site specific geotechnical assessment will detail requirements that will address the Acceptable Outcomes of this Performance Outcome. Planning scheme policy SC6.9 – Natural hazards provides guidance on preparing a site specific geotechnical assessment.</p>	<p>Not applicable</p> <p>This development would not involve Community infrastructure.</p>

LEGEND

- Existing Surface Contour (0.5m Interval)
- Existing Aboveground Electricity Cable
- Existing Open Drain
- New Directed Flow
- Trim Batter
- Backfill Existing Drain



NOTES

- All Sediment and Erosion Control Measures Shall be in Place Prior to Construction.
- Where Possible the Works are to be Programmed to be Constructed During Lower than Average Rainfall Periods.
- All Erosion and Sediment Control Measures Shall be Checked for Damage, Cleared Out and Reinstated After Each Rainfall Event.
- All Driveway Structures are to be Protected Against Sediment Infiltration During Construction.
- Silt Fencing is to be Erected on the Downstream Side of all Stockpiles & about the Construction Site.
- All temporary Erosion and Sediment Control Measures are to Remain in Place until all Areas have been Fully Revegetated.
- All Disturbed Areas are to be Topped and Grass Seeded.
- All Works to be Constructed in Accordance with NGRQC Standard Specifications, Unless Noted Otherwise.
- The Location of Services Shown are Given for Guidance Only. Locations May Not be Accurately Represented and Other Services May Exist on Site. It is the Responsibility of the Contractor to Verify the Position of all Services on Site.
- Concrete Batter Chute:
 - Thick x 600mm Wide
 - 150 Concrete with SL72 Mesh Centrally Located
 - 500mm Minimum Cover
 - 100mm Minimum Invert Depth
 - Shape to Suit Location

1:25 0 2.5m 5m
1 : 125 FULL SIZE A1

ISSUE	DATE	DESCRIPTION / APPROVED USE	BY	FOR
B	26/07/21	FOR CONSTRUCTION	TMV	PO
ISSUE	DATE	DESCRIPTION / APPROVED USE	BY	FOR

CONTRACTOR AND SUBCONTRACTORS MUST READ THE INSTRUCTIONS ON SITE BEFORE COMMENCING ANY WORK OR PREPARING SHOP DRAWINGS. USE WITH CARE. INSTRUCTIONS ONLY.

COMPONENT OF THE DRAWING IS PART OF THE PROJECT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT THE DRAWING IS USED IN ACCORDANCE WITH THE INSTRUCTIONS ON SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY NECESSARY COMPLIANCE OR CERTIFICATION DOCUMENTATION.

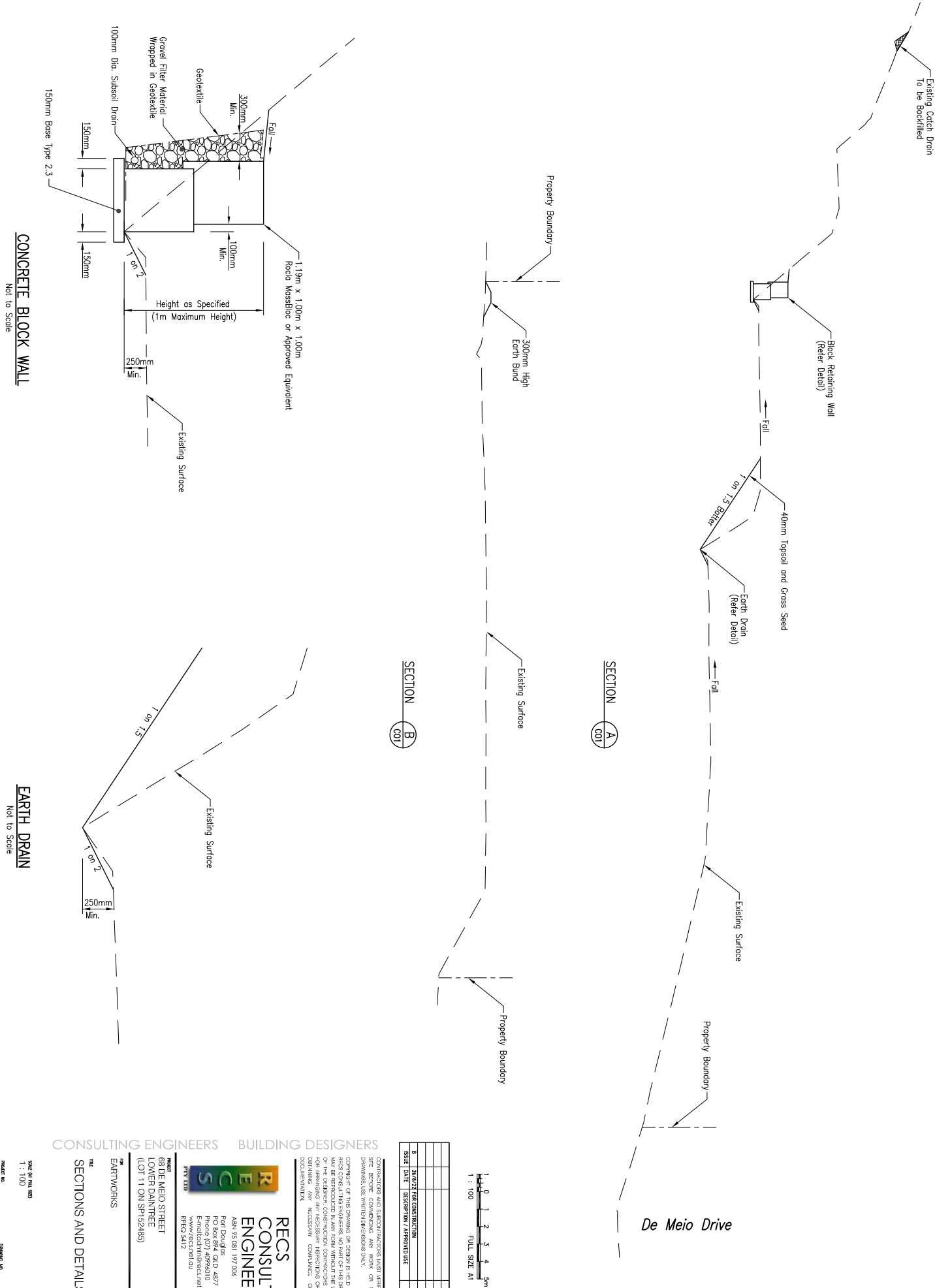
RECS CONSULTING ENGINEERS
ABN 95 081 197 006
Post Box 894 QLD 4877
Phone (07) 40996010
Email: info@reecs.net.au
Pty Ltd
Pty Ltd

89 DE MEIO STREET
LOWER DAINTREE
(LOT 11 ON SP162485)

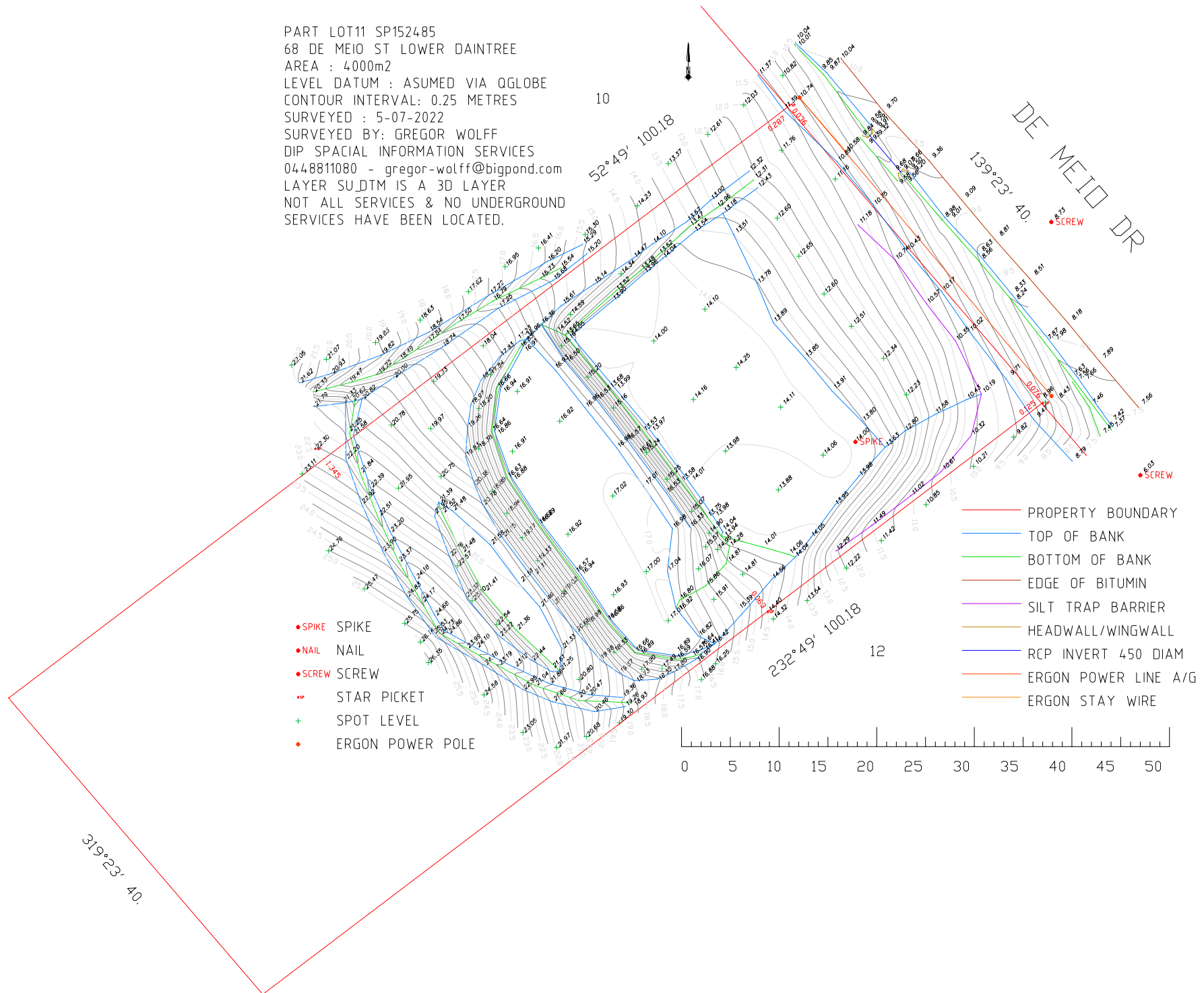
EARTHWORKS
LAYOUT

SCREW
RL 6.031

CONSULTING ENGINEERS BUILDING DESIGNERS
77-2022 C01 B



PART LOT11 SP152485
 68 DE MEIO ST LOWER DAINTREE
 AREA : 4000m2
 LEVEL DATUM : ASUMED VIA QGLOBE
 CONTOUR INTERVAL: 0.25 METRES
 SURVEYED : 5-07-2022
 SURVEYED BY: GREGOR WOLFF
 DIP SPACIAL INFORMATION SERVICES
 0448811080 - gregor-wolff@bigpond.com
 LAYER SU_DTM IS A 3D LAYER
 NOT ALL SERVICES & NO UNDERGROUND
 SERVICES HAVE BEEN LOCATED.



