GEOTECHNICAL RISK MANAGEMENT POLICY FOR PITTWATER
FORM NO. 1 – To be submitted with Development Application

Development Application for _____
Name of Applicant

Address of site 53 Samuel Street, Mona Vale

The following checklist covers the minimum requirements to be addressed in a Geotechnical Risk ***Declaration made by geotechnical engineer or engineering geologist or coastal engineer (where applicable) as part of a geotechnical report***

I, Ben White *on behalf of* White Geotechnical Group Pty Ltd
(Insert Name) (Trading or Company Name)

on this the 25/11/20 certify that I am a geotechnical engineer or engineering geologist or coastal engineer as defined by the Geotechnical Risk Management Policy for Pittwater - 2009 and I am authorised by the above organisation/company to issue this document and to certify that the organisation/company has a current professional indemnity policy of at least $10million.

I:
Please mark appropriate box

☒ have prepared the detailed Geotechnical Report referenced below in accordance with the Australia Geomechanics Society's Landslide Risk Management Guidelines (AGS 2007) and the Geotechnical Risk Management Policy for Pittwater - 2009

☒ am willing to technically verify that the detailed Geotechnical Report referenced below has been prepared in accordance with the Australian Geomechanics Society's Landslide Risk Management Guidelines (AGS 2007) and the Geotechnical Risk Management Policy for Pittwater - 2009

☐ have examined the site and the proposed development in detail and have carried out a risk assessment in accordance with Section 6.0 of the Geotechnical Risk Management Policy for Pittwater - 2009. I confirm that the results of the risk assessment for the proposed development are in compliance with the Geotechnical Risk Management Policy for Pittwater - 2009 and further detailed geotechnical reporting is not required for the subject site.

☐ have examined the site and the proposed development/alteration in detail and I am of the opinion that the Development Application only involves Minor Development/Alteration that does not require a Geotechnical Report or Risk Assessment and hence my Report is in accordance with the Geotechnical Risk Management Policy for Pittwater - 2009 requirements.

☐ have examined the site and the proposed development/alteration is separate from and is not affected by a Geotechnical Hazard and does not require a Geotechnical Report or Risk Assessment and hence my Report is in accordance with the Geotechnical Risk Management Policy for Pittwater - 2009 requirements.

☐ have provided the coastal process and coastal forces analysis for inclusion in the Geotechnical Report

Geotechnical Report Details:

Report Title: Geotechnical Report **53 Samuel Street, Mona Vale**

Report Date: 25/11/20

Author: BEN WHITE

Author's Company/Organisation: **WHITE GEOTECHNICAL GROUP PTY LTD**

Documentation which relate to or are relied upon in report preparation:

Australian Geomechanics Society Landslide Risk Management March 2007.

White Geotechnical Group company archives.

I am aware that the above Geotechnical Report, prepared for the abovementioned site is to be submitted in support of a Development Application for this site and will be relied on by Pittwater Council as the basis for ensuring that the Geotechnical Risk Management aspects of the proposed development have been adequately addressed to achieve an "Acceptable Risk Management" level for the life of the structure, taken as at least 100 years unless otherwise stated and justified in the Report and that reasonable and practical measures have been identified to remove foreseeable risk.

Signature _____

Name Ben White

Chartered Professional Status MScGEOLAusIMM CP GEOL

Membership No. 222757

Company White Geotechnical Group Pty Ltd

GEOTECHNICAL RISK MANAGEMENT POLICY FOR PITTWATER
FORM NO. 1(a) - Checklist of Requirements for Geotechnical Risk Management Report for Development Application

Development Application for _____
Name of Applicant

Address of site 53 Samuel Street, Mona Vale

The following checklist covers the minimum requirements to be addressed in a Geotechnical Risk Management Geotechnical Report. This checklist is to accompany the Geotechnical Report and its certification (Form No. 1).

Geotechnical Report Details:

Report Title: Geotechnical Report **53 Samuel Street, Mona Vale**

Report Date: 25/11/20

Author: BEN WHITE

Author's Company/Organisation: WHITE GEOTECHNICAL GROUP PTY LTD

Please mark appropriate box

☒ Comprehensive site mapping conducted **27/7/20**
(date)

☒ Mapping details presented on contoured site plan with geomorphic mapping to a minimum scale of 1:200 (as appropriate)

☒ Subsurface investigation required
- ☐ No Justification _____
- ☒ Yes Date conducted **27/7/20**

☒ Geotechnical model developed and reported as an inferred subsurface type-section

☒ Geotechnical hazards identified
- ☐ Above the site
- ☒ On the site
- ☒ Below the site
- ☐ Beside the site

☒ Geotechnical hazards described and reported

☒ Risk assessment conducted in accordance with the Geotechnical Risk Management Policy for Pittwater - 2009
- ☒ Consequence analysis
- ☒ Frequency analysis

☒ Risk calculation

☒ Risk assessment for property conducted in accordance with the Geotechnical Risk Management Policy for Pittwater - 2009

☒ Risk assessment for loss of life conducted in accordance with the Geotechnical Risk Management Policy for Pittwater - 2009

☒ Assessed risks have been compared to "Acceptable Risk Management" criteria as defined in the Geotechnical Risk Management Policy for Pittwater - 2009

☒ Opinion has been provided that the design can achieve the "Acceptable Risk Management" criteria provided that the specified conditions are achieved.

