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

Development Application for _____
Name of Applicant

Address of site 1 Belinda Place, Newport

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 11/7/23 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 **1 Belinda Place, Newport**

Report Date: 11/7/23

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 1 Belinda Place, Newport

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 **1 Belinda Place, Newport**

Report Date: 11/7/23

Author: BEN WHITE

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

Please mark appropriate box

☒ Comprehensive site mapping conducted **19/6/17**
(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 **19/6/17**

☒ 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 **1 Belinda Place, Newport**

1. Proposed Development

1.1 Construct a new driveway requiring minor levelling and minor filling.

1.2 Construct a new bin storage area and drainage corridor on the W side of the house by excavating to a maximum depth of ~2.5m.

1.3 Construct a pathway and steps on the S side of the house by excavating to a maximum depth of ~1.3m.

1.4 Minor internal and external alterations to the existing house.

1.5 Construct a new two storey suspended deck on the downhill side of the house.

1.6 Details of the proposed development are shown on 15 drawings prepared by All Australian Architecture, drawings numbered DA.00 to to DA.14, Issue E, dated 7/7/23.

2. Site Description

2.1 The site was inspected on the 6th June, 2023 and previously on the 19th June, 2017.

2.2 This residential property is on the corner of Belinda Place and Cheryl Crescent. It is on the high side of both roads. The property has a SE aspect. It is located on the steeply graded upper middle reaches of a hillslope. Sandstone beds outcrop and step up the slope above and below the house. From the road frontage to the upper boundary, the slope rises at an average angle of ~23°. The slope above and below the property continues at steep angles.

2.3 At the road frontage to Belinda Place, a steep densely vegetated slope rises to the downhill side of the house (Photo 1). The slope has been terraced with a series of low stable rough stack rock retaining walls (Photo 2). A near-level lawn covered fill extends off the downhill side of the house and is supported by a low brick retaining wall (Photo 3). Competent Medium Strength Hawkesbury Sandstone outcrops at the road frontage to Cheryl Crescent (Photo 4). A steep densely vegetated slope rises from this road frontage to the S side of the house. The two-storey brick house is supported on brick walls (Photo 5). The external supporting brick walls display no significant signs of movement. A Right of Carriageway (ROW) off Cheryl Crescent provides access to the property on the W side (Photo 6). A concrete driveway runs from the ROW to a garage on the lower ground floor of the house (Photo 7). The W side of the house is terraced with two low stable timber retaining walls. Sandstone flagging up to ~2.3m high lines a cut and fill on the N side of house (Photo 8).

3. Geology

The Sydney 1:100 000 Geological sheet indicates the site is underlain by Hawkesbury Sandstone. It is described as a medium to coarse grained quartz sandstone with very minor shale and laminite lenses.

4. Subsurface Investigation

Ground testing was carried out by this firm on the 19th June, 2017. One hand Auger Hole (AH) was put down to identify the soil materials. Five Dynamic Cone Penetrometer (DCP) tests were put down to determine the relative density of the overlying soil and the depth to bedrock. The locations 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. This is not expected to have been an issue for this site. But 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:

AUGER HOLE 1 (~RL97.6) **–** AH1 (Photo 10)

Depth (m)	**Material Encountered**
0.0 to 0.2	**TOPSOIL,** sandy soil, dark brown, fine to coarse grained with fine trace organic matter.
0.2 to 2.2	**FILL**, disturbed sandy soil, dark brown, fine to coarse grained with fine trace organic matter, trace clay, and rocks throughout.

End of test @ 2.2m in sandy fill. No water table 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** (~RL100.1)	**DCP 2** (~RL97.7)	**DCP 3** (~RL97.9)	**DCP 4** (~RL99.1)	**DCP 5** (~RL95.0)
0.0 to 0.3	2	2	1	2	6
0.3 to 0.6	3	10	4	#	10
0.6 to 0.9	10	17	#		5
0.9 to 1.2	5	11			13
1.2 to 1.5	9	15			14
1.5 to 1.8	23	30			12
1.8 to 2.1	30	30			#
2.1 to 2.4	#	#			
	End of Test @ 2.1m	End of Test @ 2.0m	Refusal on Rock @ 0.6m	Refusal on Rock @ 0.3m	Refusal on Rock @ 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 @ 2.1m, DCP still very slowly going down, brown sandy clay on damp tip.

