DA Form 1 – Development application details

Approved form (version 1.0 effective 3 July 2017) 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 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**, 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.

29 SEP 2017

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)*	Greg Skyring Design and Drafting Pty Ltd
Contact name *(only applicable for companies)*	Greg Skyring
Postal address *(P.O. Box or street address)*	11 Noli Close,
Suburb	Mossman
State	Qld
Postcode	4873
Country	Australia
Contact number	07 40982061
Email address *(non-mandatory)*	greg@skyringdesign.com.au
Mobile number *(non-mandatory)*	
Fax number *(non-mandatory)*	
Applicant's reference number(s) *(if applicable)*	

2) Owner's consent
2.1) Is written consent of the owner required for this development application?
☒ Yes – the written consent of the owner(s) is attached to this development application ☐ No – proceed to 3)

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29/09/17 R/N 232345.

Queensland Government

PART 2 – LOCATION DETAILS

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

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

3.1) Street address and lot on plan

☒ Street address **AND** lot on plan *(all lots must be listed)*, ***or***

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

a)	Unit No.	Street No.	Street Name and Type	Suburb
		14	Hibiscus Court	Rocky Point
	Postcode	Lot No.	Plan Type and Number *(e.g. RP, SP)*	Local Government Area(s)
	4873	26	RP749732	Douglas
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. Only one set of coordinates is required for this part.*

☐ 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 their details have been attached in a schedule to this 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)*:

New house on vacant land

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)*
New house on vacant land	house		296

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 construction 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
☐ Local government is taken to have agreed to the superseded planning scheme request – relevant documents attached
☒ No

PART 5 – REFERRAL DETAILS

17) Do any aspects of the proposed development require referral for 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 Regulation 2017:**

☐ Clearing native vegetation
☐ Contaminated land *(unexploded ordnance)*

- ☐ Environmentally relevant activities (ERA) *(only if the ERA have not been devolved to a local government)*
- ☐ Fisheries – aquaculture
- ☐ Fisheries – declared fish habitat area
- ☐ Fisheries – marine plants
- ☐ Fisheries – waterway barrier works
- ☐ Hazardous chemical facilities
- ☐ Queensland heritage place *(on or near a Queensland heritage place)*
- ☐ Infrastructure – designated premises
- ☐ Infrastructure – state transport infrastructure
- ☐ Infrastructure – state transport corridors and future state transport corridors
- ☐ Infrastructure – state-controlled transport tunnels and future state-controlled transport tunnels
- ☐ Infrastructure – state-controlled roads
- ☐ Land within Port of Brisbane's port limits
- ☐ SEQ development area
- ☐ 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 – residential development
- ☐ SEQ regional landscape and rural production area or SEQ Rural living area – urban activity
- ☐ Tidal works or works 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 – construction of new levees or modification of existing levees *(category 2 or 3 levees only)*
- ☐ Wetland protection area

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

- ☐ Airport land
- ☐ Environmentally relevant activities (ERA) *(only if the ERA have been devolved to local government)*
- ☐ Local heritage places

Matters requiring referral to the **chief executive of the distribution entity or transmission entity:**

- ☐ 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

- ☐ Oil and gas infrastructure

Matters requiring referral to **the Brisbane City Council:**

- ☐ Brisbane core port land

Matters requiring referral to the **Minister under the Transport Infrastructure Act 1994:**

- ☐ Brisbane core port land
- ☐ Strategic port land

Matters requiring referral to the **relevant port operator:**

- ☐ Brisbane core port land (below high-water mark and within port limits)

Matters requiring referral to the **chief executive of the relevant port authority:**

- ☐ Land within limits of another port

Matters requiring referral to the **Gold Coast Waterways Authority:**

- ☐ Tidal works, or development in a coastal management district in Gold Coast waters

Matters requiring referral to the **Queensland Fire and Emergency Service:**

- ☐ Tidal works, or development in a coastal management district

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 the development application the subject of this form, 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 – the yellow local government/private certifier's 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

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 EM941) 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 "EM941" 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.justice.qld.gov.au for further information.*

Clearing native vegetation

23.3) Does this development application involve **clearing native vegetation** that requires written confirmation 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 is accompanied by written confirmation from the chief executive of the *Vegetation Management Act 1999* (s22A determination)

☒ No

Note: *See www.qld.gov.au for further information.*

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 conservation

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

☐ Yes

☒ No

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

Water resources

23.6) Does this development application involve **taking or interfering with artesian or sub artesian water, taking or interfering with water in a watercourse, lake or spring, taking overland flow water or waterway barrier works**?

☐ Yes – the relevant template is completed and attached to this development application

☒ No

Note: *DA templates are available from www.dilgp.qld.gov.au.*

23.7) Does this application involve **taking or interfering with artesian or sub artesian water, taking or interfering with water in a watercourse, lake or spring, or taking overland flow water** under the *Water Act 2000*?

☐ Yes – I acknowledge that a relevant water authorisation under the *Water Act 2000* may be required prior to

commencing development

☒ No

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

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 and Mines at www.dnrm.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 Heritage Protection at www.ehp.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.dews.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.ehp.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.ehp.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

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 *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 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 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	
Date receipted form sighted by assessment manager	
Name of officer who sighted the form	

The *Planning Act 2016*, the Planning Regulation 2017 and the DA Rules are administered by the Department of Infrastructure, Local Government and Planning. This form and all other required development application materials should be sent to the assessment manager.

GREG SKYRING Design and DRAFTING PTY. LTD.
ATF THE SKYRING FAMILY TRUST
ABN 78 409 217 980

The Manager,
Planning Services,
Douglas Shire Council
P.O. Box 723
Mossman Q 4873

23rd Sep 2017

Dear Sir/Madam,

RE: APPLICATION FOR MATERIAL CHANGE OF USE OF PREMISES – DWELLING HOUSE ON LOT 26, RP 749732, 14 HIBISCUS COURT, ROCKY POINT; for C. ANDREASSEN.

This site has previously received a development approval dated 22 August 2006, and an extension of currency period dated 22 July 2010. However, the DA was allowed to expire, with the Owner now deciding to seek another approval.

Attached is DA Form 1 duly completed, together with sketches of the proposed house, and planning, geotechnical and waste water reports.

The following report provides supporting information to show compliance or otherwise with the planning scheme and codes within.

1.0 General Details

Applicant and Contact	Greg Skyring, Greg Skyring Design and Drafting Pty Ltd 11 Noli Close, Mossman QLD 4873 Ph 07 40982061 Fax 07 40982061 Email greg@skyringdesign.com.au
Registered Owner of Land	C. Andreassen
Real Property Description	Lot 26 RP749732
Location	14 Hibiscus Court, Rocky Point

1.0 – General Details continued

Tenure	Freehold
Land Area	4,537m ^{2}
Present Use	Vacant
Contaminated Lands or Environmental Management Registers	Nil
Easements and Encumbrances	None
Local Government Authority	Douglas Shire Council
Planning Scheme	2008 Douglas Shire Planning Scheme
Planning Area	Rural Settlement
Assessment Level	Code Assessable
Tabled Applicable Codes	Rural Settlement Locality Code Rural Settlement Planning Area Code Land Use Code Filling and Excavation Code Landscaping Code Natural Areas and Scenic Amenity Code Vehicle Parking and Access Code
Tabled Applicable Overlays	Acid Sulphate Soils Cultural Heritage and Valuable Sites Natural Hazards - Medium Risk Bushfire

Fully Complying or Not Applicable Codes/Overlays

Land use Code, House Code – complies fully

Filling and Excavation Code – no change to the existing land form is required

Vehicle Parking and Access Code – vehicle parking on site is in excess of that required under P1 of this code, and contained within proposed buildings.

Acid Sulphate Soils Overlay - this site is approximately 90m in elevation. As this code refers to elevations less than 5m AHD, this code is not applicable.

Cultural Heritage and Valuable Sites – not a site identified on overlay mapping.

Natural Hazards – site is mapped as having no fire hazard risk.

2.0 Assessment Against the Douglas Shire Planning Scheme Codes

RURAL SETTLEMENT LOCALITY CODE

General Requirements

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	COMMENTS
• Buildings and structures complement the Height of surrounding development and/or are subservient to the surrounding environment and are in keeping with the character of the Locality.	**A1.1** In all Planning Areas in this Locality the maximum Height of Buildings/structures is 6.5 metres and 2 Storeys. In addition, the roof or any ancillary roof features do not exceed a maximum Height of 3.5 metres.	the proposed house is single storey
• Development is connected to all urban services or to sustainable on Site infrastructure services.	**A2.1** Development is connected to available urban services by underground connections, wherever possible. AND/OR Contributions are paid when applicable in accordance with the requirements of Planning Scheme Policy No 11 – Water Supply and Sewerage Headworks and Works External Contributions. OR Water storage tank/s with a minimum capacity of not less than 30 000 litres to service the proposed use, including fire fighting capacity and Access to the tank/s for fire trucks. Tank/s to be fitted with a 50 mm ball valve with a camlock fitting and installed and connected prior to occupation and screened with Dense Planting. AND An environmentally acceptable and energy efficient power supply is constructed and connected prior to occupation and sited so as to be visually unobtrusive. AND On-site sewerage facilities are	The property is connected to a reticulated local water supply. A waste water disposal report is attached The installation of an advanced secondary treatment plant and sub-surface disposal being the preferred method of effluent treatment.

	provided in accordance with the On-site Sewerage Code	
• Landscaping of development Sites complements the existing rural character of the Locality.	A3.1 Landscaping utilises predominantly native species and complies with the requirements of Planning Scheme Policy No 7 – Landscaping with particular emphasis on appropriate species for this Locality. AND A minimum of 60% of the total proposed species are endemic or native species.	No clearing of vegetation is proposed
• Development Sites are provided with efficient and safe vehicle Access and maneuvering areas on Site and to the Site, to an acceptable standard for the Locality.	A4.1 All Roads, driveways and maneuvering areas on Site and adjacent to the Site are designed and maintained to comply with the specifications set out in the Planning Scheme Policy No 6 – FNQROC Development Manual.	The driveway will be concrete construction approx 3m in width.

RURAL SETTLEMENT PLANNING AREA CODE

General

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	COMMENTS
P1 The establishment of uses is consistent with the outcomes sought for the Rural Settlement Planning Area.	**A1.1** Uses identified as inconsistent uses in the Assessment Table are not established in the Rural Settlement Planning Area.	The proposal of a house is a consistent use according to the assessment table.

Site Coverage

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	COMMENTS
P2 The built form is subservient to the natural environment or the rural character of the area.	**A2.1** The maximum Site Coverage for all Buildings (includingOutbuildings) contained on an allotment is 450 m2.	Site coverage is 398sqm for the proposed. Total site cover is 8.8%

	A2.2 An Outbuilding used for purposes ancillary to a House has a maximum Site Coverage not greater than 20% of the total Site Coverage specified in A2.1 above.	No ancillary building is part of this application

Building Setbacks

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	COMMENTS
P3 Buildings/structures are Setback to: • maintain the natural or rural character of the area; and • achieve separation from neighbouring Buildings and from Road Frontages.	**A3.1** Buildings/structures are Setback not less than: • 40 metres from the property boundary adjoining a State-Controlled Road; or • 25 metres from the property boundary adjoining the Cape Tribulation Road; or • 20 metres from the property boundary fronting any other Road; and • 6 metres from the side and rear property boundaries of the Site.	The proposed setbacks are illustrated on the attached site plan, and generally comply with the Acceptable. However, it is necessary to reduce the eastern boundary setback to 2.5m, due to the physical restraints of the building pad. The adjacent house is a lesser distance from this same boundary (refer to Site Plan).
P4 Buildings/structures are screened from any adjacent Road to maintain the natural or rural character of the area.	**A4.1** At the time that a Site is developed for any purpose, the Road Frontage Setback areas are landscaped so that 10 metres of the Setback area immediately adjacent to any Road Frontage, where the minimum total Setback required is 20 metres or greater, is landscaped with Dense Planting.	A vegetation depth of approximately 10m is to be provided along the full frontage of Hibiscus Court, excluding the property access.