Construction Soiltest Pty Ltd A.B.N. 90 054 339 883
Materials Testing and Geotechnical Services

7 Barry Street, Westcourt, PO Box 2234 Cairns Ph 07 4041 4577 Fax 07 4041 4399 e-mail: soiltest@bigpond.net.au

23 June 2022

Job No: G7511

**Review of Geotechnical Slope Stability of Constructed Earthworks
for Proposed Residential Development
at No. 68 (Lot 11) De Meio Drive, Lower Daintree, Queensland.**

Client: M. Smith & Z. Hober
C/- 68 De Meio Drive
LOWER DAINTREE QLD 4873

Table of Contents

1. Introduction.
2. Proposed Development
3. Scope / Method of Assessment.
4. Current Site Description.
5. Assessment Findings.
6. Engineering Comments.
7. Foundation Maintenance / Remarks.
8. Limitations of Report.

Attachments:

Figure 1: Site Layout Plan, Test & Section Locations

Appendix A: Results of DCP Tests.

Appendix B: Slope Stability Analyses & Landslide Risk Assessment.

Appendix C: Site Photographs.

Report distribution: 1 copy (email) to M. Smith.

Construction Soiltest Pty Ltd A.B.N. 90 054 339 883

Materials Testing and Geotechnical Services

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23 June 2022

Job No: G7511

M. Smith & Z. Hober
c/- 68 De Meio Drive
LOWER DAINTREE QLD 4873

**Re: Review of Geotechnical Slope Stability of Constructed Earthworks Batters
for Proposed Residential Development
at No. 68 (Lot 11) De Meio Drive, Lower Daintree, Queensland.**

1. *Introduction.*

A geotechnical review assessment of constructed earthworks batters at 68 (Lot 11) De Meio Drive, Lower Daintree was requested M. Smith (client) following Douglas Shire Council notification. An original report was provided to the client prior to earthworks (reference report: G7511/R14610, December 2021), however extensive earthworks has since occurred which vary from the original earthworks plan. Survey plan of the earthworks constructed site has not been performed.

2. *Proposed Development.*

The proposed development is a residential house to be founded on an earthworks constructed building platform. On-site sewerage system is understood to be proposed on the site.

3. *Scope / Method of Assessment.*

3.1 *Scope.*

The scope was for an earthworks review of constructed cut and fill batters in relation to slope stability and landslide risk assessment. The assessment does not include footing foundation investigation, onsite sewerage soil assessment, drainage design or slope stability assessment of natural hillslope outside the constructed benches and batter slopes.

The scope of the assessment was limited to the constructed earthworks batters. Landslide risk was specified to achieve a 'LOW' or 'VERY LOW' property risk in accordance to LRM-AGS 2007.

3.2 *Method of Investigation.*

Method of the assessment included:

- Walkover assessment of the earthworks constructed benches, batter slopes and drains by a professional engineer.
- Measurement of earthworks constructed benches and batter slopes using hand tape measure and protractor level.
- Assessment of subsurface conditions by dynamic cone penetrometers (DCPs).
- Slope stability analysis of existing site using Galena® software (Version 4.01).
- Landslide risk assessment in accordance with Australian Geomechanics Society (AGS) – Landslide Risk Management Guidelines (LRM-AGS, 2007).

4. *Current Site Description.*

The site has been excavated to provide 3 x level benches and 4 x batters (1 x fill at front and 3 x cut batters). According to the client excavated soil material was used for fill at the front of the site and excess material was taken from the site. Unlined surface 'V' drains were constructed the high cut batter toes and above the highest batter. All bench and batter surfaces were trimmed exposed soil. Refer Figure 1 for site layout and Appendix C for site photographs.

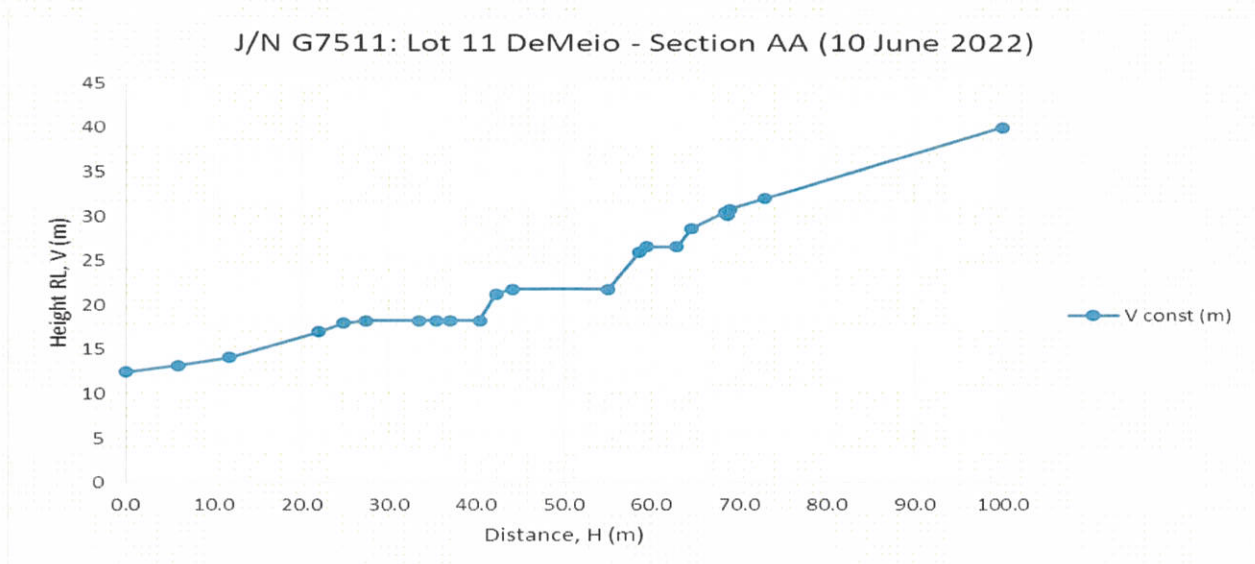
5. Assessment Findings.

5.1 Regional Geology.

According to Qld Department of Mines 1: 250 000 geology map of Mossman (sheet SE 55-1, 1996) the natural site geology comprises: Hodgkinson Formation – 'Dark grey, laminated to thin-bedded mudstone (locally phyllitic); subordinate fine to medium grained, medium to thick-bedded arenite, siltstone; minor chert, metabasalt; rare limestone'. Colluvial deposits of Hodgkinson Formation above residual to weathered rock exist on this site.

5.2 Slope Analysis.

Earthworks Feature	Assumed level, RL (m)	Source material	Surface Length (m)	Height, Vertical (m)	Batter grade angle
LH batter	-	Fill (onsite cut to fill)	5	2.6	32°
Front batter	-	Fill (onsite cut to fill)	13	3.4	15°
Lower bench (house site)	18.2	Fill and natural ground	13	-	-5°
Batter 1	-	Cut natural ground	3.5	3.0	60°
Intermediate bench	21.8	Cut natural ground	11	-	-2°
Batter 2	-	Cut natural ground	5.5	4.2	50°
Upper bench	26.5	Cut natural ground	3.5	-	-5°
Batter 3	-	Cut natural ground	2.7	2.1	52°
Stripped slope	-	Cut natural ground	4.2	1.8	25°



Note: As constructed earthworks bench & batter slope lengths & angle(s) are based on tape measure & protractor level measurements. Height RL (m) based on datum RL 12.5m at front boundary (provided by original project site plan).

5.3 Surface Conditions.

Site surface conditions of the earthworks constructed benches and batters was exposed cut soil (cut batters 1, 2 & 3) & exposed fill soil (front & LH batters & part front lower bench; onsite cut to fill).

5.4 Subsurface Conditions.

Reference report G7511/R14610 Dec 2021 for Test pit logs TP1-TP3: Note GL level may differ after earthworks.

Exposed batters after earthworks were colluvium to residual soils (sandy silty clay), possible weathered rock exposed at base of Batter 2. Groundwater was not observed at any of the original test holes, at the time of original logging. Groundwater may vary during seasonal climatic conditions.

In-situ DCP tests performed after earthworks indicate generally stiff conditions for colluvial soils, residual soils and dense for weathered rock (refer Appendix A, report H14025/21 for DCP results).

5.5 Slope Stability Analysis.

Slope stability analysis was performed at sections of the constructed individual batter slopes configuration. Analysis was based on site measurements estimates and assumed soil parameters estimates (effective strength values; cohesion, c' & friction angle, ϕ'). Soil stratum were interpolated between test locations and extrapolated on the hillslope. The model analysed concentrates on a potential critical slope condition (mass failure of individual batter slope). Galena slope stability software (Version 4.01) was used for the analysis. The slope model includes an assumed phreatic surface to simulate potential 'WET' ground conditions, no phreatic surface model to simulate 'NIL' groundwater conditions, and an 'pseudo-static' earthquake coefficient.

The analysis provides a 'Factor of Safety' (FOS) against mass slope instability, where:

FOS ≥ 1.5 is considered stable

FOS = 1.0 to 1.5 is considered marginally stable

FOS < 1.0 is considered unstable.

Analyses provided for i) current as constructed condition & ii) re-analysed for control measure applied condition (mitigated).

i) Table 5.5 A: Results of the slope stability conditions for the constructed batter slope section assessed;

Section	Modelled Groundwater (note 1)	Slope Model	FOS	P % (note 2)	Analysis Reference
AA	NIL	Front fill batter	2.4	0	G7511/AC1
AA	WET	Front fill batter	1.8	0	G7511/AC2
BB	NIL	LH fill batter	2.0	0	G7511/BC1
BB	WET	LH fill batter	1.5	<1	G7511/BC2
AA	NIL	Cut batter No. 1	1.4	2	G7511/AC3
AA	WET	Cut batter No. 1	1.3	5	G7511/AC4
AA	NIL	Cut batter No. 2	1.3	1	G7511/AC5
AA	WET	Cut batter No. 2	1.1	2	G7511/AC6

ii) Table 5.5 B: Results of the slope stability conditions for mitigated (control measure) batter slope section assessed;

Section	Modelled Groundwater (note 1)	Slope Model	FOS	P % (note 2)	Analysis Reference
AA	NIL	Cut batter No. 1 Option 1V:1.5H slope	1.7	0	G7511/AM1
AA	WET	Cut batter No. 1 Option 1V:1.5H slope	1.6	0	G7511/AM2
AA	NIL	Cut batter No. 2 Option: stabilised or retained	1.5	<1	G7511/AM3
AA	WET	Cut batter No. 2 Option: stabilised or retained	1.3	<1	G7511/AM4

Notes:

1) 'WET' = Assumed phreatic surface. 'NIL' = phreatic surface not applied.

2) P% = probability of FOS < 1.0; based on standard deviation, SD, of soil parameters; where for colluvium, residual & weathered rock: c' SD = 3kPa and ϕ' SD' = 5°

Refer Appendix B for stability analyses and Figure 1 for section location.

5.6 Landslide Risk Assessment.

5.6.1 Landslide Hazards.

Constructed un-retained batters are considered landslide hazards based on the site ground and geological conditions and the stability analyses where $FOS < 1.5$. Sustained heavy rainfall and/or uncontrolled drainage would be a likely trigger of such an event.

The landslide hazard(s) identified could pose a risk to the No. 68 (Lot 11) property and life. The quantitative risk to property of the consequence of hazards occurring are estimated to provide guidance to the developer, designer, builder and user of the property in regard to landslide risk management.

5.6.2 Hazard Probability.

Indicative annual probability = annual frequency (ARI 50 years) x probability of $FOS < 1$ x batter slope factor x natural ground slope factor is used for the assessment.

5.6.3 Landslide Risk.

Landslide risk provided for i) current as constructed condition & ii) re-assessed for control measure applied condition.

i) Table 5.6 A, **As Constructed**: Quantitative property risk assessment for the constructed un-retained batters and assumed property location. Qualitative risk descriptions are based on the quantitative assessment.