☒ Design Life Adopted:
- ☒ 100 years
- ☐ Other _____
specify

☒ Geotechnical Conditions to be applied to all four phases as described in the Geotechnical Risk Management Policy for Pittwater - 2009 have been specified

☒ Additional action to remove risk where reasonable and practical have been identified and included in the report.

☐ Risk assessment within Bushfire Asset Protection Zone.

I am aware that Pittwater Council will rely on the Geotechnical Report, to which this checklist applies, as the basis for ensuring that the geotechnical risk management aspects of the proposal have been adequately addressed to achieve an "Acceptable Risk Management" level for the life of the structure, taken as at least 100 years unless otherwise stated, and justified in the Report and that reasonable and practical measures have been identified to remove foreseeable risk.

Signature _____

Name Ben White

Chartered Professional Status MScGEOLAusIMM CP GEOL

Membership No. 222757

Company White Geotechnical Group Pty Ltd

GEOTECHNICAL INVESTIGATION:

Alterations and Additions at **53 Samuel Street, Mona Vale**

1. Proposed Development

1.1 Demolish the existing carport and construct a new carport and parking area in the same location by excavating to a maximum depth of ~1.6m.

1.2 Demolish the existing pool and construct a new pool on the downhill side of the property by excavating to a maximum depth of ~1.4m.

1.3 Demolish the existing deck on the downhill side of the house and construct a new deck in the same location.

1.4 Demolish the existing awning on the downhill side of the house and construct a new awning in the same location.

1.5 Various other internal and external alterations.

1.6 Details of the proposed development are shown on 5 drawings prepared by Ashley Holt, drawings numbered DA-01 and DA-03 to 06, Issue A, dated 23/11/20.

2. Site Description

2.1 The site was inspected on the 27th July, 2020.

2.2 This battle-axe-shaped residential property is on the high side of the road and has a N aspect. It is located on the gentle to moderately graded lower middle reaches of a hillslope. The natural slope rises from the road frontage at moderate angles that ease to an average angle of ~5° across the majority of the property. The land surface above the property continues at gentle angles. The land surface below the property gradually eases.

2.3 At the road frontage, a concrete driveway runs up the slope to a carport on the downhill side of the property and to a parking area on the downhill side of the house (Photos 1 to 3). The carport will be demolished as part of the proposed works. A pool has been cut into the slope between the carport and the house (Photo 4). The pool will also be demolished as part of the proposed works. The area around the pool has been filled. The fill is supported by a stack rock retaining wall that will be demolished as part of the proposed works (Photo 5). Between the pool and the house is a gently sloping lawn. The part two-storey house is supported on brick walls and brick piers (Photo 6). No significant signs of movement were observed in the supporting walls and the supporting piers stand vertical. A gently sloping lawn and tile-paved patio area extends off the uphill side of the house to the upper common boundary (Photo 7).

3. Geology

The Sydney 1:100 000 Geological sheet indicates the site is underlain by the Newport Formation of the Narrabeen Group. It is described as interbedded laminite, shale and quartz to lithic quartz sandstone.

4. Subsurface Investigation

One auger hole was put down to identify the soil materials. Four Dynamic Cone Penetrometer (DCP) tests were put down to determine the relative density of the overlying soil and the depth to weathered rock. The locations of the tests are shown on the site plan. It should be noted that a level of caution should be applied when interpreting DCP test results. The test will not pass through hard buried objects so in some instances it can be difficult to determine whether refusal has occurred on an obstruction in the profile or on the natural rock surface. This is not expected to be an issue for the testing on this site. However, excavation and foundation budgets should always allow for the possibility that the interpreted ground conditions in this report vary from those encountered during excavations. See the appended "Important information about your report" for a more comprehensive explanation. The results are as follows:

AUGER HOLE 1 (~RL21.3) **–** AH1 (Photo 8)

Depth (m)	**Material Encountered**
0.0 to 0.6	**FILL**, disturbed sandy soil, dark brown and mottled orange, very loose to loose, damp, medium to coarse grained with fine trace organic matter and rock fragments.

Refusal @ 0.6m on unknown obstruction within fill. No watertable encountered.