Scenic Amenity

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	COMMENTS
P5 Buildings/structures are designed to maintain the low-density rural settlement character of the area and sited to minimise	**A5.1** White and shining metallic finishes are avoided on external surfaces in prominent view.	External colours will be similar shades to the following approved colours: Roof – Colorbond green Walls – clay brick veneer

impacts on the environment and Scenic Amenity values of the area.		
P6 Buildings/structures are sited to achieve the retention of native trees and protect existing Watercourses, riparian vegetation and wildlife corridors.	**A6.1** No Acceptable Solution. (Information that the Council may request to demonstrate compliance with the Performance Criteria is outlined in Planning Scheme Policy No 10 – Reports and Information the Council May Request, for code and impact assessable development).	All existing vegetation will remain. There are no existing watercourses

Sloping Sites

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	COMMENTS
P7 Building/structures are designed and sited to be responsive to the constraints of sloping Sites.	**A7.1** Building/structures are Erected on land with a maximum slope not exceeding 15%. OR Development proposed to be Erected on land with a maximum slope between 15% and 33% is accompanied by a Geotechnical Report prepared by a qualified engineer at development application stage. OR Development proposed to be Erected on land with a maximum slope above 33% is accompanied by a Specialist Geotechnical Report prepared by a qualified engineer at development application stage which includes signoff that the Site can be stabilised. AND	The slope of the land area of the house pad is generally level. However, a geotechnical report has been provided as part of the original DA to ensure no potential slip impact on properties below

	Any Building/structures proposed to be Erected on land with a maximum slope above 15% are accompanied by an additional Geotechnical Report prepared by a qualified engineer at building application stage. (Information that the Council may request as part of the Geotechnical Report are outlined in Planning Scheme Policy No 10 – Reports and Information the Council May Request, for code and impact assessable development.)	
P8 The building style and construction methods used for development on sloping Sites are responsive to the Site constraints.	**A8.1** A split level building form is utilised. **A8.2** A single plane concrete slab is not utilised. **A8.3** Any voids between the floor of the Building and Ground Level, or between outdoor decks and Ground Level, are screened from view by using lattice/batten screening and/or Landscaping.	N/A
P9 Development on sloping land minimises any impact on the landscape character of the surrounding area.	**A9.1** Buildings/structures are sited below any ridgelines and are sited to avoid protruding above the surrounding tree level.	N/A
P10 Development on sloping land ensures that the quality and quantity of stormwater traversing the Site does not cause any detrimental impact to the natural environment or to any other	**A10.1** All stormwater drainage discharges to a lawful point of discharge and does not adversely affect downstream, upstream, underground stream or adjacent properties.	N/A

NATURAL AREAS AND SCENIC AMENITY CODE

Development in Areas of Natural and Scenic Amenity Value

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS	COMMENTS
- Where a development within a DDA triggers this Code, the natural and environmental values of the areas of Remnant Vegetation and/or Watercourse/s are protected from inappropriate development.	**A1.1** Buildings/structures Access Roads/car parking, infrastructure and landscape/recreation facilities are constructed within the DDA identified on a Site Plan drawn to scale. **A1.2** Where internal Roads are required to service the development, the Roads are located within a DDA identified on a Site Plan drawn to scale. (Information that the Council may request to demonstrate compliance with the Performance Criteria is outlined in Planning Scheme Policy No 8 – Natural Areas and Scenic Amenity and Planning Scheme Policy No 10 – Reports and Information the Council May Request, for code and impact assessable development).	The attached site plan shows the location of proposed buildings and internal roads in relation to the existing vegetation.
- Development does not adversely impact on the natural and environmental values and Scenic Amenity of areas identified as Remnant Vegetation and/or Watercourse/s.	**A2.1** Where development occurs, it is located on that part of the Site which poses the least threat to the natural and environmental values and Scenic Amenity, for example: • adjacent to existing development; • within an existing cleared area; • within a disturbed area with little potential for rehabilitation; • within an area close to an Access Road; • removed from an identified area of important habitat. **A2.2** Development within the DDA is sited to minimise visual intrusion on the Site and the surrounding landscape. **A2.3** No continuous boundary fence lines or barriers are Erected on an	The building is located to in an existing cleared area Refer above No boundary fences are proposed

	approved development Site within a DDA identified on a Site Plan drawn to scale. **A2.4** Infrastructure, such as water mains, sewers, electricity and telecommunication services, is sited underground, wherever reasonable, to protect Scenic Amenity, and is located within a DDA on a Site Plan drawn to scale. **A2.5** Internal Roads associated with the development are designed and constructed to achieve a low speed environment. **A2.6** Roads and infrastructure services do not cross the Setback area/riparian corridor; or if this is not possible, the number of crossings is minimised. **A2.7** Setback areas/riparian corridors are provided in accordance with A4.1, A4.2, A4.3 and A4.4 below; AND The lowest intensity of development occurs adjacent to any Setback area/riparian corridor, and in the case of reconfiguration, larger lots are located adjacent to any Setback area/riparian corridor. **A2.8** There is no fragmentation or alienation of any Remnant Vegetation. **A2.9** Any natural, environmental or Scenic Amenity value of any balance area outside the DDA is protected.	Power to the site will be provided from a new pole located at the property boundary, continuing from the pole to the house underground. All other services are will be underground from the front boundary. The access road is shown on the site plan, and is relatively flat Only one access is proposed. No change to existing vegetation will be made.
- Any development involving filling and excavation minimises detrimental impacts on any aquatic environment.	No Acceptable Solution. (Information that the Council may request to demonstrate compliance with the Performance Criteria is outlined in Planning Scheme Policy No 8 – Natural Areas and Scenic Amenity and Planning Scheme Policy No 10 – Reports and Information the Council May	Refer to A2.1

	Request, for code and impact assessable development).	

Setback Areas/Riparian Corridors – N/A

Use of Setback Areas/Riparian Corridors – N/A

Retaining and Protecting Highly Visible Areas – N/A

LANDSCAPING CODE

Landscaping is to be provided to a 10m wide buffer to the full frontage of the site, excluding the property access, and to the 6m side boundary setbacks, to comply with the DSC planning scheme policy No 7 - Landscaping.

CONLUSION

The development application seeks a Development Permit for Material Change of Use for the purpose of a single dwelling house on land described as Lot 26 RP749732, 14 Hibiscus Court, Rocky Point.

The proposed development is considered generally consistent with the relevant Planning Scheme Codes and the surrounding locality. The report includes supporting information intended to address any concerns Council may have as the assessing authority

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

I, Colin Aaron Andreassen

[Insert full name.]

as owner of the premises identified as follows:

14 Hibiscus Court, Rocky Point
L26 RP749732

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

Greg Skyring for Greg Skyring Design and Drafting Pty Ltd

on the premises described above for:

Material change of use for single storey house

C A Andreassen 27-9-17

[signature of owner and date signed]

Construction Soiltest Pty Ltd A.B.N. 90 054 339 883
Materials Testing and Geotechnical Services
7 Barry Street, Westcourt, PO Box 2234 Cairns Ph 07 4041 4577 Fax 07 4041 4399 e-mail: consoil@bigpond.com

30 May 2006 Job No: G5478

C. Andreassen
c/ Greg Skyring
11 Noli Close
MOSSMAN QLD 48$$

Dear Sir,

Re: **Geotechnical Review at**
Lot 26 Hibiscus Court Rocky Point.

1. *Introduction.*

Mr G Skyring (G. Skyring Design & Drafting) requested a review of geotechnical conditions and property risk assessment of original geotechnical report G5478/R11942 on behalf of client (C. Andreassen). Further comments were requested by Douglas Shire Council (DSC) in lieu of design variations and stabilisation works proposed for the site. Updated site plans were provided by G. Skyring.

2. *Proposed Development & Site Conditions.*

The proposed residential development includes a masonry block building located approximately 6 - 3m from the rear southern embankment. A waste disposal bed is to be located at the front (northern) side of the proposed house.

Site conditions were generally consistent with previous report findings. Further regrowth has occurred on the southern embankment surface and two minor slip areas remain below the crest. One slip is located near the proposed patio area and another at the eastern end of the embankment.

Refer Figure R1 for proposed residence plan and site conditions.

3. *Site Property Risk Assessment.*

Risk assessment is limited to the existing rear embankment slope and the likelihood and consequences of potential debris slide(s) (i.e. event) has to the proposed house. The risk assessment is limited to property and the proposed building, or part thereof, located <6m from the embankment crest.

Table 1. (Refer Attachment 'Appendix A & G AGS Sub-committee March 2000' for terminology)

Event	Potential Slide – un-retained	Potential slide - Retained Slope
Volume (estimate) m^3	1-20	1-20
Indicative Annual Probability	10^{-2}	10^{-4}
Qualitative Likelihood	LIKELY	UNLIKELY
Qualitative Consequences	MEDIUM	MEDIUM-MINOR
Level of Risk to property	HIGH	MODERATE-LOW
Risk level implications	Risk considered greater than tolerable levels – reduce risk.	Acceptable if treatment maintains or reduces risk.
Recommendations	Treatment of slip area of slope to reduce risk.	Monitor implemented stabilisation system.
Treatment options	Provide stabilisation to slip zone below crest (ie gabion units or retaining wall).	Gabion units, or structural retaining wall.

Notes to Table 1:
i)Qualitative measure of Likelihood:
- **LIKELY** = the event will probably occur under adverse conditions
- **UNLIKELY** = the event might occur under very adverse circumstances

ii)Qualitative measure of Consequence to property:
- **MINOR** consequences to property = limited damage to house from minor slip, or part of site requiring some debris clearing.
- **MEDIUM** consequences to property = moderate damage to part of rear of house from major slip, rear part of site requiring major debris clearing.

4. Comments.

1) Risk of site instability from proposed waste disposal bed is considered low provided that the waste disposal bed functions without overflowing.

2) Footings shall be no closer than 6m from the southern embankment to satisfy estimated low risk to property from potential slips. Proposed footings closer than 6m from the rear embankment crest increase the risk of property damage and will require structural stabilisation measures below the embankment crest. Proposed patio footings (approximately 3m from crest) are located near an existing slip below the crest. Slip areas near footings (ie <6m from crest) will need to be structurally stabilised. Gabion units or free draining structural retaining walls are recommended. Patio footings shall be founded into rock. Stabilisation measures shall be designed by a professional engineer.