DCP2 – End of test @ 2.0m, DCP still very slowly going down, wet muddy tip.
DCP3 – Refusal on rock @ 0.6m, DCP bouncing off rock surface, wet muddy tip.
DCP4 – Refusal on rock @ 0.3m, DCP bouncing off rock surface, white impact dust on dry tip.
DCP5 – Refusal on rock @ 1.7m, DCP bouncing off rock surface, wet sandy tip.

5. Geological Observations/Interpretation

The surface features of the block are controlled by the outcropping and underlying sandstone bedrock that steps down the property forming sub horizontal benches between the steps. Where the grade is steeper, the steps are larger and the benches narrower. Where the slope eases, the opposite is true. Where the rock is not exposed it is overlain by fill, sandy soils, and sandy clays that fill the bench step formation. In the test locations, the depth to rock ranged between ~0.3m to ~2.2m below the current surface, being deeper where filling has been undertaken on the downhill side of the house and due to the stepped nature of the bedrock. It is interpreted from ground tests and observations of the retaining walls that the fill reaches a depth of ~2.2m. The outcropping sandstone on the property is estimated to be Medium Strength or better and similar strength rock is expected to underlie the entire site.

6. Groundwater

Normal ground water seepage is expected to move over the buried surface of the rock and through the cracks.

Due to the elevation of the block, the water table 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 the ROW drainage system.

8. Geotechnical Hazards and Risk Analysis

No geotechnical hazards were observed beside the property. The steep slope that rises across the property and continues above and below is a potential hazard (**Hazard One**). The vibrations produced during the proposed excavations are a potential hazard (**Hazard Two**). The proposed excavations are a potential hazard (**Hazard Three**).

Geotechnical Hazards and Risk Analysis - Risk Analysis Summary

HAZARDS	Hazard One	Hazard Two	Hazard Three
TYPE	The steep slope that rises across the property and continues above and below failing and impacting on the property.	The vibrations produced during the proposed excavations for the bin storage/drainage cavity and pathway/steps impacting on the surrounding structures.	The proposed excavations for the bin storage/drainage cavity and pathway/steps collapsing onto the worksite during the excavation process.
LIKELIHOOD	'Unlikely' (10^{-4})	'Possible' (10^{-3})	'Possible' (10^{-3})
CONSEQUENCES TO PROPERTY	'Medium' (12%)	'Medium' (15%)	'Medium' (20%)
RISK TO PROPERTY	'Low' (2×10^{-5})	'Moderate' (2×10^{-4})	'Moderate' (2×10^{-4})
RISK TO LIFE	8.3×10^{-7}/annum	5.3×10^{-7}/annum	3.7×10^{-5}/annum
COMMENTS	This level of risk is 'ACCEPTABLE'.	This level of risk to property is 'UNACCEPTABLE'. To move risk to 'ACCEPTABLE' levels the recommendations in **Sections 11 & 12** are to be followed.	This level of risk to life and property is 'UNACCEPTABLE'. To move the 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

There is fall to both Belinda Place and Cheryl Crescent below the property. Roof water from the proposed development is to be piped to either street drainage system through any tanks that may be required by the regulating authorities.

11. Excavations

An excavation to a maximum depth of ~2.5m is required to construct the proposed bin storage and drainage corridor. Another excavation to a maximum depth of ~1.3m is required to construct the proposed pathway and steps.

The excavations are expected to be through fill, topsoil and sandy clay, with Medium Strength Sandstone expected at depths of between ~0.3m to ~2.1m below the current surface, being deeper in the filled areas (DCP1, 2 & 5) and variable due to the stepped nature of the rock.

It is envisaged that excavations through fill, soil and clay can be carried out with an excavator and toothed bucket and excavations through rock will require grinding or rock sawing and breaking.

