27 July 2022

ASPIRE
Town Planning and Project Services

Chief Executive Officer
Douglas Shire Council
64-66 Front Street
MOSSMAN QLD 4873

Via email: enquiries@douglas.qld.gov.au

RE: DEVELOPMENT APPLICATION FOR A MATERIAL CHANGE OF USE FOR A DWELLING HOUSE OVER LAND AT 14 HIBISCUS COURT, ROCKY POINT, MORE FORMALLY DESCRIBED AS LOT 26 ON RP749732

Aspire Town Planning and Project Services act on behalf of on behalf of Mr Stephen Marriott (the 'Applicant') in relation to the above described Development Application.

On behalf of the Applicant, please accept this correspondence and the accompanying attachments as a properly made Development Application pursuant to Sections 50 and 51 of the *Planning Act 2016* seeking a Development Permit for a Material Change of Use (Dwelling House).

Please find enclosed the following documentation associated with this Development Application:

- Duly completed DA Form 1 (Attachment 1);
- Landowners Consent (Attachment 2);
- Certificate of Title (Attachment 3);
- Plan of Proposed Development prepared by Greg Skyring Design and Drafting (Attachment 4);
- Geotechnical Report prepared by Geo Design (Attachment 5); and
- Waste Water Report prepared by Earth Test (Attachment 6).

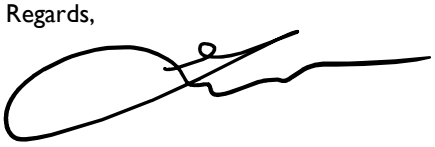
The following sections of this correspondence discuss the relevant details of the Development Application, including the site, the proposed development, the applicable statutory town planning framework, and provides an assessment of the proposal against this framework.

The Application Fee is calculated as $344.00, which is the fee for a Dwelling House. It is respectfully requested that Council issue an Invoice, so the fee can be paid directly by the Applicant.

12 Lloyd Road MIALLO, QLD 4873
PO BOX 1040, MOSSMAN QLD 4873
M. 0418826560
E. admin@aspireqld.com
ABN. 79 851 193 691

Thank you for your time in considering the attached Development Application. If you wish to inspect the property or have any further queries, please contact the undersigned.

Regards,



Daniel Favier
Senior Town Planner
ASPIRE Town Planning and Project Services

1.0 Executive Summary

This Development Application is for a Material Change of Use for a Dwelling House over land at 14 Hibiscus Court Rocky Point Rykers Road, Cape Tribulation and is more formally described as Lot 26 on RP749732. The Current Registered Landowner of the land is Mr. Stephen Marriott, refer to the copy of the Title of Certificate included under Attachment 3.

The land is 4,537m^2 in area and has approximately 24m frontage to Hibiscus Court. The land is accessed via Hibiscus Court, via a short 15m concrete driveway which leads up to an existing cleared development pad of nearly 1,800m^2. Midway of the site, the land falls away to the south. The initial 6m-10m is generally vegetated with grasses only and beyond to the southern boundary is more mature vegetation.

The proposed Dwelling House has been sited to maximise use of the existing level building area and also take in the scenic views from the property. Although the proposed building will extend beyond the top of bank, overall the design is a modest single storey building and is sympathetic to the Hillslope constraints.

The land is located within the Environmental Management Zone under the Douglas Shire Planning Scheme 2018 V1.0 (the 'planning scheme'). The proposed development triggers Code Assessment in accordance with the Environmental Management Zone Tables of Assessment.

The following sections of this correspondence discuss the relevant details of the Development Application, including the site, the proposed development and the applicable statutory town planning framework, and provide an assessment of the proposal against this framework.

The information provided in this report, and accompanying attachments, demonstrates that the proposed development achieves compliance with the applicable provisions of the relevant planning framework. We therefore seek Council favourable consideration of the proposed development and approval the Development Application, subject to reasonable and relevant conditions. It would be appreciated if draft conditions could be provided for review prior to the issue of a Decision Notice.

2.0 Site Characteristics and Surrounds

2.1 The Site

The subject unit is located at 14 Hibiscus Court, Rocky Point, and is formally described as Lot 26 on RP749732 and has a total land area of 4,537m^2, see Figure 1 below. The site is bound by Hibiscus Court to the north (approximately 24m) and existing developed residential lot to the east, and vacant residential lots to the south and west. To the north west is a Council lot containing an above ground water reservoir.

More broadly, the site is situated, off the Mossman Daintree Road within an existing developed residential estate commonly known as Port Douglas Views Estate. The site is further located approximately 8.5km directly north, north east of Mossman Township.

Figure 1: Site location and aerial mapping (source: QLD Globe July 2022)

2.2 Site Features, Built Form, Access and Services

The site contains an existing level and cleared building pad which is accessed via an existing approximately 15m long concrete driveway from Hibiscus Court, an existing bitumen sealed road. Midway of the site, the land falls away to the south. The initial 6m-10m is generally vegetated with grass and weeds and beyond to the southern boundary exists more mature vegetation.

There are no existing built structures on the property, except for the existing concrete driveway.

Mains water supply, electricity or telecommunications is available to the property. Waste water will be treated and disposed onsite, refer to the Waste Water Report at Attachment 6.

2.3 Ownership and Encumbrances

The site is in the registered ownership of Mr. Stephen Marriott, refer to the Certificate of Title, included as Attachment 3.

The Certificate of Title confirms the site is not burdened by any easements or encumbrances.

3.0 Description of Proposed Development

The proposal seeks a Development Permit for a Material Change of Use for a Dwelling House over land at 14 Hibiscus Court, Rocky Point, which is more formally described as Lot 26 on RP749732, refer to the Proposal Plan included at Attachment 4.

The proposed Dwelling House is located within an existing cleared and levelled area of the site, although some minor earthworks are proposed to establish drainage, level existing mounds and backfill a 2m high retaining wall proposed along the western boundary. Additional earthworks are proposed to pullback the top of bank to regrade the embankment to reduce slip potential. The Dwelling House and proposed earthworks have been designed in accordance with a Geotechnical Report carried out by Geo Design, refer to Attachment 5.

The following characteristics describe the Dwelling House:

- Single storey;
- 3 Bedrooms, each with ensuite and walk in robe. The Master Bedroom is cantilevered from the top of bank by approximately 6m, minimising disturbance of sloping land. The other two generously sized bedrooms are located behind the top of bank and open out onto an open Verandah. Access to these rooms is via the Verandah;
- Separate Media Room and Office;
- Open plan Kitchen, Dining and Living;
- 2 outdoor Verandah living areas; and
- 12 vehicle garage and shed in a L-shape, attached to the Dwelling House and extending along the eastern boundary.

The exterior finish will be a combination of colorbond sheeting and weatherboard. The colour scheme has not been selected at this point in time however the Applicant acknowledges the requirement for dark shades and would be accepting of conditional approval. A concrete lined drain will catch stormwater along the eastern boundary and convey back towards Hibiscus Court. A concrete lined drain is also proposed along the western boundary and will catch and convey stormwater south to a rock grout apron where water discharges.

The Dwelling House will be connected to reticulated water supply, electricity and telecommunications.

Waste water will be disposed via onsite disposal. A Waste Water Report prepared by Earth Test is attached as Attachment 6.

4.0 State Planning Framework

4.1 State Planning Policies

The minister has declared that the Douglas Shire Planning Scheme 2018 V1.0 appropriately incorporated the relevant State Planning Policies. No further assessment is required in this regard.

4.2 FNQ Regional Plan

The site is included in the Regional Landscape and Rural Production Area Designation of the FNQ2009-2031 Regional Plan and it is submitted that the proposed development satisfies the intent of the Regional Landscape and Rural Production Area Designation and the requirements of the Regional Plan.

4.3 State Agency Referral

Review of Schedule 10 of the *Planning Regulation 2017* confirms that the proposed Material Change of Use does not trigger referral to the State Assessment and Referral Agency, or any other agency.

4.4 State Assessment Development Provisions

The State Assessment Development Provisions are not applicable to the proposed development.

5.0 Local Government Planning Context

5.1 Douglas Shire Planning Scheme 2018 V1.0

The subject unit is located within the Environmental Management Zone under the Douglas Shire Planning Scheme 2018 V1.0, see Figure 2 below.

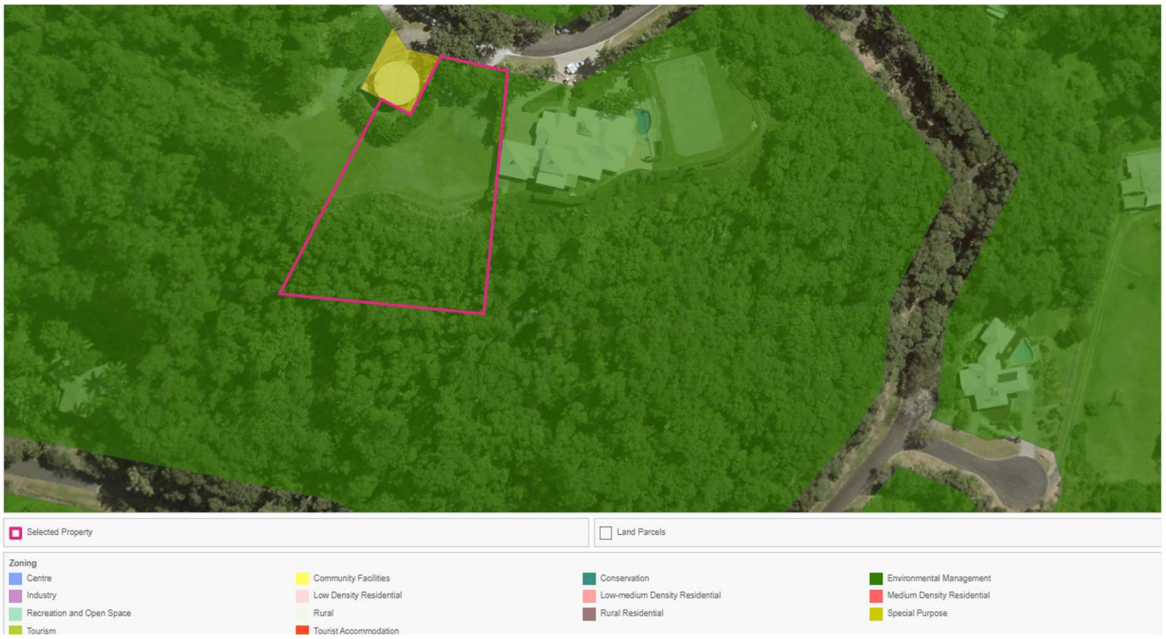


Figure 2: Site Zoning (source: 2018 Douglas Shire Council Planning Scheme Property Report)

5.2 Local Plan

The subject site is not included within a Local Plan Area.

5.3 Planning Scheme Overlays

Review of the Douglas Shire Planning Scheme 2018 v1.0 confirms the following Overlays are applicable to a Dwelling House within the Environmental Management Zone:

- Bushfire Hazard (Potential Impact Buffer/Very High Potential Bushfire Intensity/High Potential Bushfire Intensity)
- Hillslopes (Areas Affected by Hillslopes)
- Landscape Values (High Landscape Values)
- Landslide Hazard Overlay (High and Medium Hazard)
- Natural Areas Overlay (MSES – Wildlife Habitat, MSES – Regulated Vegetation)
- Transport Network Overlay (Access Road)

With the exception of the Landscape Values Code which does not applicable to the assessment of a Dwelling House, assessment against the relevant Overlay Codes is included under s5.5 of this report.

5.4 Level of Assessment

In accordance with the Conservation Zone Table of Assessment the proposed development triggers Code Assessment.

5.5 Code Assessment

The following Code Assessment describes only those matters of non-compliance against the respective codes or where the proposed development seeks an Alternative Outcome.

Assessment Benchmark	Matter of Non-compliance	Comment
Environmental Management Zone Code **General discussion:** A Dwelling House is a consistent land use within the Environmental Management Zone. The building is single storey and complies with the maximum height requirements. The proposed Dwelling House is sited within an existing cleared and levelled area of the property and access is gained via an existing single width concrete driveway from Hibiscus Court. Where the Master Bedroom and Verandah areas cantilever beyond the top of bank, the vegetation is limited to grasses and weeds.		
Setbacks	AO2	**Alternative solution:** The proposed siting of the development complies with the minimum setback requirements, except for the eastern side boundary. The subject site adjoins an existing developed residential property along the eastern boundary. Given the generally narrow width of the subject property it would be difficult to comply in full with the building setback requirements of the planning scheme. It is noted that adjoining property sits on a higher retained building pad and itself benefits from a reduced building setback. The proposed siting will not generate overlooking or amenity issues as the adjoining property has positioned their garage and air conditioning condenser units along the common boundary.
Finishes	AO7	**Alternative solution:** The proposed colour scheme has not yet been selected. The land owner is aware the Dwelling House would need to be finished in darker, non-reflective surfaces. It would be acceptable for Council to condition specific requirements in this regard, including that a colour scheme is submitted prior to Building Approval for Council endorsement.
Bushfire Hazard Overlay **General discussion:** the Dwelling House is largely located within the Potential Impact Buffer only, however a Master Bedroom and an area of the Verandah extend into the mapped Very High Potential Bushfire Intensity area. No clearing of vegetation is proposed.		
Development Design and Separation	AO7	**Alternative solution:** Although part of the Dwelling House encroaches on mapped Very High Potential Bushfire Intensity, the Dwelling House does provide some separation from existing mature vegetation. Furthermore, the Dwelling House will be connected to

		reticulated water supply and is provided with sealed road access which supports emergency vehicle access.
Hillslopes Overlay **General discussion:** The entire property is mapped within the Hillslopes Overlay, however the proposed Dwelling House is located within the existing level development pad. The Dwelling House does extend beyond the top of bank, however this is cantilevered minimising the impact and disturbance of the down slope. The design of the proposed Dwelling House is supported by a Geotechnical Assessment by Geo Design and included under Attachment 5. Minor retaining and filling works are proposed adjacent the western boundary to bring this area of the site up to level. Retaining will be via concrete masonry block wall. The proposed development is a modest single storey structure and will not protrude above the ridge altering the skyline. No vegetation clearing is proposed.		
Exterior Finishes	AO2.7-2.8	**Alternative solution:** The proposed colour scheme has not yet been selected. It would be acceptable for Council to condition any specific requirements in this regard. It is noted that the due to location of the proposed building site, topography and vegetation coverage, the buildings will not be easily visible from Rykers Road or neighbouring properties.
Landslide Overlay **General discussion:** the proposed Dwelling House is largely sited within the existing benched, level and cleared of vegetation building pad. The Master Bedroom and section of the Veranda will be cantilevered over the top of bank. This method of construction is intended to minimise the impact on slope stability. The design of the proposed Dwelling House is supported by a Geotechnical Assessment by Geo Design and included under Attachment 5.		
Transport Network Overlay **General discussion:** the proposed development is a low scale residential use which will not compromise the safety and efficiency of the transport network. There are no notable matters of non-compliance.		
Dwelling House Code **General discussion:** There are no notable matters of non-compliance.		
Access, Parking and Services Code **General discussion:** The site is accessed via an existing concrete driveway from Hibiscus Court. There is sufficient area within the site to enable circulation and exit in forward motion. There are no notable matters of non-compliance.		