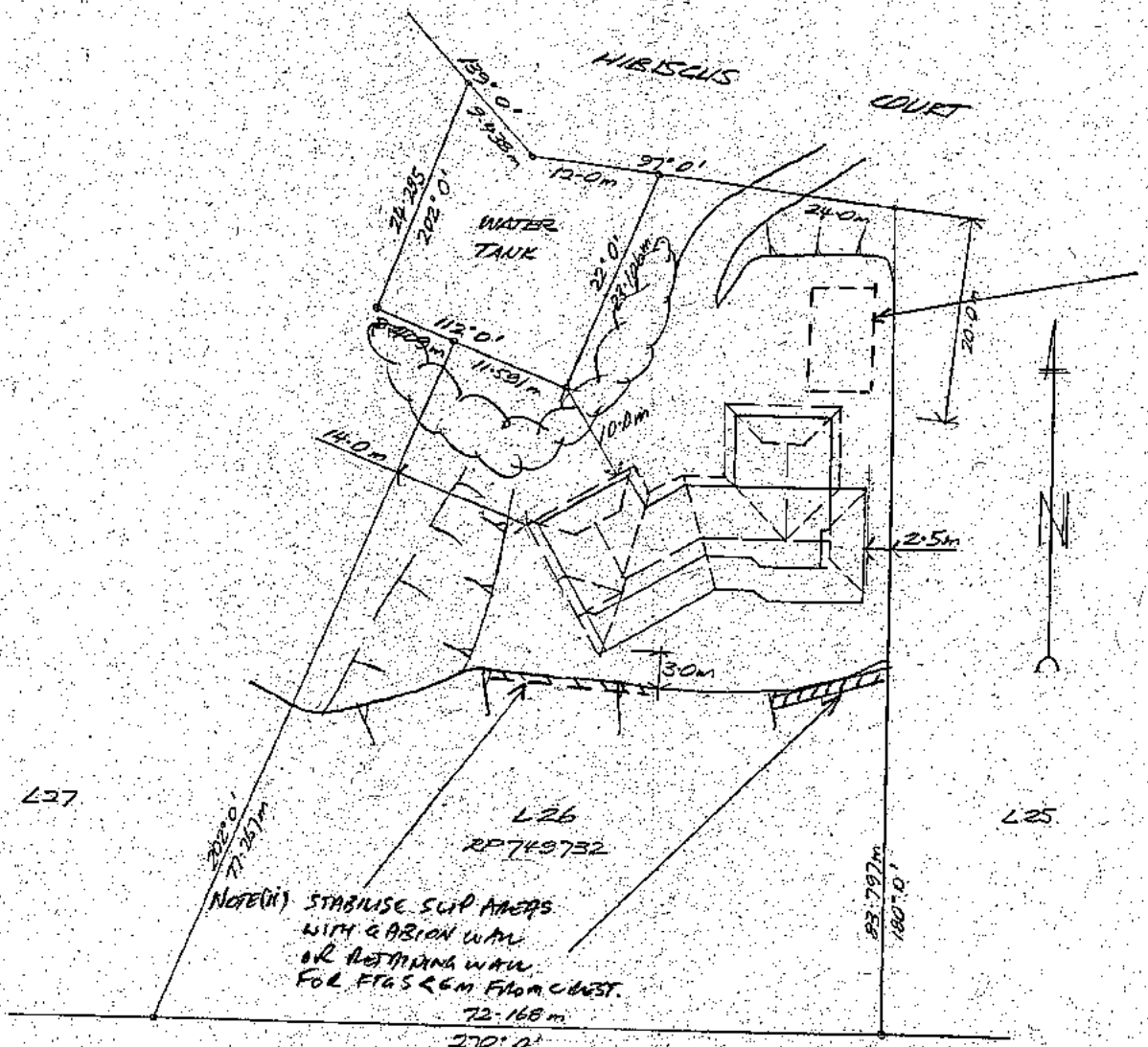
3) All other site recommendations as per 8.2 of original report shall also be implemented.

4) This report shall be read in conjunction with original report G5478/R11942.

Yours faithfully
Construction Soiltest Pty Ltd

P.A. Posar

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



SITE PLAN 1:600

* Notes By DAP.

FIGURE R1.

CONSTRUCTION SOUTHEAST P/L

L 26 HIBISCUS CRT

J/N G4579

REV A 07-03-06

10-06-05

AND 01

PROPOSED RESIDENCE
FOR C & G ANDREASSEN
14 HIBISCUS COURT
ROCKY POINT

GREG SKYRING
Design and DRAFTING Pty. Ltd.
Lic. Under QBSA Act 1991 – No 65264
11 Noli Close
Phone/Fax: (07) 46982951

APPENDIX G

LANDSLIDE RISK ASSESSMENT – EXAMPLE OF QUALITATIVE TERMINOLOGY FOR USE IN ASSESSING RISK TO PROPERTY

Qualitative Measures of Likelihood

Level	Descriptor	Description	Indicative Annual Probability
A	ALMOST CERTAIN	The event is expected to occur	$>=10^{-1}$
B	LIKELY	The event will probably occur under adverse conditions	$\approx 10^{-2}$
C	POSSIBLE	The event could occur under adverse conditions	$\approx 10^{-3}$
D	UNLIKELY	The event might occur under very adverse circumstances	$\approx 10^{-4}$
E	RARE	The event is conceivable but only under exceptional circumstances.	$\approx 10^{-5}$
F	NOT CREDIBLE	The event is inconceivable or fanciful	$<10^{-6}$

Note: "≈" means that the indicative value may vary by say ± ½ of an order of magnitude, or more.

Qualitative Measures of Consequences to Property

Level	Descriptor	Description
1	CATASTROPHIC	Structure completely destroyed or large scale damage requiring major engineering works for stabilisation.
2	MAJOR	Extensive damage to most of structure, or extending beyond site boundaries requiring significant stabilisation works.
3	MEDIUM	Moderate damage to some of structure, or significant part of site requiring large stabilisation works.
4	MINOR	Limited damage to part of structure, or part of site requiring some reinstatement/stabilisation works.
5	INSIGNIFICANT	Little damage.

Note: The "Description" may be edited to suit a particular case.

Qualitative Risk Analysis Matrix – Level of Risk to Property

LIKELIHOOD	CONSEQUENCES to PROPERTY				
	1: CATASTROPHIC	2: MAJOR	3: MEDIUM	4: MINOR	5: INSIGNIFICANT
A – ALMOST CERTAIN	VH	VH	H	H	M
B – LIKELY	VH	H	H	M	L-M
C – POSSIBLE	H	H	M	L-M	VL-L
D – UNLIKELY	M-H	M	L-M	VL-L	VL
E – RARE	M-L	L-M	VL-L	VL	VL
F – NOT CREDIBLE	VL	VL	VL	VL	VL

Risk Level Implications

Risk Level		Example Implications(1)
VH	VERY HIGH RISK	Extensive detailed investigation and research, planning and implementation of treatment options essential to reduce risk to acceptable levels; may be too expensive and not practical
H	HIGH RISK	Detailed investigation, planning and implementation of treatment options required to reduce risk to acceptable levels
M	MODERATE RISK	Tolerable provided treatment plan is implemented to maintain or reduce risks. May be accepted. May require investigation and planning of treatment options.
L	LOW RISK	Usually accepted. Treatment requirements and responsibility to be defined to maintain or reduce risk.
VL	VERY LOW RISK	Acceptable. Manage by normal slope maintenance procedures.

Note: (1) The implications for a particular situation are to be determined by all parties to the risk assessment; these are only given as a general guide.

(2) Judicious use of dual descriptors for Likelihood, Consequence and Risk to reflect the uncertainty of the estimate may be appropriate in some cases.

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Materials Testing and Geotechnical Services
7 Barry Street, Westcourt, PO Box 2234 Cairns Ph 07 4041 4577 Fax 07 4041 4399 e-mail: consoil@bigpond.com

5 October 2005 Job No: G5478

C & G Andreassen
C/- Greg Skyring Design and Drafting
11 Noli Close
MOSSMAN QLD 4873

Dear Sir/Madam,

Re: **Geotechnical Report for Lot 26 (No. 14) Hibiscus Court Rocky Point.**

1. *Introduction/Authorisation.*

A geotechnical investigation and report was authorised by Mr G Skyring (Greg Skyring Design and Drafting) on behalf of clients/owners C & G Andreassen for proposed residential development at Lot 26 Hibiscus Court Rocky Point. The scope of the report and site plans of the proposed development were provided by Mr Skyring. No site contour levels were available at the time of the investigation.

2. *Scope/Method of Investigation.*

The scope of the geotechnical report requested, included the following:

- To provide a report which addresses driveway stability and the site suitability for the proposed development and also the implications of landslide to the allotments below the proposed development.

- Site classification in accordance with AS 2870 `Residential Slabs and Footings' for footing design purposes.

The methods used for the investigation included geotechnical assessment of existing surface features and exposed soil/rock profiles and subsurface soil/rock conditions of the site using augered boreholes and dynamic cone penetrometer (DCP) tests. Subsurface testing was not performed on the southern hill-slope due to steepness and inaccessibility.

3. *Proposed Development.*

The proposed development is for a residential dwelling founded at existing surface levels. Residential construction is to be limited to the existing benched

area. The proposed access driveway is to be the existing driveway configuration off Hibiscus Court. Minimal earthworks are proposed to provide a level building platform and driveway access.

4. Site Description.

The site is identified as Lot 26 RP749732 No.14 Hibiscus Court Rocky Point, which is located south of Hibiscus Court.

The subject site is partly a cut flat ridgeline area south of Hibiscus Court to a steeply sloping natural hill-slope at the rear of the allotment. The hill-slope crest is approximately 45m south of the front boundary and the hill-slope surface is sloping concavely from approximately 45° to 30° north to south to the rear boundary. Access to the site is via a cut unsealed driveway which has cut batters of up to 1m in height. A council easement (Lot 36) with a concrete water tank is located on the north-west (front right hand) corner of the site. An existing house on Lot 25 is located east of the site and a vacant allotment (Lot 27) is located west and is separated by a 15° cut batter. A vacant allotment (Lot 22) is located south of the site at the lower end of the hill-slope. Vegetation on the site varies from nil (exposed rock/soil) on the flat platform area to partly cleared, to thick rainforest, on the rear hill-slope.

Refer Figure 1A and 1B for site location and proposed development.

5. Regional Geology

According to the Queensland Department of Mines and Energy 1:250000 geological map for Mossman region (Sheet SE 55-1, 1996) the site is underlain by `Hodgkinson Formation' which may comprise `interbedded fine to medium grained arenite and mudstone (locally phyllitic); minor chert, and metabasalt'.

Generally on hill slope sites a layer of colluvium overlies residual soils and weathered rock. Landslips have been recorded on steep hill-slopes and earthworks batters in this area.

6. Assessment/Findings.

6.1. Surface Conditions.

The site surface is mainly exposed weathered rock at the flat platform area (proposed building site) containing little to no vegetation. Exposed weathered rock was evident in the driveway and Hibiscus Court cut batters. The hill slope south of the platform area was steeply sloping below the crest and reducing somewhat concavely to the rear boundary. Vegetation on the slope was partly cleared below the crest and contained fallen trees, thick groundcover shrubs/grass and regrowth saplings and small trees. No major mature trees exist

from the crest to approximately 20-30m down-slope. Dense rainforest including mature trees exist below the 'cleared' slope to the rear boundary and into Lot 22.

No major gullies were observed on the site though evidence down-slope was not established due to thick vegetation and general inaccessibility. Instability zones were observed at and below the hill slope crest where erosion from runoff has caused progressive minor debris slides. Very steep slopes (>45°) were evident below the crest at approximately 2-3 m in height. Small erosion gullies and colluvial deposits containing soil, cobbles and small boulders were observed on Lot 22 (south and down slope of the site).

Existing cut batters on the Hibiscus Court and driveway cutting are mainly exposed weathered rock with some regrowth vegetation. No major instability was observed at the exposed driveway cut batter slopes at the time of the assessment, though occasional small rock piece dislodgements and minor debris has been accumulating at the toe. Exposed weathered rock exists at the front of Lot 22 (base of southern slope/road formation).

6.2. Subsurface Conditions.

Boreholes and DCP tests were performed at the proposed house location. Generally the proposed foundation area encountered approximately 0.3 to 0.6m of residual soil to extremely weathered rock (clayey silt) freshening to distinctly weathered rock. Exposed weathered rock predominates at the front (north end) of the on flat platform. Soil types are considered low to medium plastic clay silts of estimated low reactivity (ie Class S type foundation reactivity).

Exposed cut batters were inspected and logged for rock type, weathering, and orientation of bedding planes and discontinuities. Exposed rock was mainly distinctly weathered arenite/argillite? Orientation of bedding planes are generally steeply dipping in a westerly to south westerly direction (ie approximately 60-80°/220°). Rock strength was estimated to be very low to low. No water seepage was observed at the exposed batter face(s) though conditions may vary during wet seasons.

DCP test results indicate firm to dense conditions, and tests met with refusal when encountering denser weathered rock at depth.

Refer report CS7524/05 for borehole logs and DCP test details, and Figure 2 for test locations.

6.3. Slope Stability/Risk Assessment.

Slope stability of the site was assessed from existing site performance and potential impacts of the proposed development. Stability of the flat platform area

is considered likely stable at the north to the centre of the platform but less stable near the south crest and down-slope of the crest. North (front) cut batters at the existing driveway are considered stable.

The orientation of bedding planes to the southern hill-slope is considered partially unfavourable for stability due to steeply dipping bedding planes inclined sub-parallel and oriented down-slope. Poor vegetation cover below the crest of the hill-slope is considered unfavourable for slope stability.

