

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

Development Application for \_\_\_\_\_  
Name of Applicant

Address of site 316 Hudson Parade, Clareville

*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 28/8/24 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 316 Hudson Parade, Clareville

Report Date: 28/8/24

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	<u>316 Hudson Parade, Clareville</u>

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 <u>316 Hudson Parade, Clareville</u>
Report Date: <u>28/8/24</u>
Author: <u>BEN WHITE</u>
Author's Company/Organisation: <u>WHITE GEOTECHNICAL GROUP PTY LTD</u>

**Please mark appropriate box**

- ☒ Comprehensive site mapping conducted 21/8/24  
(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 21/8/24
- ☒ 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:**

New Pool at **316 Hudson Parade, Clareville**

### **1. Proposed Development**

- 1.1** Demolish the existing pool and install a new pool on the downhill side of the property by excavating to a maximum depth of ~1.5m.
- 1.2** Details of the proposed development are shown on 3 drawings prepared by Baxter and Jacobson Architects, job number 346-02, drawings numbered DA.mod.102, DA.mod.314, and DA.mod.315, dated 19.8.24.

### **2. Site Description**

- 2.1** The site was inspected on the 21<sup>st</sup> August, 2024 and several times previously.
- 2.2** This residential property is on the low side of the road and has a W aspect. From the upper boundary the natural slope falls at an average angle of ~35° to the uphill side of the house. The natural slope above, beside, and below the house has been altered with cut and fills to create level platforms. The cut depths reach a maximum of ~1.8m and the fill height reaches a maximum height ~5.0m. The natural slope below the property falls at an average angle of ~30° that increases to ~45° where the slope falls to the waterfront.
- 2.3** At the road frontage, a steeply graded slope falls to the uphill side of the subject house (Photos 1). Vehicular access to the property is provided by a shared driveway from the S that cuts across the slope and runs to the existing house and a detached brick garage/studio beside the house (Photos 2 & 3). The detached garage and uphill side of the property is currently undergoing demolition/construction works approved as part of a separate DA.

The two-storey brick house displays no significant movement in the external supporting walls that could be associated with slope instability. A concrete pool is located below the N side of the house (Photo 4). The pool shell displays no visible signs of movement. This is to be demolished as part of the proposed works. The area below the house and beside the pool has been filled for a level lawn area. From visual observations on site, the fill reaches a maximum height of ~5.0m on the S side and reduces to ~1.4m on the N end. The S side of the fill is supported by a gabion basket retaining wall (Photos 5 & 6). Where the wall lines the S common boundary, the baskets are slightly bulging. To ensure the ongoing stability of the wall into the future, the recommendations in **Section 16** are to be followed. The remaining areas of the wall show no obvious bulging. The N side of the fill is supported by a concrete crib retaining wall that is obscured by thick vegetation (Photo 7). From what could be seen of the wall, it appears stable.

**2.4** The area below the property has been partly terraced with treated pine retaining walls that appear well constructed. Below the walls, the slope falls steeply to the waterfront. Bands of Medium Strength Sandstone outcrop in this area (Photo 8). The exposed sandstone is fractured and is relatively thinly bedded. The exposed rock does not display any significant undercutting or geological defects that could lead to a significant failure that could impact the retaining walls or house above.

### 3. Geology

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

### 4. Subsurface Investigation

Three Dynamic Cone Penetrometer (DCP) tests were put down to determine the relative density of the overlying soil and the depth to weathered rock. The location of the tests are

shown on the site plan attached. 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. Due to the possibility that the actual ground conditions vary from our interpretation there should be allowances in the excavation and foundation budget to account for this. We refer to the appended "Important Information about Your Report" to further clarify. The results are as follows:

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 (~RL14.3)	DCP 2 (~RL13.1)	DCP 3 (~RL16.2)
0.0 to 0.3	6	11	8
0.3 to 0.6	11	15	4
0.6 to 0.9	24	5	5
0.9 to 1.2	31	11	8
1.2 to 1.5	#	22	11
1.5 to 1.8		31	14
1.8 to 2.1		#	23
2.1 to 2.4			#
	Refusal on Rock @ 1.2m	Refusal on Rock @ 1.7m	Refusal on Rock @ 2.1m

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

DCP1 – Refusal on rock @ 1.2m, DCP bouncing, light brown clay or rock fragments on dry tip.  
DCP2 – Refusal on rock @ 1.7m, DCP bouncing off rock surface, orange clay on wet tip.  
DCP3 – Refusal on rock @ 2.1m, DCP bouncing off rock surface, orange shale fragments on dry 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 fill and a thin sandy topsoil over Firm to Stiff Clays. Fill to a maximum depth of ~5.0m provides level platforms for lawn, garden and paved areas

across the property. In the test locations, the clays merge into the weathered zone of the under lying rocks at depths of between ~1.2m to ~2.1m below the current surface, being deeper in the filled area. The weathered zone of the underlying rock is interpreted as Extremely Low to Low Strength Rock. It is to be noted that this material is a soft rock and can appear as a mottled stiff clay when it is cut up by excavation equipment. 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 clay and rock and through the cracks in the rock.

Due to the slope and elevation of the block, the water table in the location is expected to be many metres below the base of the proposed works.

## 7. Surface Water

No evidence of surface flows were observed on the property during the inspection. Normal sheet wash from the slope above will be intercepted by the street drainage system for Hudson Parade above.

## 8. Geotechnical Hazards and Risk Analysis

No geotechnical hazards were observed beside the property. The steeply graded slope that falls across the property and continues above and below is a potential hazard (**Hazard One**). The proposed excavation is a potential hazard until retaining structures are in place (**Hazard Two**). The portion of the gabion basket retaining wall that lines the S boundary is a potential hazard (**Hazard Three**).

**RISK ANALYSIS SUMMARY ON THE NEXT PAGE**

## Risk Analysis Summary

HAZARDS	Hazard One	Hazard Two	Hazard Three
TYPE	The steeply graded slope falls across the property and continues above and below failing and impacting on the property.	The excavation (to a maximum depth of ~1.9m) collapsing onto the work site before the pool structure is in place.	Further movement of the gabion basket retaining wall that lines the S common boundary and leads to failure (Photo 8).
LIKELIHOOD	'Unlikely' ( $10^{-4}$ )	'Possible' ( $10^{-3}$ )	'Unlikely' ( $10^{-4}$ )
CONSEQUENCES TO PROPERTY	'Medium' (15%)	'Medium' (25%)	'Medium' (20%)
RISK TO PROPERTY	'Low' ( $2 \times 10^{-5}$ )	'Moderate' ( $2 \times 10^{-4}$ )	'Low' ( $2 \times 10^{-5}$ )
RISK TO LIFE	$8.3 \times 10^{-7}$ /annum	$5.9 \times 10^{-5}$ /annum	$5.6 \times 10^{-6}$ /annum
COMMENTS	This level of risk is 'ACCEPTABLE', provided the recommendations in <b>Section 16</b> are carried out.	This level of risk to life and property is 'UNACCEPTABLE'. To move risk to 'ACCEPTABLE' levels, the recommendations in <b>Section 13</b> are to be followed.	This level of risk to life and property is 'ACCEPTABLE' provided the recommendations in <b>Section 16</b> are 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

All stormwater from the proposed development is to be piped to the waterfront through any tanks that may be required by the regulating authorities.

## 11. Excavations

An excavation to a maximum depth of ~1.5m is required to install the proposed pool.

The excavation is interpreted to be through fill, topsoil, and clay with Extremely Low to Low Strength Rock expected from depths of between ~1.2m to ~2.1m below the current surface, being deeper in the filled areas.

Excavations through fill, soil, clay, and rock up to Low Strength can be carried out with an excavator and toothed bucket. If Medium Strength Rock is encountered, it will require grinding or rock sawing and breaking.