Filling and Excavation Code **General discussion:** minor retaining and filling is proposed along the western boundary to make the site level.		
Visual Impact and Site Stability	AO2.2	**Alternative solution:** minor retaining and filling is proposed along the western boundary to make the site level. It is proposed to construct a 2m high retaining wall along this boundary. It is submitted that this does not raise any privacy or scenic amity matters for concern.
Infrastructure Code **General discussion:** The site will be connected to necessary reticulated water supply, telecommunications and electricity. Sealed road access is gained via Hibiscus Court. Waste water will be treated and disposed onsite in accordance with the waste water design by Earth Test included as Attachment 6. The proposal plan included under Attachment 4 illustrates how stormwater will be conveyed and discharged from the site. There are no notable matters of non-compliance.		
Vegetation Management Code **General discussion:** No vegetation clearing is proposed. There are no notable matters of non-compliance.		

6.0 Conclusion

This Development Application is for a Material Change of Use for a Dwelling House) over land at 14 Hibiscus Court, Rocky Point and is more formally described as Lot 26 on RP749732.

This Development Application demonstrates that the proposed development is:

- Consistent with the purpose of the Environmental Management Zone under the Douglas Shire Planning Scheme 2018 V1.0;
- Appropriate in terms of scale and siting;
- Supported by the necessary geotechnical and waster water treatment technical assessment and design; and
- Generally complies with the Acceptable Outcomes of the relevant codes.

The proposed development is submitted to Council for Approval. As a matter of courtesy, it would be greatly appreciated if the Council could provide the applicant with draft conditions prior to the determination of the Development.

Attachment 1:

Duly Completed DA Form 1

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*)	Stephen Marriott
Contact name *(only applicable for companies)*	c/- Daniel Favier (Aspire Town Planning and Project Services)
Postal address *(P.O. Box or street address)*	PO Box 1040
Suburb	Mossman
State	QLD
Postcode	4873
Country	Australia
Contact number	0418 826 560
Email address *(non-mandatory)*	admin@aspireqld.com
Mobile number *(non-mandatory)*	
Fax number *(non-mandatory)*	
Applicant's reference number(s) *(if applicable)*	2022-03-01 - Marriott – 14 Hibiscus Court Rocky Point

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)

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
		14	Hibiscus Court	Rocky Point
	Postcode	Lot No.	Plan Type and Number *(e.g. RP, SP)*	Local Government Area(s)
	4873	26	RP749732	Douglas Shire
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)*
		☐ WGS84 ☐ GDA94 ☐ Other:	

☐ Coordinates of premises by easting and northing

Easting(s)	Northing(s)	Zone Ref.	Datum	Local Government Area(s) *(if applicable)*
		☐ 54 ☐ 55 ☐ 56	☐ WGS84 ☐ GDA94 ☐ 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:

☐ Listed on the Environmental Management Register (EMR) under the *Environmental Protection Act 1994*	
EMR site identification:	
☐ Listed on the Contaminated Land Register (CLR) under the *Environmental Protection Act 1994*	
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? *(tick only one box)*

☒ Material change of use ☐ Reconfiguring a lot ☐ Operational work ☐ Building work

b) What is the approval type? *(tick only one box)*

☒ Development permit ☐ Preliminary approval ☐ Preliminary approval that includes a variation approval

c) What is the level of assessment?

☒ Code assessment ☐ Impact assessment *(requires public notification)*

d) Provide a brief description of the proposal *(e.g. 6 unit apartment building defined as multi-unit dwelling, reconfiguration of 1 lot into 3 lots)*:

Development Application for a Material Change of Use for a Dwelling House

e) Relevant plans

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

☒ 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? *(tick only one box)*

☐ Material change of use ☐ Reconfiguring a lot ☐ Operational work ☐ Building work

b) What is the approval type? *(tick only one box)*

☐ Development permit ☐ Preliminary approval ☐ Preliminary approval that includes a variation approval

c) What is the level of assessment?

☐ Code assessment ☐ Impact assessment *(requires public notification)*

d) Provide a brief description of the proposal *(e.g. 6 unit apartment building defined as multi-unit dwelling, reconfiguration of 1 lot into 3 lots)*:

e) Relevant plans

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

☐ Relevant plans of the proposed development are attached to the development application

6.3) Additional aspects of development

☐ 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

☐ Not required

Section 2 – Further development details

7) Does the proposed development application involve any of the following?	
Material change of use	☒ Yes – complete division 1 if assessable against a local planning instrument
Reconfiguring a lot	☐ Yes – complete division 2
Operational work	☐ Yes – complete division 3
Building work	☐ 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)*
Construction of a Dwelling House on existing vacant land	Dwelling House	1	

8.2) Does the proposed use involve the use of existing buildings on the premises?
☐ Yes
☒ 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)*	
☐ Subdivision *(complete 10))*	☐ Dividing land into parts by agreement *(complete 11))*
☐ Boundary realignment *(complete 12))*	☐ 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?	
☐ Yes – provide additional details below ☐ 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?			

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?		
☐ Road work	☐ Stormwater	☐ Water infrastructure
☐ Drainage work	☐ Earthworks	☐ Sewage infrastructure
☐ Landscaping	☐ Signage	☒ Clearing vegetation
☐ 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)*		

PART 4 – ASSESSMENT MANAGER DETAILS

15) Identify the assessment manager(s) who will be assessing this development application
Douglas Shire Council
16) Has the local government agreed to apply a superseded planning scheme for this development application?
☐ Yes – a copy of the decision notice is attached to this development application
☐ The local government is taken to have agreed to the superseded planning scheme request – relevant documents attached
☒ No

PART 5 – REFERRAL DETAILS

17) Does this development application include any aspects that have any referral requirements?
***Note**: A development application will require referral if prescribed by the* Planning Regulation 2017.

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

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

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

☐ Heritage places – Local heritage places

Matters requiring referral to the **Chief Executive of the distribution entity or transmission entity:**
☐ Infrastructure-related referrals – Electricity infrastructure

Matters requiring referral to:
- 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

☐ Infrastructure-related referrals – Oil and gas infrastructure

Matters requiring referral to the **Brisbane City Council:**
☐ Ports – Brisbane core port land

Matters requiring referral to the **Minister responsible for administering the *Transport Infrastructure Act 1994*:**
☐ Ports – Brisbane core port land *(where inconsistent with the Brisbane port LUP for transport reasons)*
☐ Ports – Strategic port land

Matters requiring referral to the **relevant port operator**, if applicant is not port operator**:**
☐ Ports – Land within Port of Brisbane's port limits *(below high-water mark)*

Matters requiring referral to the **Chief Executive of the relevant port authority:**
☐ Ports – Land within limits of another port *(below high-water mark)*

Matters requiring referral to the **Gold Coast Waterways Authority:**
☐ Tidal works or work in a coastal management district *(in Gold Coast waters)*

Matters requiring referral to the **Queensland Fire and Emergency Service:**
☐ Tidal works or work in a coastal management district *(involving a marina (more than six vessel berths))*

18) Has any referral agency provided a referral response for this development application?

☐ Yes – referral response(s) received and listed below are attached to this development application
☒ 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 *(if applicable).*

PART 6 – INFORMATION REQUEST

19) Information request under Part 3 of the DA Rules

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

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

- *that this development application will be assessed and decided based on the information provided when making this development application and the assessment manager and any referral agencies relevant to the development application are not obligated under the DA Rules to accept any additional information provided by the applicant for the development application unless agreed to by the relevant parties*
- *Part 3 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 DA Forms Guide.

PART 7 – FURTHER DETAILS

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

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

List of approval/development application references	Reference number	Date	Assessment manager
☐ Approval ☐ Development application			
☐ Approval ☐ 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 Form1 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:	

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 ***Note**: See the Planning Regulation 2017 for referral requirements*	☒ Yes
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 *Note: For completion by assessment manager if applicable*			
Description of the work			
QLeave project number			
Amount paid ($)		Date paid (dd/mm/yy)	
Date receipted form sighted by assessment manager			
Name of officer who sighted the form			

Attachment 2:

Landowners Consent

Individual owner's consent for making a development application under the *Planning Act 2016*

I,

Stephen Marriott

as owner of the premises identified as follows:

14 Hibiscus Court, Rocky Point, more formally described as 26 on RP749732

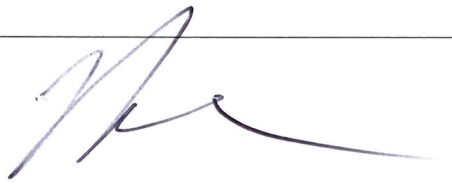
consent to the making of a development application under the *Planning Act 2016* by:

Daniel Favier (Aspire Town Planning and Project Services)

on the premises described above for:

Development Application for a Material Change of Use (Dwelling House)

Signed



Stephen Marriott

Date: 25-04-2022

Attachment 3:

Certificate of Title

Current Title Search

Queensland Titles Registry Pty Ltd
ABN 23 648 568 101

Title Reference:	**21442156**	**Search Date:**	24/07/2022 10:00
Date Title Created:	02/07/1990	**Request No:**	41763713
Previous Title:	21427113		

ESTATE AND LAND

Estate in Fee Simple

LOT 26 REGISTERED PLAN 749732
Local Government: DOUGLAS

REGISTERED OWNER

Dealing No: 721109887 21/09/2021

STEPHEN MARRIOTT

EASEMENTS, ENCUMBRANCES AND INTERESTS

1. Rights and interests reserved to the Crown by
Deed of Grant No. 20313054 (POR 14V)

2. MORTGAGE No 721109888 21/09/2021 at 12:18
NATIONAL AUSTRALIA BANK LIMITED A.C.N. 004 044 937

ADMINISTRATIVE ADVICES

NIL

UNREGISTERED DEALINGS

NIL

Caution - Charges do not necessarily appear in order of priority

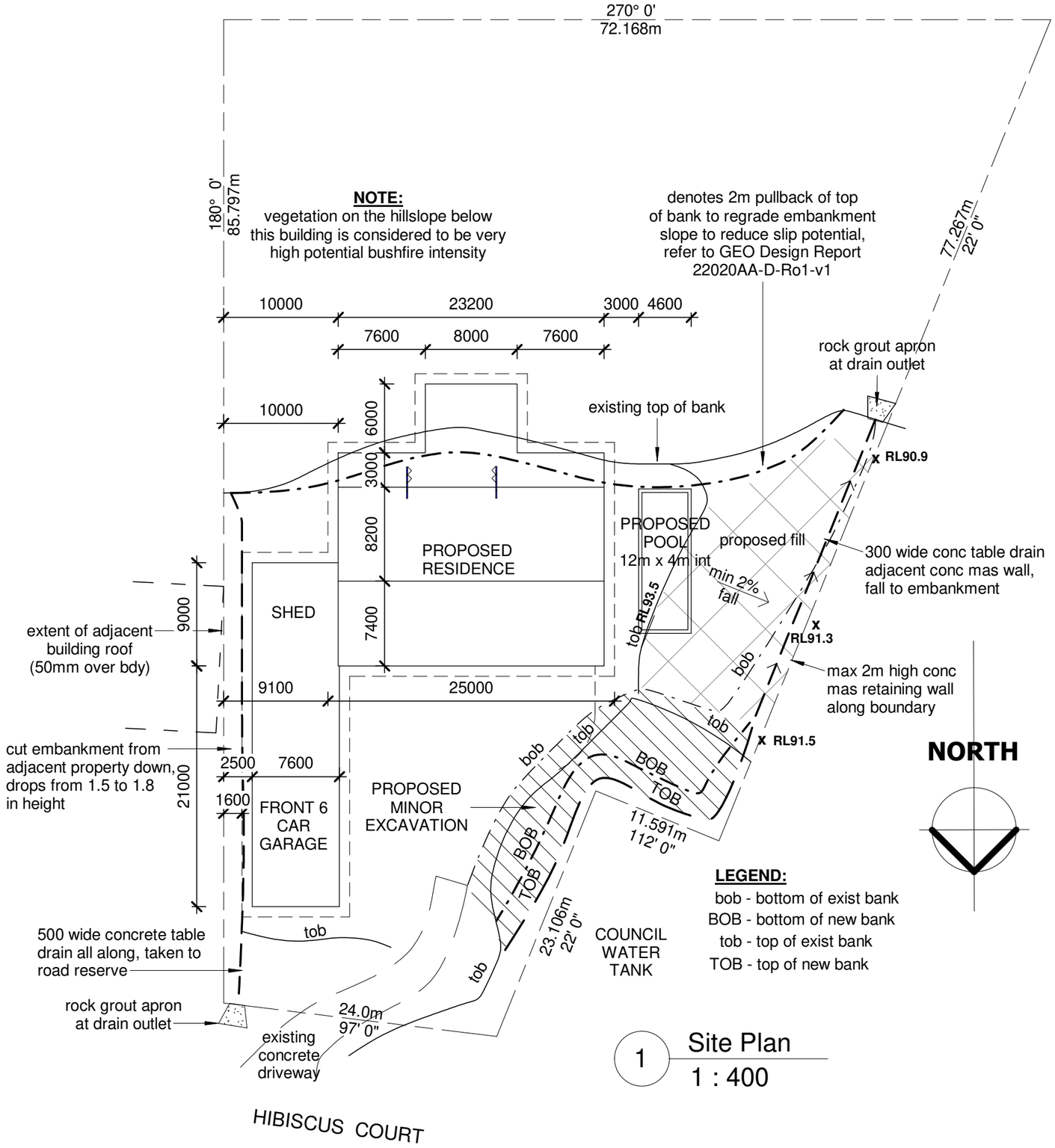
** End of Current Title Search **

Requested by: D-ENQ TITLES QUEENSLAND

Attachment 4:

Plan of Proposed Development

Prepared by Greg Skyring Design and Drafting



1 Site Plan
1 : 400

REV	DATE	DESCRIPTION

GREG SKYRING
Design and DRAFTING Pty. Ltd.
Lic Under QBSA Act 1991 - No 1040371

11 Noli Close,
Mossman Q. 4873

Phone/Fax: (07) 40982061
Mobile: 0419212652
Email: greg@skyringdesign.com.au

PROJECT

Proposed Residence,
L26 RP749732,
14 Hibiscus Court,
ROCKY POINT

PLAN TITLE

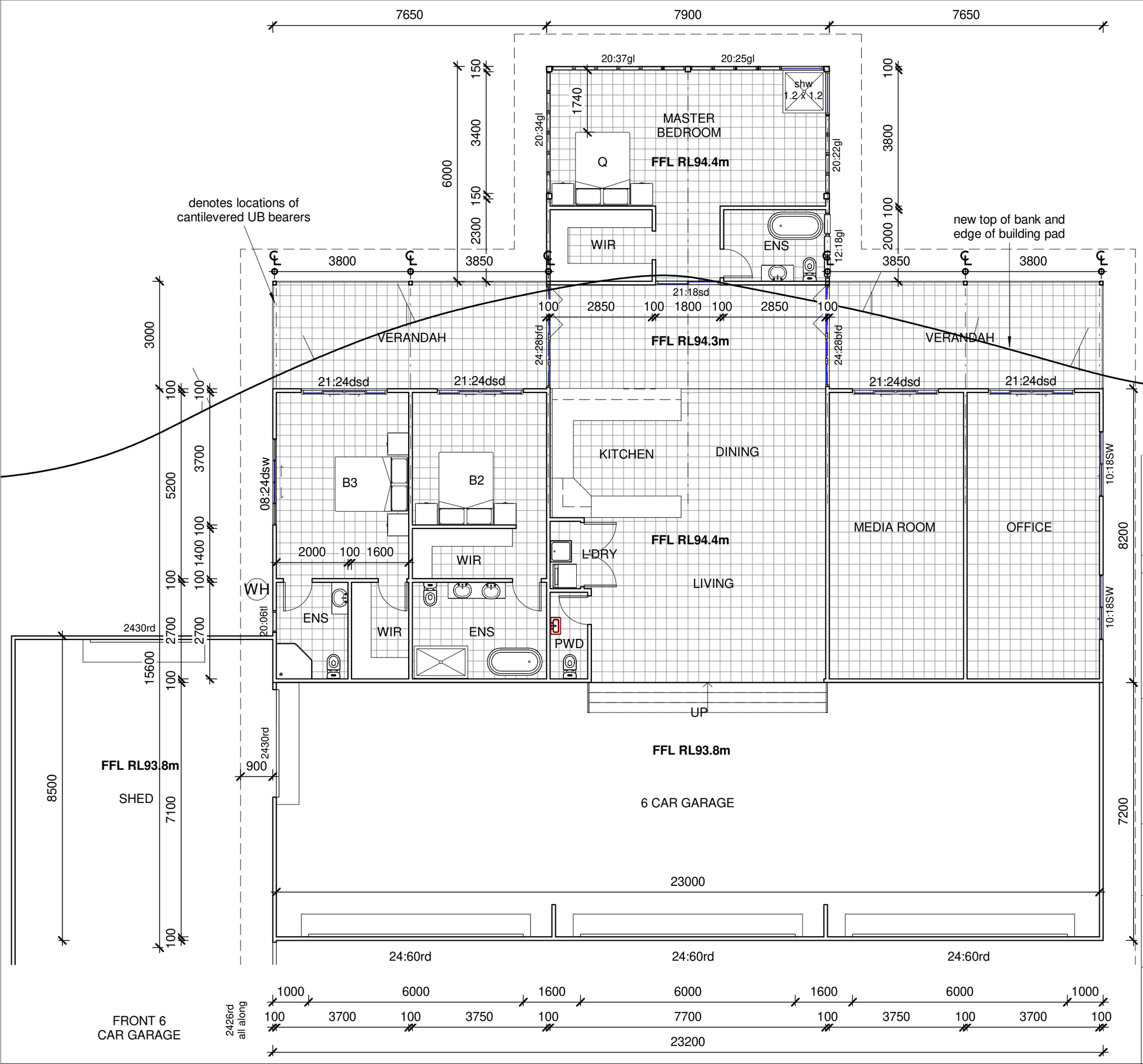
Site Plan

CLIENT

S. Marriott

SCALES	WIND CLASS	PLAN NO	SHEET NO
1 : 400	C3	211-21	2 of 7

REV.



LEGEND

- timber or steel stud framed external and internal walls, select external lining, gyprock lining to internal, villaboard to wet areas
- **B** as above, lined one face for bracing, refer to Bracing Wall Notes
- **L1** special lintels, refer to Details
- 100 x 4 SHS Posts to verandah
- 150 x 4 SHS Posts to Master Bedroom
- WP waterproof wet areas to AS3740
- S/A smoke alarms to AS3786
- **FW •** optional floor waste

WINDOW and DOOR LEGEND

sd	single sliding door
dsd	double sliding door
td	timber door, suitable for location
rd	garage roller door
sw	single sliding window
dsw	double sliding window
gl	glass louvre window

NOTE: all windows and doors are colour coated aluminium framed uno, fitted with grey glass and flymesh

1 Floor Plan - Residence
1 : 100

REV	DATE	DESCRIPTION

GREG SKYRING Design and DRAFTING Pty. Ltd.
Lic Under QBSA Act 1991 - No 1040371
11 Noli Close,
Mossman Q. 4873
Phone/Fax: (07) 40982061
Mobile: 0419212652
Email: greg@skyringdesign.com.au

PROJECT

Proposed Residence,
L26 RP749732,
14 Hibiscus Court,
ROCKY POINT

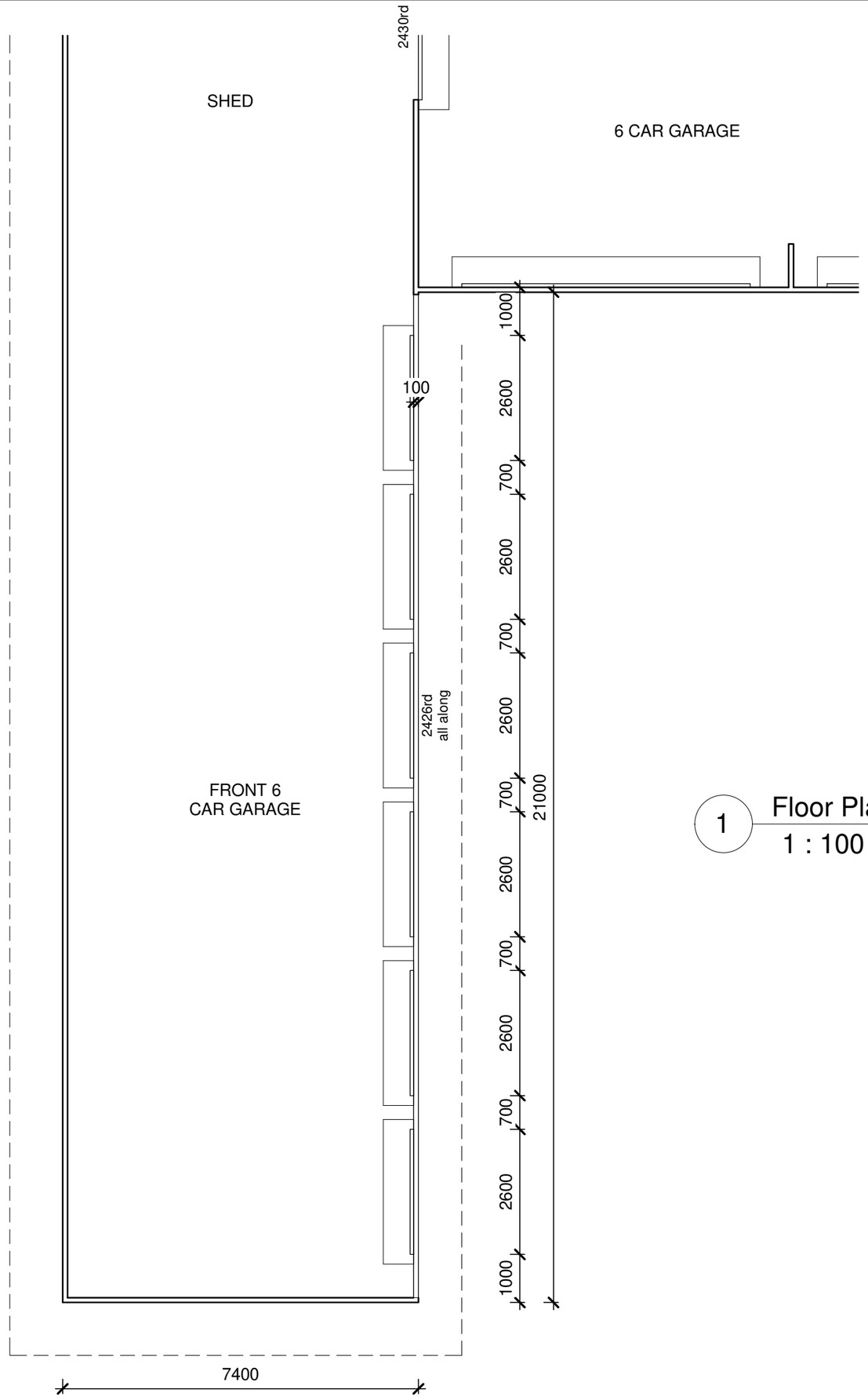
PLAN TITLE

Floor Plan Residence

CLIENT

S. Marriott

SCALES	WIND CLASS	PLAN NO	SHEET NO
1 : 100	C3	211-21	3 of 7
		REV.	



1 Floor Plan - Garage
1 : 100

REV	DATE	DESCRIPTION

GREG SKYRING Design and DRAFTING Pty. Ltd.

Lic Under QBSA Act 1991 - No 1040371

11 Noli Close,
Mossman Q. 4873

Phone/Fax: (07) 40982061
Mobile: 0419212652
Email: greg@skyringdesign.com.au

PROJECT

Proposed Residence,
L26 RP749732,
14 Hibiscus Court,
ROCKY POINT

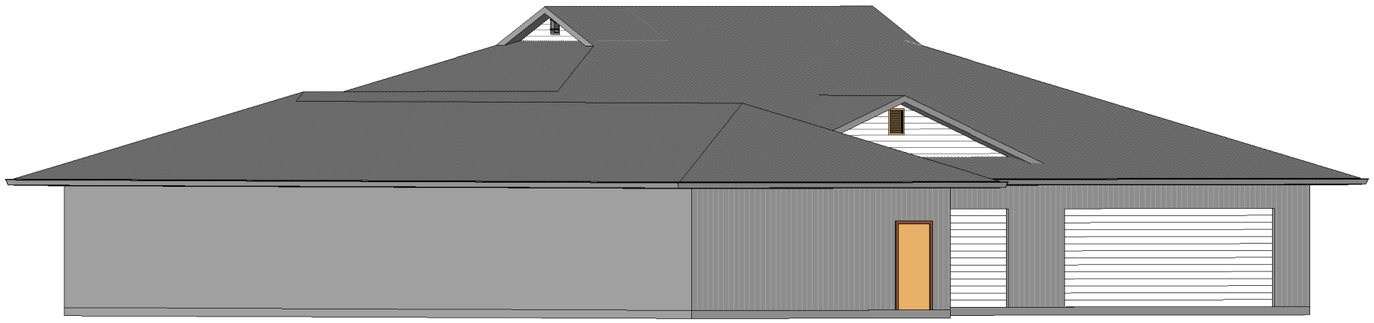
PLAN TITLE

Front Garage Floor Plan

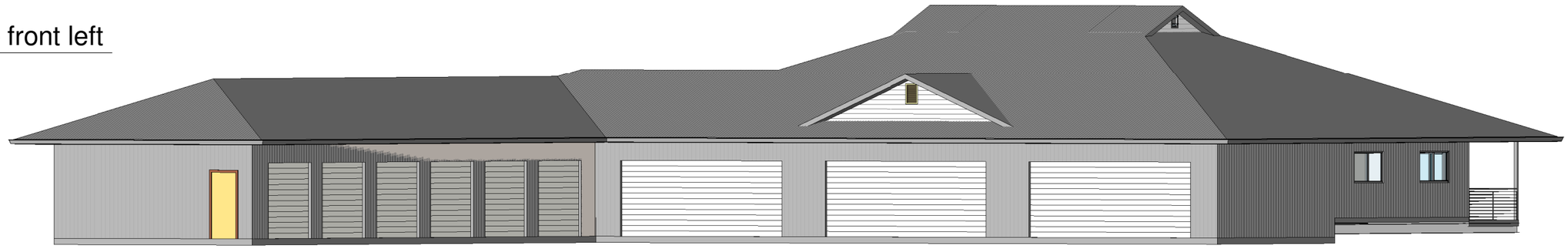
CLIENT

S. Marriott

SCALES	WIND CLASS	PLAN NO	SHEET NO
1 : 100	C3	211-21	6 of 7
		REV.	