Some instability was observed at the hill-slope crest and down-slope of the crest from a debris slide. Regression of the batter crest is to be expected over time due to the combination of the slope steepness, runoff scour and erosion.

All hill-slope sites carry risks to the owner and/or resident in regard to site stability and consequences to property. This site has been assessed to pose the following potential instability risks to property:

Potential debris slides at the crest and down-slope below crest;
Considered `Likely' to occur under adverse conditions* and
Considered `Minor' consequences to down-slope allotment; Risk -`Moderate'.
Considered `Medium' consequences to proposed house on Lot 26 if founded near crest; Risk -`High'.

Refer attached `Appendix G' AGS Sub-committee March 2000; for details of likelihood and risk descriptors.

* adverse conditions for this site would most likely be sustained heavy rain.

The client/owner will need to accept these risks when developing this site or reduce risks by implementing engineering solutions, site management during construction, site maintenance and/or protective measures (refer section 8 of this report). It shall be noted that risk to the down-slope allotment (Lot 22) may change if/or when development occurs on this allotment. Risk to the Lot 26 proposed house can be reduced by siting the house further away from the crest.

7. *Site Suitability.*

The building site (platform area) can be considered suitable for residential development but will require engineering solutions to minimise potential hill-slope instability, siting house away from the hill-slope crest, and good hill-slope engineering and construction practices for long term suitability. Site suitability shall be constrained to the flat platform area and no closer than 6m from the existing hill-slope crest. Existing access driveway can be considered suitable for residential use.

8. *Engineering Comments.*

8.1. *Site Foundation Classification.*

The proposed residential building site located on the flat platform is classified Class S in accordance with AS2870 'Residential Slabs and Footings' for footing design purposes. Allowable bearing pressures shall be limited top 100kPa for strip/pad footings and 50 kPa for slabs. This site classification does not apply for any footing located on any hill-slope or within 6m north of the slope crest. For proposed house length >25m, footings shall be designed by a professional engineer using engineering principles. Partial rock foundation should be allowed for in footing design due to potential rock weathering variation.

8.2. *Site Recommendations.*

The proposed building site (platform area) shall implement the following to improve long-term suitability:

- Provide runoff drainage of the building platform and divert via concrete lined spoon drains to a legal discharge point to the north (not to the south hill-slope).
- Provide crest and immediate down-slope surface with protection to minimise erosion and instability of crest edges (eg. sprayed concrete or vegetation and matting).
- Preserve all hill-slope vegetation and revegetate below crest using suitable species and methods that aid surface stability.

The proposed access driveway shall implement the following to improve long-term suitability:

- Provide concrete lines spoon drains at cut batter toes (including any intermediate berms) and above cut batter crests discharging to a suitable point where scour damage is avoided.
- Provide pavement and seal to driveway (ie concrete or asphalt on road base).

Other site issues which should be addressed include:

- Options for stabilisation methods and/or engineering solutions to reduce any potential instability zones monitored during and after construction.
- Long term site maintenance of the site by clearing drains of any debris.
- Monitoring site and slope condition by a professional engineer following wet season rains.
- Provision for drainage of slope stabilisation methods (eg weep holes for sprayed concrete and free draining matting).

9. *Foundation Maintenance/Remarks.*

Ongoing foundation maintenance is always essential for the durability and stability of the footings and foundation and the appropriate required maintenance is described in AS 2870 'Residential Slabs and Footings'. Briefly, however, it is advised to keep away from the footings/foundation all water taps, gardens and trees, and provide adequate compaction of loose ground around the outside of the footing perimeter. Rainwater/water should not be allowed to pond against the perimeter of the footings/foundations. Foundation maintenance should follow with the guidelines as set out in CSIRO 10-91 'A Guide to Home Owners on Foundation Maintenance and Footing Performance'.

10. *Limitations of Report.*

This report is based on the scope and purpose of the assessment undertaken. Interpolation was used to give soil parameters for areas not specifically tested. If during any phase of the building development ground profile conditions revealed differ or vary from those described in this report, our office or suitably qualified personnel should be contacted.

Stability comments are based on a qualitative assessment of site conditions including stability performance of nearby properties. Site stability does not account for leaking or broken pipes and uncontrolled and/or concentrated runoff. Likelihood and risk cannot predict consequences to property structures that currently are not proposed or do not exist (ie Lot 22).

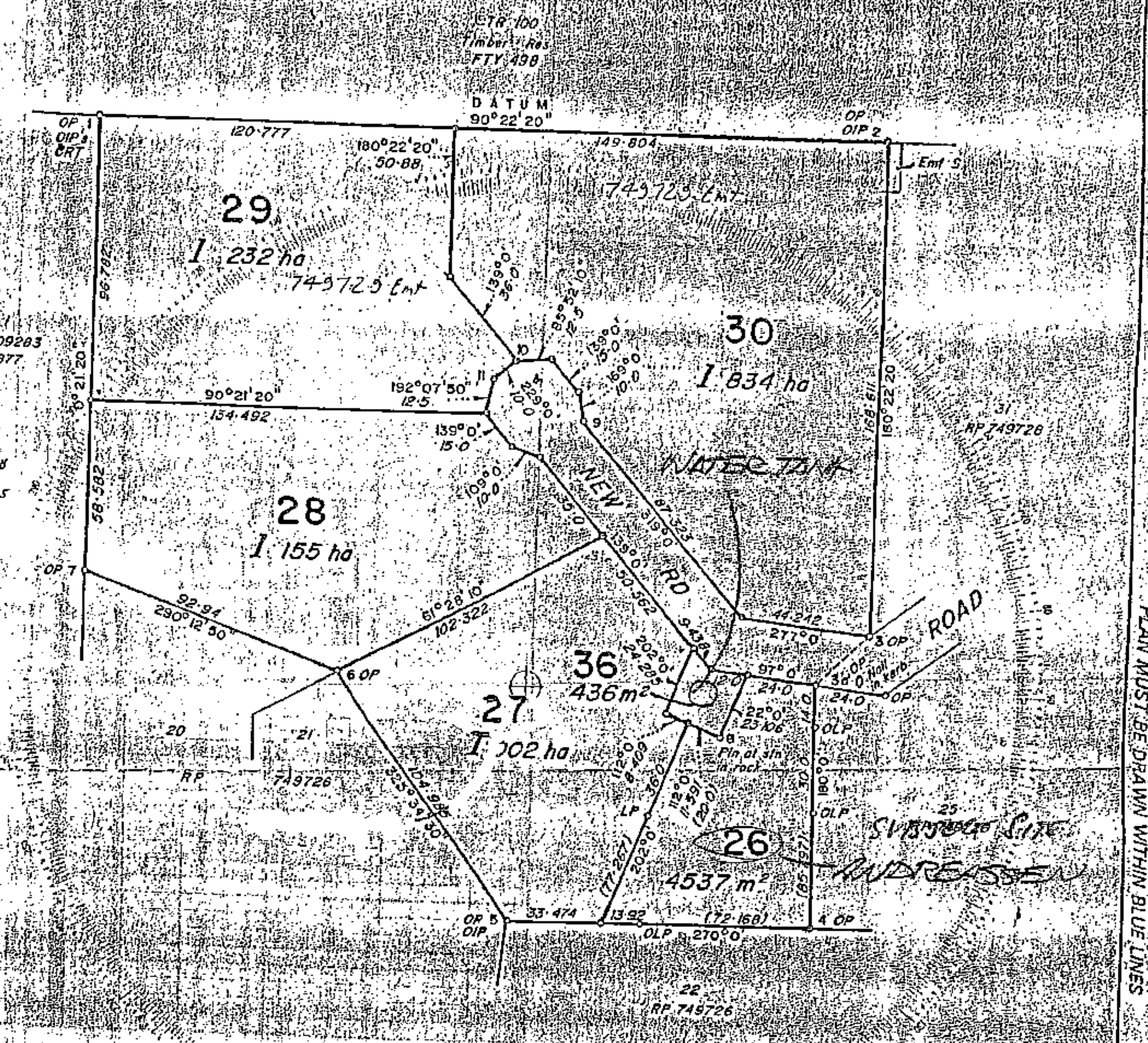
The client and residents of the site shall need to accept and tolerate a level of risk when developing and dwelling on hill slope sites. The comments made in this report aim to present the existing risk, and also offers actions to minimise this risk to a level acceptable or tolerable to the client. The acceptance or toleration of risk is the owners' responsibility to make.

This report is provided for the client and relevant consultants. The information provided shall not be used by others as findings may not be relevant.

Yours faithfully
Construction Soiltest Pty Ltd

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

WARNING - FOLDING OR MUTILATING WILL LEAD TO REJECTION - PLAN MAY BE ROLLED



REFERENCE MARKS

STN	TO	BEARING	DIST
1	OIP	177°40'	2·335
	OIP	153°0'	6·98
	ORT	122°30'	9·435
2	OIP	270°22'20"	16·0
3a	O Nail in kerb	3°26'	5·605
5	OIP	270°0'	1·005
10	Nail in kerb	158°02'	6·265
	Pin	135°27'	1·195
11	Nail in kerb	112°0'	7·29