12. Vibrations

Possible vibrations generated during excavations through fill, soil and clay will be below the threshold limit for building damage utilising a domestic sized excavator up to 20 tonne.

Excavations through Medium Strength Sandstone or better should be carried out to minimise the potential to cause vibration damage to the subject house. The excavations come flush with the subject house.

Excavation methods are to be used that limit peak particle velocity to 5mm/sec at the subject house. Vibration monitoring will be required to verify this is achieved. Vibration monitoring must include a light/alarm so the operator knows if vibration limits have been exceeded. The equipment is to 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 subject and neighbouring houses.

13. Excavation Support Requirements

Allowing for backwall drainage, the excavation for the pathway/steps is set back ~1.0m from a low tilting brick fence on the subject property (Photo 9). The low brick fence will be within the zone of influence of the excavation. In this instance, the zone of influence is the area above a theoretical 30° line (from horizontal) through fill/soil and a 45° line through clay from the base of the excavation or the top of Medium Strength Rock, whichever comes first,

towards the surrounding structures and boundaries. The excavations come flush with the subject house, however the ground floor of the house is ~0.3m above the drainage corridor and the foundations supporting the house will be outside the zone of influence of the excavation. The storage area below the E side of the house is at the level of the pathway/steps excavation and will be outside the zone of influence of the excavation, however part of the brick wall supporting the ground floor of the house does not extend to the level of the storage area.

The subject brick wall (where it does not extend to the storage level below the house) may be supported on rock. However, to be sure, exploration pits along the wall will need to be put down by the builder to determine the foundation depth and material. These are to be inspected by the geotechnical consultant.

If the foundations are confirmed to be supported on Medium Strength Rock, the excavation may commence. If they are not, the walls will need to be underpinned prior to the excavation commencing. The extent of the area of the required exploration pits/underpinning are shown in red on the attached Ground Floor Plan.

Underpinning is to follow the underpinning sequence 'hit one miss two'. Under no circumstances is the bulk excavation to be taken to the edge of the wall and then underpinned. Underpins are to be constructed from drives that should not exceed 0.6m in width along strip footings and should be proportioned according to footing size for other foundation types. Allowances are to be made for drainage through the underpinning to prevent a build-up of hydrostatic pressure. Underpins that are not designed as retaining walls are to be supported by retaining walls. The void between the retaining walls and the underpinning is to be filled with free-draining material such as gravel.

The low tilting brick fence (Photo 9) is to be demolished prior to the excavation commencing.

Where underpinning is not required and where space permits, the fill and soil portion of the excavation is to be battered temporarily at 1.0 Vertical to 2.0 Horizontal (26°) until the

retaining walls are in place. Excavations through clay are expected to stand at near vertical angles for short periods of time until the retaining walls are in place, provided the cut batters are kept from becoming saturated. Medium Strength Sandstone or better is expected to stand at vertical angles unsupported subject to approval by the geotechnical consultant.

During the excavation process, the geotechnical consultant is to inspect the excavation in 1.5m intervals as it is lowered to ensure ground materials are as expected and no wedges or other geological defects are present that could require additional support. If additional ground support is required this will likely involve the use of mesh, rock bolts and sprayed concrete.

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 retaining walls 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. If the cut batters through fill, soil and clay remain unsupported for more than a few days before the construction of the retaining walls they are to be temporarily supported until the retaining walls are in place.

Upon completion of the excavation, it is recommended the cut faces be supported with retaining walls to prevent any potential future movement of joint blocks in the cut face that can occur over time, when unfavourable jointing is obscured behind the excavation face. Additionally, retaining walls will help control seepage and to prevent minor erosion and sediment movement.

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^3)	'Active' K_a	'At Rest' K_0
Fill, Topsoil	20	0.40	0.55
Residual Clays	20	0.35	0.45
Medium Strength Sandstone	24	0.00	0.01

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 full hydrostatic pressures are to be accounted for in the retaining structure design.

15. Foundations

The proposed additions are to be supported on spread footings or piers taken to Medium Strength Sandstone. This ground material is expected at depths of between ~0.3m to ~2.1m below the current surface, being deeper in the filled areas (DCP1, 2 & 5) and variable due to the stepped nature of the rock. A maximum allowable bearing pressure of 1000kPa can be assumed for footings on Medium Strength Sandstone.