	Debris slide of un-retained cut batter No. 1 impacting proposed house building (50-200m3 landslide).	Debris slide of un-retained cut batter No. 2 impacting proposed house building (50-200m3 landslide).
Qualitative Likelihood	POSSIBLE	POSSIBLE
Qualitative Consequences	MEDIUM	MINOR
Qualitative Risk to Property	MODERATE	MODERATE

ii) Table 5.6 B, **Control Measure applied**: A quantitative property risk assessment of the constructed un-retained batters after control measure(s) (mitigation) and assumed property location. Qualitative risk descriptions are based on the quantitative assessment.

	Debris slide of <u>mitigated</u> un-retained cut batter No. 1 (after control measure) impacting proposed house building (50-200m3 landslide).	Debris slide of <u>mitigated</u> cut batter No. 2 (after control measure) impacting proposed house building (50-200m3 landslide).
Qualitative Likelihood	UNLIKELY	UNLIKELY
Qualitative Consequences	MINOR	MINOR
Qualitative Risk to Property	LOW	LOW

Refer Appendix B for Landslide Risk Assessment quantitative analysis.

It is recommended that risk be maintained to LOW. Treatment options are suggested for risk management (refer section 6.2 Footing Design and 6.3 Control Measures for Slope and Erosion Stability) and Appendix C (Extract of AGS Vol 42 March 2007 – LR8).

Landslide risk assessment is limited to Property risk from the modelled landslide event(s) of the existing site slope configuration and assumed house location and for footing options. This landslide risk assessment does not include slope failure, damage or injury caused by vegetation clearing, up-slope sprinkler system(s), broken or leaking sewer or stormwater pipes, uncontrolled drainage runoff, fallen trees, fire, flooding or activity from neighbouring allotments. Minor slides and runoff channel erosion are still possible on this site. The client will need to accept the possibility of minor failures on this site and civil/structural engineering design shall include this risk.

6. Engineering Comments.

6.1 Site Classification Review.

Due to constructed earthworks and presence of fill the proposed building platform site footing design shall be reviewed. According to the client fill was placed at the front of the site (lower bench) and no relative density tests were performed. Fill depth is unknown and due to unknown fill compaction control the fill shall be regarded as uncontrolled fill in accordance with AS3798 'Guidelines on Earthworks for Commercial and Residential Developments'. The nominated house building site is classified a Class P site (uncontrolled non sand fill) in accordance with AS 2870 'Residential Slabs and Footings'. Residential footings shall be designed by professional engineer using engineering principles.

6.2 Footing Design.

Refer report G7511/R14610 Dec 2021 Section 6.2. Note above clause 6.1 shall take precedence where site fill now exists. 2 x DCP tests were performed at the constructed lower bench (refer report H14025/22), however further investigation may be required for final site classification for residential building footing design.

6.3 Control Measures for Batter Slope Stability Minimisation.

Control measures shall be provided in the design and construction to minimise batter slope instability & achieve a projected LOW landslide risk.

6.3.1 Constructed Batters.

- i) Front Fill Batter: Trim fill batters to no steeper than 1V:2H slope grade. Vegetate batter face after slope grade mitigation.
- ii) Cut Batter No. 1 (Lower bench to intermediate bench batter): Excavate batter to no steeper than 1V:1.5H. Vegetate batter face after slope grade mitigation.
- iii) Cut Batter No. 2 (Intermediate bench to upper bench batter): Retain or stabilise existing batter slope to achieve equivalent horizontal (retaining) force as per modelled stability analysis. Vegetate exposed batter face areas outside retainment or stabilisation.
- iv) Stabilisation and / or retainment shall be designed by a professional engineer. Seek options for suitable stabilisation system(s) or retaining wall systems(s) to achieve LOW landslide risk. Further earthworks to Batter 2 or 3 is not recommended due to site space and steepness.

6.3.2 Site Drainage.

- i) Constructed drains are currently unlined earth 'V' drains. All constructed drains shall be reviewed by a professional engineer for capacity & grade to ensure adequate size and runoff control. All constructed drains shall be concrete lined or equivalent to minimise scouring and erosion.
- ii) Engineer design and provide spoon drain at base of LH fill batter to control runoff from entering neighbouring allotment. Drain shall be concrete lined or equivalent to minimise scouring and erosion.
- iii) Original drain running from top to bottom of site along the RH (north-west) boundary has progressively scoured to approximately 1m deep. This drain shall be reviewed by a professional engineer for capacity & grade to ensure adequate size and runoff control. The existing drain shall be mitigated to engineer's instruction & concrete lined or equivalent to minimise scouring and erosion.
- iv) Un-controlled runoff was observed from the intermediate bench to the lower bench via LH access formation. Mitigate access cross grade and provide spoon drain from intermediate to lower bench to link with the constructed lower bench batter drain. Drain shall be engineer designed and concrete lined or equivalent to minimise scouring and erosion.

v) Refer report G7511/R14610 Dec 2021 Section 6.3.2 for additional drainage management requirements.

6.3.3 Site Monitoring.

Site stability conditions can change over time particularly following wet season rain. Annual site inspection of the site and western hillslope by a geotechnical consultant is recommended. Inspections can provide reassurance of site stability and / or the identification of new or potential unstable zones.

7. Foundation Maintenance / Remarks.

Ongoing foundation maintenance is always essential for the durability and stability of the footings and foundation and the appropriate required maintenance is described in AS 2870 'Residential Slabs and Footings'. Briefly, however, it is advised to keep away from the footings/foundation all water taps, gardens and trees, and provide adequate compaction of loose ground around the outside of the footing perimeter. Rainwater/water should not be allowed to pond against the perimeter of the footings/foundations.

Foundation maintenance should follow with the guidelines as set out in CSIRO BTF 18 'Foundation Maintenance and Footing Performance: A Homeowner's Guide'.

Any earthworks following the date of this report must comply with the requirements of AS 2870 'Residential Slabs and Footings' Section 6 and AS 3798 'Guidelines on Earthworks for Commercial and Residential Developments'. Footing foundations shall be inspected by a professional engineer prior to reinforcement and concrete placement. Site control / treatment methods and earthworks plans shall be reviewed by a professional engineer.

8. Limitations of Report.

Construction Soiltest was not engaged, nor involved, in the control of constructed earthworks on this site. This report is based on the extent of the assessment undertaken after earthworks was completed and is limited to stability review only. As constructed earthworks survey has not been performed. Earthworks fill testing was not performed.

The assessment was based on onsite measurements for batter configuration and is limited to hand tape measurements. Interpolation was used to give soil/rock parameters for stability analysis of areas not specifically tested. Variations of subsurface conditions between test positions are possible. Interpolation to give soil parameters for areas and depths not specifically tested and/or the presence of seasonal spring activity is beyond the scope of this investigation. If any ground profile and groundwater conditions revealed differ or vary from those described in this report, our office or suitably qualified personnel should be contacted.

The client shall need to accept a level of landslide risk (slope instability) when developing this site. 'Engineering Comments' provided in this report aim to minimise landslide risk but does not claim to remove risk entirely. All parties involved in design and construction and dwelling on this site shall need to accept this risk.

Site stability can be reduced by potential incidents such as broken and/or leaking pipes and drains, uncontrolled drainage runoff, vegetation clearing, loading of batters and/or affects from neighbouring allotment developments. Stability analysis presented in this report does not include such hazards or circumstances. It is the client's responsibility to maintain and monitor the site, and to stabilise and/or re-vegetate cleared slopes, address any drainage problems and repair any broken or leaking pipes. If in the event of any incident occurring, or if site conditions vary from the assessment, this office shall be contacted to monitor and/or review site recommendations.

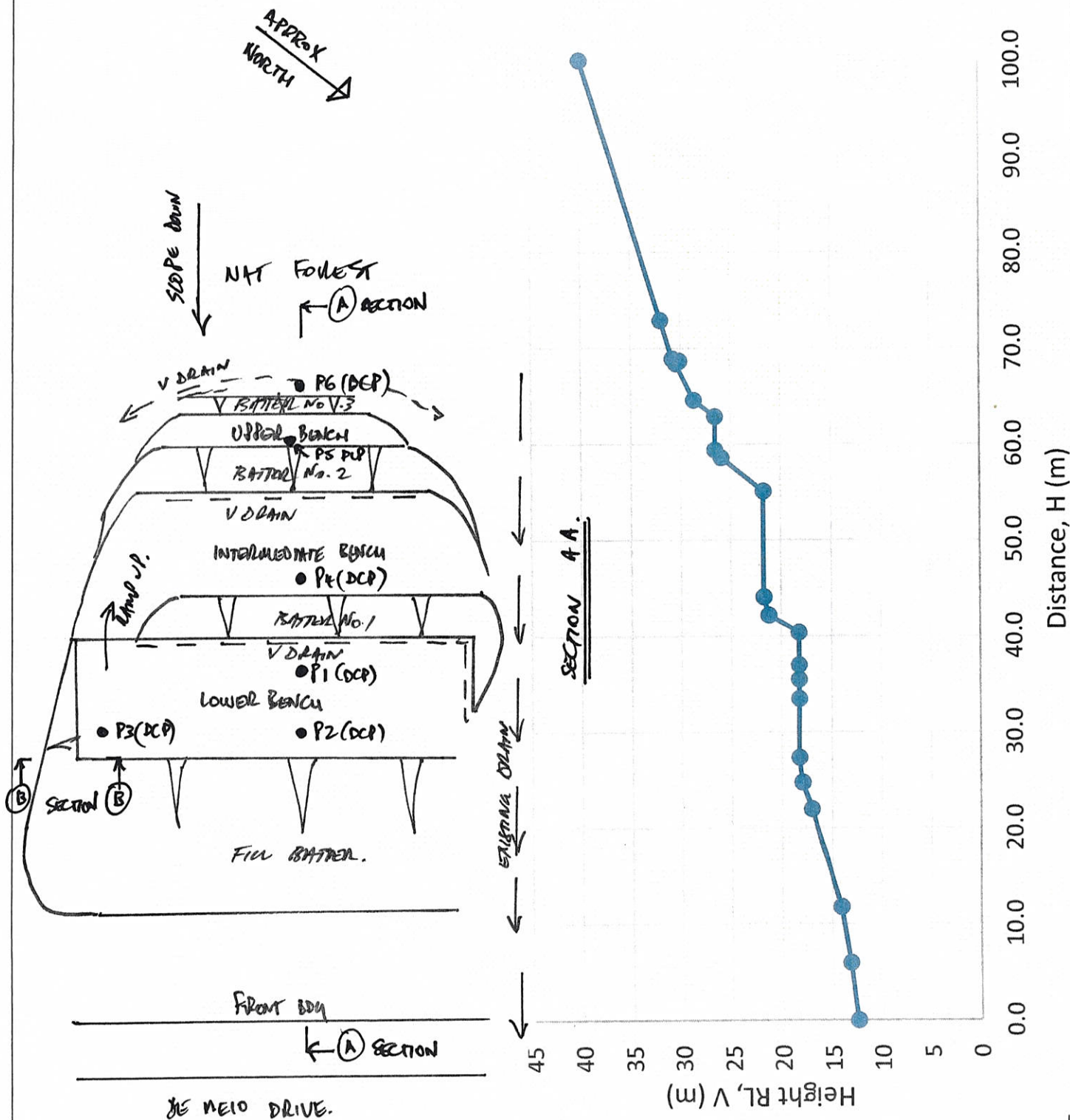
Test holes previously carried out on the site for the investigation were backfilled by excavator bucket only. Some slumping of soil should be expected in these location(s). Project design, earthworks and construction shall need to account for such conditions. Construction Soiltest Pty Ltd accepts no responsibility for the impact test locations may have on the safety and development of the site.