DCP TEST RESULTS – Dynamic Cone Penetrometer				
Equipment: 9kg hammer, 510mm drop, conical tip.			Standard: AS1289.6.3.2 - 1997	
Depth(m) Blows/0.3m	**DCP 1** (~RL22.8)	**DCP 2** (~RL22.3)	**DCP 3** (~RL21.2)	**DCP 4** (~RL19.6)
0.0 to 0.3	1	2F	2F	3
0.3 to 0.6	2F	2F	2	10
0.6 to 0.9	10	2	10	3
0.9 to 1.2	20	8	11	13
1.2 to 1.5	7	8	22	17
1.5 to 1.8	9	17	30	30
1.8 to 2.1	30	20	#	#
2.1 to 2.4	30	30		
2.4 to 2.7	#	#		
	End of Test @ 2.3m	End of Test @ 2.4m	End of Test @ 1.7m	End of Test @ 1.7m

#refusal/end of test. F=DCP fell after being struck showing little resistance through all or part of the interval.

DCP Notes:

DCP1 – End of test @ 2.3m, DCP still very slowly going down, brown clay on wet tip, brown clay in collar above tip.

DCP2 – End of test @ 2.4m, DCP still very slowly going down, brown clay on wet tip, orange clay in collar above tip.

DCP3 – End of test @ 1.7m, DCP still very slowly going down, brown clay on wet tip, orange clay in collar above tip.

DCP4 – End of test @ 1.7m, DCP still very slowly going down, brown soil on wet tip, brown clay in collar above tip.

5. Geological Observations/Interpretation

The slope materials are colluvial at the near surface and residual at depth. In the test locations, the ground materials consist of manmade filling where the slope eases to gentle angles across the majority of the property. The owner of the property informed us that a market garden existed in this location prior to residential development. The presence of interpreted filling in the DCP test results supports this. The fill overlies a thin silty soil and firm to stiff clays. The clays merge into the underlying weathered rock at depths of between 1.5 to 2.1m below the current surface across the property, being deeper due to the varying depths of fill. It is interpreted from ground tests that the fill reaches a maximum depth of ~1.2m. The weathered zone is interpreted to be Extremely Low Strength Shale. See Type Section attached for a diagrammatical representation of the expected ground materials.

6. Groundwater

Normal ground water seepage is expected to move over the buried surface of the rock and through the cracks. Due to the slope and elevation of the block, the water table is expected to be many metres below the base of the proposed excavation.

7. Surface Water

No evidence of surface flows were observed on the property during the inspection. It is expected that normal sheet wash will move onto the site from above the property during heavy down pours.

8. Geotechnical Hazards and Risk Analysis

No geotechnical hazards were observed above or beside the property. The gentle to moderately graded slope that rises across the property and continues below is a potential hazard (**Hazard One**). The proposed excavations are a potential hazard until the retaining walls/pool structure are in place (**Hazard Two**).

Geotechnical Hazards and Risk Analysis - Risk Analysis Summary

HAZARDS	Hazard One	Hazard Two
TYPE	The gentle to moderate slope that rises across the site and continues below failing and impacting on the proposed works.	The excavation (up to a depth of ~1.6m) collapsing onto the work site before retaining walls are in place.
LIKELIHOOD	'Unlikely' (10^{-4})	'Possible' (10^{-3})
CONSEQUENCES TO PROPERTY	'Medium' (12%)	'Medium' (15%)
RISK TO PROPERTY	'Low' (2×10^{-5})	'Moderate' (2×10^{-4})
RISK TO LIFE	5.5×10^{-7}/annum	4.4×10^{-5}/annum
COMMENTS	This level of risk is 'ACCEPTABLE'.	This level of risk to life and property is 'UNACCEPTABLE'. To move risk to 'ACCEPTABLE' levels, the recommendations in **Section 13** are to be followed.

(See Aust. Geomech. Jnl. Mar 2007 Vol. 42 No 1, for full explanation of terms)

9. Suitability of the Proposed Development for the Site

The proposed development is suitable for the site. No geotechnical hazards will be created by the completion of the proposed development provided it is carried out in accordance with the requirements of this report and good engineering and building practice.

10. Stormwater

The fall is to Samuel Street. Roof water from the development is to be piped to the street drainage system through any tanks that may be required by the regulating authorities.

11. Excavations

An excavation to a maximum depth of ~1.6m is required to construct the parking area. Another excavation to a maximum depth of ~1.4m is required to install the new pool. The

excavations are expected to be taken through a maximum of ~1.2m of manmade fill over a thin silty soil and firm to stiff clays. Extremely Low Strength Shale may be encountered near the base of the excavations.

Excavations through fill, soil, clay, and Extremely Low Strength Shale can be carried out with an excavator and bucket.

12. Vibrations

Possible vibrations generated during excavations through fill, soil, clay, and Extremely Low Strength Shale will be below the threshold limit for building damage.

13. Excavation Support Requirements

The E common boundary fence is to be braced before the excavations commence.

Bulk Excavation for Proposed Parking Area

The proposed excavation will be taken through ~0.6m of fill and soil over a maximum of ~0.9m of clays before encountering Extremely Low Strength Shale. Allowing for back-wall drainage, the excavation will be set back a minimum of ~1.4m from the E common boundary. It will reach a maximum depth of ~1.6m but will taper away in height downslope. Thus, the E common boundary will fall within the zone of influence of the excavation. The cut will require temporary support to maintain the integrity of the E neighbouring property until permanent retaining walls are in place.