The foundations supporting the existing house are currently unknown, but are expected to be supported on Medium Strength Sandstone. Ideally, footings should be founded on the same footing material across the old and new portions of the structure. Where the footing material does change across the structure construction joints or similar are to be installed to prevent differential settlement, where the structure cannot tolerate such movement.

Naturally occurring vertical cracks (known as joints) commonly occur in sandstone. These are generally filled with soil and are the natural seepage paths through the rock. They can extend to depths of several metres and are usually relatively narrow but can range between 0.1 to 0.8m wide. If a footing falls over a joint in the rock, the construction process is simplified if with the approval of the structural engineer the joint can be spanned or alternatively the footing can be repositioned so it does not fall over the joint.

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. 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.

17. 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.

- The geotechnical consultant is to inspect any exploration pits required to expose the foundation materials of the existing house.
- During the excavation process, the geotechnical consultant is to inspect the excavation in 1.5m intervals as it is lowered to ensure ground materials are as expected and no wedges or other geological defects are present that could require additional support.
- 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.

Reviewed By:

Dion Sheldon
BEng(Civil)(Hons),
Geotechnical Engineer.

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

Photo 1

Photo 2

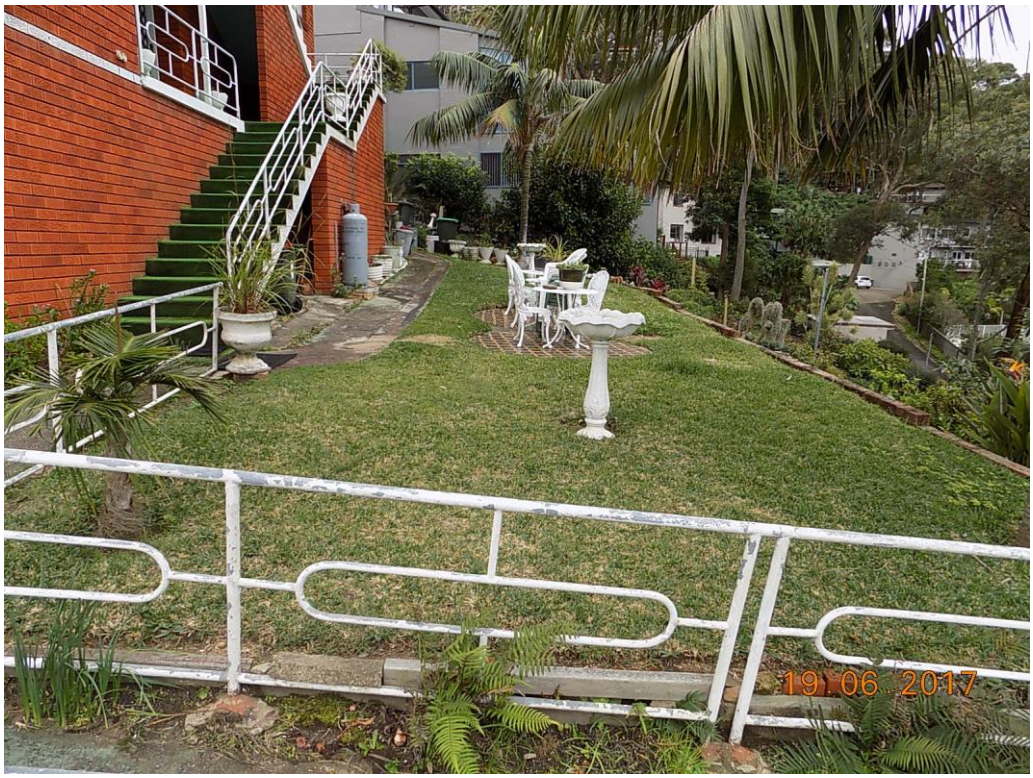


Photo 3

Photo 4

Photo 5

Photo 6

Photo 7

Photo 8

Photo 9

Photo 10: 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

DRAWING NOTES

01 New balcony structure
02 Infill existing window
03 Keep existing roof
04 New concrete driveway
05 New roof extension
06 Vental Louvre
07 Awning
08 Bulkhead
09 Keep existing window
10 Access door to drainage corridor