This report is provided for the client (M. Smith & Z. Hober) and client project consultants only. The information provided shall not be used by others, or for any purpose other than the stated scope.

Yours faithfully
Construction Soiltest Pty Ltd



Paul Posar
CPEng. M.I.E. Aust. R.P.E.Q.



Construction Soiltest Pty Ltd A.B.N. 90 054 339 883 - Materials Testing and Geotechnical Services

7 Barry Street, Westcourt QLD 4870. PO Box 2234 Cairns QLD 4870. Ph 07 4041 4577. e-mail: soiltest@bigpond.net.au

Project: 68 De Meio Drive, Lower Daintree.

Client: M. Smith

Job No.: G7511

Report Ref.: G7511/R14629

Drawing Title: Figure 1: Site Layout & Test Locations.

Drawn by: PP

Date: 23/6/22

Scale: Not to scale.

Legend: SECTION denotes cross section

P Denotes DCP test

APPENDIX A: DCP Test Results

Construction Soiltest PTY LTD.A.B.N. 90 054 339 883

7 Barry Street, Westcourt Q 4870, PO Box 2234 Cairns Q 4870

Ph: (07) 4041 4577, Fax: (07) 40414 399, e-mail: soiltest@bigpond.net.au

REPORT OF DYNAMIC CONE PENETROMETER (DCP) TEST

Project Name: Lot 11 (No. 68) De Meio Drive.	Reg. No.: H14025/22
Project Location: Lower Daintree, Queensland.	Page 1 of 1
Client: M. Smith.	Job No.: G7511
Work Stage: Constructed earthworks benches & batters.	

Test by: PP		Test date: 10/6/22									
Test Location: P1 (Lower bench) Refer Figure 1. (note 1)		Test Location: P2 (Lower bench) Refer Figure 1. (note 1)		Test Location: P3 (Lower bench) Refer Figure 1. (note 1)		Test Location: P4 (Inter. bench) Refer Figure 1. (note 1)		Test Location: P5 (Upper bench) Refer Figure 1. (note 1)		Test Location: P6 (Top slope) Refer Figure 1. (note 1)	
Depth Below GL (m)	Blows per 0.1m	Depth Below GL (m)	Blows per 0.1m	Depth Below GL (m)	Blows per 0.1m	Depth Below GL (m)	Blows per 0.1m	Depth Below GL (m)	Blows per 0.1m	Depth Below GL (m)	Blows per 0.1m
0.05	Seat	0.05	Seat	0.05	Seat	0.05	Seat	0.05	Seat	0.05	Seat
0.15	4	0.15	6	0.15	6	0.15	4	0.15	3	0.15	2
0.25	4	0.25	6	0.25	6	0.25	5	0.25	4	0.25	2
0.35	5	0.35	8	0.35	5	0.35	5	0.35	2	0.35	2
0.45	6	0.45	4	0.45	4	0.45	6	0.45	4	0.45	3
0.55	6	0.55	3	0.55	4	0.55	6	0.55	3	0.55	3
0.65	5	0.65	4	0.65	3	0.65	5	0.65	3	0.65	3
0.75	8	0.75	4	0.75	3	0.75	5	0.75	3	0.75	4
0.85	6	0.85	3	0.85	2	0.85	3	0.85	3	0.85	5
0.95	6	0.95	2	0.95	3	0.95	3	0.95	4	0.95	5
1.05	5	1.05	2	1.05	4	1.05	2	1.05	4	1.05	6
1.15	6	1.15	2	1.15	4	1.15	2	1.15	5	1.15	5
1.25	6	1.25	4	1.25	5	1.25	4	1.25	13	1.25	6
1.35	6	1.35	4	1.35	4	1.35	4	1.35	7	1.35	7
1.45	5	1.45	6	1.45	4	1.45	5	1.45	7	1.45	5
1.55	7	1.55	6	1.55	4	1.55	5	1.55	6	1.55	7
1.65	6	1.65	5	1.65	4	1.65	4	1.65	7	1.65	4
1.75	5	1.75	5	1.75	3	1.75	5	1.75	7	1.75	5
1.85	5	1.85	5	1.85	3	1.85	4	1.85	8	1.85	4
1.95	5	1.95	4	1.95	2	1.95	3	1.95	5	1.95	5
2.05	10	2.05	5	2.05	3	2.05	5	2.05	5	2.05	4
2.15	5	2.15	6	2.15	3	2.15	6	2.15	5	2.15	4
2.25	5	2.25	6	2.25	4	2.25	7	2.25	7	2.25	3
2.35	5	2.35	7	2.35	4	2.35	4	2.35	7	2.35	3
2.45	4	2.45	7	2.45	6	2.45	5	2.45	5	2.45	4
2.55	4	2.55	6	2.55	6	2.55	6	2.55	7	2.55	4
2.65	4	2.65	6	2.65	5	2.65	30+	2.65	10	2.65	5
2.75	5	2.75	5	2.75	6	2.75	-	2.75	9	2.75	5
2.85	6	2.85	6	2.85	5	2.85	-	2.85	5	2.85	8
2.95	8	2.95	7	2.95	5	2.95	-	2.95	6	2.95	7
3.05	8	3.05	-	3.05	-	3.05	-	3.05	6	3.05	9
3.15	9	3.15	-	3.15	-	3.15	-	3.15	6	3.15	6
3.25	9	3.25	-	3.25	-	3.25	-	3.25	10	3.25	5
3.35	9	3.35	-	3.35	-	3.35	-	3.35	9	3.35	5
3.45	12	3.45	-	3.45	-	3.45	-	3.45	10	3.45	5
3.55	14	3.55	-	3.55	-	3.55	-	3.55	16	3.55	6
3.65	15	3.65	-	3.65	-	3.65	-	3.65	12	3.65	7
3.75	14	3.75	-	3.75	-	3.75	-	3.75	10	3.75	8
3.85	14	3.85	-	3.85	-	3.85	-	3.85	10	3.85	8
3.95	15	3.95	-	3.95	-	3.95	-	3.95	11	3.95	9

Test Method:
AS 1289 6.3.2

Notes:

Note (1):
Dynamic cone
penetrometer variation from
test method AS1289 6.3.2:
Soil type, moisture
condition, groundwater level
not determined at this
location.

Note (2):
Refer to borehole log for
soil description details.

Remarks:
Results only relate to the
item tested.

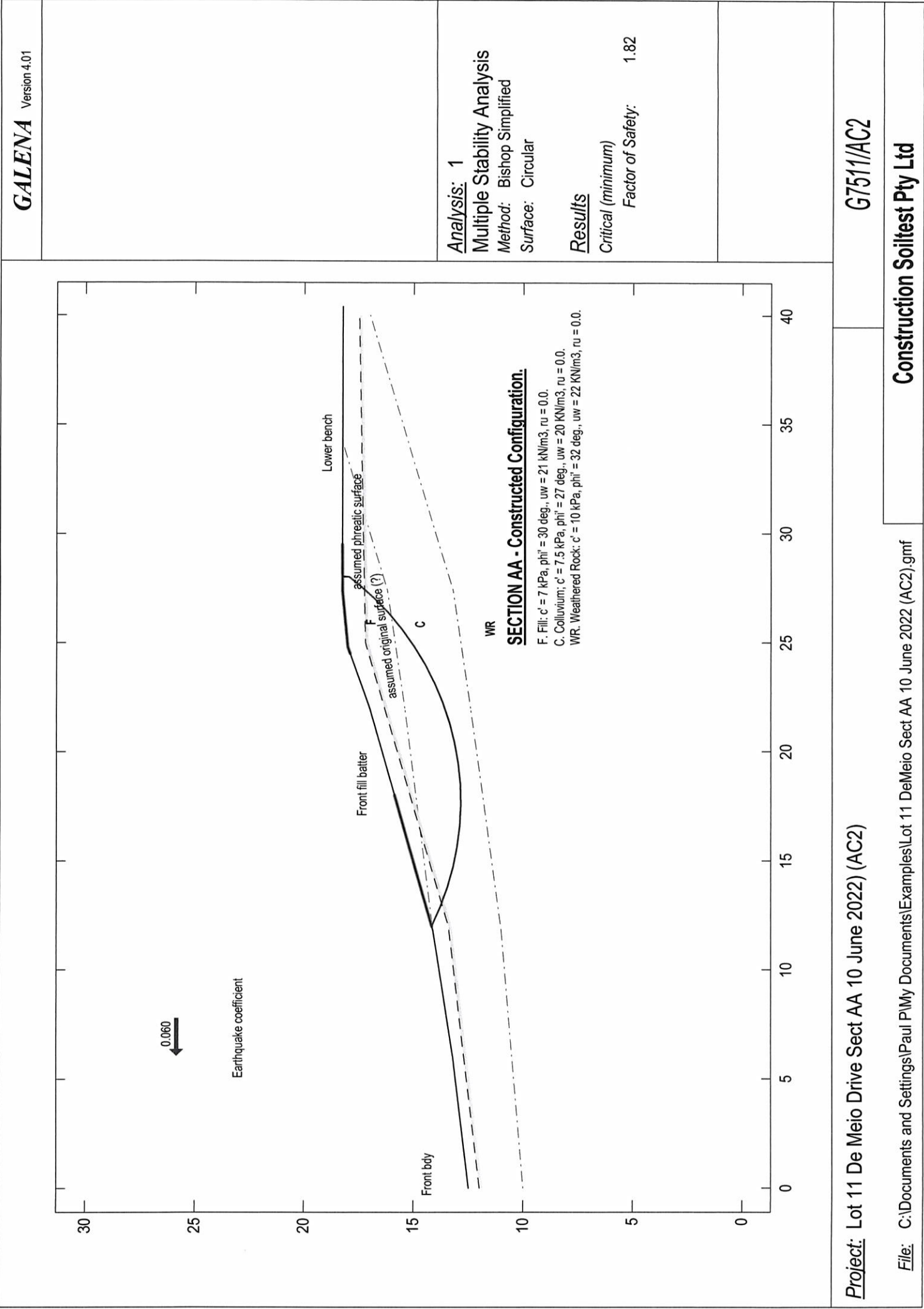
GL = start of test.
GL = current constructed
surface, 10/6/22)