## 12. Vibrations

It is expected the proposed excavations will be carried out with an excavator and toothed bucket and the vibrations produced will be below the threshold limit for building or infrastructure damage.

If Medium Strength Rock or better is encountered, excavations through this material should be carried out to minimise the potential to cause vibration damage to the subject and neighbouring house. Allowing for 0.5m of backwall drainage, the setbacks from the proposed excavation to the existing structures/boundaries are as follows:

- Flush with the lower boundary.
- ~0.9m from the N common boundary.
- ~2.5m from the subject house.
- ~3.0m from the N neighbouring house.

Close controls by the contractor over rock excavation are recommended so excessive vibrations are not generated.

Excavation methods are to be used that limit peak particle velocity to 5 mm/sec at the subject house. Vibration monitoring will be required to verify this is achieved. The vibration



monitoring equipment must include a light/alarm so the operator knows if vibration limits have been exceeded. It also must log and record vibrations throughout the excavation works.

In Medium Strength Rock or better techniques to minimise vibration transmission will be required. These include:

- Rock sawing the excavation perimeter to at least 1.0m deep prior to any rock breaking with hammers, keeping the saw cuts below the rock to be broken throughout the excavation process.
- Limiting rock hammer size.
- Rock hammering in short bursts so vibrations do not amplify.
- Rock breaking with the hammer angled away from the nearby sensitive structures.
- Creating additional saw breaks in the rock where vibration limits are exceeded, as well as reducing hammer size as necessary.
- Use of rock grinders (milling head).

Should excavation induced vibrations exceed vibration limits after the recommendations above have been implemented, excavation works are to cease immediately and our office is to be contacted.

It is worth noting that vibrations that are below thresholds for building damage may be felt by the occupants of the neighbouring houses.

### **13. Excavation Support Requirements**

An excavation to a maximum depth of ~1.5m is required to install the proposed pool. The setbacks from the proposed excavation to the existing structures/boundaries are as follows:

- Flush with the downslope concrete retaining wall.
- Flush with the lower boundary.
- ~0.9m from the N common boundary.
- ~2.5m from the subject house.

- ~3.0m from the N neighbouring house.

As the lower boundary is below the base of the proposed excavation, only the downslope concrete retaining wall and N common boundary will lie within the zone of influence of the proposed excavation. In this instance, the zone of influence is the area above a theoretical 45° line from the base of the excavation towards the surrounding structures and boundaries. This line reduces to 30° through the fill and soil.

The excavation will require the concrete retaining wall near the lower boundary to be partially demolished. The fill upslope of the wall is to be removed prior to the wall's removal.

We recommend the soil and clay portions of the N side of the excavation be temporarily supported with typical pool shoring such as braced sacrificial form ply, until the pool structure is in place. The remaining sides of the cut are expected to 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 soil and clay remain unsupported for more than a day before pool construction commences, they are also to be supported with typical pool shoring until the pool structure is in place. The support will need to be designed by the structural engineer. See site plan attached for extent of minimum required shoring shown in blue.

Upslope runoff is to be diverted from the cut faces by sandbag mounds or other diversion works. All unsupported cut batters through fill, soil, and clay 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 cannot blow off in a storm. The materials and labour to construct the pool structure are to be organised so on completion of the excavation they can be constructed as soon as possible. The excavation is 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 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 <sup>3</sup> )	'Active' K <sub>a</sub>	'At Rest' K <sub>0</sub>
Fill and Topsoil	20	0.40	0.55
Residual Clays	20	0.35	0.45
Extremely Low to Very Low Strength Rock	22	0.25	0.38
Low Strength Rock	24	0.20	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

To avoid adding surcharge loads to the existing retaining walls immediately downslope of the proposed pool, the pool is to be supported on piers taken below the zone of influence of the retaining walls and embedded into the underlying Extremely Low Strength rock or better.