COMF

Demoliti...
Smoke alarms - to comply with AS3786 & Part 9.5.1 of NCC
Stairs - to comply with part 11.2 of NCC 2022
Barriers and handrails - to comply with 11.3 of NCC 2022
Protection of openable windows - being in accordance with Part 11.3.7 & 11.3.8 of NCC 2022
Slip Resistance - provide slip resistance to staircase as per part 11.2.4 of NCC 2022
Tree protection - in accordance with AS4970-2009 Protection of Trees on Development Sites
Glass balustrades - to be 1m unless noted 1.2m. No opening greater than 125mm.
All glass balustrades to comply with AS1288 and to be fitted with a top rail as per the standard. Balustrades are to be structurally designed to incorporate design elements of AS1170.
All works - to comply with NCC 2022 Volume 2 (May 2023) & BASIX commitments

ALSO REFER TO:

BASIX Certificate - A500200 July 2023
Stormwater / WMP / Erosion & Sediment - 2317-C01-C04-B / Aidan Hogan
Survey - 534detail 1 Rev B / Waterview Surveying Services
Geotechnical Report - J4945 / White Geotechnical
Statement of Environmental Effects - June 2023 / Nolan Planning Consultants

COLOURS:

PROPOSED ITEM IS **BLACK**
EXISTING ITEM IS **BLUE** / BLUE
DEMOLISHED ITEM IS **RED**

40
D.P.218250

DCP1
DCP2
DCP3
DCP4
DCP5
AH 1

Wall that requires confirmation via exploration pits shown in red.

ALL AUSTRALIAN ARCHITECTURE
Suite 206, 20 Dale St,
Brookvale NSW 2100
ABN 95 492 673 232
aaarchitect.com.au

Adam Pressley FRAIA
Principal & Nominated
Architect NSW #6007
0412 348 575

Alterations & Additions - Ron & Kusuma McCarthy
1 Belinda Place Newport 2106
39/-/DP218250

Ground Floor Plan
Scale 1:100 @ A3
DA Plans - For Approval

1Bel
DA.05
Issue:
E

DRAWING NOTES

01 New balcony structure
02 Infill existing window
03 Keep existing roof
04 New concrete driveway
05 New roof extension
06 Vental Louvre
07 Awning
08 Bulkhead
09 Keep existing window
10 Access door to drainage corridor

COMPLIANCE NOTES

Demolition - in accordance with AS2601-2001 - Demolition of Structures
Smoke alarms - to comply with AS3786 & Part 9.5.1 of NCC
Stairs - to comply with part 11.2 of NCC 2022
Barriers and handrails - to comply with 11.3 of NCC 2022
Protection of openable windows - being in accordance with Part 11.3.7 & 11.3.8 of NCC 2022
Slip Resistance - provide slip resistance to staircase as per part 11.2.4 of NCC 2022
Tree protection - in accordance with AS4970-2009 Protection of Trees on Development Sites
Glass balustrades - to be 1m unless noted 1.2m. No opening greater than 125mm.
All glass balustrades to comply with AS1288 and to be fitted with a top rail as per the standard. Balustrades are to be structurally designed to incorporate design elements of AS1170.
All works - to comply with NCC 2022 Volume 2 (May 2023) & BASIX commitments