1 3D - front left



2 3D - front right

3 3D - rear left

4 3D - rear right

GREG SKYRING
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Lic Under QBSA Act 1991 - No 1040371

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Mossman Q. 4873

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Mobile: 0419212652
Email: greg@skyringdesign.com.au

PROJECT
Proposed Residence,
L26 RP749732,
14 Hibiscus Court,
ROCKY POINT

CLIENT
S. Marriott

WIND CLASS
C3

PLAN NUMBER
211-21

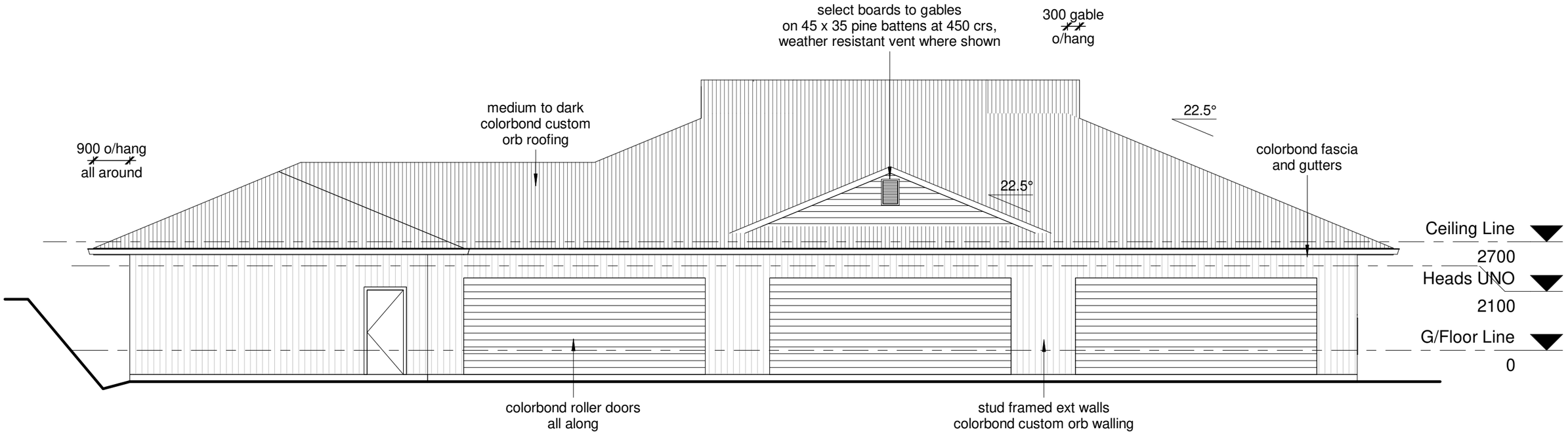
SHEET
1 of 7

SCALES

PLAN TITLE
3D Views

DATE OF ISSUE
30.06.22

REV



1 Front Elevation
1 : 100

2 Right Elevation
1 : 100

GREG SKYRING
Design and DRAFTING Pty. Ltd.
Lic Under QBSA Act 1991 - No 1040371
11 Noli Close,
Mossman Q. 4873
Phone/Fax: (07) 40982061
Mobile: 0419212652
Email: greg@skyringdesign.com.au

PROJECT
Proposed Residence,
L26 RP749732,
14 Hibiscus Court,
ROCKY POINT

CLIENT	WIND CLASS	PLAN NUMBER	SHEET
S. Marriott	C3	211-21	4 of 7

SCALES	PLAN TITLE	DATE OF ISSUE	REV
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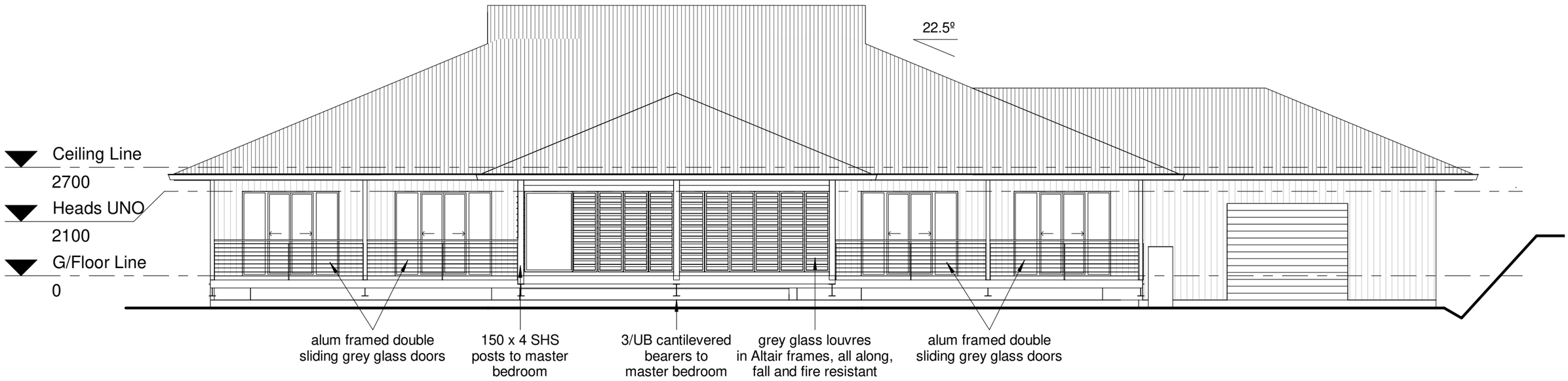


1 Rear Elevation
1 : 100

2 Left Elevation
1 : 100

GREG SKYRING
Design and DRAFTING Pty. Ltd.
Lic Under QBSA Act 1991 - No 1040371
11 Noli Close,
Mossman Q. 4873
Phone/Fax: (07) 40982061
Mobile: 0419212652
Email: greg@skyringdesign.com.au

PROJECT
Proposed Residence,
L26 RP749732,
14 Hibiscus Court,
ROCKY POINT

CLIENT: S. Marriott

WIND CLASS: C3

PLAN NUMBER: 211-21

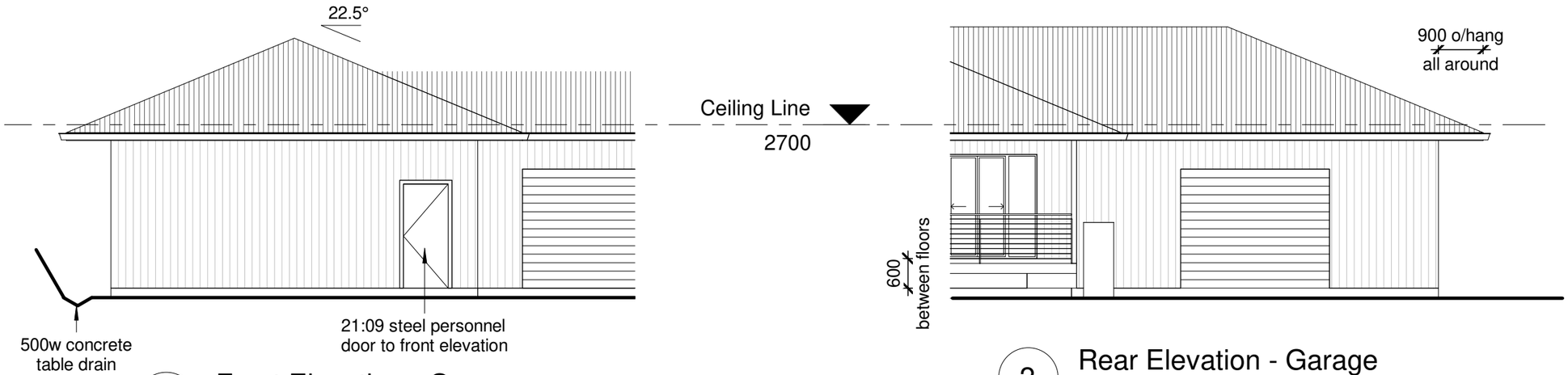
SHEET: 5 of 7

SCALES: 1 : 100

PLAN TITLE: Residence Elevations - Sheet 2

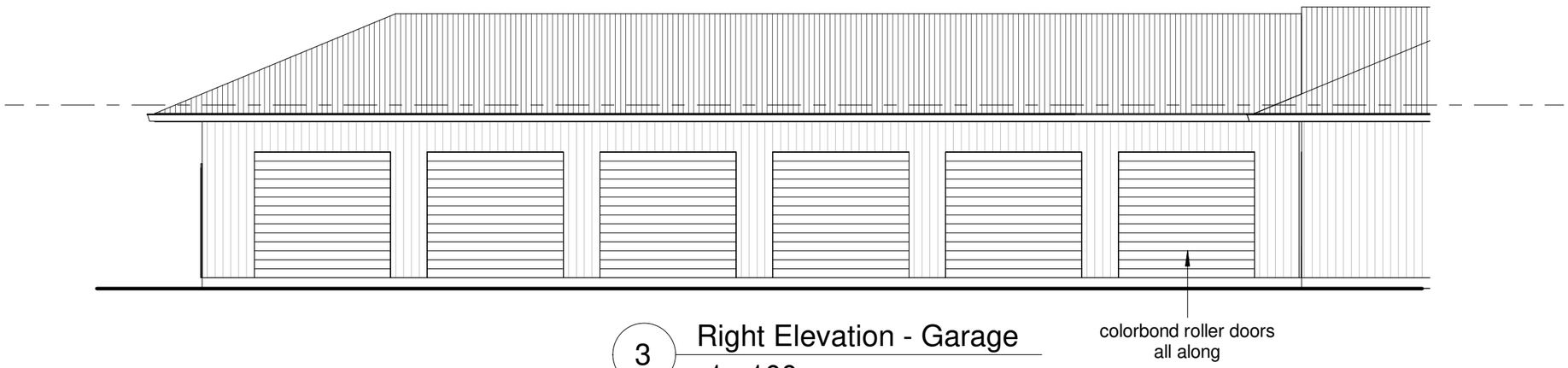
DATE OF ISSUE: 30.06.22

REV:

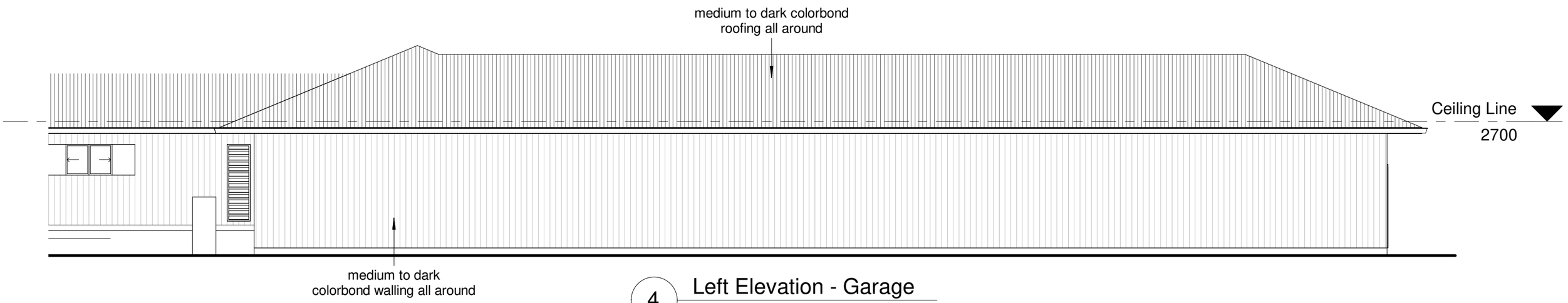


1 Front Elevation - Garage
1 : 100

2 Rear Elevation - Garage
1 : 100



3 Right Elevation - Garage
1 : 100



4 Left Elevation - Garage
1 : 100

GREG SKYRING
Design and DRAFTING Pty. Ltd.
Lic Under QBSA Act 1991 - No 1040371
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PROJECT
Proposed Residence,
L26 RP749732,
14 Hibiscus Court,
ROCKY POINT

CLIENT
S. Marriott

WIND CLASS
C3

PLAN NUMBER
211-21

SHEET
7 of 7

SCALES
1 : 100

PLAN TITLE
Garage Elevations

DATE OF ISSUE
30.06.22

REV

Attachment 5:

Geotechnical Report

Prepared by Geo Design

GEO | design

ISO 9001
ISO 14001
ISO 45001
BUREAU VERITAS
Certification

REPORT

Geotechnical Investigation

Proposed New Residence

14 Hibiscus Court

Rocky Point QLD 4873

22020AA-D-R01-v1

Steve Marriott

26 April 2022

GEO | design

Table of Contents

List of Appendices

1.0 Introduction

GEO Design has carried out a geotechnical investigation for a proposed new residence at 14 Hibiscus Court, Rocky Point. The investigation was carried out at the request of Steve Marriott.