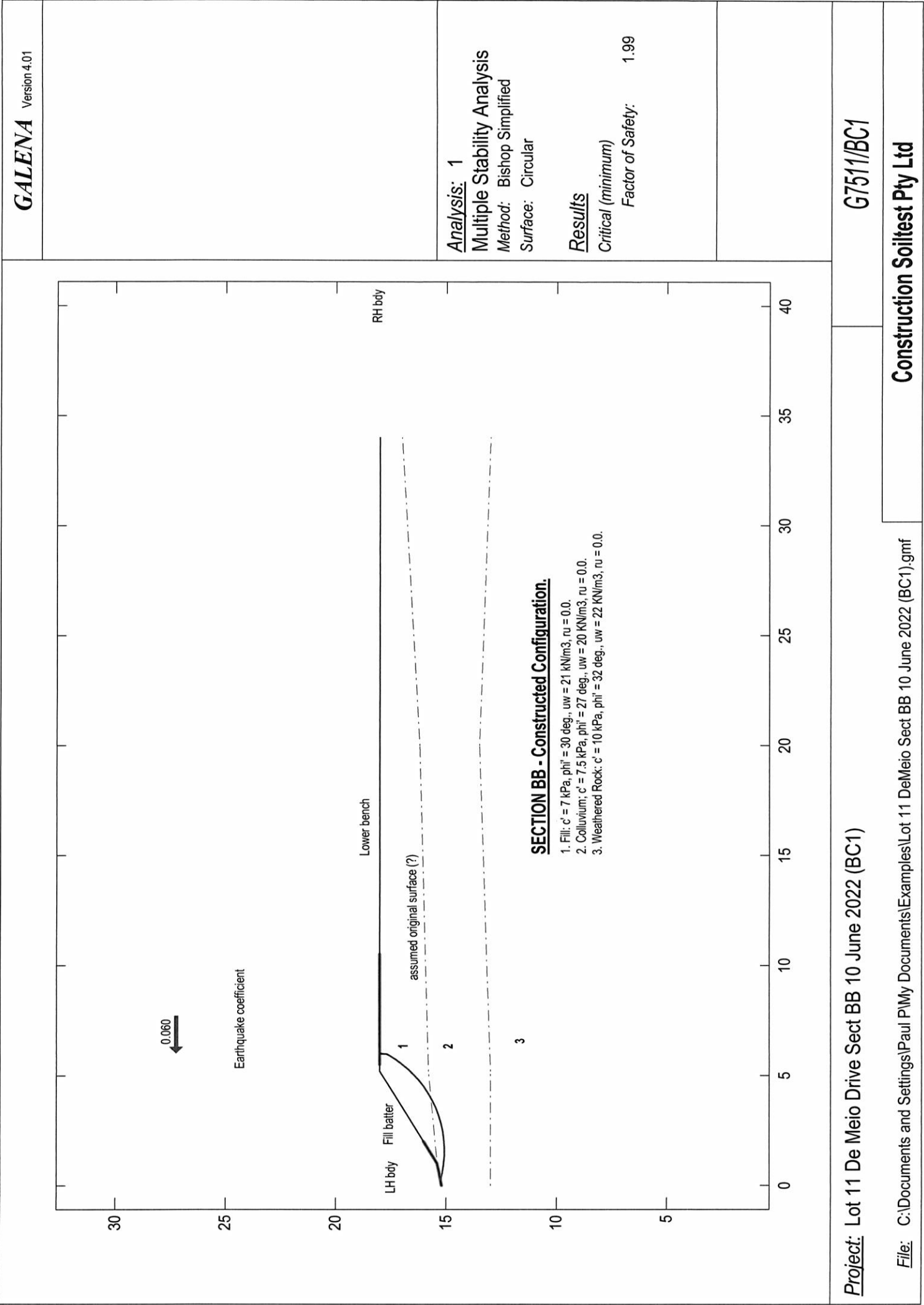
NATA Accredited Laboratory No.1952.

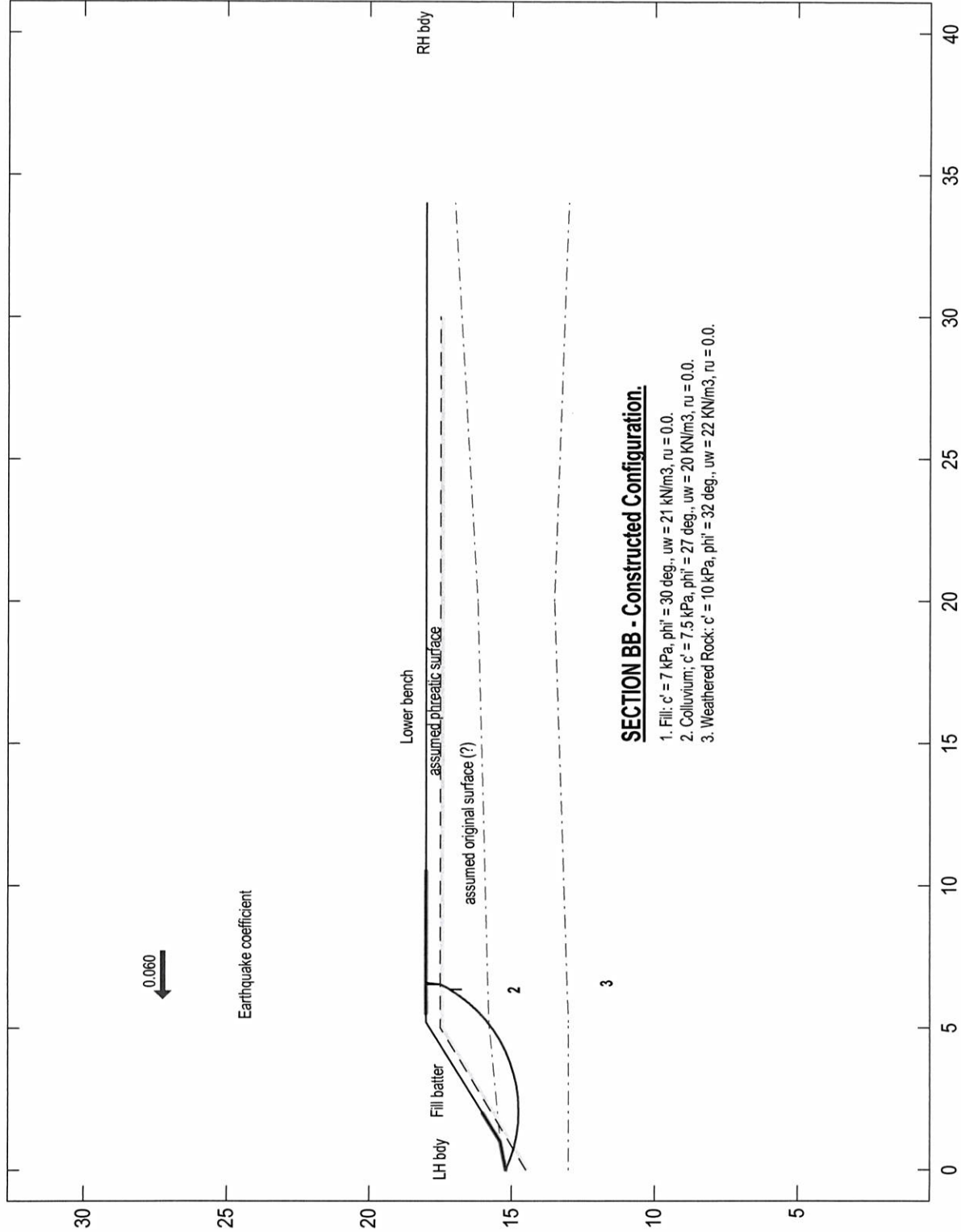
Approved by: P.A. Posar P.Posar Date: 23/6/22

APPENDIX B: Stability Analysis & Landslide Risk Assessment

<div>GALENAVersion 4.01</div>		<div>Analysis: 1 Multiple Stability Analysis Method: Bishop Simplified Surface: Circular</div> <div>Results Critical (minimum) Factor of Safety: 2.44</div>	
<p>SECTION AA - Constructed Configuration.</p> <p>F: Fill: $c' = 7$ kPa, $\phi^{int} = 30$ deg., $uw = 21$ kN/m³, $ru = 0.0$. C: Colluvium: $c' = 7.5$ kPa, $\phi^{int} = 27$ deg., $uw = 20$ kN/m³, $ru = 0.0$. WR: Weathered Rock: $c' = 10$ kPa, $\phi^{int} = 32$ deg., $uw = 22$ kN/m³, $ru = 0.0$.</p>		<div>Project: Lot 11 De Meio Drive Sect AA 10 June 2022) (AC1)</div> <div>File: C:\Documents and Settings\Paul PIMy Documents\Examples\Lot 11 DeMeio Sect AA 10 June 2022 (AC1).gmf</div>	
<div>G7511/AC1</div>		<div>Construction Soiltest Pty Ltd</div>	