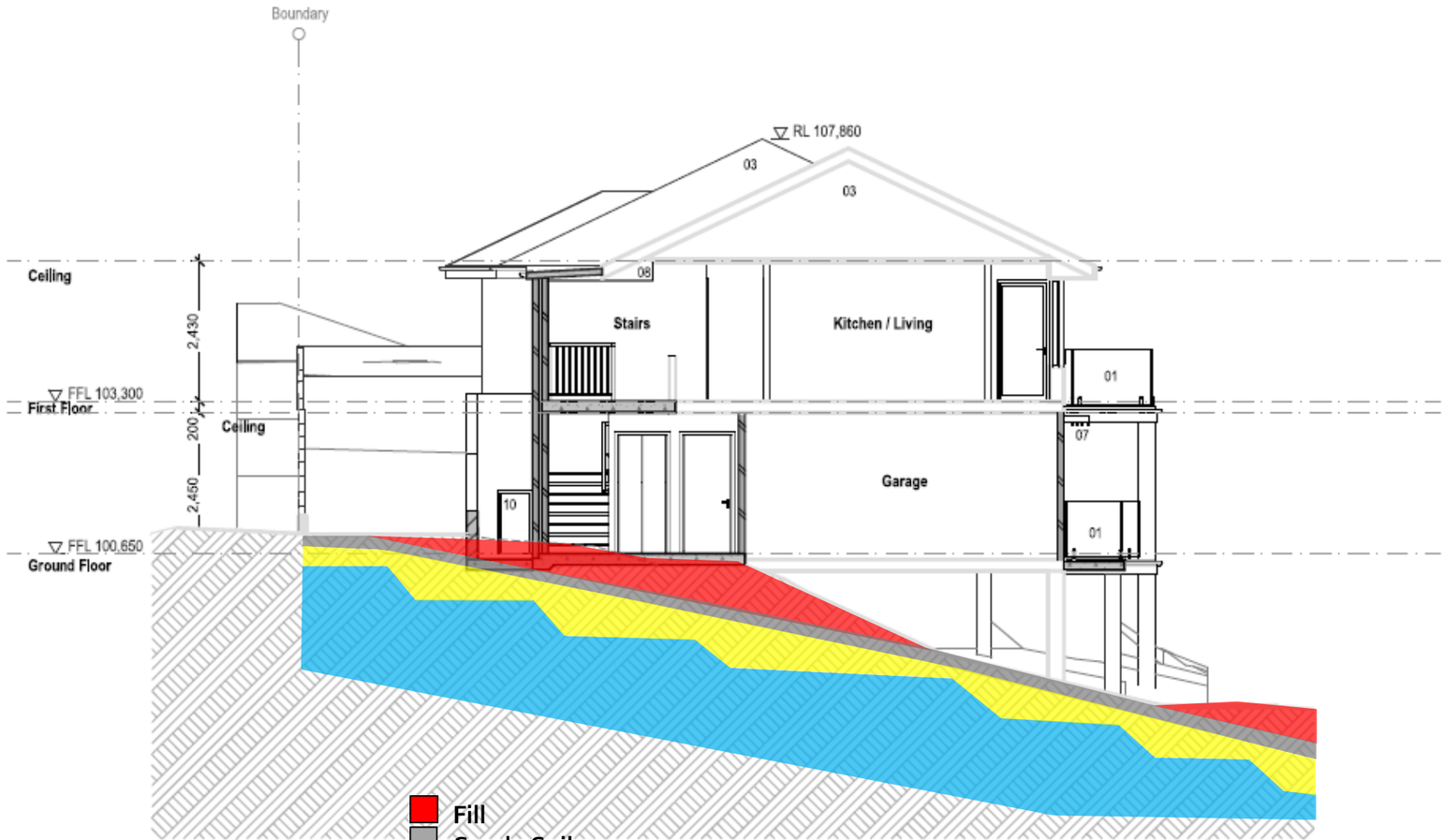
ALSO REFER TO:

BASIX Certificate - A500200 July 2023
Stormwater / WMP / Erosion & Sediment - 2317-C01-C04-B / Aidan Hogan
Survey - 534detail 1 Rev B / Waterview Surveying Services
Geotechnical Report - J4945 / White Geotechnical
Statement of Environmental Effects - June 2023 / Nolan Planning Consultants

COLOURS:

PROPOSED ITEM IS **BLACK**
EXISTING ITEM IS **BLUE** / BLUE
DEMOLISHED ITEM IS RED

TYPE SECTION – Diagrammatical Interpretation of expected Ground Materials



ALL AUSTRALIAN ARCHITECTURE
Suite 206, 20 Dale St,
Brookvale NSW 2100
ABN 95 492 673 232
aaarchitect.com.au