It is understood that it is proposed to construct a new residence and associated structures at the site. It is further understood that the new structures will be founded on the existing building platform and over the existing batters/natural slopes.

Given the above, the aims of the geotechnical investigation were as follows:

- Evaluate the subsurface conditions at the site.
- Comment on suitable footings and provide geotechnical design parameters to allow structural design.
- Comment on construction of the proposed building and provide recommendations for construction.
- Comment on retaining wall design and provide geotechnical design parameters.
- Comment on slope stability issues at the subject allotments and provide comments in regards to the development's adherence to the State Planning Policy 1/03-Mitigating the Adverse Impacts of Flood, Bushfire and Landslide (Landslides only).
- Comment on slope stability measures that should be incorporated into the proposed development.
- Comment on earthworks including recommended cut and fill batters, procedures and site preparation.

This report presents the results of the geotechnical investigation together with the engineering comments outlined above.

2.0 Fieldwork

The fieldwork for the current investigation comprised the following:

- Carry out a walkover survey of the site.
- Carry out field mapping of exposed batters.
- Excavation of three test holes (TP1 to TP3) to a maximum depth of about 2.1 m.

The locations of field tests are presented in Appendix A. The results of the fieldwork are presented in Appendix B. Site photographs are presented in Appendix C.

2.1 Surface Conditions

The site is located at 14 Hibiscus Court, Rocky Point. Access to the site is provided from Hibiscus Court along a small track that extends from the north-eastern corner of the allotment which is adjacent to a concrete water reservoir. The site is dominated by a near level building platform that covers the central portion of the site. The building platform is bound to the east by a cut batter up to about 2 m in height which separates an existing residence from the subject allotment. The building platform is bound to the south by a fill batter and the natural surface which slopes to the south between about 30-45° with locally steeper sections. At the time of fieldwork, the surface of the southern slopes was covered by thick grass and trees. The building platform is bound to the west by a low cut batter which extends into the adjacent, undeveloped allotment.

At the time of fieldwork, the surface of the building platform was covered by low level, maintained grass.

No signs of significant instability were noted in the walkover survey. Some zones of minor erosion, scouring and surface slumping were noted within the batters and in the natural slopes located to the south of the existing building platform.

The location of the site is presented in Figure 1 below.

Figure 1: Site Location

2.2 Subsurface Conditions

The subsurface conditions encountered within test pit TP1 excavated near the crest of the slope to the south of the existing building platform generally comprised a layer of fill to a depth of about 1.2 m over stiff to very stiff colluvium/residual soils to a depth of about 1.6 m, over weathered rock.

The subsurface conditions encountered within test pits TP2 and TP3 generally comprised a thin layer of clayey fill over weathered rock to the maximum depths investigated.

The subsurface conditions observed within the existing cut batters on the eastern and northern sections of the allotment generally comprised a thin layer of clayey soil over weathered rock.

For engineering purposes, and the lack of testing certificates for review, the observed filling at the site can be considered as uncontrolled fill.

At the time of fieldwork groundwater was not encountered or observed at the site.

3.0 Stability

3.1 General

Based on the results of the investigation at this site and experience with similar sites in this area of Rocky Point, it is considered the geotechnical model for this site generally comprises some filling and natural clayey colluvium overlying weathered rocks of the Hodgkinson Formation.

Given the above geotechnical model, together with the results of the fieldwork, stability analyses were carried out for a profile of the site including the proposed new building.

A summary of the results of the stability analyses carried out for the site are presented in the following section.

3.2 Stability Analysis

Stability analyses were carried out for a typical profile at the site as shown on Figure 1 of Appendix A. The profiles were based on site measurements and the plans provided.

The analyses considered two cases as shown in the table below.

Case	Description
1	Existing Profile
2	Existing Profile with Building Positioned

Based on the materials observed at the site, the following effective (drained) strength parameters were adopted for the stability analyses:

Material Type	Strength Parameters	
	c'	ϕ'
Uncontrolled Fill	4 kPa	32°
Clayey Colluvium	5 kPa	30°
Weathered Rock	15 kPa	35°

Analyses were initially performed for what were considered to be dry or "normal" conditions. Analyses were then performed for what were considered to be wet or "extreme" conditions. The "extreme" conditions considered near saturation of the materials with a pore water pressure co-efficient (R_u) of between 0.1-0.2 adopted for the soil material properties to simulate seepage/water infiltration.

A vertical load was applied to the areas of proposed building located over the proposed building platform and where loads are applied to the ground surface. Loads were not applied to the surface below portions of the buildings and structures over the existing batters and slopes that will be supported on deep foundations (such as bored piers or micropiles).

The analyses were carried out for a potential circular failure using the proprietary software SLIDE 2018 The results of the stability analyses are presented in Appendix D and summarised as follows:

Case	Calculated Factor of Safety (FOS)	
	Dry Conditions	Extreme Conditions
1	1.368	1.097
2	1.336	1.076

For the purposes of assessing stability we provide the following guidelines which are appropriate to the conditions at this site:

- A calculated factor of safety > 1.5 indicates the profile is likely to be stable.
- A calculated factor of safety from 1.0 – 1.5 indicates a marginally stable profile.
- A calculated factor of safety < 1.0 indicates the profile is likely to be unstable.

In general terms the factor of safety is calculated by dividing the forces resisting instability (i.e. the strength of the soil/rock or the strength of discontinuities within the soil/rock) by the forces driving instability (i.e. the weight of the soil/rock, plus groundwater/seepage, plus surcharges/loads on the slope). A calculated factor of safety of 1.0 indicates the forces are balanced, whereas a calculated factor of safety <1.0 indicates instability will likely occur.

For this site we consider that a calculated factor of safety >1.3 should be achieved for the wet or "extreme" conditions modelled, and that a calculated factor of safety >1.5 should be achieved for the dry or "normal" conditions modelled.

The results of the stability analyses indicate that the site is marginally stable for both cases considered under the dry conditions and wet conditions modelled. As such, it is considered that some slope remediation/stabilisation works are required on the southern batter, particularly where filling was observed in the western portion of the platform.

Further comments in regards to remediation/stabilisation options are presented in the following sections. Further detailed analyses may be required as part of any remediation/stabilisation scheme.

Analyses for small scale slumping at this site is not possible and is dependent upon slight profile variations and the cover of soil materials, angle and orientation of the discontinuities and the influences of trees and water flow. It is considered that small scale slumping within unsupported batters and in the steep sections of natural slopes should be expected. It is considered that this instability should be in the form of relatively small slumps or erosion failures and occur during or following prolonged rainfall events. This type of instability is common in this area of Rocky Point.

3.3 Landslide Risk

As part of the investigation, a landslide risk assessment was carried out for the area of the proposed development in general accordance with the guidelines of the Landslide Risk Management Concepts and Guidelines published by the Australian Geomechanics Society in March 2000. Risk assessment in accordance with the New South Wales Road Traffic Authority (RTA) Guide to Slope Risk Analysis, Version 3.1, and the Queensland Department of Transport and Main Roads (DTMR) Batter Slope Risk Element procedures were also carried out. These guides are based on the approach suggested in the Landslide Risk Management Concepts and Guidelines and to those outlined in the Australian Geoguide LR7 (Landslide Risk).

The landslide risk assessment generally involves the evaluation of slopes enabling the identification of potential hazards ("a condition with the potential for causing an undesirable consequence", for example, rockfall or slump type failure) and analyses the identified hazards with respect to likelihood and consequences using prescribed risk matrices. The risk matrices use a number of estimated conditional probabilities to calculate an Assessed Risk Level (ARL) rating for individual slopes.

The risk assessment procedure generally uses estimated conditional probabilities designed to characterise a sequence of events which must occur for slope instability to result in a fatality or injury to the community, damage to structures or buildings, and/or economical costs that may be associated with the effects of instability.

The principal conditional probabilities used in the risk assessment include the following:

- Temporal Probability (T)
- Vulnerability (V)
- Likelihood of instability (L)

In general, the risk assessments use T and V to estimate a Consequence rating (C) for loss of life or economic loss as a result of instability. The rating C is combined with L to derive the ARL rating.

The RTA system has five separate ARL categories, namely ARL1 to ARL5, with ARL1 being the highest risk rating and ARL5 being the lowest risk rating. It is generally understood that all slopes with a risk rating of ARL1 or ARL2 are given the highest priority and should have risk reduction measures implemented within the short term (<3 years). ARL3 sites generally undergo regular monitoring with risk reduction measures carried out if the assessed risk levels are considered to increase. Sites assessed as ARL4 and ARL5 are periodically inspected for any significant site changes.

In terms of the Guidelines for Landslide Risk Management outlined in Australian Geomechanics, Volume 42, No. 1 March 2007 (AGS 2007) the risk to property is defined as Very Low to Very High. In general terms risks of very low to low are tolerable for regulatory bodies in relation to developments while higher risks are generally unacceptable without detailed investigation and implementation of risk reduction strategies to enable the reduction of risk to an acceptable level. The risk system matrix outlined in AGS 2007 is presented in Appendix E.

A full description of the risk analyses procedures are presented in the RTA and AGS 2007 documents. For further information the reader is directed to these documents.

The landslide risk assessment carried out as part of this investigation was based on the constructed development including the satisfactory implementation of the engineering and slope stability measures outlined in the following sections. The risk assessment considered the results of the stability analyses (outlined in the previous section), the walkover survey, site observations and based on experience in this area of Rocky Point.

The hazards evaluated as part of the risk analysis were based on the proposed development with the adoption of the construction recommendations and measures included within this report.

The hazards considered comprised the following:

1. Instability within the batters or natural slopes resulting in downward migration of <20 m^3 of soil debris impacting the residence and associated structures or surrounding structures.
2. Instability within the batters or natural slopes resulting in downward migration of >20 m^3 of soil debris impacting the residence and associated structures or surrounding structures.

Based on the above, the following AGS 2007 and RTA risk classifications have been assessed for the proposed development:

Hazard	AGS 2007 Risk Rating	ARL Risk Rating
1	Medium	ARL3
2	Low	ARL5

Low to Very Low risks are generally considered acceptable to regulators for development approval in accordance with the relevant guides.

Given that a medium risk has been estimated for Hazard 1, some remediation/stabilisation measures are required. This is supported by the completed stability analyses.

In addition to the above, to maintain long term stability at the site, the measures recommended in the following sections should be implemented as a minimum.

4.0 Engineering Comments

4.1 General

As outlined previously, it is envisaged that the proposed residence will be constructed partly over the existing building platform and partly over the slopes to the south of the building platform.

To reduce the risk of instability at the site and impacts to the proposed structures and surrounding developments, some remediation/stabilisation works are recommended.

Engineering comments relating to site preparation and earthworks procedures, excavation conditions, foundation options, slope stabilisation comments and retaining walls are presented in the following sections.

4.2 Cut and Fill Earthworks

It is envisaged that some further cut and fill earthworks may be required as part of the proposed development.

Where required, all new unsupported batters should be constructed in accordance with the guidelines outlined in the following table.

Batter Type	Maximum Height (m)	Maximum Batter Face
Fill	1.5	1V:2H
Cut	2.5	1V:1H

Unsupported fill batters should not be constructed over slopes >15°. If proposed, fill batters higher or steeper than the above guidelines, or where proposed over slopes >15°, should be supported by engineered retaining walls.

No further filling should be placed near the crest of the existing batters to the south of the building platform.

Temporary cut batters predominantly formed within the weathered rock should be limited to 4 m in height formed at about 2V:1H.

Site preparation and earthworks procedures should involve the following:

- Strip and remove existing debris/materials, topsoil and soil containing significant amounts of organic materials.
- Strip and remove all cobble and boulders >150 mm in diameter from the surface.
- Compact the subgrade with a heavy roller to reveal soft or loose materials. Soft or loose material that cannot be improved by compaction should be removed and replaced with engineered fill.
- Place fill where required in uniform horizontal layers not exceeding 200 mm loose thickness and compact to achieve a relative dry density ratio of at least 95% using Standard Compaction. Each layer of filling should be keyed into natural ground. Filling should be placed at least 1 m beyond the design profile and then trimmed to the design profile.

If required, imported fill materials should have a Plasticity Index less than 20 and a soaked CBR value of >15%.

It is recommended that all earthworks procedures be carried out in accordance with AS 3798-2007 "Guidelines on Earthworks for Commercial and Residential Developments" and local authority requirements. It is recommended that the earthworks contractor be familiar with site conditions.

4.3 Excavation Conditions

Excavations at the site in the proposed building areas are likely to encounter clayey soils and weathered rock. Excavation of the soils would be readily achievable for a conventional small (>8T) excavator. Excavation into the weathered rock will likely require a large (20T) excavator. A ripper or impact breaker may be required to loosen hard zones or where deep excavation is proposed.

4.4 Drainage

Drainage measures that should be implemented include:

- Provision of lined drains at the crest of any proposed new fill batters.
- Provision of lined drains and kerbing or similar along the margin of the driveway/car parking areas.
- Provision of subsurface drainage behind retaining walls and lined drains above the crest of any retaining walls over 1.5 m in height.

All stormwater should be collected and discharged from the site via pipes into designated drainage paths and not be allowed to flow on to the ground or around footings or structures. Where this is not possible, stormwater should be directed into flow spreaders or energy dissipaters to prevent concentrated flows.

4.5 Retaining Structures

Retaining walls could be founded on high level or bored pier footings. High level footings (strip/pad or slab on ground) should be founded on the weathered rock. High level footings for the retaining walls founded in this manner could be designed with an allowable bearing pressure of 100 kPa.