TRAVERSES

LINE	BEARING	DIST
3 - 3a	225°31'10"	25·562

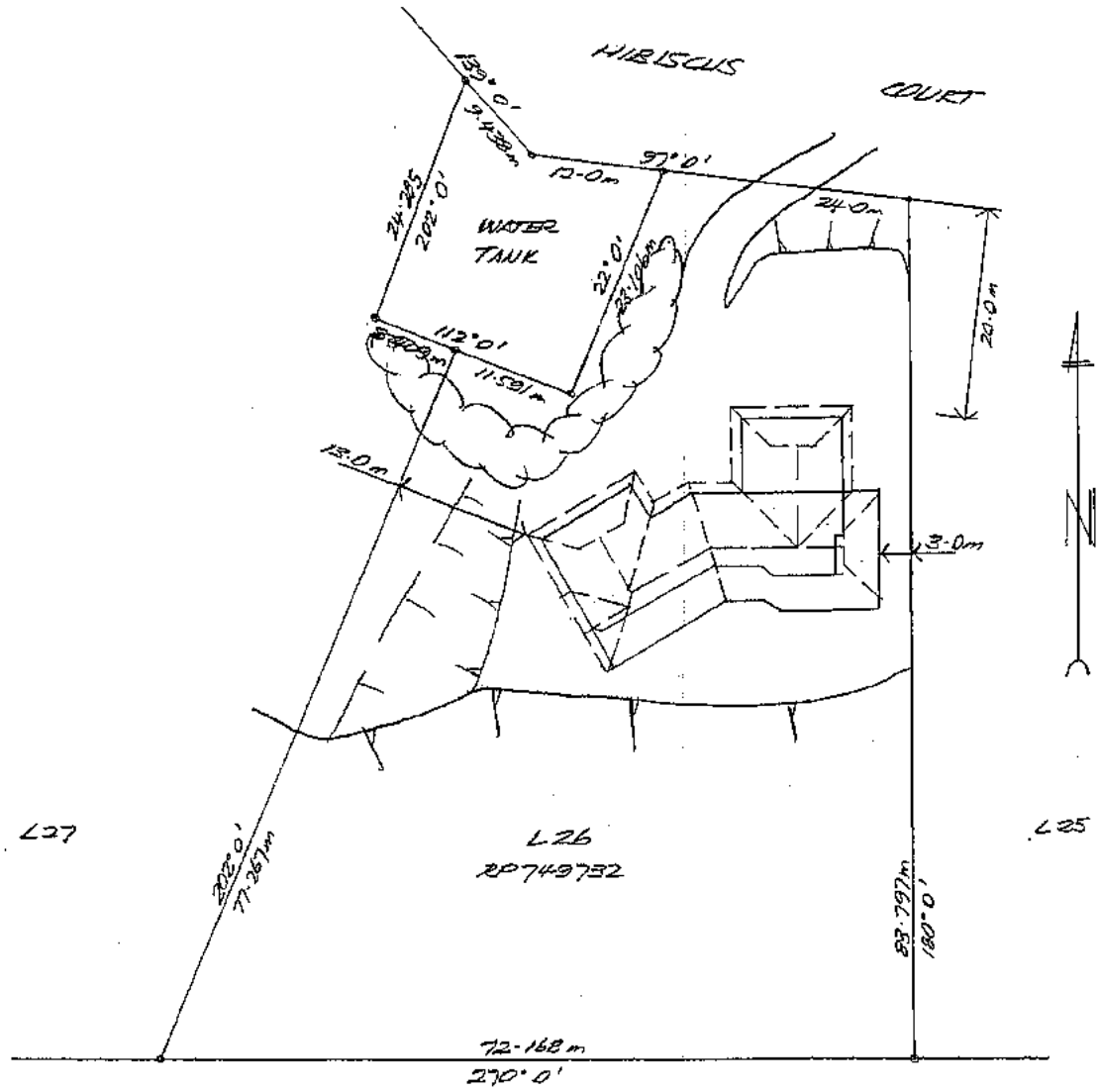
PERMANENT MARKS

PM	BEARING	DIST	No
9 - PM	212°40'	6·085	100469

AREA OF NEW ROAD
3442 m²

PLAN MUST BE DRAWN WITHIN BLUE LINES

FIELD NOTES LODGED	
ORIGINAL GRANT 13200 Por 14V	PLAN OF Lots 26 - 30 & 36 cancelling the balance of Lot 1 on RP 748300
ORIG. PORTION 14V	TOWN
PARISH WHYANBEEL	COUNTY Solander
PROCLAIMED SURVEY AREA	SURVEYED BY J M SCRIVEN 21 / 12 / 89
MERIDIAN RP 748300	SCALE 1 : 1500
REGISTERED PLAN 749732	



SITE PLAN 1:500

CONSTRUCTION DOCUMENT P/L

LOT 26 HIBISCUS CRT.
ROCKY POINT.

FIGURE 1B

JN 05478

10-06-05

AND 01

PROPOSED RESIDENCE
FOR C & G ANDREASSEN
14 HIBISCUS COURT
ROCKY POINT

GREG SKYRING
Design and DRAFTING Pty. Ltd.
Lic. Under QBSA Act 1991 – No 65264
11 Noli Close
MOSSMAN Q. 4873
Phone/Fax: (07) 40982061
Mobile: 0419 212652
Email: skyrdesign@cyberworld.net.au

Construction Soiltest Pty Ltd A.B.N. 90 054 339 883
Materials Testing and Geotechnical Services
7 Barry Street, Westcourt, PO Box 2234 Cairns Ph 07 4041 4577 Fax 07 4041 4399 e-mail: consoil@bigpond.com

13 October 2005

Job No: G5478

Lot 26 (No 14) Hibiscus Court Rocky Point
For
C & G Andreassen

Field Borehole Log

Date: 16/9/05 Logged by: PP/WM Plant: 100mm auger

Pit No: AH-1 Location: Building platform see sketch.

Depth (m)	Description of subsoil
GL	Stripped surface at GL. CL/CH. Extremely weathered rock. Mauve brown clayey silt/silty clay. Slightly moist. Medium plasticity.
0.6	CL/CH. Distinctly weathered rock. Mauve brown clayey silt/silty clay.
0.7	Auger refusal. No groundwater encountered.

Signatory: P.A. Posar P.A. Posar Date: 21/10/05

Construction Soiltest Pty Ltd A.B.N. 90 054 339 883
Materials Testing and Geotechnical Services
7 Barry Street, Westcourt, PO Box 2234 Cairns Ph 07 4041 4577 Fax 07 4041 4399 e-mail: consoil@bigpond.com

13 October 2005

Job No: G5478

Lot 26 (No 14) Hibiscus Court Rocky Point
For
C & G Andreassen

Field Borehole Log

Date: 16/9/05 Logged by: PP/WM Plant: 100mm auger

Pit No: AH-2 Location: Building platform see sketch

Depth (m)	Description of subsoil
GL	Stripped surface at GL. CL/CH. Distinctly weathered rock. Mauve brown clayey silt/silty clay.
0.4	Auger refusal. No groundwater encountered.

Signatory: P.A. Posar P.A. Posar Date: 21/10/05

Construction Soiltest Pty Ltd A.B.N. 90 054 339 883
Materials Testing and Geotechnical Services
7 Barry Street, Westcourt, PO Box 2234 Cairns Ph 07 4041 4577 Fax 07 4041 4399 e-mail: consoil@bigpond.com

13 October 2005

Job No: G5478

Lot 26 (No 14) Hibiscus Court Rocky Point
For
C & G Andreassen

Field Exposure Log

Date: 29/9/05 Logged by: PP Plant: Visual

Pit No: EX-1 & EX2 Location: See sketch

Depth (m)	Description of subsoil

EX-1.
Driveway cut batter, east side.
Exposed distinctly weathered rock.
Bedding planes dip 70°/220°.

EX-2.
Lot 22 front boundary exposure.
Approximately 0.5m colluvium overlying residual to distinctly weathered rock.
Distinctly weathered rock at west end; to residual silty clay to extremely weathered rock at east end.

Signatory: P.A. Posar P.A. Posar Date: 21/10/05

CONSTRUCTION SOILTEST PTY LTD
ABN 90 054-339-883 PO Box 2234 Cairns Ph: 4041 4577

Job Name: Lot 26 (No 14) Hibiscus Court
Job Location: Rocky Point
Client: C & G Andreassen

REPORT ON PENETRATION RESISTANCE OF SOIL

Tested By: WM/PP Date Tested: 16/9/05 Date of Report: 13/10/05 Job Number: G5478

Depth Below GL (m)	Blows per 0.1m	Test Location: P1/AH1 See Sketch (Borehole by 100mm hand auger) Description of Subsoil	Depth Below GL (m)	Blows per 0.1m	Test Location: P2 See Sketch Description of Subsoil	Depth Below GL (m)	Blows per 0.1m	Test Location: P3 See Sketch (Borehole by 100mm hand auger) Description of Subsoil
0.05	Seat	GL. Stripped surface.	0.05	Seat		0.05	Seat	GL. Stripped surface.
0.15	2	CL/CH. Extremely weathered rock.	0.15	4		0.15	3	CL/CH. Distinctly weathered rock.
0.25	2	Mauve brown clayey silt/silty clay.	0.25	7		0.25	3	Mauve brown clayey silt/silty clay.
0.35	4	Slightly moist. Medium plasticity.	0.35	REF		0.35	2	
0.45	7		0.45			0.45	3	
0.55	6		0.55			0.55	8	0.4m
0.65	12		0.65			0.65	10	Auger refusal.
0.75	15	0.6m	0.75			0.75	11	No groundwater encountered.
0.85	9	CL/CH. Distinctly weathered rock.	0.85			0.85	9	
0.95	9	Mauve brown clayey silt/silty clay.	0.95			0.95	9	
1.05	11		1.05			1.05	15	
1.15	10		1.15			1.15	11	
1.25	10	0.7m	1.25			1.25	9	
1.35	10	Auger refusal.	1.35			1.35	9	
1.45		No groundwater encountered.	1.45			1.45		
1.55			1.55			1.55		
1.65			1.65			1.65		
1.75			1.75			1.75		
1.85			1.85			1.85		
1.95			1.95			1.95		
2.05			2.05			2.05		
2.15			2.15			2.15		
2.25			2.25			2.25		
2.35			2.35			2.35		
2.45			2.45			2.45		
2.55			2.55			2.55		

Approved Signatory: P.A. Posar P. Posar Date of Issue: 21/10/05

Dynamic cone penetrometer tested in accordance with AS 1289. 6.3.2

Report AR111A July 2002

CONSTRUCTION SOILTEST PTY LTD
ABN 90 054-339-883 PO Box 2234 Cairns Ph: 4041 4577

Job Name: Lot 26 (No 14) Hibiscus Court
Job Location: Rocky Point
Client: C & G Andreassen

REPORT ON PENETRATION RESISTANCE OF SOIL

Tested By: WM/PP Date Tested: 16/9/05 Date of Report: 13/10/05 Job Number: G5478

Depth Below GL (m)	Blows per 0.1m	Test Location: P4 See Sketch Description of Subsoil	Depth Below GL (m)	Blows per 0.1m	Test Location: Description of Subsoil	Depth Below GL (m)	Blows per 0.1m	Test Location: Description of Subsoil
0.05	Seat		0.05			0.05		
0.15	3		0.15			0.15		
0.25	10		0.25			0.25		
0.35	11		0.35			0.35		
0.45	REF		0.45			0.45		
0.55			0.55			0.55		
0.65			0.65			0.65		
0.75			0.75			0.75		
0.85			0.85			0.85		
0.95			0.95			0.95		
1.05			1.05			1.05		
1.15			1.15			1.15		
1.25			1.25			1.25		
1.35			1.35			1.35		
1.45			1.45			1.45		
1.55			1.55			1.55		
1.65			1.65			1.65		
1.75			1.75			1.75		
1.85			1.85			1.85		
1.95			1.95			1.95		
2.05			2.05			2.05		
2.15			2.15			2.15		
2.25			2.25			2.25		
2.35			2.35			2.35		
2.45			2.45			2.45		
2.55			2.55			2.55		

Approved Signatory: P.A. Posar P. A Posar Date of Issue: 21/10/05

Dynamic cone penetrometer tested in accordance with AS 1289. 6.3.2

Report AR111A July 2002

ZAMMATARO PLUMBING PTY LTD
8 THERESE CL
MOSSMAN 4873
PH: 981 744
FAX: 981 042

D.S.C copy

ON SITE SEWERAGE FACILITY
SITE AND SOIL EVALUATION REPORT

A: SITE EVALUATOR

Name: Anthony Zammataro

Signature: _____ Date: 8st September 05

B: SITE INFORMATION (desk-top evaluation)

Location Details,

Locality 14 Hibiscus Court Rocky point

Owner: C + G Andreassen

Phone 40988285

Survey Plan Details:RP 749732 Lot No: 26

Local Government: Parish: Whyanbeel County: Solander

Site Plan Details Attached, Ref. No. Or Description: Removal **Residence, Site plan attached**

Soil Type from Soil Maps etc: N/A

Climate

Annual Rainfall: **2013** mm Annual Potential Evapotranspiration: **2239** mm

Intended Water Supply Source:

Town Water Supply ***** Rainwater (Roof Collection)

Dam Bore/Well (Irrigation Only)

Other

SITE AND SOIL EVALUATION REPORT

C: SITE ASSESSMENT

Topography

Slope: **Level Building Platform, Big sloping site after that**

Ground Cover: No

Geology: **N/A**

Drainage Patterns: (Site Plan details attached) **N\A**

Available Clearances: (Site Plan details attached

Boundaries: **Within reguired distances**

Wells, Bores: N/A

Embankments: Not in disposal areas

Stands of Trees, Not in disposal areas

Buildings: **2 Meters**

Other: _____

Site History (Land Use): **Unknown**

Environmental Concerns: **Steep slope 4 metres away for disposal areas**

Site Stability:

Is expert Evaluation Necessary? ~~Yes~~ / No

If yes, attach stability report and give details here of:

Author: _____ Designation: _____

Company: _____ Date: _____

Drainage Controls

Depth of Seasonal water table: Records not avails. (Taken it is over 1.8m)

WINTER: Records not avail. SUMMER: Records not avail.