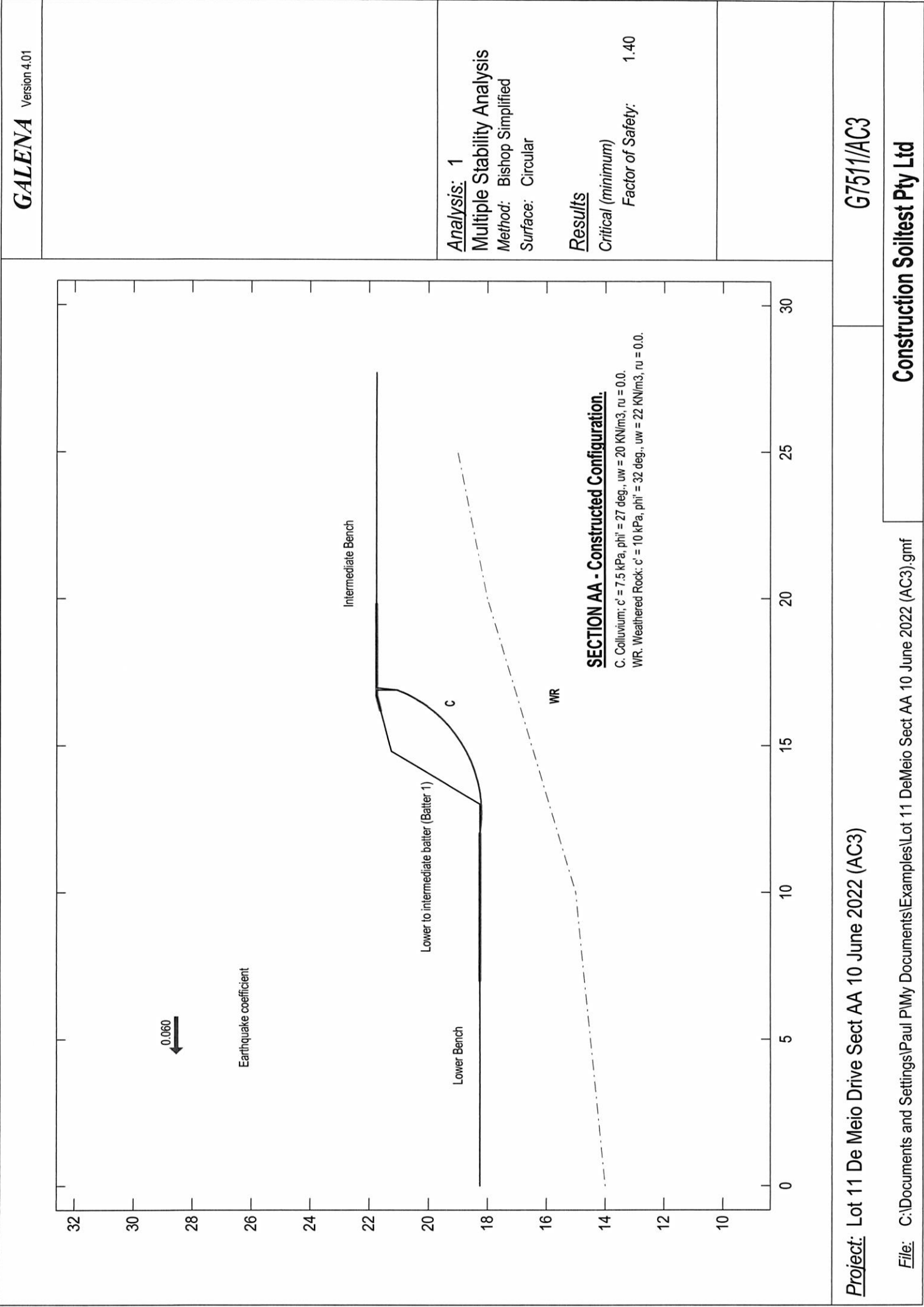


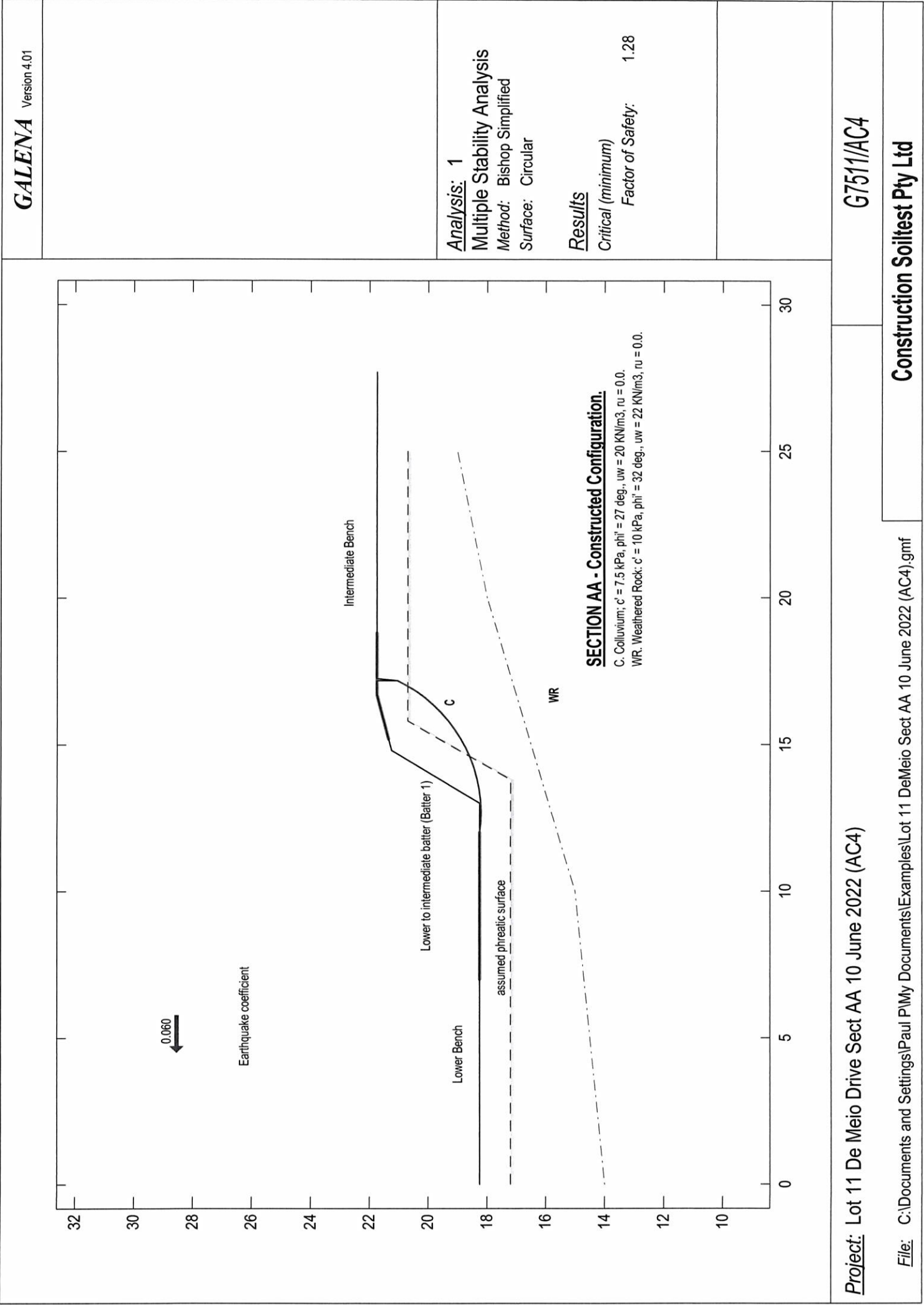




Analysis: 1
Multiple Stability Analysis
Method: Bishop Simplified
Surface: Circular

Results
Critical (minimum)
Factor of Safety: 1.51



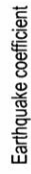


Project: Lot 11 De Meio Drive Sect AA 10 June 2022 (AC4)

G7511/AC4

File: C:\Documents and Settings\Paul PIMy Documents\Examples\Lot 11 DeMeio Sect AA 10 June 2022 (AC4).gmf

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C. Colluvium; $c' = 7.5$ kPa, $\phi^{int} = 27$ deg., $uw = 20$ kN/m³, $ru = 0.0$.
WR. Weathered Rock: $c' = 10$ kPa, $\phi^{int} = 32$ deg., $uw = 22$ kN/m³, $ru = 0.0$.

Multiple Stability Analysis

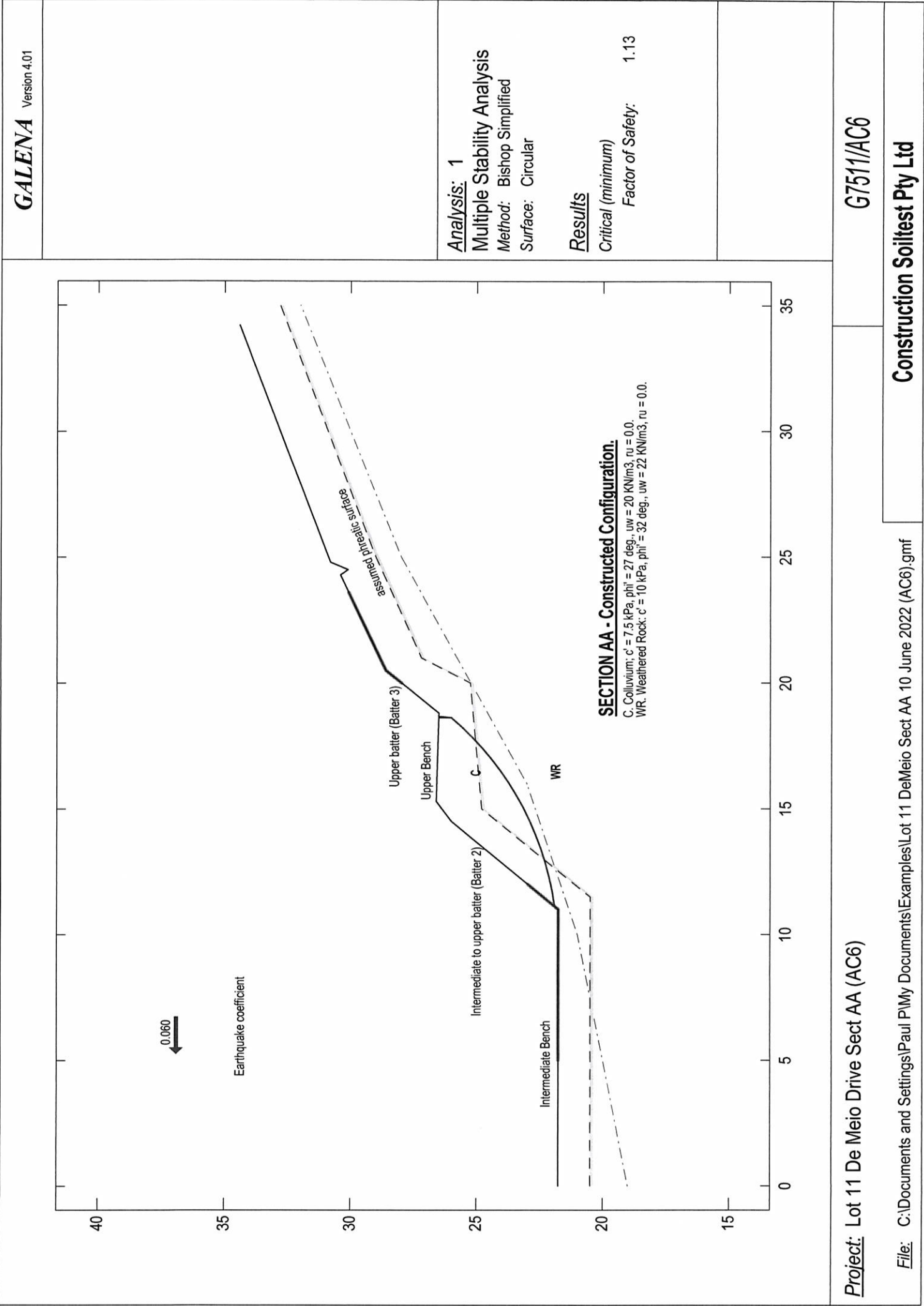
Surface: Circular

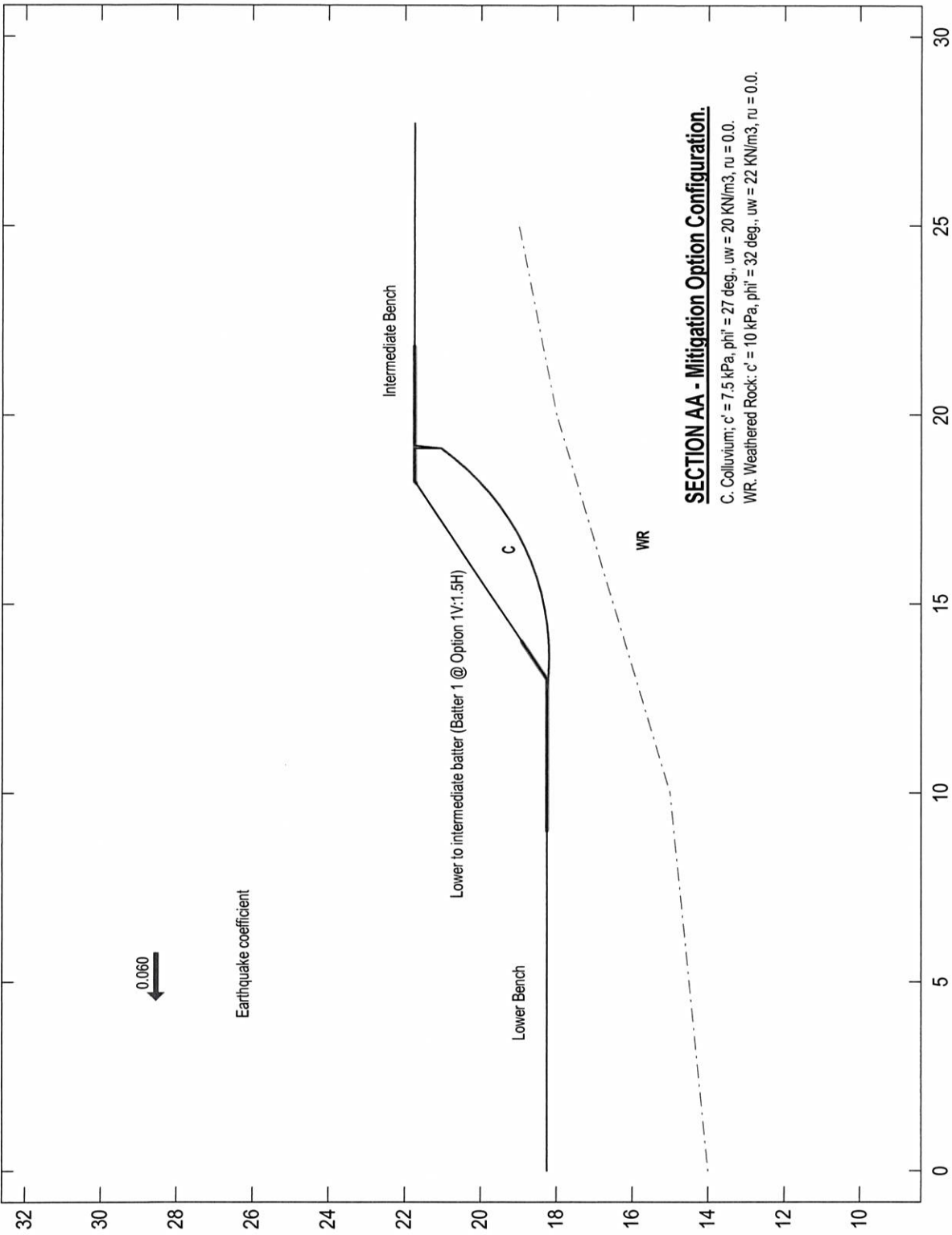
Critical (minimum)

Factor of Safety: 1.29

G7511/AC5

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GALENA Version 4.01	
 <p>SECTION AA - Mitigation Option Configuration.</p> <p>C. Colluvium; $c' = 7.5$ kPa, $\phi' = 27$ deg., $u_w = 20$ kN/m³, $r_u = 0.0$. WR. Weathered Rock: $c' = 10$ kPa, $\phi' = 32$ deg., $u_w = 22$ kN/m³, $r_u = 0.0$.</p>	
<p><u>Analysis:</u> 1 Multiple Stability Analysis Method: Bishop Simplified Surface: Circular</p> <p><u>Results</u> Critical (minimum) Factor of Safety: 1.71</p>	
<p><u>Project:</u> Lot 11 De Meio Drive Sect AA 10 June 2022 (AM2)</p>	
<p><u>File:</u> C:\Documents and Settings\Paul PIMy Documents\Examples\Lot 11 DeMeio Sect AA 10 June 2022 (AM1)).gmf</p>	



Earthquake coefficient

Intermediate Bench

Lower to intermediate batter (Batter 1 @ Option 1V:1.5H)

Lower Bench

assumed phreatic surface

WR

SECTION AA - Mitigation Option Configuration.