The cut will require staged sacrificial temporary support such as braced form ply or similar support installed along the E side as the excavation is progressed in spans not less than 2.0m horizontally. The support is to be designed by the structural engineer. The temporary support is to remain in place until the retaining wall is built.

The fill and soil portions along the uphill and W sides of the excavation are to be battered at 1.0 Vertical to 1.7 Horizontal (30°) and cut batters through clay and Extremely Low Strength

Shale or better will stand unsupported at near-vertical angles for short periods of time until retaining walls are installed, provided they are kept from becoming saturated.

During the excavation process, the geotechnical consultant is to inspect the cut as it is lowered to a depth of 1.6m, while the machine/excavation equipment is on site, to ensure the ground materials are as expected and no temporary support is required.

Bulk Excavation for Proposed Pool

The proposed excavation will be ~1.4m deep and will be set back a minimum of ~0.9m from the E common boundary. Thus, the E common boundary will be within the zone of influence of the proposed excavation.

To ensure the integrity of the E neighbouring property, we recommend the E side of the excavation be temporarily supported with typical pool shoring such as sacrificial form ply, until the pool structure is in place.

The remaining sides of the cut will stand at near-vertical angles for short periods of time until the pool structure is installed provided the cut batters are kept from becoming saturated. If the cut batters through fill, soil, and clay remain unsupported for more than a few days, they are to be supported with typical pool shoring such as sacrificial form ply, until the pool structure is in place.

Advice Applying to Both Excavations

Upslope runoff is to be diverted from the cut faces by sandbag mounds or other diversion works. Unsupported cut batters through fill, soil, clay, and Extremely Low Strength Shale are to be covered to prevent access of water in wet weather and loss of moisture in dry weather. The covers are to be tied down with metal pegs or other suitable fixtures so they can't blow off in a storm. The materials and labour to construct the retaining walls/pool structure are to be organised so on completion of the excavations they can be constructed as soon as possible. The excavations are to be carried out during a dry period. No excavations are to commence if heavy or prolonged rainfall is forecast.

All excavation spoil is to be removed from site following the current Environmental Protection Agency (EPA) waste classification guidelines.

14. Retaining Structures

For cantilever or singly-propped retaining structures, it is suggested the design be based on a triangular pressure distribution of lateral pressures using the parameters shown in Table 1.

Table 1 – Likely Earth Pressures for Retaining Structures

Unit	Earth Pressure Coefficients		
	Unit weight (kN/m^3)	'Active' K_a	'At Rest' K_0
Fill, Sandy Soil, and Residual Clays	20	0.40	0.55
Extremely Low Strength Shale	22	0.25	0.35

For rock classes refer to Pells et al "Design Loadings for Foundations on Shale and Sandstone in the Sydney Region". Australian Geomechanics Journal 1978.

It is to be noted that the earth pressures in Table 1 assume a level surface above the structure, do not account for any surcharge loads and assume retaining structures are fully drained. Rock strength and relevant earth pressure coefficients are to be confirmed on site by the geotechnical consultant.

All retaining structures are to have sufficient back-wall drainage and be backfilled immediately behind the structure with free-draining material (such as gravel). This material is to be wrapped in a non-woven Geotextile fabric (i.e. Bidim A34 or similar), to prevent the drainage from becoming clogged with silt and clay. If no back-wall drainage is installed in retaining structures, the likely hydrostatic pressures are to be accounted for in the structural design.

15. Foundations

Due to the presence of ~0.9m of fill underlying the property in this location, the proposed carport is to be supported on piers taken to the underlying Extremely Low Strength Shale. This material is expected at depths of between 1.5 to 2.1m below the current surface.

The proposed pool can be supported on piers taken to the underlying Extremely Low Strength Shale. This material is expected at depths of between 1.5 to 2.1m below the current surface.

If the proposed terrace and awning on the downhill side of the house are flexible structures, and some movement in accordance with a 'Class M' site can be tolerated (i.e. timber framed and clad), they can be supported on foundations embedded at least 0.3m into natural clay. This material is expected at a depth of ~1.5m below the current surface in this location. This is due to the presence of ~1.2m of fill overlying the clay. Thus, the footing depth will need to be 1.8m taken from the downhill side of the footing. A maximum allowable bearing pressure of 200kPa can be assumed for footings on firm to stiff clay.

For better quality footings, or where little movement can be tolerated (i.e. the structures are of masonry construction) piers can be taken to Extremely Low Strength Shale. This material is expected at a maximum depth of ~2.1m below the current surface.

A maximum allowable bearing pressure of 600kPa can be assumed for footings on Extremely Low Strength Shale. It should be noted that this material is a soft rock and a rock auger will cut through it so the builders should not be looking for refusal to end the footings.

Due to its age, at best, it is likely the existing house is supported on the firm to stiff clays of the natural profile. Alternatively, the house could be supported on the fill. Ideally, footings should be founded on the same footing material across the old and new structure. Where the footing material changes across the structure, construction joints or similar are to be installed to prevent differential settlement, where the structure cannot tolerate such movement.