Need for groundwater cut-off drains? ~~Yes~~ / No

Need for surface water collection / cut-off drains? ~~Yes~~ / No

Availability of Reserve / Setback Areas

Reserve Area available for disposal: 100 % of design area:

Setback area: 100 %
(between site development and on-site disposal design reserve areas % of total area)

Evaluator's Photographs attached ~~Yes~~ / No

SITE AND SOIL EVALUATION REPORT

D: SUBSOIL INVESTIGATION

Soil Profile Determination

Method: Falling Water ✳

Test Pit □

Other ✳ **Soil Texture Test \ Soil Classification Test**

Report:

Estimated Soil Category:

Soil Category	Description	Tick One
1.	Gravels and Sand	
2	Sandy Loams	
3	Loams	
4.	Clay Loams	*****
5	Light Clays	
6.	Medium to Heavy Clays	

Reasons for placing in Stated Soil Category: **On Site Test**

Reasons for Design Loading Rate (DLR) recommendation: **Based on Test and have assumed LTAR of 30 from AS 1547:2000**

General Comments

Need for Groundwater Quality Protection: Yes / ~~No~~

Type of Land Application Facility considered best suited to site. Secondary treatment plant to conventional bed as per A.S 1547 Fig. 4.5A5

Evaluator's preliminary assessment of minimum Land Application Area for the site:

36m²

Estimated Daily Flow: **Based on a 4 bed home = 6 people x 180 litres per day = 1080 litres**

Design Considerations: **Town water supply**

Consultation with other parties:

Neighbours	Local Environment Groups	
Environment Agencies	Not Applicable	✳
Report Attached	Yes / No	

DISPOSAL SYSTEMS for EFFLUENT from DOMESTIC PREMISES A.S 1547-2000
SIZING OF DISPOSAL AREA CALCULATIONS
(Primary effluent)

1. ABSORPTION AREA OR TRENCH

Aw = Q / DLR

Aw = wetted area in square meters
Q = daily flow in litres
DLR = long term acceptance rate in litres per day

Aw = (4 bedroom = 6persons x 180 lit per person per day) / 10

Aw = 1080 / 10

Aw = 108m^2 of wetted area required

2. LEGTH OF TRENCH

L = Aw / B

L = trench length in meters
Aw = wetted area in square meters
B = trench width in meters

L = 108 / 0.6

L = 180 meters of 600mm wide x 600mm deep absorption trench.

3. CONCLUSION

Area is unavailable on-site for this amount of absorption trench. Or bed

DISPOSAL SYSTEMS for EFFLUENT from DOMESTIC PREMISES A.S 1547-2000
SIZING OF DISPOSAL AREA CALCULATIONS

1. IRRIGATION AREA

Ai = Qw / DIR

Ai = irrigation area required
Qw = quantity of effluent generated per week in litres
DIR = design irrigation rate in millimetres per week

Ai = 7 x 1080 / 25

Ai = 7560/ 25

Ai = 300m² of landscaped irrigation area.

2. CONCLUSION

Area is not unavailable on-site for this amount of irrigation

DISPOSAL SYSTEMS for EFFLUENT from DOMESTIC PREMISES A.S 1547-2000

SIZING OF DISPOSAL AREA CALCULATIONS
(Secondary treatment)

1. ABSORPTION AREA OR TRENCH

Aw = Q / DLR

Aw = wetted area in square meters
Q = daily flow in litres
DLR = long term acceptance rate in litres per day

Aw = (4 bedroom = 6 persons x 180 lit per person per day) / 30

Aw = 1080/ 30

Aw = 36m² of wetted area required

3. LEGTH OF TRENCH

L = Aw / B

L = trench length in meters
Aw = wetted area in square meters
B = trench width in meters

L = 36 / 0.6

L = 60 meters of 600mm wide x 500mm deep absorption trench.

3. CONCLUSION

Area is unavailable on-site for this amount of absorption trench. But have available area for bed This is the recommended on site sewerage facilility

This Calculation is based on Table 4.2A1 on page 116 of AS 1547.2002, using Secondary Treated Effluent with a DLR of 30

SUITABLE VEGETATION FOR WET SOILS

(Informative)

TYPES OF VEGETATION

(a) CLIMBERS

Bougainvillea
Hardenbergia
Hibbertia Scandens
Kennedia
Lonicera Japonica
Pandorea Jasminoides

(b) GRASSES

Buffalo
Kikuyu

(c) GROUND COVER

Acanthus Mollis
Coprosma X Kirki
Grevillea Poorinda
Liriope Muscari
Ophiopogon
Royal Mantle

(d) PERENNIALS

Agapanthus Preaecox
Astor Novi-Belgii
Canna X Generalis
Chrysanthemum Maximum
Gazania X Hybrida
Salvia X Superba
Stokesia Laevis
Viola Hederacea

(e) SHRUBS

Abelia X Grandiflora
Acacia Longifolia
Callistemon Citrinus
Cassia Bicapsularis
Ceratostigma
Chaenomeles Lagenaria
Correa Alba
Cotoneaster Glaucophyllus
Cotoneaster Lacteus
Cotoneaster Pannosus
Caphea Ignea
Euonymus Japonicus
Euphorbia Millii
Euphorbia Pulcherrima
Hebe Speciosa
Jasminum Mesnyi
Jasminum Officinale
Jasminum Polyanthum
Lantana Camara
Lantana Montevidensis
Leptospermum Flavescens
Narium Oleander
Plumbago Auriculate
Pyracantha Fortuneana
Thunbergia Alata
Westringia Fruticosa

(f) TREES

Angophora Costata
Banksia Integrifolia
Callistemon Salignus
Callistemon Viminalis
Casuarina Glauca
Casuarina Stricta
Eucalyptus Botryoides
Eucalyptus Robusta
Hakea Salicifolia
Hakea Saligna
Leptospermum Laevigatum
Leptospermum Petersonii
Melaleuca Armillaris – Sandy Soil
Melaleuca Linariifolia – Clay Soil
Melaleuca Quinquenervia – Sandy Soil
Melaleuca Styphelioides – Clay Soil
Nyssa Sylvatica
Photinea X Frasieri 'Robusta'
Tristaniopsis Laurina

All vegetation should be checked with Local Authorities and Nurseries prior to installation for suitability to each region.

NOTICE TO LAND OWNER

Your sanitary drainage installation consists of a septic tank and land application system. To ensure the operational effectiveness of this installation the following advise should be adhered to.

OPERATION AND MAINTENANCE:
GENERALLY

On-site sewerage treatment plants and the associated land application facilities are complex systems that are prone to failure if operated and maintained incorrectly. All on-site sewerage facilities require a high degree of user dedication in terms of operation and maintenance to ensure that the design performance of the facility is achieved for the expected life of the facility.

All on-site sewerage facilities or components of the facility have a finite life. For instance, septic tanks may have an expected life of 25 years. whilst the associated land application facility may have an expected life of 5 to 15 years depending on the nature of the specific site.

OPERATION & MAINTENANCE PROCEDURES

Operation and maintenance procedures are undertaken to a regular schedule appropriate to the nature and type of treatment and land application facility and in accordance with any manufacturers instructions; and
Continuity of operation and maintenance is achieved throughout changes of ownership and\or changes in use or development of the site.

OPERATION

Practice water conservation. and avoid exceeding the hydraulic capacity of the facility.

Minimise the input of cleaning agents, detergents, disinfectants, bleaches, alkalis, oil, petrol, acids, degreasers, photography chemicals, cosmetics. lotions, pesticides and herbicides into the facility.

Not place materials such as disposal nappies, female napkins, paper towels, cigarette butts, bones and coffee grounds into the facility.

Be observant regarding signs of unsatisfactory performance, including unusual odours, leaks from the facility or choking.

Contact the service agent following observation of unsatisfactory performance or breakdown.

Protect facility components from structural damage, such as from vehicles.

Be familiar with safety procedures.

Establish a time pattern of desludging.

Keep the area in the vicinity of the on-site sewerage facility tidy to facilitate ease of operation and maintenance.

Where appropriate, or required by a condition of approval, enter into an annual service contract with a service agent, and

Retain copies of all service reports.

SEPTIC TANKS

It is recommended that septic tanks be inspected at two yearly intervals. The inspection should include an assessment of the sludge and scum levels and checking of the outlet and inlet square junctions for blockages. Septic Tanks should be desludged when:

- The scum layer is within 100mm of the bottom of the inlet square junction or the sludge layer is within 200mm from the bottom of the inlet.
- The sludge occupies the basic allowance of the septic tank; or
- The sludge scum occupy two-thirds the volume of the tank (or first stage of a two stage system).

The desludging procedure should ensure that 400-500mm of liquid is retained in the tank, and that the tank is immediately refilled with water to the outlet level.

LAND APPLICATION SYSTEMS

Regular visual checking of correct system operation by households, and an annual inspection by service contractors should be undertaken. Signs of system failure include:

- Surface ponding and run-off of treated effluent;
- Degrading of soil structure (Sheet or Rill erosion, surface crusts, hard surface);
- Poor vegetation growth; and
- Unusual odours.