Bored pier footings for retaining walls should be extended at least three times their diameter into the weathered rock. Bored pier footings founded in this manner can be designed using an allowable end bearing pressure of 350 kPa and an allowable shaft adhesion of up to 60 kPa, neglecting the contribution of the upper 1 m of the shaft.

It is recommended that all new retaining walls be designed using the following at rest (K_0), active (K_a) and passive (K_p) earth pressure coefficients.

Material Description	K_0	K_a	K_p
Clayey Soils/Fill	0.6	0.4	2.0
Weathered Rock	0.1	0.25	5.0

All retaining walls should include any surcharge loads imposed on the walls.

All retaining walls should be designed by a Structural Engineer.

4.6 Footings

4.6.1 High Level Footings

It is considered that the proposed residence and other structures to be constructed on the existing building platform, prepared in accordance with Section 4.2 above, and located at least 3 m from the crest of any batter or the natural slope, can be founded on high level footings such as pad, strip or beams for slab on ground footings. High level pad, strip or beams for slab on ground footings should be founded on the weathered rock. Pad, strip or beams for slab on ground footings founded in this manner can be designed using an allowable bearing pressure of 100 kPa.

For the purposes of AS2870-2011, high level footings could be designed in accordance with a Class S site.

4.6.2 Bored Pier Footings

Portions of buildings and structures located within 3 m of the crest of all batters and natural slopes should be founded on bored piers. Bored pier footings should extend at last three times their diameter into the weathered rock. Bored pier footings founded in this manner can be designed with an allowable end bearing pressure of 350 kPa and a shaft adhesion of 60 kPa. Shaft adhesion for the upper 1 m of the shaft should be neglected.

It is recommended that all footing excavations be inspected by an experienced engineer to confirm that founding conditions are consistent with those on which the design guidelines are based.

4.6.3 Micropile Footings

Advancement of typical auger drilled bored piers within the rock may be difficult. This may result in early refusal, or the accumulation of loose material at the base of the shaft which would be an inadequate founding material for the bored piers. In addition, access to portions of the slope may be limited to a conventional excavator with boring attachment which may limit the ability to reach satisfactory depths and/or all pier locations.

To overcome this issue, drilled and grouted micropiles could be adopted. Micropiles, such as Ischebeck Titan Micropiles, can be drilled and installed through cobbles and boulders and penetrate rock. As such, the adoption of drilled and grouted micropiles would ensure an adequate embedment in the recommended founding material.

The equipment used is generally light and can be mounted on mast extensions on conventional excavators, or even on long arm excavators, to ensure satisfactory reach and positioning.

For guidance, a 40 mm diameter micropile grouted using a minimum 40 MPa strength within a 150 mm diameter drilled hole extending at least 2 m into weathered rock is likely to achieve an allowable capacity in compression of up to 300 kN.

It is recommended that the procedures outlined in the Ischebeck Titan Micropile manual be reviewed for design and construction guidance of micropile foundations.

4.7 Slope Remediation/Stabilisation

As outlined above, some remediation/stabilisation works are recommended on the crest of the batter/natural slopes located along the southern boundary of the existing building platform. The principal options that could be considered include the following:

1. Re-profile crest.
2. Installation of a soil nail scheme.
3. Construction of a retaining wall.

Further comments on the above options are outlined below. Any option would require further geotechnical input to ensure no negative effect on the profile.

4.7.1 Re-Profile

The crest of the existing batter/slope could be re-profiled to reduce the overall angle of the batter crest. It is recommended that trimming the batter to form a maximum profile of around 30° would reduce the risk of instability overall. This would result in the excavation of the outer 2-3 m of the existing building platform. Erosion protection matting should be placed over the newly exposed batter surface.

All new high level footings would need to be setback at least 3 m from the newly formed batter crest.

Following re-profiling, and the adoption of the drainage and erosion protection measures outlined above, it is considered the batter would have a Low Risk in accordance with the AGS 2007 guidelines. As such, this is considered acceptable.

4.7.2 Soil Nails

A soil nail design could be adopted to stabilise the existing batter crest. This is likely to involve the installation of 4-5 m long soil nails on a 1.0 to 1.5 m vertical and horizontal grid. It is considered that the soil nail design should extend at least 5 m below the current building platform level.

The process for soil nailing would include the following:

1. Trimming the existing batter profile to form a smooth uniform profile.
2. Install soil nails on the prescribed grid.
3. Cover the batter with high strength netting (MacMat-R or similar) fastened to the slope using the nuts and plates of the soil nails and intermediate pins in accordance with the manufacturer's guidelines.

A detailed soil nail design scheme would need to be developed.

4.7.3 Retaining Structure

The existing batter crest could be reinforced through the construction of an appropriate retaining structure such as gabions, MassBloc's, concrete segmental walls or timber walls. The retaining wall should include the excavation of the upper portion of the batter with the formed new temporary batter being retained. The height and extents of the retaining wall may vary depending on the construction and design requirements of the retention system selected.

A typical process for the works would involve the following:

1. Excavate the upper portion of the batter to form a temporary profile. The temporary profile could also be supported through the installation of soil nails.
2. The height and profile of the temporary batter should be in accordance with the guidelines outlined in Section 4.2 above.
3. Construction of the retaining wall ensuring sufficient set back for any high level footings from the crest of the newly formed retaining wall platform.
4. Consideration should be given to the treatment of the margins of the retaining wall and how they are tied into the surrounding materials.

The development of a suitable retention system would be carried out by a suitably and qualified engineer.

5.0 Limitations

GEO Design has prepared this report for the use of Steve Marriott for design purposes in accordance with generally accepted geotechnical engineering practices. No other warranty, expressed or implied, is made as to the professional advice included in this report. This report has not been prepared for use by parties other than Steve Marriott and their other consultants. It may not contain sufficient information for purposes of other parties or for other uses.

Your attention is drawn to the document - "Important Information About Your Geotechnical Engineering Report". This document has been prepared by the ASFE (Professional Firms Practicing in the Geosciences). The statements presented in this document are intended to advise you of what your realistic expectations of this report should be, and to present you with recommendations on how to minimise the risks associated with the ground works for this project. The document is not intended to reduce the level of responsibility accepted by GEO Design Pty Ltd, but rather to ensure that all parties who may rely on this report are aware of the responsibilities each assumes in so doing.

We would be pleased to answer any questions that you may have regarding this matter.

Regards,

Steve Ford

Principal Geotechnical Engineer
BSc (Geo) BSc Hons (Geo) MEngSc (Geotechnical)
RPEQ 25762

Appendix A

Site Plan

SITE PLAN DEVELOPED FROM IMAGES FROM QUEENSLAND GLOBE

LEGEND

Section for Stability Analyses

TP1 Approximate Test Pit 1 Location

GEO | design

Client:	S MARRIOTT	**GEOTECHNICAL INVESTIGATION**
Drawn:	SRF	**PROPOSED NEW RESIDENCE** **14 HIBISCUS COURT** **ROCKY POINT**
Scale:	NTS	**FIGURE 1** **SITE PLAN**
Project No:	22020AA-D	

Appendix B

Results of Fieldwork

TEST PIT: TP1

investigate | design | construct

Project	Geotechnical Investigation			Sheet	1 OF 1
Site	14 Hibiscus Court				
Location	Rocky Point				
Position	Refer Site Plan	Contractor	JRG	Date	8/3/22
Job No.	22020AA-D	Machine	4-6t Excavator	Logged	SRF
Client	S Marriott	Bucket Size	300mm		

Excavation					Sampling		Field Material Description					
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	DCP TEST (AS 1289.6.3.2-1997) Blows per 100 mm
EX	L	Not Encountered	0.0					CL	GRAVELLY SANDY CLAY: brown, low plasticity	M	F to St	
			0.5									
			1.0	1.20				CL	SANDY CLAY: orange brown, low plasticity	M	St to VSt	
	H		1.5	1.60					ARGILLITE: brown, fine grained, layered; distinctly weathered, very low strength			
			2.0	2.10					TEST TERMINATED AT 2.10 m Refusal			
			2.5									
			3.0									

DCP TEST (AS 1289.6.3.2-1997) Blows per 100 mm: 0 5 10 15 20 25

Sketch & Other Observations

Comments

Checked SRF

Date 22/4/22

TEST PIT: TP2

investigate | design | construct

Project	Geotechnical Investigation			Sheet	1 OF 1
Site	14 Hibiscus Court				
Location	Rocky Point				
Position	Refer Site Plan	Contractor	JRG	Date	8/3/22
Job No.	22020AA-D	Machine	4-6t Excavator	Logged	SRF
Client	S Marriott	Bucket Size	300mm		

Excavation					Sampling		Field Material Description					
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	*DEPTH* RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	DCP TEST (AS 1289.6.3.2-1997) Blows per 100 mm
EX	M-H	Not Encountered	0.0						ARGILLITE: brown, fine grained, layered; distinctly weathered, very low strength			0 5 10 15 20 25
			0.5									
			1.0	*1.10*								
									TEST TERMINATED AT 1.10 m Refusal			
			1.5									
			2.0									
			2.5									
			3.0									

Sketch & Other Observations

Comments

Checked SRF

Date 22/4/22

TEST PIT: TP3

investigate | design | construct

Project	Geotechnical Investigation			Sheet	1 OF 1
Site	14 Hibiscus Court				
Location	Rocky Point				
Position	Refer Site Plan	Contractor	JRG	Date	8/3/22
Job No.	22020AA-D	Machine	4-6t Excavator	Logged	SRF
Client	S Marriott	Bucket Size	300mm		

Excavation					Sampling		Field Material Description					
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	DCP TEST (AS 1289.6.3.2-1997) Blows per 100 mm
EX	M-H	Not Encountered	0.0						ARGILLITE: brown, fine grained, layered; distinctly weathered, very low strength			0 5 10 15 20 25
			0.5	0.60								
									TEST TERMINATED AT 0.60 m Refusal			
			1.0									
			1.5									
			2.0									
			2.5									
			3.0									

Sketch & Other Observations

Comments

Checked SRF

Date 22/4/22

Appendix C

Site Photographs

GEO

GEO Design Pty Ltd
Geotechnical Investigation
Site Photographs

GEO Ref:	22020AA-D - Site Photographs
Project Address:	14 Hibiscus Court, Rocky Point
Client:	Steve Marriott
Drawn:	Steve Ford, Engineering Geologist

Site Photographs

GEO Ref:	22020AA-D - Site Photographs
Project Address:	14 Hibiscus Court, Rocky Point
Client:	Steve Marriott
Drawn:	Steve Ford, Engineering Geologist

Site Photographs

GEO Ref:	22020AA-D - Site Photographs
Project Address:	14 Hibiscus Court, Rocky Point
Client:	Steve Marriott
Drawn:	Steve Ford, Engineering Geologist

Site Photographs

TP1

TP2

TP3

GEO

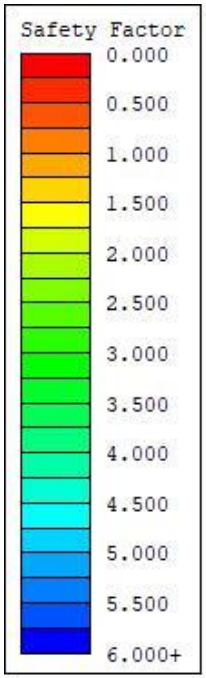
GEO Design Pty Ltd
Geotechnical Investigation
Site Photographs

GEO Ref:	22020AA-D - Site Photographs
Project Address:	14 Hibiscus Court, Rocky Point
Client:	Steve Marriott
Drawn:	Steve Ford, Engineering Geologist

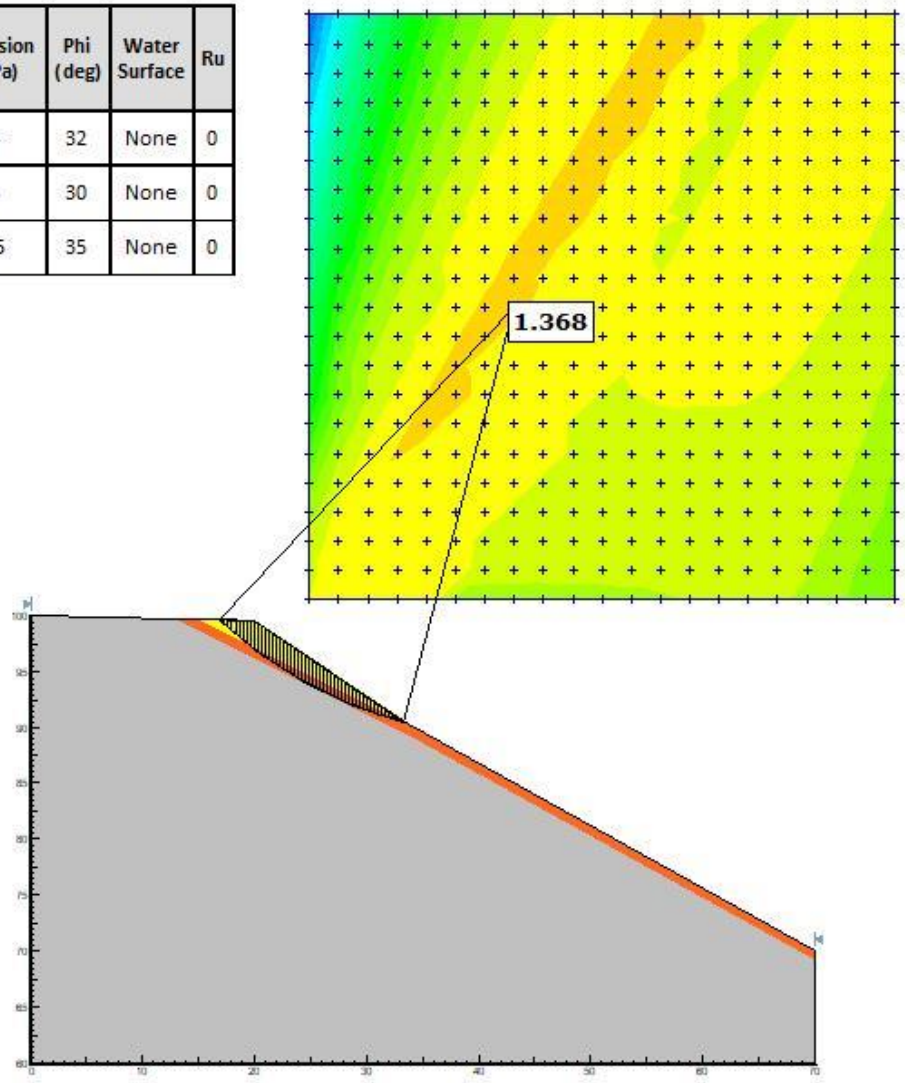
Site Photographs

Appendix D

Stability Analysis

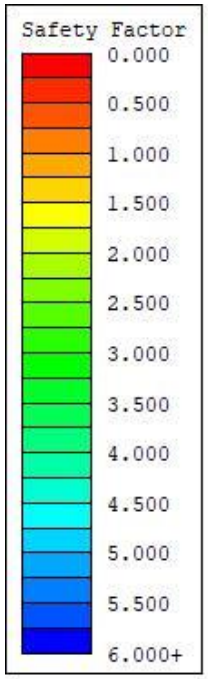


Material Name	Color	Unit Weight (kN/ m3)	Strength Type	Cohesion (kPa)	Phi (deg)	Water Surface	Ru
Fill		20	Mohr-Coulomb	4	32	None	0
Clayey Colluvium		18	Mohr-Coulomb	5	30	None	0
Weathered Rock		20	Mohr-Coulomb	15	35	None	0