This ground material is expected at depths of between ~0.7m to ~2.4m below the current surface.

A maximum allowable bearing pressure of 600kPa can be assumed for footings embedded in Extremely Low Strength Rock or better.

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.

As the bearing capacity of weathered rock reduces when it is wet, we recommend 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 layer of weathered rock 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 professional 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. Ongoing Site Maintenance

The S side of the gabion basket retaining wall is slightly bulging (Photo 8). This structure is currently considered stable but, to ensure the ongoing stability into the future, we recommend they be inspected by the owners on a biennial basis or after heavy prolonged rainfall, whichever occurs first. A photographic record of the inspections is to be kept. Should further movement be observed, the Geotechnical Consultant is to be engaged to assess the structure and provide remedial advice, should it be required.

Where slopes are steep and approach or exceed 30°, such as on this site, it is prudent for the owners to occasionally inspect the slope (say annually or after heavy and prolonged rainfall events, whichever occurs first). Should any of the following be observed: movement or cracking in retaining walls, cracking in any structures, cracking or movement in the slope surface, tilting or movement in established trees, leaking pipes, or newly observed flowing water, or changes in the erosional process or drainage regime, then a geotechnical consultant should be engaged to assess the slope.

We can carry out these inspections upon request. The risk assessment in **Section 8** is subject to this ongoing maintenance being carried out.

## 17. Geotechnical Review

The structural plans are to be checked and certified by the geotechnical engineer as being in accordance with the geotechnical recommendations. On completion, a Form 2B will be issued. This form is required for the Construction Certificate to proceed.

## 18. Inspections

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

- All footings are to be inspected and approved by the geotechnical consultant while the excavation equipment and contractors are still onsite and before steel reinforcing is placed or concrete is poured.

White Geotechnical Group Pty Ltd.



Tyler Jay Johns  
BEng (Civil)(Hons),  
Geotechnical Engineer.

Reviewed By:



Nathan Gardner B.Sc. (Geol. & Geophys. & Env. Stud.)  
AIG., RPGeo Geotechnical & Engineering.  
No. 10307  
Engineering Geologist & Environmental Scientist.







Photo 1



Photo 2





Photo 3



Photo 4





Photo 5



Photo 6





Photo 7



Photo 8

## 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 professional. 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.