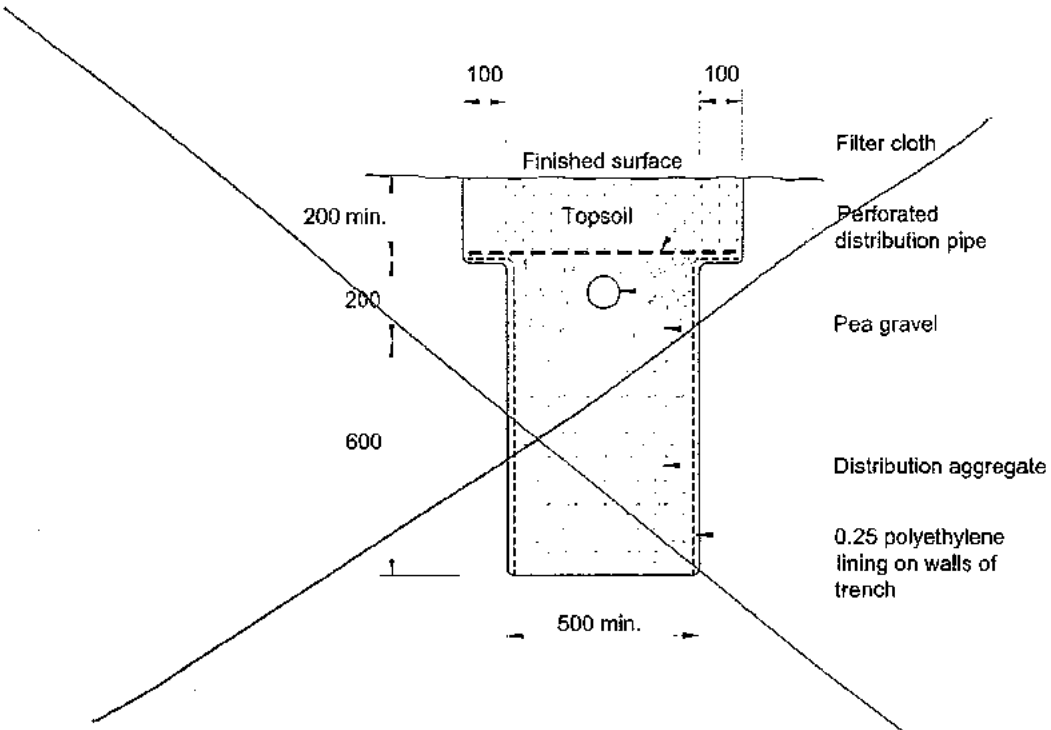


FIGURE 4.5A4 DISCHARGE CONTROL TRENCH FOR CATEGORY 1 SOIL

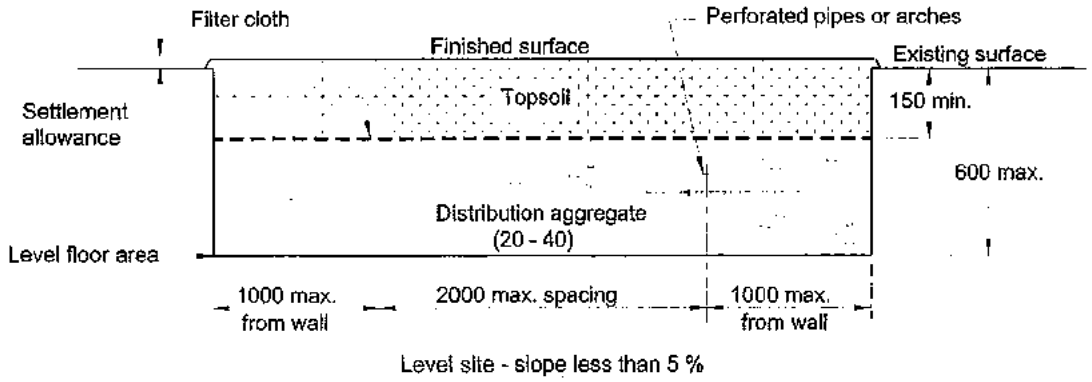
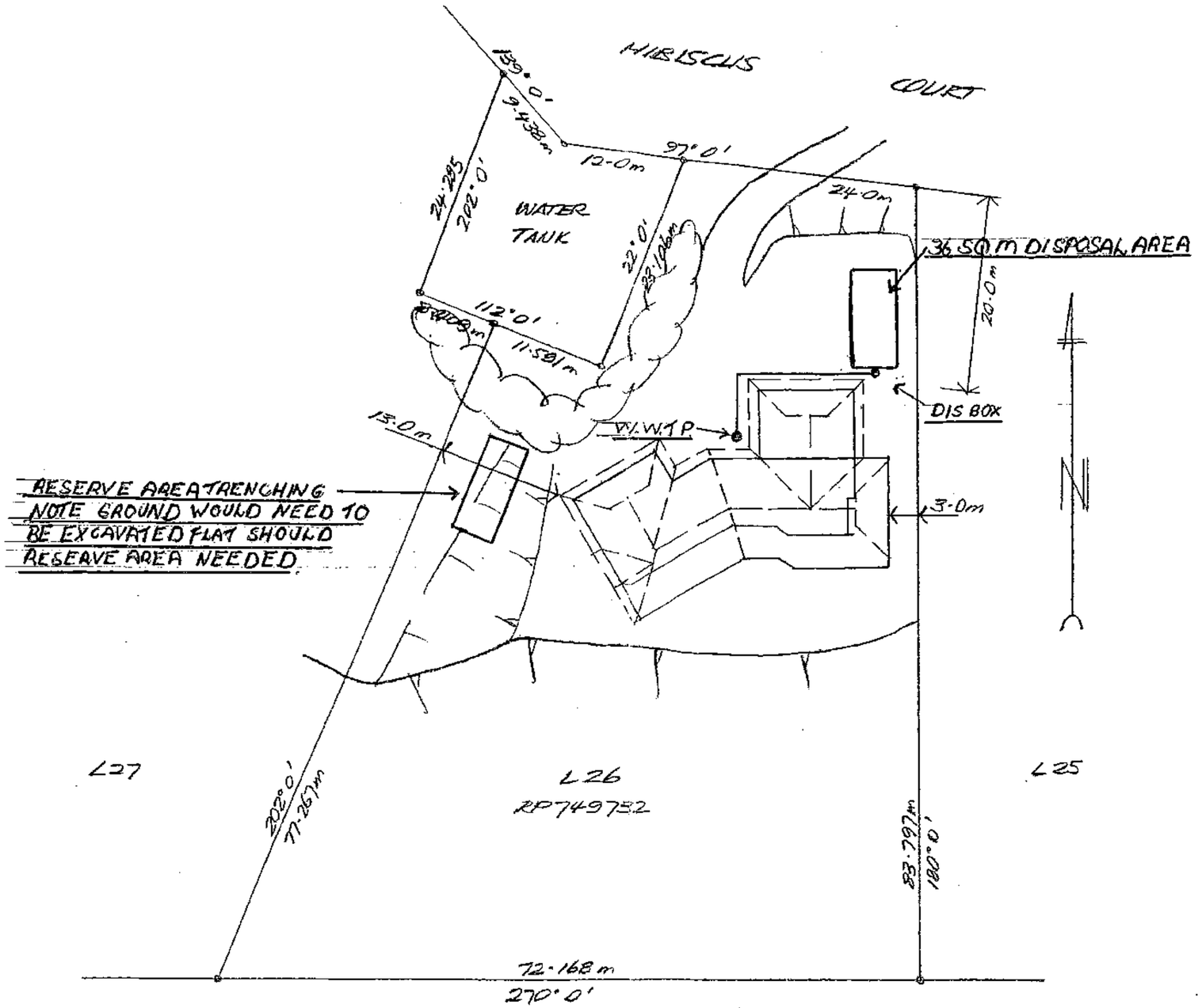


FIGURE 4.5A5 CONVENTIONAL BED



SITE PLAN 1:500

AND 01

10-06-05

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ROCKY POINT

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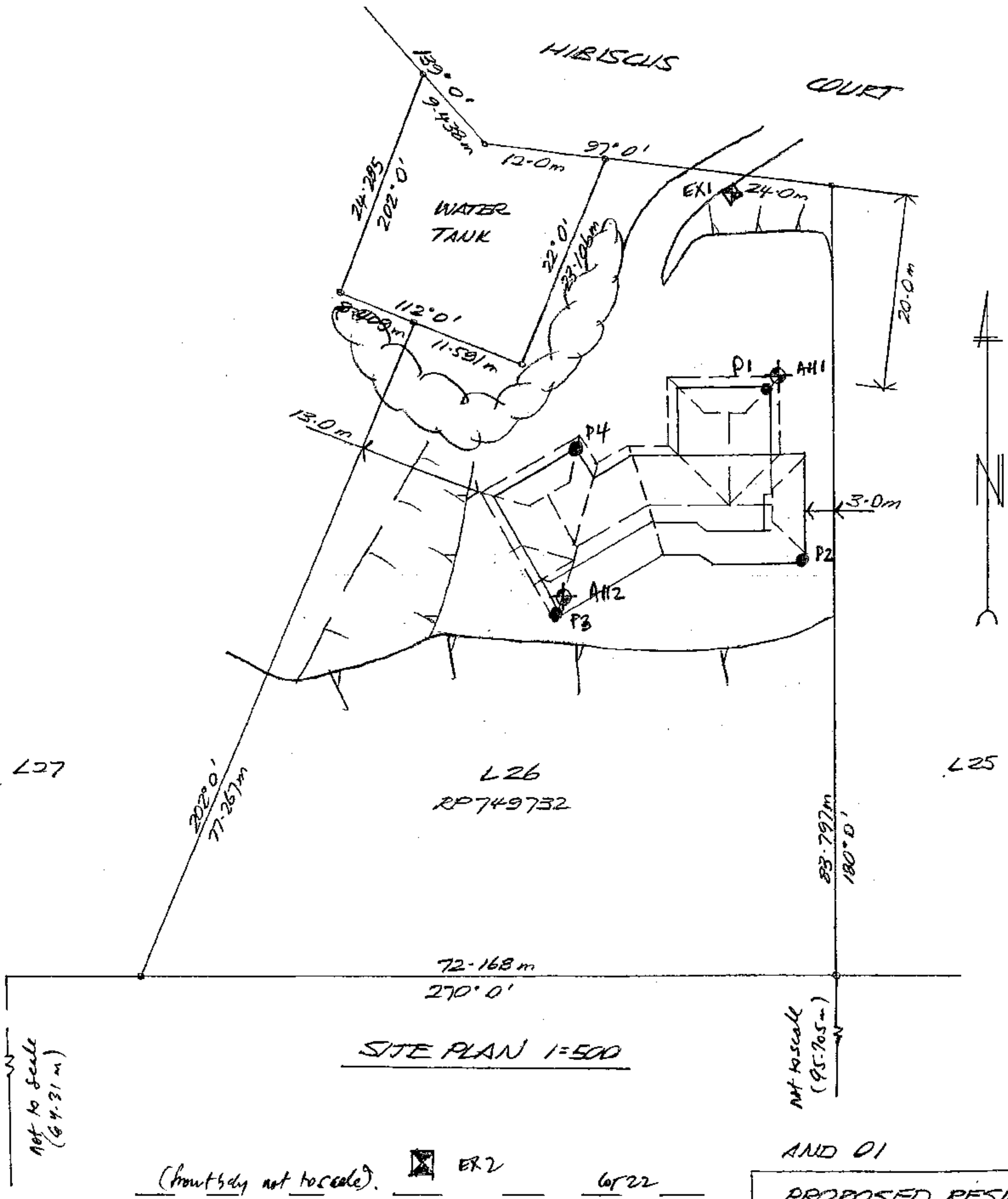

(frontsdy not to scale). EX2 Lot 22

Hibiscus Crt

Construction Geotest Pty Ltd

Lot 26 Hibiscus Crt
Rocky Point.

FIGURE 2 : J/N G5478

LOCATION OF TESTS

⊕ Denotes Borehole.

⊠ Denotes Exposure.

● Denotes DCP test.

AND 01

10-06-05

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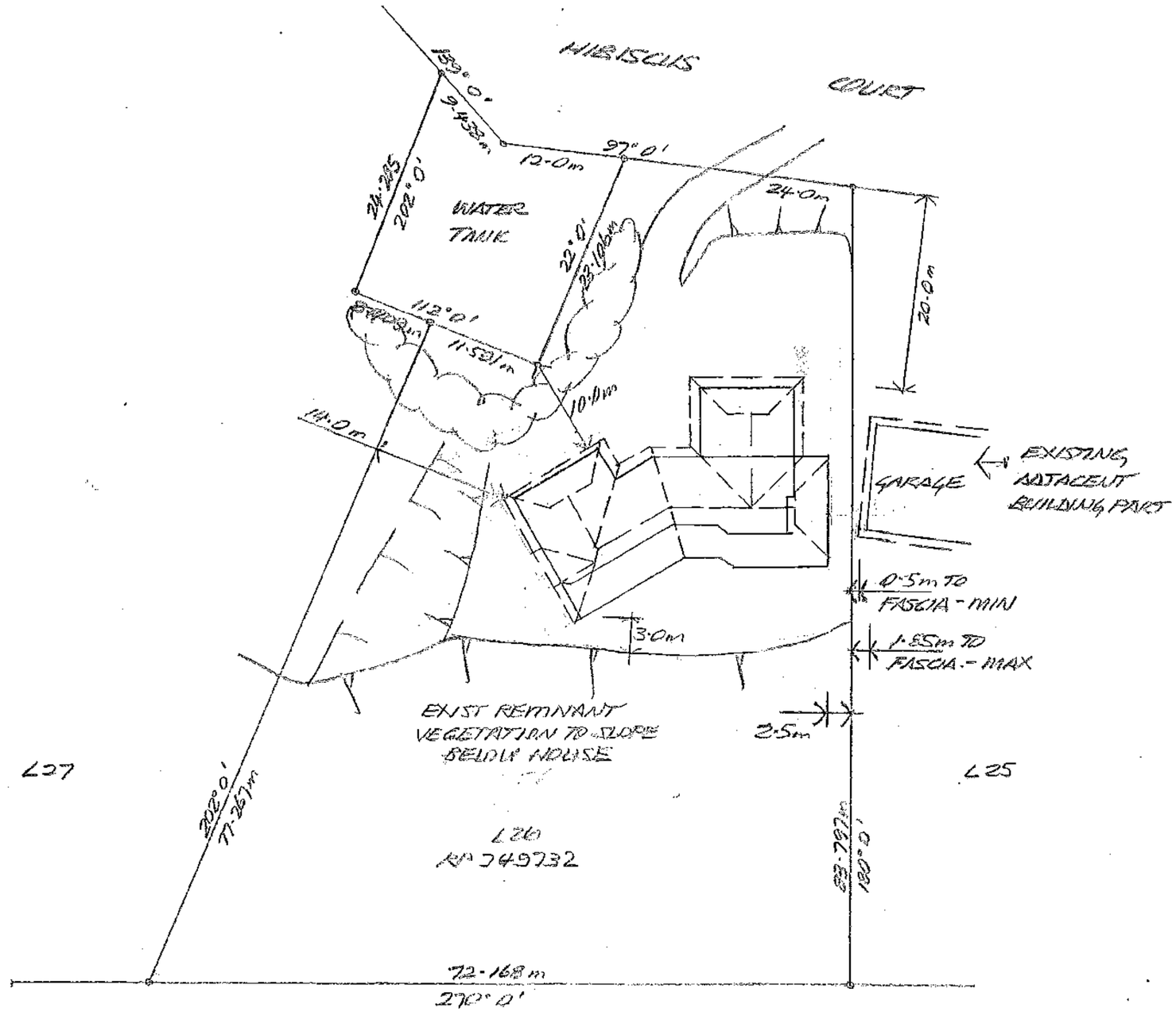