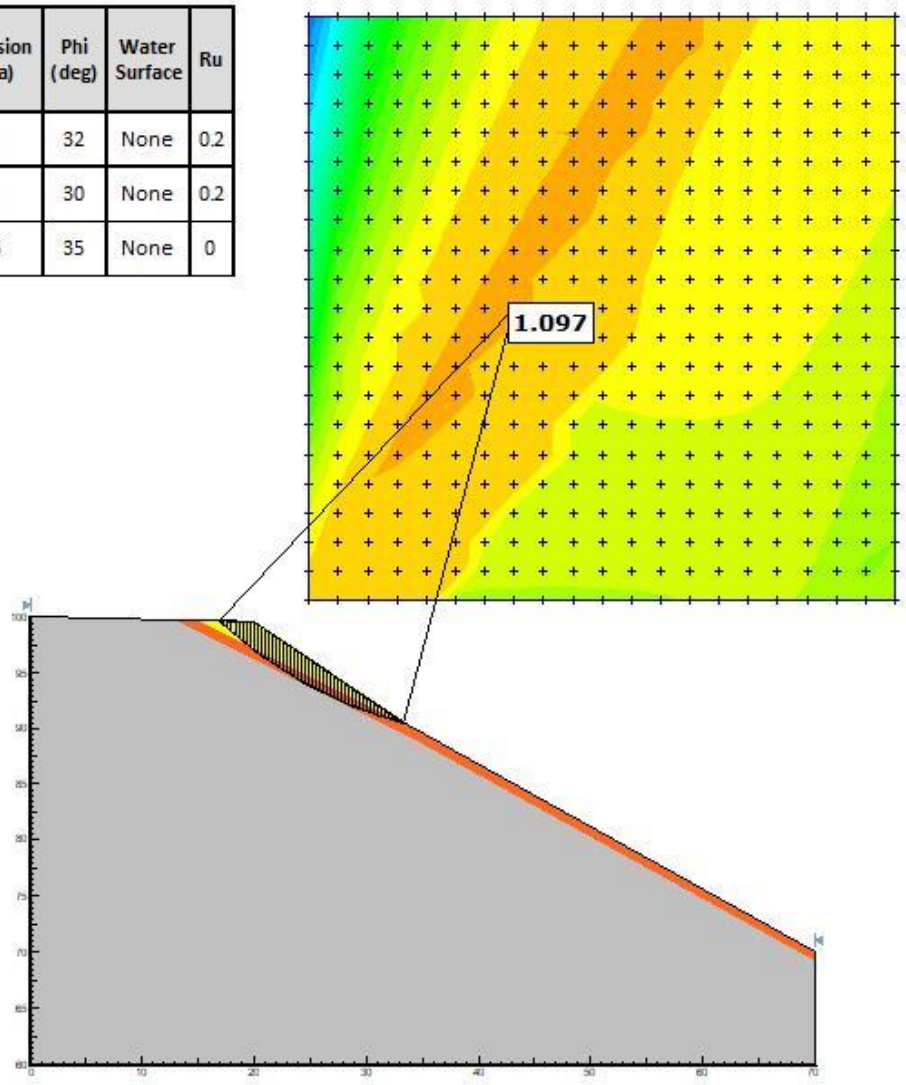


GEO | design

Client:	Steve Marriott	**Geotechnical Investigation**
Drawn:	SRF	**14 Hibiscus Court, Rocky Point**
Scale:	NTS	**RESULTS OF STABILITY ANALYSES CASE 1 EXISTING PROFILE DRY CONDITIONS**
Project No:	22020AA-D	

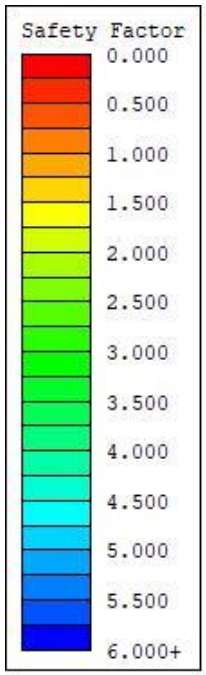


Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (deg)	Water Surface	Ru
Fill		20	Mohr-Coulomb	4	32	None	0.2
Clayey Colluvium		18	Mohr-Coulomb	5	30	None	0.2
Weathered Rock		20	Mohr-Coulomb	15	35	None	0

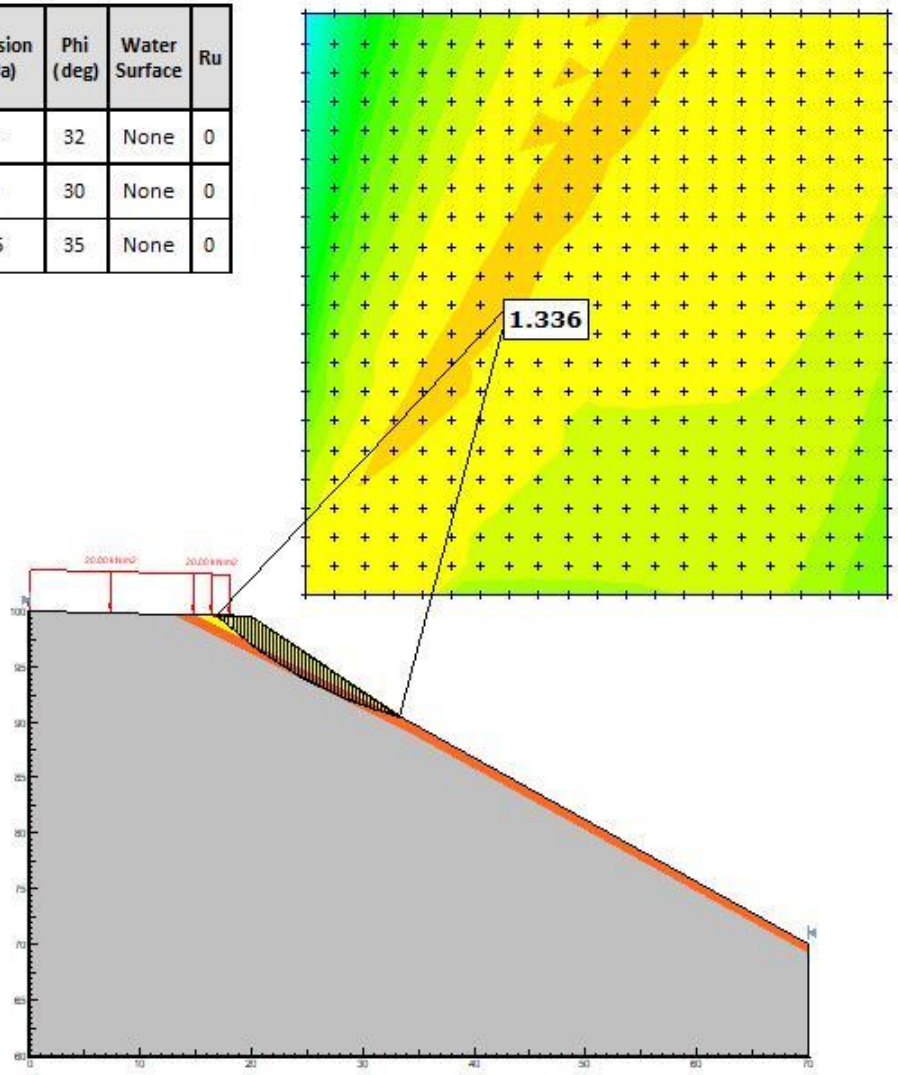


GEO | design

Client:	Steve Marriott	**Geotechnical Investigation**
Drawn:	SRF	**14 Hibiscus Court, Rocky Point**
Scale:	NTS	**RESULTS OF STABILITY ANALYSES CASE 1 EXISTING PROFILE WET CONDITIONS**
Project No:	22020AA-D	

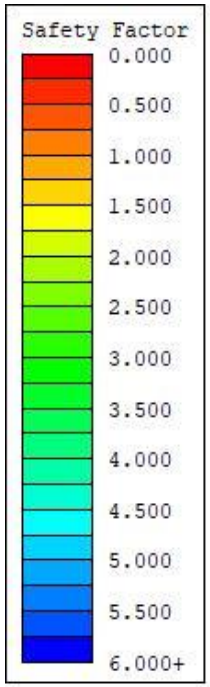


Material Name	Color	Unit Weight (kN/m3)	Strength Type	Cohesion (kPa)	Phi (deg)	Water Surface	Ru
Fill		20	Mohr-Coulomb	4	32	None	0
Clayey Colluvium		18	Mohr-Coulomb	5	30	None	0
Weathered Rock		20	Mohr-Coulomb	15	35	None	0

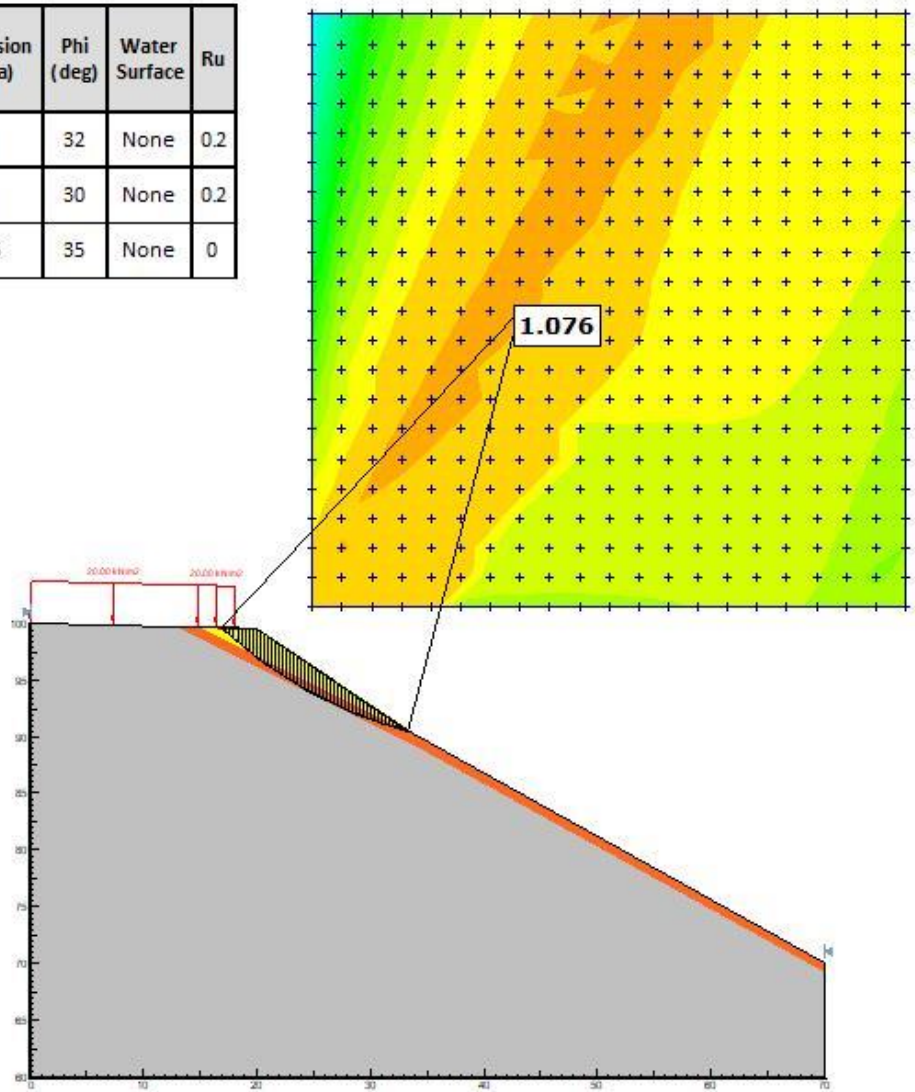


GEO | design

Client:	Steve Marriott	**Geotechnical Investigation**
Drawn:	SRF	**14 Hibiscus Court, Rocky Point**
Scale:	NTS	**RESULTS OF STABILITY ANALYSES CASE 2 EXISTING PROFILE WITH BUILDING POSITIONED DRY CONDITIONS**
Project No:	22020AA-D	



Material Name	Color	Unit Weight (kN/ m3)	Strength Type	Cohesion (kPa)	Phi (deg)	Water Surface	Ru
Fill		20	Mohr-Coulomb	4	32	None	0.2
Clayey Colluvium		18	Mohr-Coulomb	5	30	None	0.2
Weathered Rock		20	Mohr-Coulomb	15	35	None	0



GEO | design

Client:	Steve Marriott	**Geotechnical Investigation**
Drawn:	SRF	**14 Hibiscus Court, Rocky Point**
Scale:	NTS	**RESULTS OF STABILITY ANALYSES CASE 2 EXISTING PROFILE WITH BUILDING POSITIONED WET CONDITIONS**
Project No:	22020AA-D	

Appendix E

AGS 2007 Risk Matrix

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 as 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 the 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 risk to Low. Treatment options to reduce to Low should be implemented as soon as practical.
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.