C. Colluvium; $c' = 7.5$ kPa, $\phi_{hi} = 27$ deg., $uw = 20$ kN/m³, $ru = 0.0$.

WR. Weathered Rock: $c' = 10 \text{ kPa}$, $\phi' = 32 \text{ deg.}$, $uw = 22 \text{ kN/m}^3$, $ru = 0.0$.

Analysis: 1

Multiple Stability Analysis

Method: Bishop Simplified

Surface: Circular

Results

Critical (minimum)

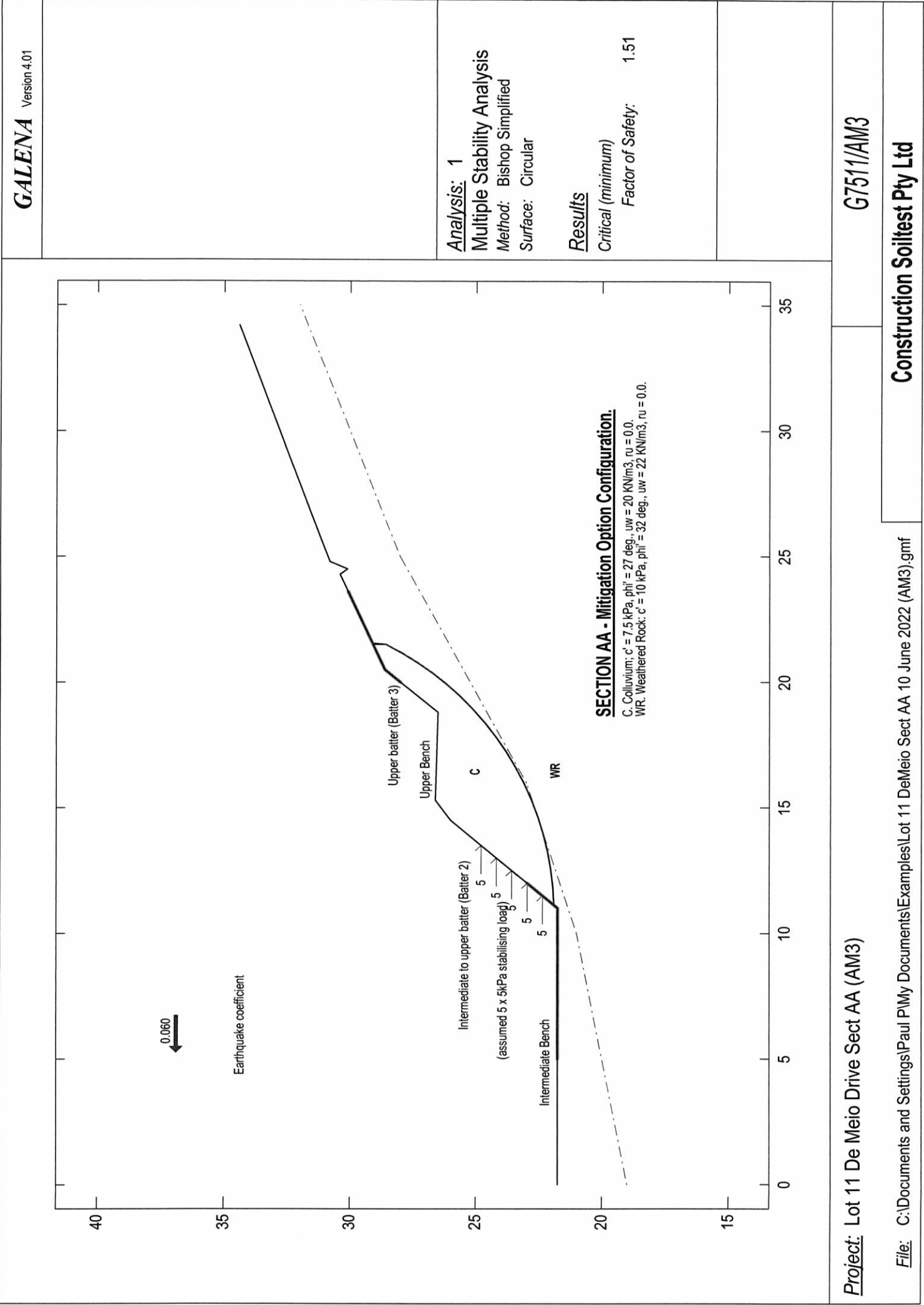
Factor of Safety: 1.56

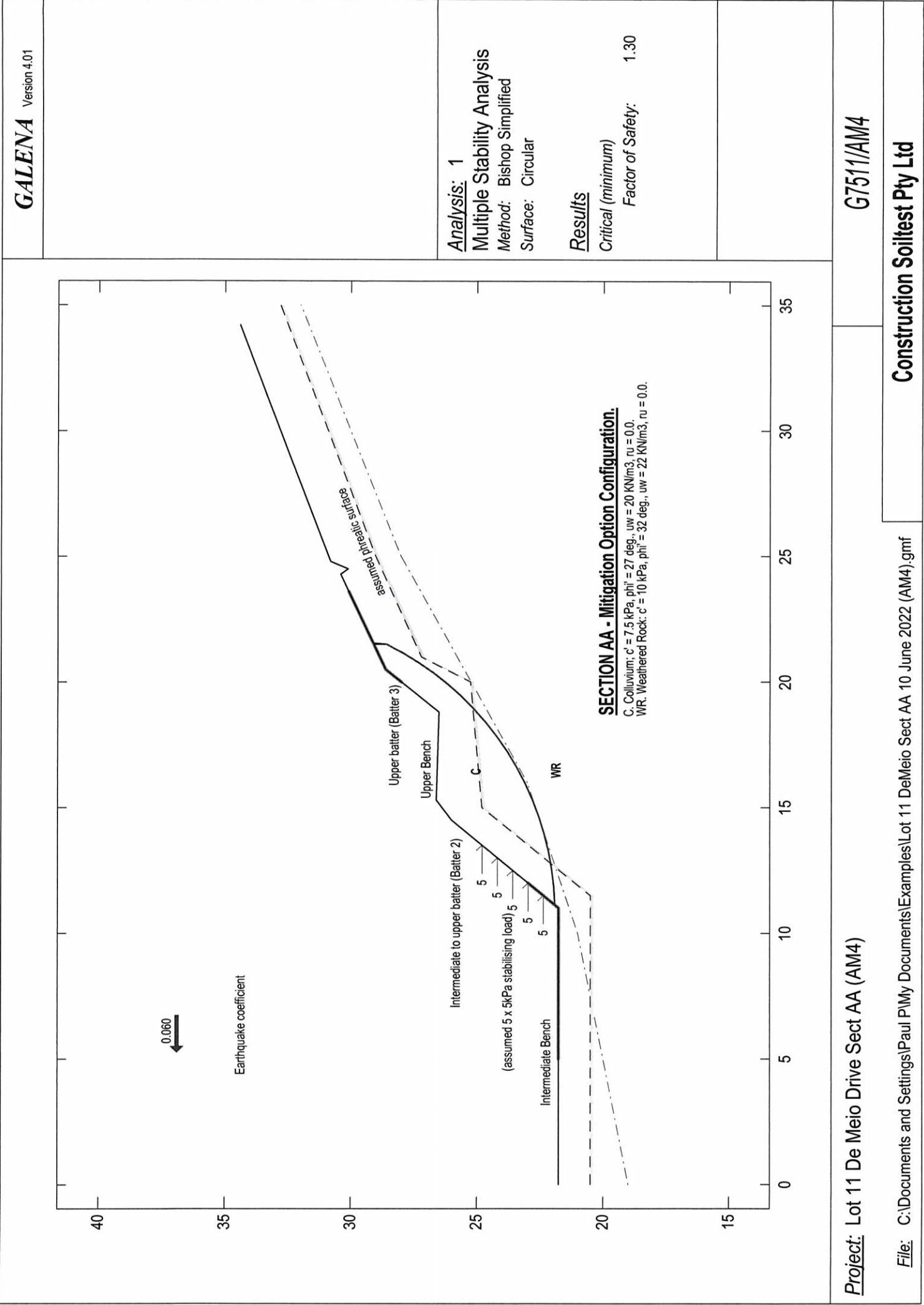
Project: Lot 11 De Meio Drive Sect AA 10 June 2022 (AM2)

G7511/AM2

File: C:\Documents and Settings\Paul PIMy Documents\Examples\Lot 11 DeMeio Sect AA 10 June 2022 (AM2)).gmf

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Quantitative Landslide Risk Assessment.		File created: PP 26/8/20		
7.1 QUANTITATIVE RISK ESTIMATION		AGS Vol 42 No 1 March 2007		
Quantitative risk estimation involves integration of the frequency analysis and the consequences.				
For property, the risk can be calculated from:				
R(Prop) = P(H) x P(S:H) x P(T:S) x V(Prop:S) x E (1)				
Where				
R(Prop) is the risk (annual loss of property value).				
P(H) is the annual probability of the landslide.				
(Tf = probability FOS < 1, Bsf = constructed slope steepness, Nsf = slope steepness behind batter).				
P(S:H) is the probability of spatial impact by the landslide on the property, taking into account the travel distance and travel direction.				
P(T:S) is the temporal spatial probability. For houses and other buildings P(T:S)= 1.0. For Vehicles and other moving elements at risk1.0< P(T:S) >0.				
V(Prop:S) is the vulnerability of the property to the spatial impact (proportion of property value lost).				
E is the element at risk (e.g. the value or net present value of the property).				
Project: Lot 11 De Meio Drive - Constructed Batters		Date: 10 June 2022		
J/N: G7511		Report No. G711/R14629		
	Event:			
Hazard Analysis:	Batter 1 CONST	Batter 1 MITIGATED	Batter 2 CONST	Batter 2 MITIGATED
	60° 3.5m high	34° 3.5m high	50° 4.8m high	50° 4.8m high RW
Volume m3	50-200	50-200	50-200	50-200
Rainfall, mm	≤ 300	≤ 300	≤ 300	≤ 300
Duration, hrs	12	12	12	12
ARI yrs	50	50	50	50
Probability %	2	2	2	2
Annual Frequency P(H)g	0.02	0.02	0.02	0.02
Frequency Assessment:				
P(H)g	0.02	0.02	0.02	0.02
Tf	0.1	0.005	0.1	0.005
BSf	3	1.5	3	3
NSf	1	1	1.5	1.5
P(H) = P(H)g x Tf x BSf x NSf	6.00E-03	1.50E-04	9.00E-03	4.50E-04
Property Risk Assessment:				
P(H)	6.00E-03	1.50E-04	9.00E-03	4.50E-04
P(S:H)	0.5	0.5	0.5	0.5
P(H) x P(S:H) Indicative annual probability	3.00E-03	7.50E-05	4.50E-03	2.25E-04
P(T:S)	1	1	1	1
V(Prop:S)	0.3	0.05	0.1	0.01
E	1	1	1	1
R(Prop)	9.00E-04	3.75E-06	4.50E-04	2.25E-06
Qualitative assessment: Refer AGS LRM 2007 Appendix C.				
Qualitative Likelihood of P(H) x P(S:H)	POSSIBLE	UNLIKELY	POSSIBLE	UNLIKELY
Qualitative Consequences of V(Prop:S)	MEDIUM	MINOR	MINOR	MINOR
Qualitative Risk to Property	MODERATE	LOW	MODERATE	LOW