SITE PLAN 1:500

REV B 30-05-06
REV A 07-03-06
10-06-05

AND 01

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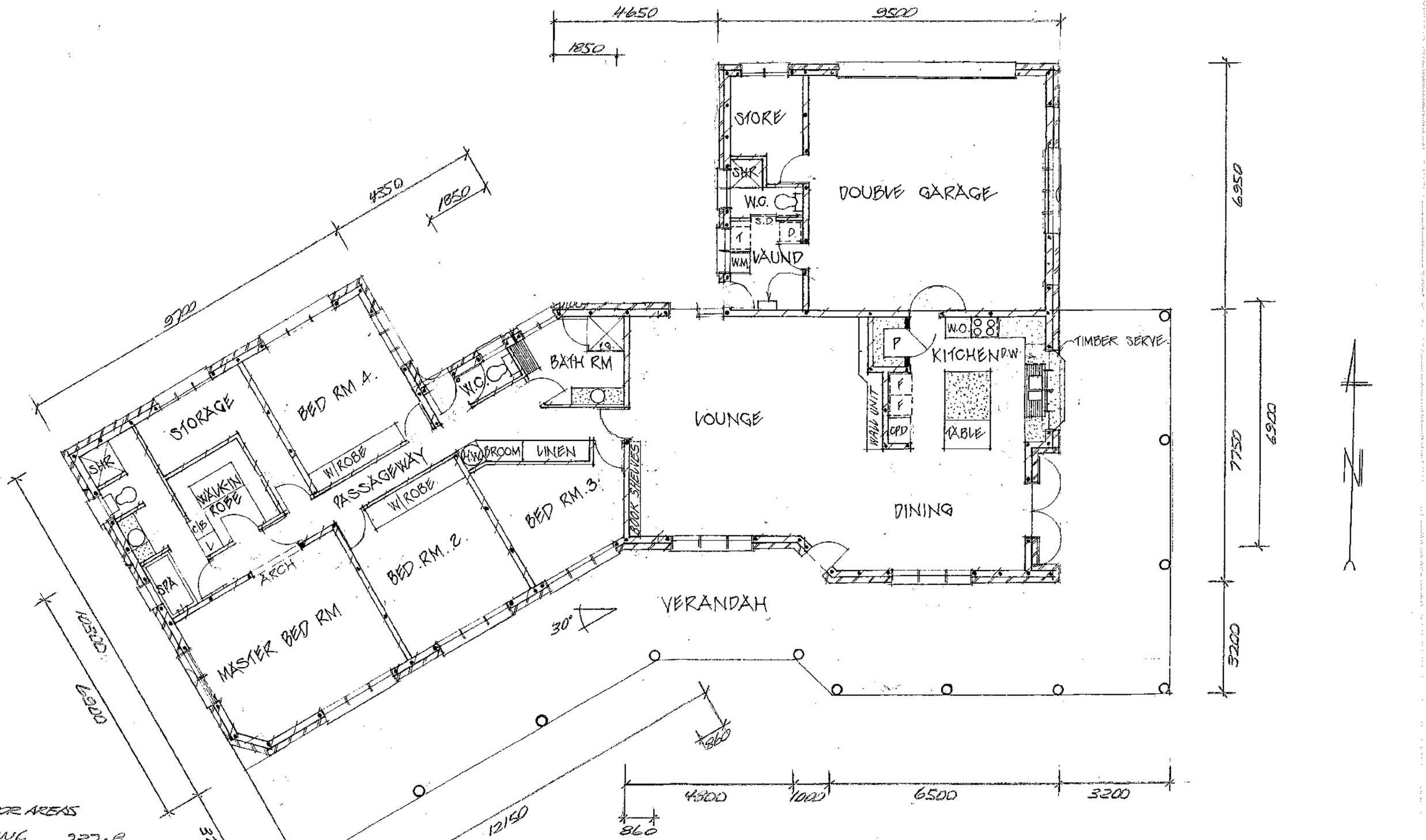

FLOOR AREAS

LIVING	237.8
GARAGE	50.0
PATIOS	110.5
TOTAL	398.3 m²

SPA = 296.1 m²

FLOOR PLAN 1:100

AND 02

10-06-05

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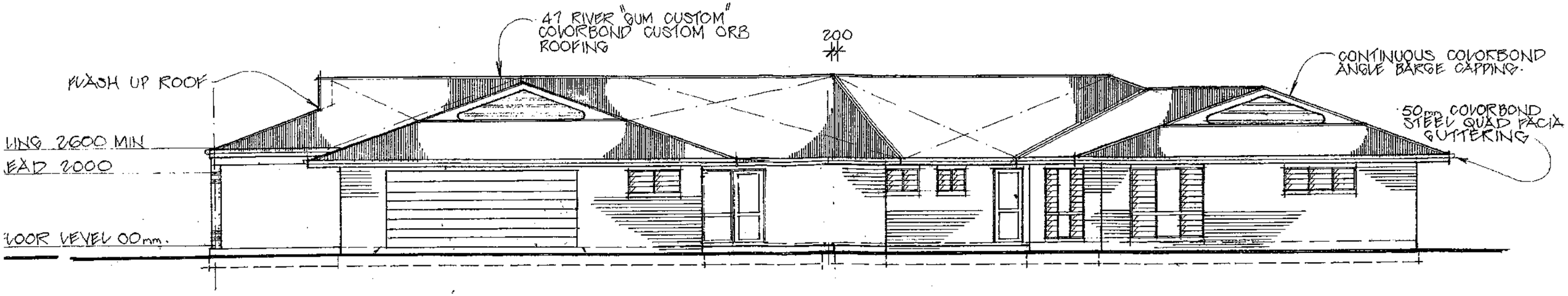
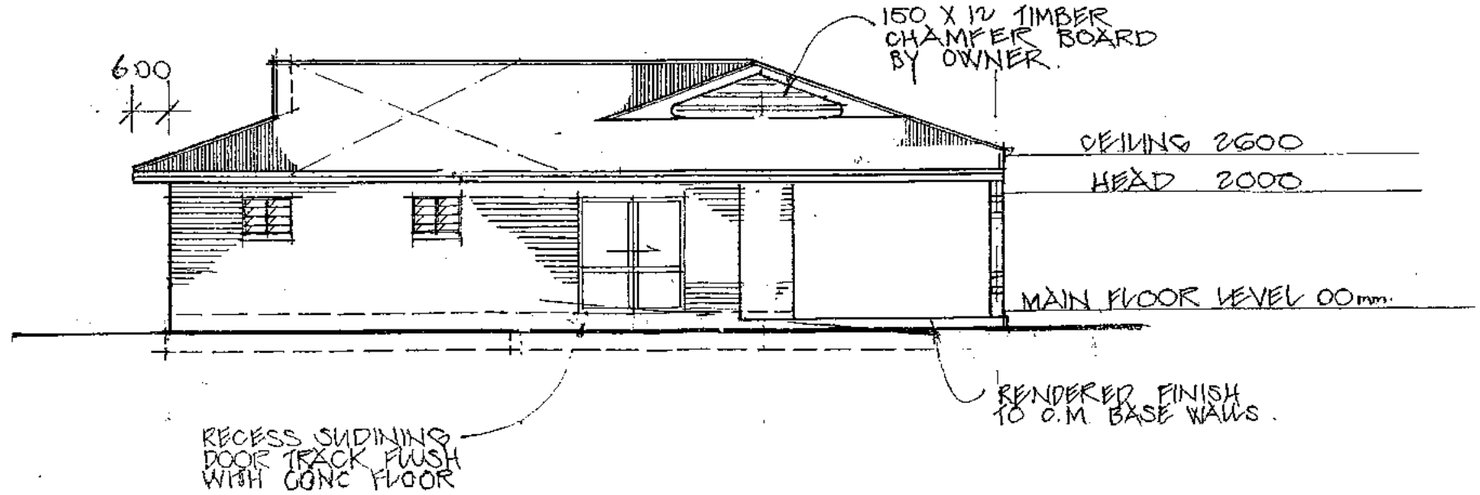


NORTH VIEW



WEST VIEW

AND 03

10-06-05

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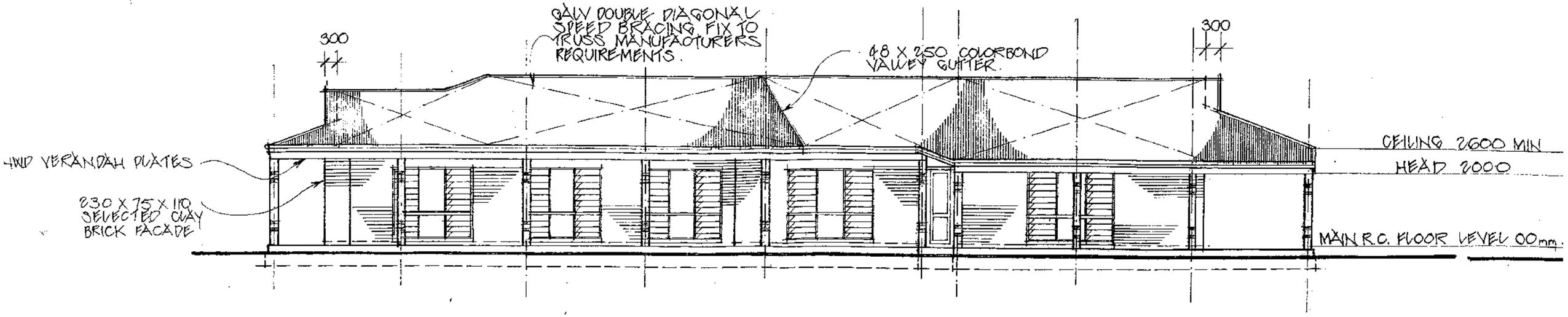
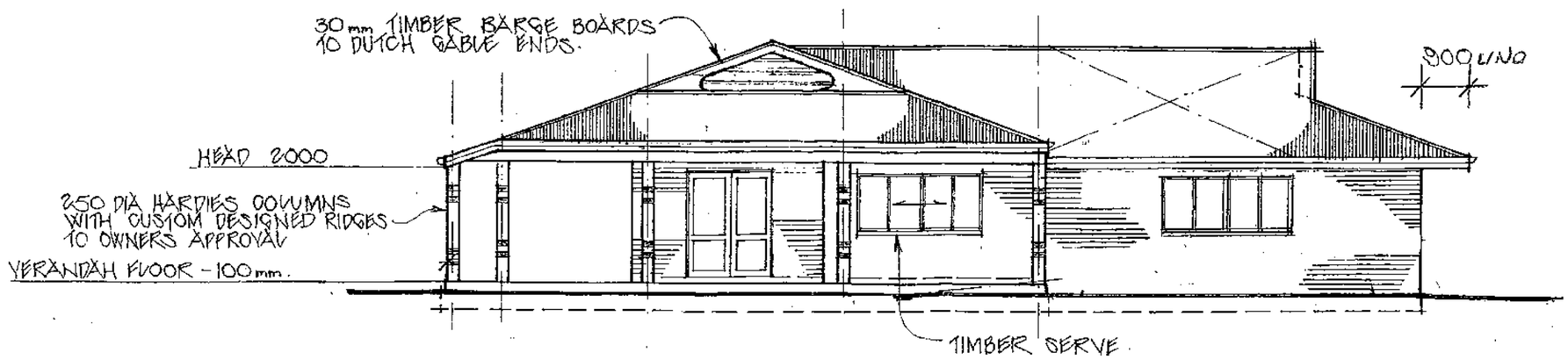


SOUTH VIEW



EAST VIEW SCALE 1:100

AND 04

10-06-05

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