It is recommended the footings be dug, inspected, and poured in quick succession (ideally the same day if possible). If the footings get wet, they will have to be drained and the soft wet layer of shale on the footing surface will have to be removed before concrete is poured.

If a rapid turnaround from footing excavation to the concrete pour is not possible, a sealing layer of concrete may be added to the footing surface after it has been cleaned.

NOTE: If the contractor is unsure of the footing material required, it is more cost-effective to get the geotechnical consultant on site at the start of the footing excavation to advise on footing depth and material. This mostly prevents unnecessary over-excavation in clay-like shaly-rock but can be valuable in all types of geology.

16. Inspections

The client and builder are to familiarise themselves with the following required inspections as well as council geotechnical policy. We cannot provide certification for the regulating authorities or the owner if the following inspections have not been carried out during the construction process.

- During the excavation process, the geotechnical consultant is to inspect the cut as it is lowered to a depth of 1.6m, while the machine/excavation equipment is on site, to ensure the ground materials are as expected and no temporary support is required.
- All footings are to be inspected and approved by the geotechnical consultant while the excavation equipment is still onsite and before steel reinforcing is placed or concrete is poured.

White Geotechnical Group Pty Ltd.

Ben White M.Sc. Geol.,
AusIMM., CP GEOL.
No. 222757
Engineering Geologist

Photo 1

Photo 2

Photo 3

Photo 4

Photo 5

Photo 6

Photo 7

Photo 8: AH1 – Downhole is from left to right

Important Information about Your Report

It should be noted that Geotechnical Reports are documents that build a picture of the subsurface conditions from the observation of surface features and testing carried out at specific points on the site. The spacing and location of the test points can be limited by the location of existing structures on the site or by budget and time constraints of the client. Additionally, the test themselves, although chosen for their suitability for the particular project, have their own limiting factors. The testing gives accurate information at the location of the test, within the confines of the test's capability. A geological interpretation or model is developed by joining these test points using all available data and drawing on previous experience of the geotechnical consultant. Even the most experienced practitioners cannot determine every possible feature or change that may lie below the earth. All of the subsurface features can only be known when they are revealed by excavation. As such, a Geotechnical report can be considered an interpretive document. It is based on factual data but also on opinion and judgement that comes with a level of uncertainty. This information is provided to help explain the nature and limitations of your report.

With this in mind, the following points are to be noted:

- If upon the commencement of the works the subsurface ground or ground water conditions prove different from those described in this report, it is advisable to contact White Geotechnical Group immediately, as problems relating to the ground works phase of construction are far easier and less costly to overcome if they are addressed early.

- If this report is used by other professionals during the design or construction process, any questions should be directed to White Geotechnical Group as only we understand the full methodology behind the report's conclusions.

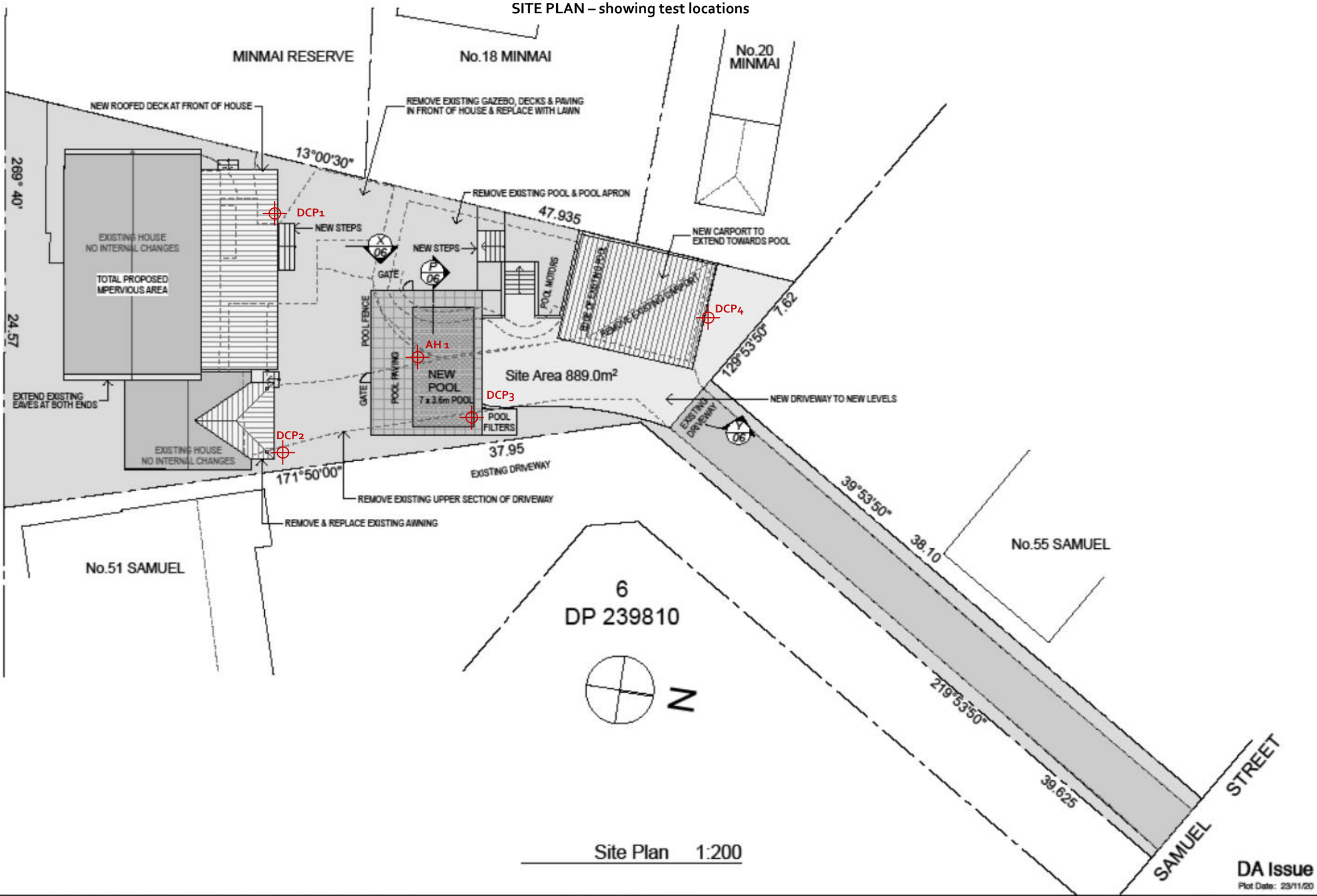
- The report addresses issues relating to your specific design and site. If the proposed project design changes, aspects of the report may no longer apply. Contact White Geotechnical if this occurs.