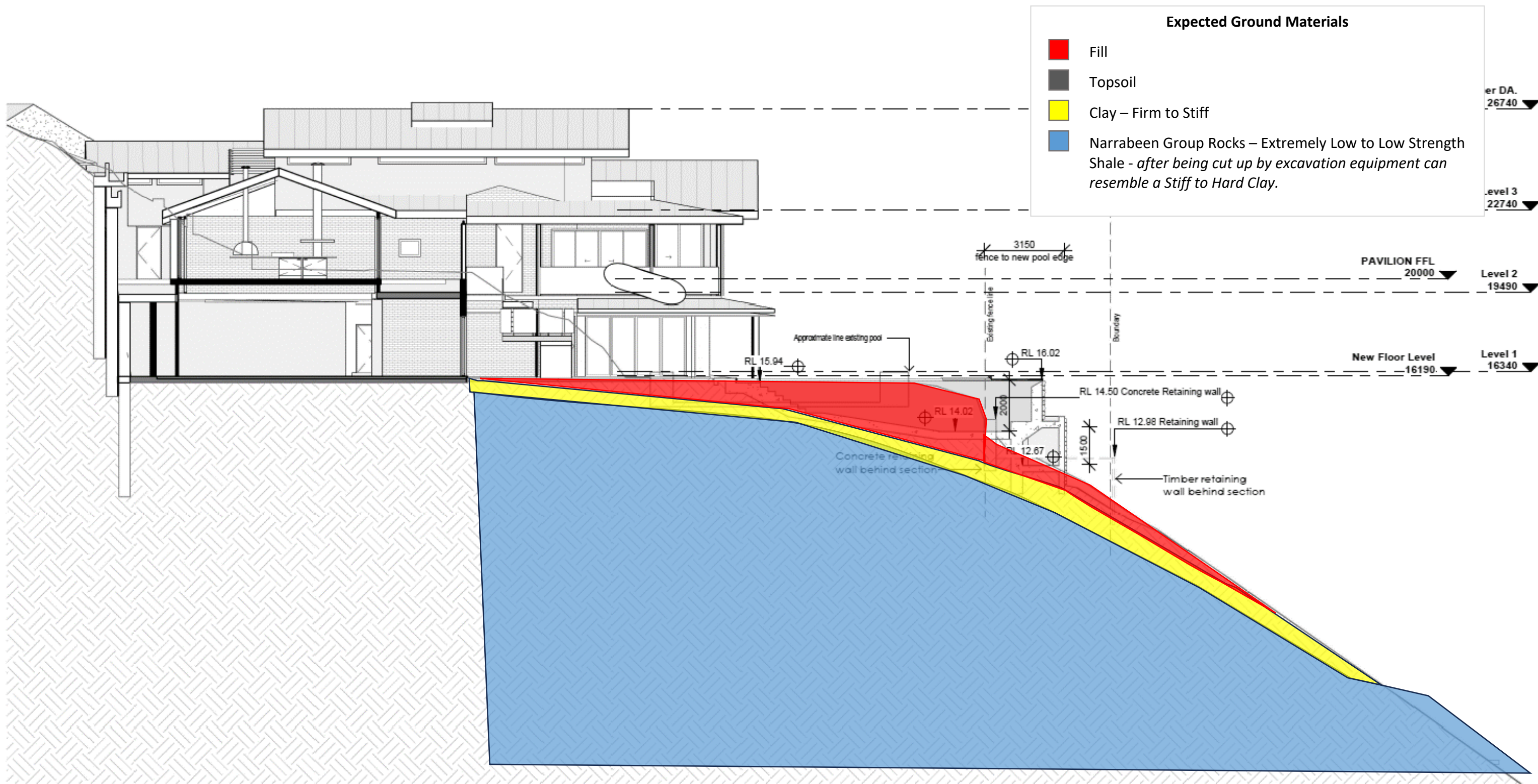
With this in mind, the following points are to be noted:

- 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.





## TYPE SECTION – Diagrammatic Interpretation of expected Ground Materials



CC.105 Pool section to water  
1 : 150

### General Notes:

- \*How discrepancies to be brought to Architect's attention
- \*Use figure dimensions in preference to scaling
- \*Draw work under direction from architect
- \*Station to view and site and to verify conditions and dimensions
- \*No drawing represents the property of the Architect
- \*Client is granted conditional license to use the drawings
- \*Transfer of the License is prohibited
- \*Architect reserves the right to terminate the license
- \*Electronic data transfer should be accepted for virtual before use
- \*How loss or damage (including consequential damages) caused to the recipient of electronic data, by its direct or indirect use, is the sole liability of the Architect
- \*Solely by hard copies for use of electronic data
- \*Copyright reserved by the Architect

Issue

Date \_\_\_\_\_

Amendment



BAXTER &  
JACOBSON  
ARCHITECTS

SYDNEY MANLY, NSW AUSTRALIA  
BYRON BAY NSW AUSTRALIA  
Nominated Architects  
D Jacobson #4259 & M Barler #4831  
PHONE +612 9977 7648  
EMAIL mark@bja.net.au  
WEB www.bja.net.au

Job No
Client
Address

348-02 316 Hudson Pde TONY WALLS 316 Hudson Parade Clareville
--

Drawn	TT
Checked	MB
Scale	1 : 150

Design Stage	
CC	
Title	
<b>Pool Section</b>	

No  
DA.mod.314  
Issue 3



# EXAMPLES OF **GOOD** HILLSIDE PRACTICE



# EXAMPLES OF **POOR** HILLSIDE PRACTICE