PRACTICE NOTE GUIDELINES FOR LANDSLIDE RISK MANAGEMENT 2007

APPENDIX C: LANDSLIDE RISK ASSESSMENT

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	The event is expected to occur over the design life. The event will probably occur under adverse conditions over the design life.	ALMOST CERTAIN LIKELY	A B
10 ⁻²	5x10 ⁻³	100 years			
10 ⁻³	5x10 ⁻⁴	1000 years	The event could occur under adverse conditions over the design life. The event might occur under very adverse circumstances over the design life.	POSSIBLE UNLIKELY	C D
10 ⁻⁴	5x10 ⁻⁵	10,000 years			
10 ⁻⁵	5x10 ⁻⁶	100,000 years	The event is conceivable but only under exceptional circumstances over the design life. The event is inconceivable or fanciful over the design life.	RARE BARELY CREDIBLE	E F
10 ⁻⁶	5x10 ⁻⁶	1,000,000 years			

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. 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.	CATASTROPHIC	1
60%	40%			
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. Limited damage to part of structure, and/or part of site requiring some reinstatement stabilisation works. Little damage. (Note for high probability event (Almost Certain), this category may be subdivided at a notional boundary of 0.1%. See Risk Matrix.)	MAJOR	2
5%	1%			
0.5%			MEDIUM	3
			MINOR	4
			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), stabilisation 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*

PRACTICE NOTE GUIDELINES FOR LANDSLIDE RISK MANAGEMENT 2007
APPENDIX C: – 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.

Construction Soiltest Pty Ltd A.B.N. 90 054 339 883

Materials Testing and Geotechnical Services

7 Barry Street, Westcourt, PO Box 2234 Cairns Ph 07 4041 4577 Fax 07 4041 4399 e-mail: soiltest@bigpond.net.au

Lot 11 De Meio Drive, Lower Daintree.

Job No: G7511

APPENDIX C: Constructed Site Photographs (10 June 2022).

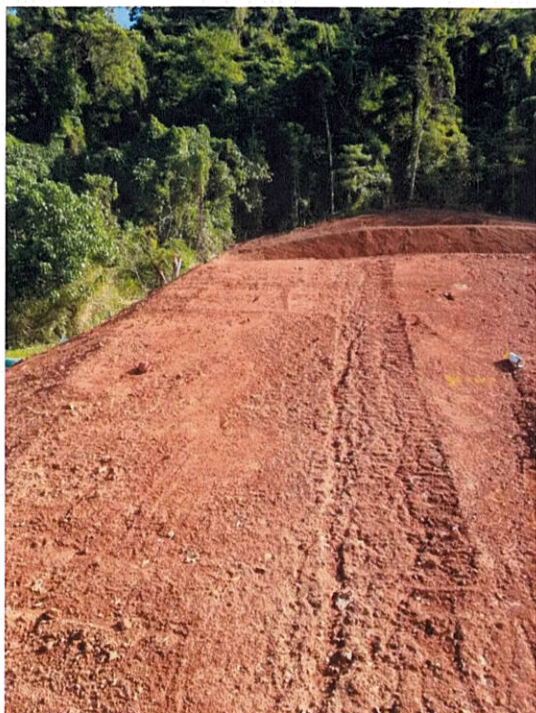


Site looking west from lower bench.



CONSTRUCTED SITE FROM LOWER BENCH to BATTER 1 to INTERMEDIATE BENCH to BATTER 2 to UPPER BENCH to BATTER 3 to NATURAL TOP SLOPE.

G7511/R14629



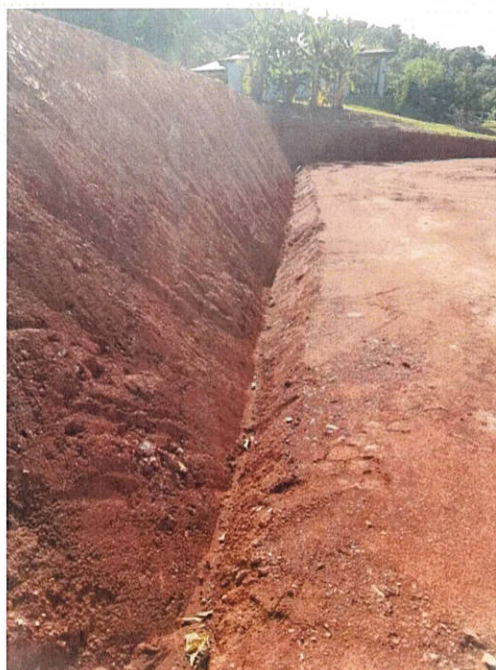
LH FILL looking up to intermediate bench.



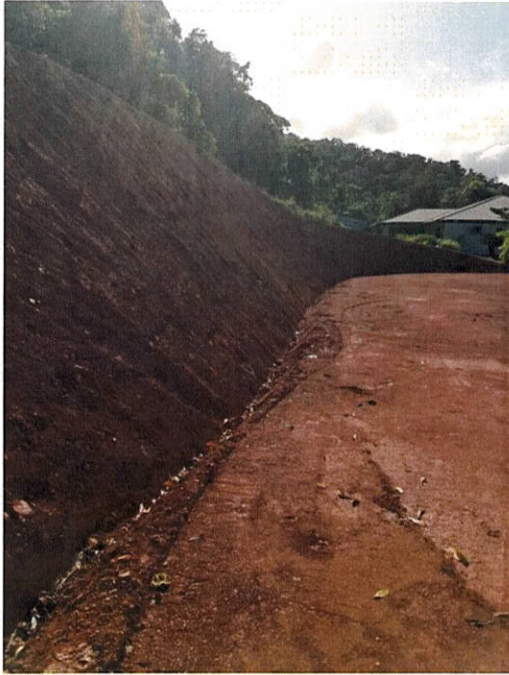
LH FRONT FILL BATTER.



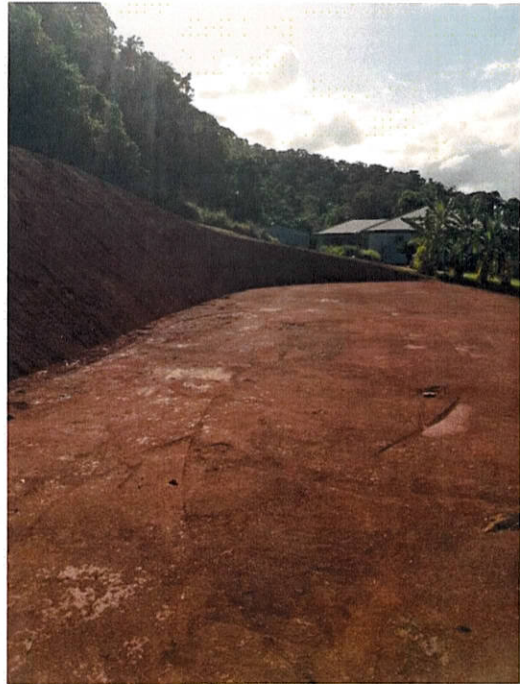
LOWER BENCH TO INTERMEDIATE BATTER (BATTER No.1).



LOWER TO INTERMEDIATE BENCH BATTER (BATTER No. 1)



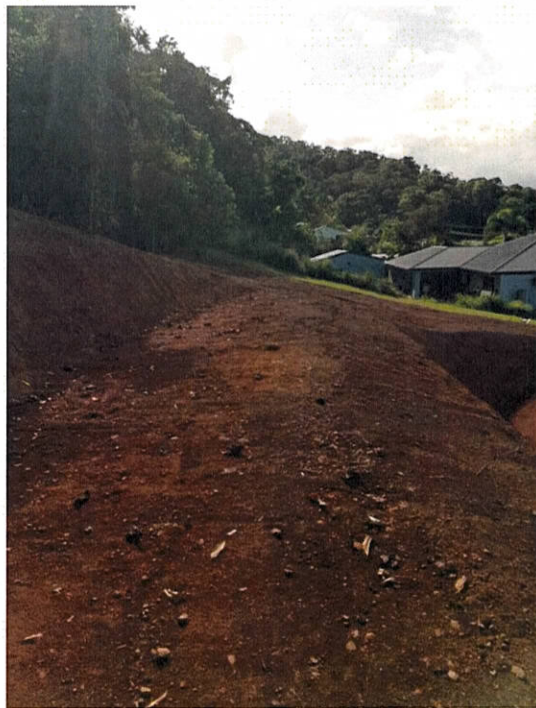
INTERMEDIATE TO UPPER BENCH BATTER (BATTER No. 2).



INTERMEDIATE TO UPPER BENCH BATTER (BATTER No. 2).



UPPER BATTER (BATTER No. 3).



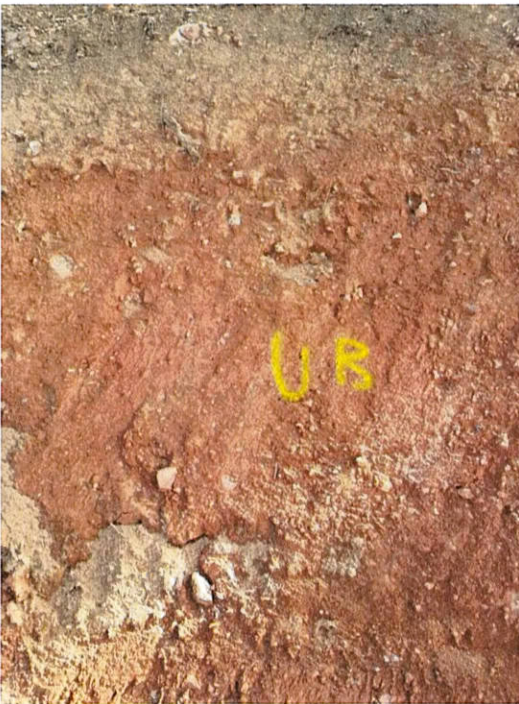
UPPER BENCH & UPPER BATTER (BATTER No. 3).



LOWER BATTER SURFACE DETAIL (BATTER No. 1).



INTERMEDIATE BATTER SURFACE DETAIL (BATTER No. 2).



UPPER BATTER SURFACE DETAIL (BATTER No. 3).

BLANK



UPPER BATTER (BATTER No. 3) TOP DRAIN.



UPPER BATTER (BATTER No. 3) TOP DRAIN.



EXISTING RH DRAIN (looking down from upper bench).



EXISTING RH DRAIN (deep scour).