- This report should not be applied to any other project other than that outlined in section 1.0.

- This report is to be read in full and should not have sections removed or included in other documents as this can result in misinterpretation of the data by others.

- It is common for the design and construction process to be adapted as it progresses (sometimes to suit the previous experience of the contractors involved). If alternative design and construction processes are required to those described in this report, contact White Geotechnical Group. We are familiar with a variety of techniques to reduce risk and can advise if your proposed methods are suitable for the site conditions.

SITE PLAN – showing test locations



Site Plan 1:200

DA Issue

Plot Date: 23/11/20

The builder shall check and verify all dimensions and verify all errors and omissions to the Designer. Do not scale the drawings.
Drawings shall not be used for construction purposes until issued by the Designer for construction.

Date :	Issue	Description :
23/11/2020	A	DA Issue.

Designed by: B(Arch)

Project : Alterations & Additions, 53 Samuel Street, Mona Vale

Client : Tennant

Project No. : -----

Scale : As Shown @ (A3)

Drawing : Site Plan

Drawing No. : DA-01 @A3

Issue : A

Date : Nov 2020

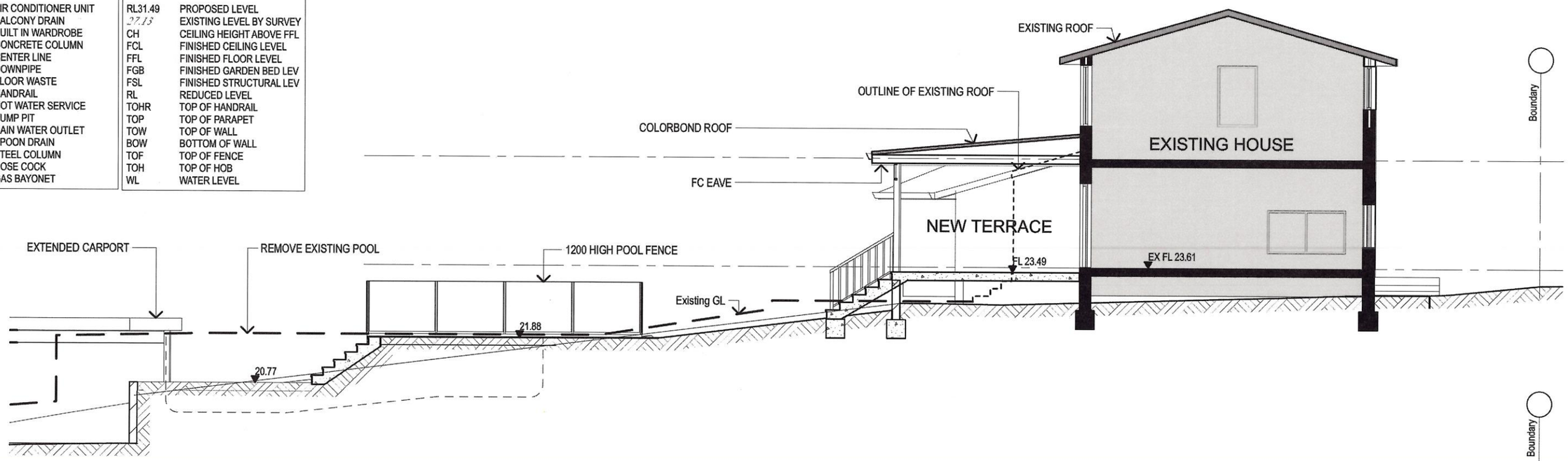
TYPE SECTION – Diagrammatical Interpretation of expected Ground Materials