Attachment 6:

Waste Water Report

Prepared by Earth Test

Wastewater Management System

For

Steve Marriott

At

14 Hibiscus Court

Rocky Point

Postal address: Earth Test, PO Box 1042, Tolga, Qld 4882. Phone: 4095 4734
e-mail: info@earthtest.com.au

INTRODUCTION:

Earth Test has been engaged by Greg Skyring Design & Drafting on behalf of Steve Marriott to assess, design and report on a Domestic Wastewater Management System at 14 Hibiscus Court, Rocky Point.
Real Property Description:-
Lot 26, on RP 749732
Local Authority: Douglas Shire Council
It is understood the intention is to construct a dwelling at the site.
A site and soil evaluation was carried out in July 2022.

SITE FACTORS:

The site was identified by its site address, a photo was taken to confirm the sites identity.
The lot has an area of 4537 square metres and is predominantly covered with grass.
The house site is on a level bench and is to be built over the edge of the steep (approx. 35 degree) bank.
Surface rock outcrops were observed at the site.
The water supply for the dwelling is reticulated.
One soil permeability test was performed at a location P1 as shown on the site plan.

View of proposed dwelling location at 14 Hibiscus Court, Rocky Point

SITE AND SOIL EVALUATION

14 Hibiscus Court, Rocky Point.

The site and soil evaluation carried out on 21/07/2022 provided the following results.

Site Assessment

Site Factor	Result
Slope	Level to 35 Degree
Shape	Linear planar
Aspect	South
Exposure	Good
Erosion/land slip	Not noted
Boulders/rock outcrop	Surface rock outcrops noted
Vegetation	Grass
Watercourse	Not in area affected by the land application area
Water table	Not encountered during investigation
Fill	Not encountered.
Flooding	Not likely.
Channelled run-off	Not found
Soil surface conditions	Firm Moist
Other site specific factors	Not found.

Soil Assessment

Soil Property	Result
Colour	Brown
Texture	Sandy Clay loam.
Structure	Weak.
Coarse Fragments	Nil
Measured Permeability Ksat (m/d)	Indicative Permeability 0.08-0.5
Dispersion	Slakes.
Soil Category	4
Resultant Design Irrigation Rate, DIR (mm/day)	3.5

WASTEWATER MANAGEMENT SYSTEM

A "Secondary Quality Approved System" as approved by Dept of Local Government and Planning is considered suitable for this site.

The system shall be capable of producing secondary quality effluent.

- Biochemical Oxygen Demand - less than or equal to 20 mg/L; and
- Total Suspended Solids – less than or equal to 30 mg/L; and
- Thermotolerant coliforms – not exceeding 200 organisms/100mL.

Treated effluent from the system will be disposed of on site using sub-surface irrigation.

This system has been designed to conform to the requirements of the following codes, acts, regulations and standards. All work to be carried out in accordance with the following codes.

- AS/NZ 1547:2012 On-site domestic-wastewater management.
- Queensland PLUMBING AND DRAINAGE ACT 2018.
- Queensland STANDARD PLUMBING AND DRAINAGE REGULATION 2019.
- Queensland PLUMBING AND WASTEWATER CODE.

SYSTEM SIZING FACTORS.

A population equivalent of five (5) persons has been chosen for the proposed three bedroom dwelling.

Standard water-reduction fixtures must be used to ensure the integrity of the system.
They shall include:-

- Dual flush 6/3 litre water closets.
- Shower-flow restrictors.
- Aerator faucets.
- Water-conserving automatic washing machines.

Note: - Garbage grinders are not permitted with most systems.

As per AS/NZ 1547:2012 Appendix H, Table H1 the "Typical wastewater design flow" for a "Reticulated water supply" gives a flow allowance of 150 L/Person/day.

The daily flow for the dwelling (5 persons @ 150 L/person/day) will be 750 L/day.

LAND-APPLICATION SYSTEM

DISPOSAL AREA SIZING

The daily flow for the dwelling is 750 L/day.

From AS/NZ 1547:2012 Table M1 the Design Irrigation Rate (DIR) is 20(mm/day).
The land application area required is 750/3.5 = 214 square metres.

Use 220 linear metres pressure compensated dripper line at 1m spacing.
(See detail plan and cross section.)

THIS DESIGN SHALL BE CONFIRMED BY THE DESIGNER ONCE EARTHWORKS IS COMPLETE.

SYSTEM INSTALLATION

The need for an outlet filter and distribution valve depends on the brand of system chosen. Contact this office for more details if required.

The system shall be installed by a licensed plumber in accordance with the manufacturer's recommendations and the relevant Australian Standards.

OPERATION AND MAINTENANCE

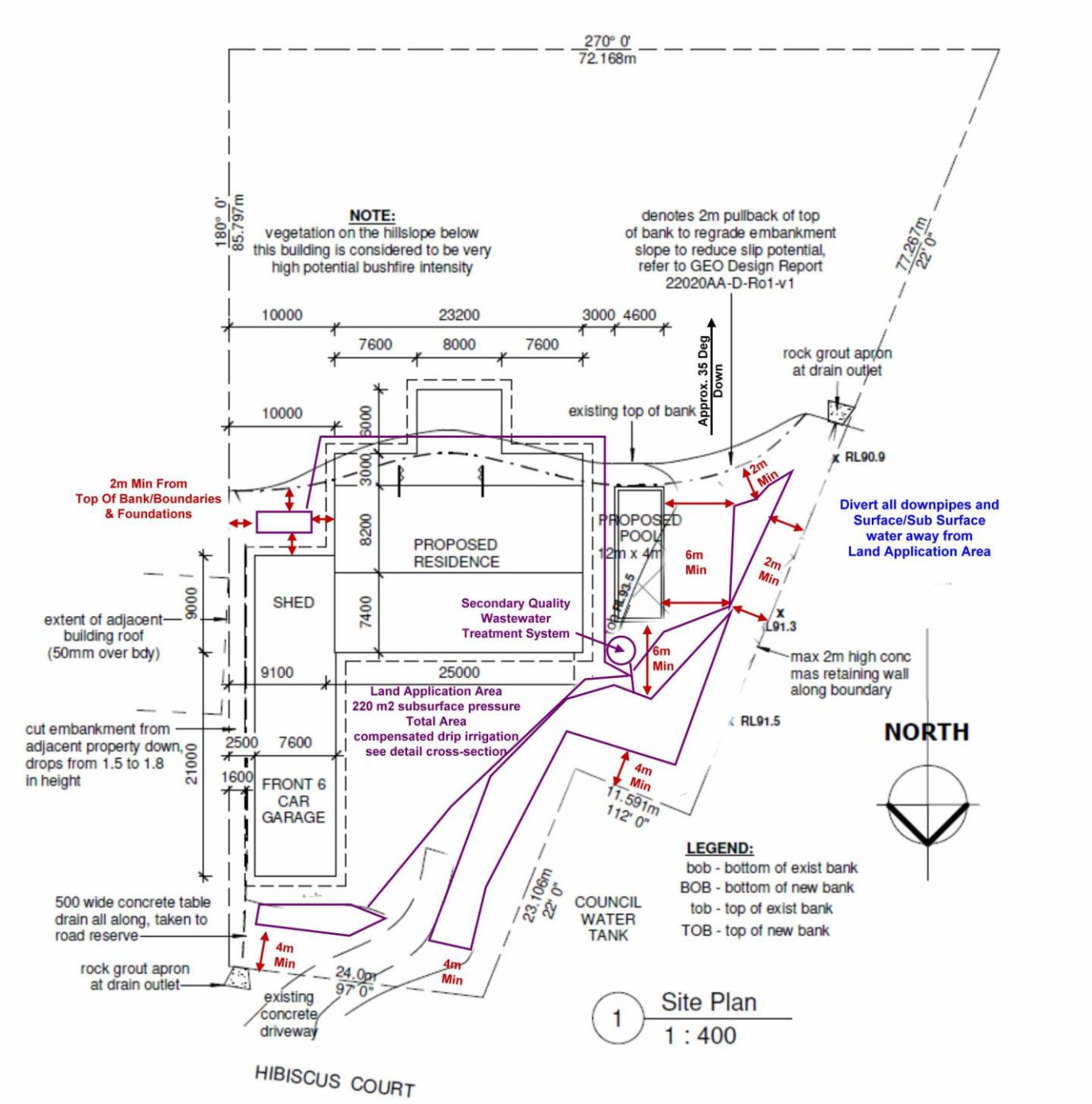
Homeowners should be fully informed of the proper operation and maintenance requirements of the on-site wastewater system.

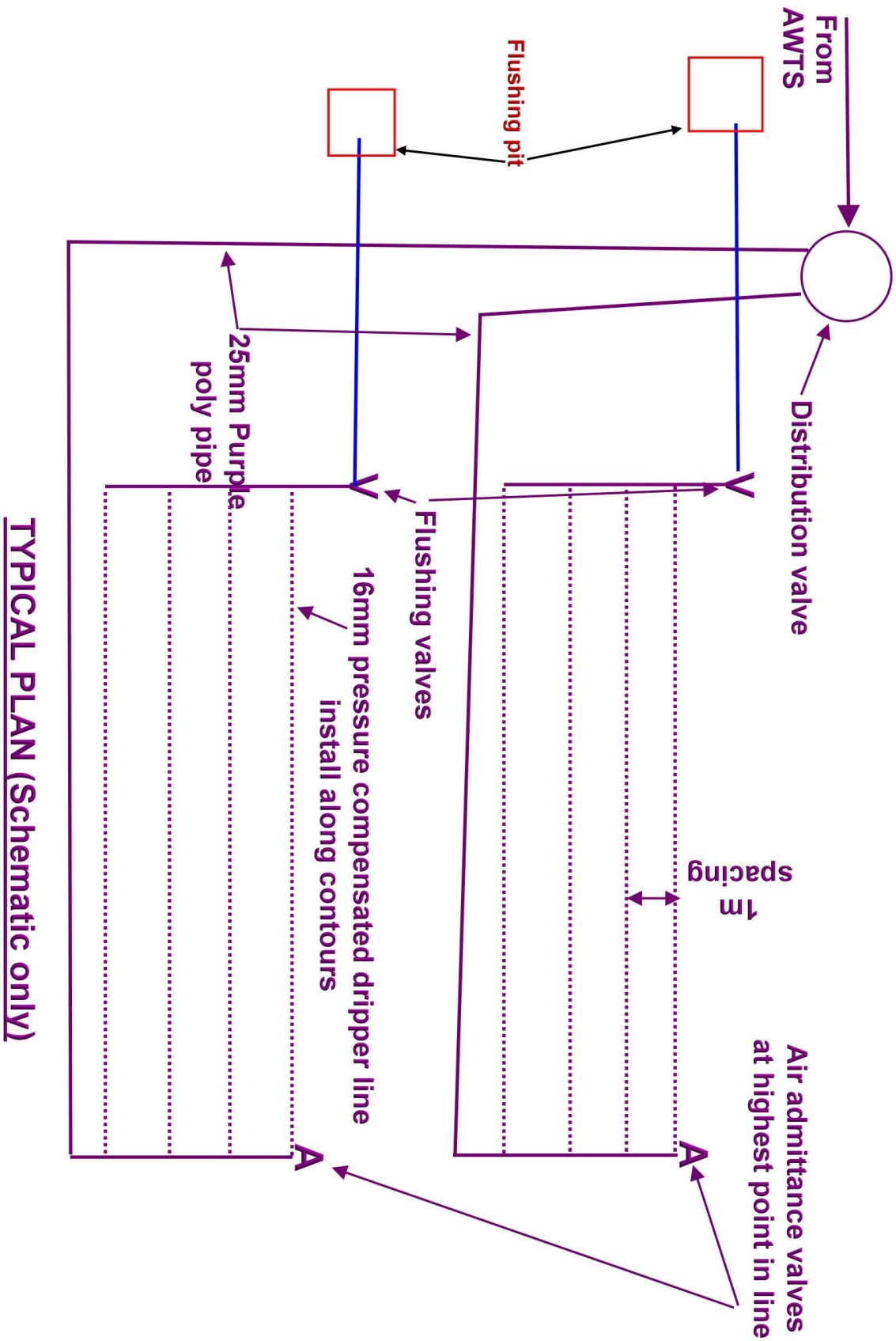
Gavin Negri
Earth Test

SITE PLAN

14 Hibiscus Court, Rocky Point

NOT TO SCALE





TYPICAL PLAN (Schematic only)