Adam Pressley FRAIA
Principal & Nominated
Architect NSW #6007
0412 348 575

Alterations & Additions - Ron & Kusuma McCarthy
1 Belinda Place Newport 2106
39/-/DP218250

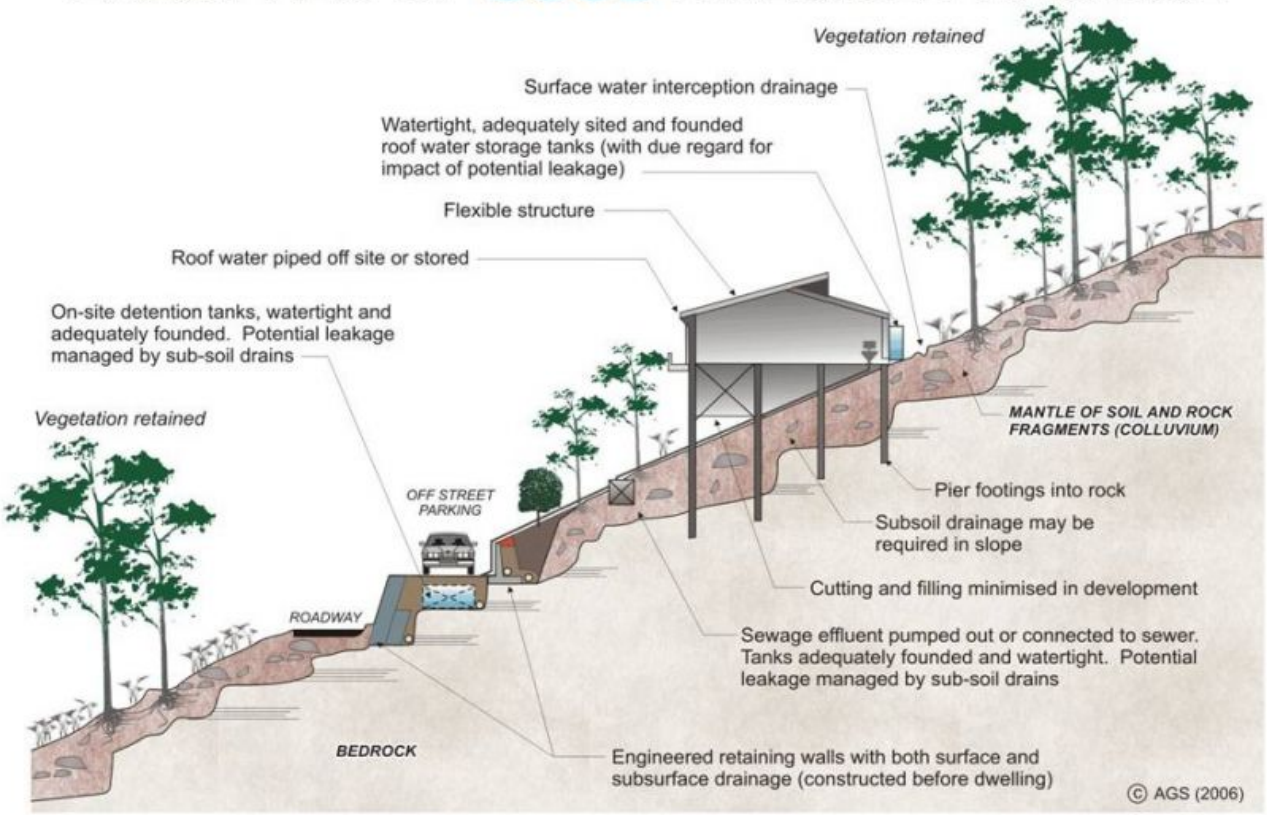
0 1 2

Section AA
Scale 1:100 @ A3

DA Plans - For Approval

1Bel
DA.11
Issue:
E

EXAMPLES OF **GOOD** HILLSIDE PRACTICE



EXAMPLES OF **POOR** HILLSIDE PRACTICE