GENERAL LEGEND

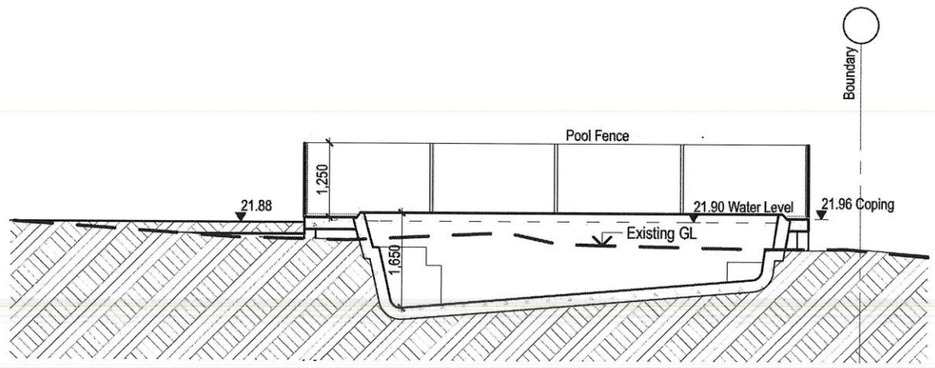
A/C	AIR CONDITIONER UNIT
BD	BALCONY DRAIN
CBD	BUILT IN WARDROBE
CC	CONCRETE COLUMN
CL	CENTER LINE
DP	DOWNPIPE
FW	FLOOR WASTE
HR	HANDRAIL
HW	HOT WATER SERVICE
PIT	SUMP PIT
RWO	RAIN WATER OUTLET
SD	SPOON DRAIN
SC	STEEL COLUMN
HC	HOSE COCK
GB	GAS BAYONET

LEVEL LEGEND

RL31.49	PROPOSED LEVEL
27.13	EXISTING LEVEL BY SURVEY
CH	CEILING HEIGHT ABOVE FFL
FCL	FINISHED CEILING LEVEL
FFL	FINISHED FLOOR LEVEL
FGB	FINISHED GARDEN BED LEV
FSL	FINISHED STRUCTURAL LEV
RL	REDUCED LEVEL
TOHR	TOP OF HANDRAIL
TOP	TOP OF PARAPET
TOW	TOP OF WALL
BOW	BOTTOM OF WALL
TOF	TOP OF FENCE
TOH	TOP OF HOB
WL	WATER LEVEL

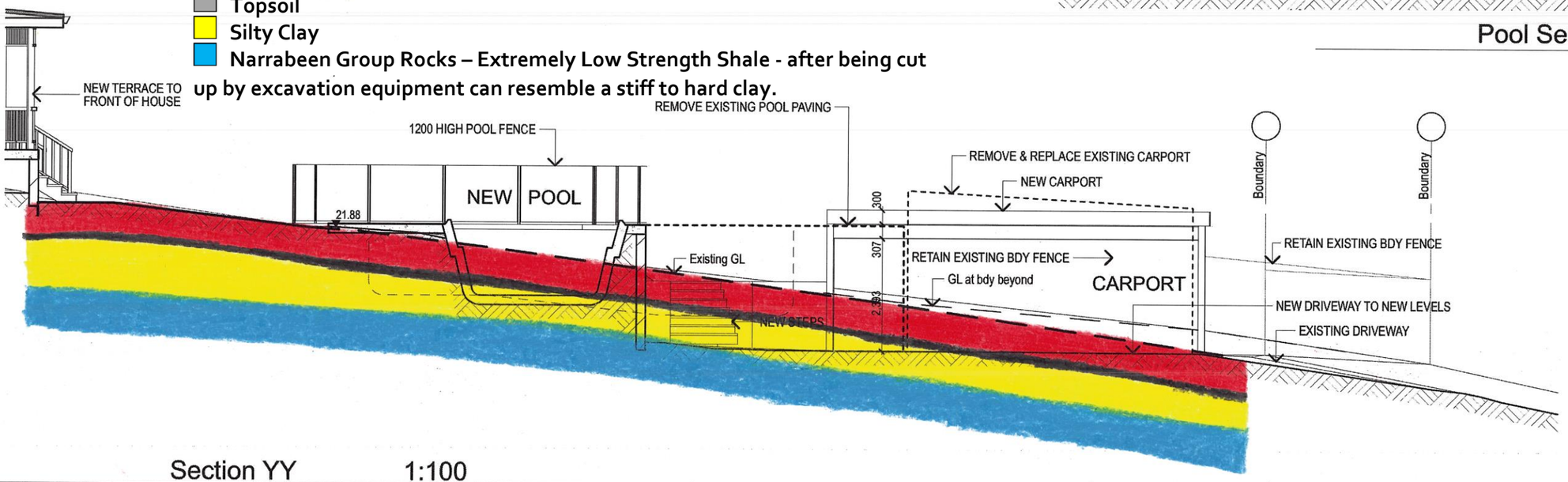


Section XX 1:100



Pool Section 1:100

Fill
Topsoil
Silty Clay
Narrabeen Group Rocks – Extremely Low Strength Shale - after being cut up by excavation equipment can resemble a stiff to hard clay.



Section YY 1:100

DA Issue
Plot Date: 23/11/20

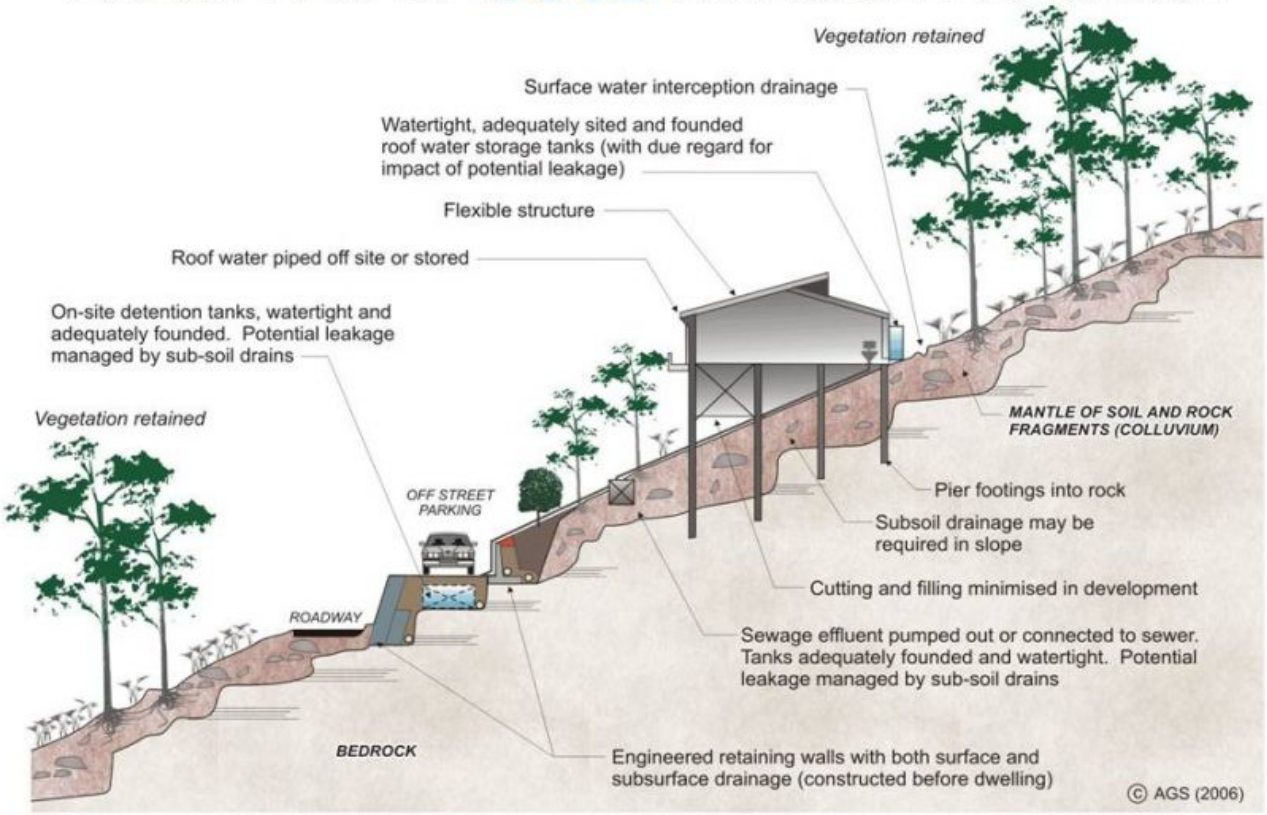
The builder shall check and verify all dimensions and verify all errors and omissions to the Designer. Do not scale the drawings.
Drawings shall not be used for construction purposes until issued by the Designer for construction.

Date :	Issue	Description :
23/11/2020	A	DA Issue.

Designed by
B(Arch)

Project : Alterations & Additions, 53 Samuel Street, Mona Vale
Client : Tennant
Project No. : ----
Scale : As Shown @ (A3)
Drawing : Sections AA & BB
Drawing No. : DA-06 @A3
Issue : A
Date : Nov 2020

EXAMPLES OF **GOOD** HILLSIDE PRACTICE



EXAMPLES OF **POOR** HILLSIDE PRACTICE