

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

Development Application for _____	Name of Applicant
Address of site _____	45 Hillcrest Avenue, 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 16/12/24 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 45 Hillcrest Avenue, Mona Vale
Report Date: 16/12/24
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>45 Hillcrest Avenue, Mona Vale</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 45 Hillcrest Avenue, Mona Vale
Report Date: 16/12/24
Author: BEN WHITE
Author's Company/Organisation: WHITE GEOTECHNICAL GROUP PTY LTD

Please mark appropriate box

- Comprehensive site mapping conducted 14/10/20
(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 **14/10/20**
- 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:

Balcony Extension at **45 Hillcrest Avenue, Mona Vale**

1. Proposed Development

- 1.1** Extend the existing balcony at the downhill side.
- 1.2** Details of the proposed development are shown on 14 drawings prepared by JJ Drafting, job number 1077/24, drawings numbered DA.01 to DA.14, Revision C, dated 16/12/24.

2. Site Description

- 2.1** The site was inspected on the 4th December, 2024 and previously on the 10th November, 2021 and the 14th October, 2020.
- 2.2** This residential property is on the low side of the road and has a SW aspect. It is located on the gentle to moderately graded upper reaches of a hillslope. The natural slope falls across the property at an average angle of $\sim 12^\circ$. The slopes above and below the property decrease in grade.
- 2.3** At the road frontage, a concrete driveway runs down the slope to a garage attached to the house (Photo 1). Between the road frontage and the house is a garden area. The fill for the garden area is supported by a stable low rendered masonry retaining wall. The part two storey house is supported on masonry walls (Photos 2 & 3). The external supporting walls show no significant signs of movement. A cut provides a level platform for the N side of the house. The cut is lined by low sandstone flagging retaining wall or is supported by a stable sandstone block retaining wall up to ~ 1.6 m high (Photo 4). A pool that shows no significant signs of movement is located downslope of the house (Photo 5). Stable rendered masonry and keystone retaining walls up to ~ 3.6 m high support fills for lawn and paved areas across the

downhill side of the property (Photos 6 to 8). No signs of slope instability were observed on the property. The adjoining neighbouring properties were observed to be in good order as seen from the street and subject property.

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

Ten 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 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 may have occurred for DCP5. 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 ON NEXT PAGE

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 (~RL41.0)	DCP 2 (~RL41.1)	DCP 3 (~RL41.0)	DCP 4 (~RL41.0)	DCP 5 (~RL41.0)
0.0 to 0.3	10	5	16	14	12
0.3 to 0.6	20	6	16	17	10
0.6 to 0.9	13	4	9	14	#
0.9 to 1.2	37	7	13	14	
1.2 to 1.5	19	8	8	33	
1.5 to 1.8	11	16	#	30	
1.8 to 2.1	17	40		19	
2.1 to 2.4	25	#		18	
2.4 to 2.7	40			18	
2.7 to 3.0	#			30	
3.0 to 3.3				#	
	End of Test @ 2.6m	End of Test @ 2.1m	Refusal on Rock @ 1.3m	Refusal on Rock @ 2.9m	Refusal @ 0.5m

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

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 6 (~RL41.0)	DCP 7 (~RL39.7)	DCP 8 (~RL36.6)	DCP 9 (~RL35.7)	DCP 10 (~RL36.8)
0.0 to 0.3	16	13	7	5	5
0.3 to 0.6	18	11	7	9	6
0.6 to 0.9	10	5	13	10	7
0.9 to 1.2	12	5	40	14	37
1.2 to 1.5	9	#	#	20	#
1.5 to 1.8	16			#	
1.8 to 2.1	40				
2.1 to 2.4	#				
	End of Test @ 2.0m	Refusal on Rock @ 1.0m	End of Test @ 1.2m	Refusal on Rock @ 1.3m	Refusal on Rock @ 1.2m

#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 @ 2.6m, DCP still very slowly going down, brown orange rock fragments on dry tip.

DCP2 – End of Test @ 2.1m, DCP still very slowly going down, orange clayey rock fragments on dry tip.

DCP3 – Refusal on Rock @ 1.3m, DCP bouncing off rock surface, orange clayey rock fragments on dry tip.

DCP4 – Refusal on Rock @ 2.9m, DCP bouncing, white, orange and red rock fragments on dry tip.

DCP5 – Refusal @ 0.5m, DCP bouncing, brown soil on dry tip.

DCP6 – End of Test @ 2.0m, DCP still very slowly going down, orange clay on dry tip.

DCP7 – Refusal on Rock @ 1.0m, DCP bouncing off rock surface, orange and white impact dust on dry tip.

DCP8 – End of Test @ 1.2m, DCP still very slowly going down, orange and white impact dust on dry tip.

DCP9 – Refusal on Rock @ 1.3m, DCP bouncing off rock surface, orange brown rock fragments on dry tip.

DCP10 – Refusal on Rock @ 1.2m, DCP bouncing off rock surface, white impact dust 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 topsoil over firm to stiff clays. Fill has been placed to form level lawn and paved areas at the downhill side of the property. The clays merge into the weathered zone of the under lying rocks at depths of between 1.0m to 2.9m below the current surface, being deeper in the filled areas. 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

Ground water seepage is expected to move over the denser and less permeable clay and weathered rock layers in the sub-surface profile. Due to the slope and 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 Hillcrest Avenue above.

8. Geotechnical Hazards and Risk Analysis

No geotechnical hazards were observed beside the property. The gentle to moderately graded slope that falls across the property and continues above and below is a potential hazard (**Hazard One**).

Geotechnical Hazards and Risk Analysis - Risk Analysis Summary

HAZARDS	Hazard One
TYPE	The gentle to moderate slope that falls across the property and continues above and below failing and impacting on the property.
LIKELIHOOD	'Unlikely' (10^{-4})
CONSEQUENCES TO PROPERTY	'Medium' (12%)
RISK TO PROPERTY	'Low' (2×10^{-5})
RISK TO LIFE	8.3×10^{-7} /annum
COMMENTS	This level of risk is 'ACCEPTABLE'.

(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 away from the street. The stormwater engineer is to refer to council stormwater policy for suitable options.

11. Excavations

Apart from those for footings, no excavations are required.

12. Site Classification

The site classification in accordance with AS2870-2011 is Class P due to the depth of the fill. The natural clays below the fill are interpreted to be moderately reactive.

13. Foundations

The proposed balcony extension is to be supported on piers taken to and embedded no less than 0.6m from the downhill edge of the footing into Extremely Low Strength Rock or better. This ground material is expected at depths of between ~1.3m to ~3.0m below the current surface, being deeper where the fill is deeper. 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.

The foundations supporting the existing house and balcony are currently unknown. 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.

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 and inspected.

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.

14. 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.

15. Inspection

The client and builder are to familiarise themselves with the following required inspection as well as council geotechnical policy. We cannot provide geotechnical certification for the Occupation Certificate if the following inspection has 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.



Dion Sheldon
BEng(Civil)(Hons) MIEAust NER,
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

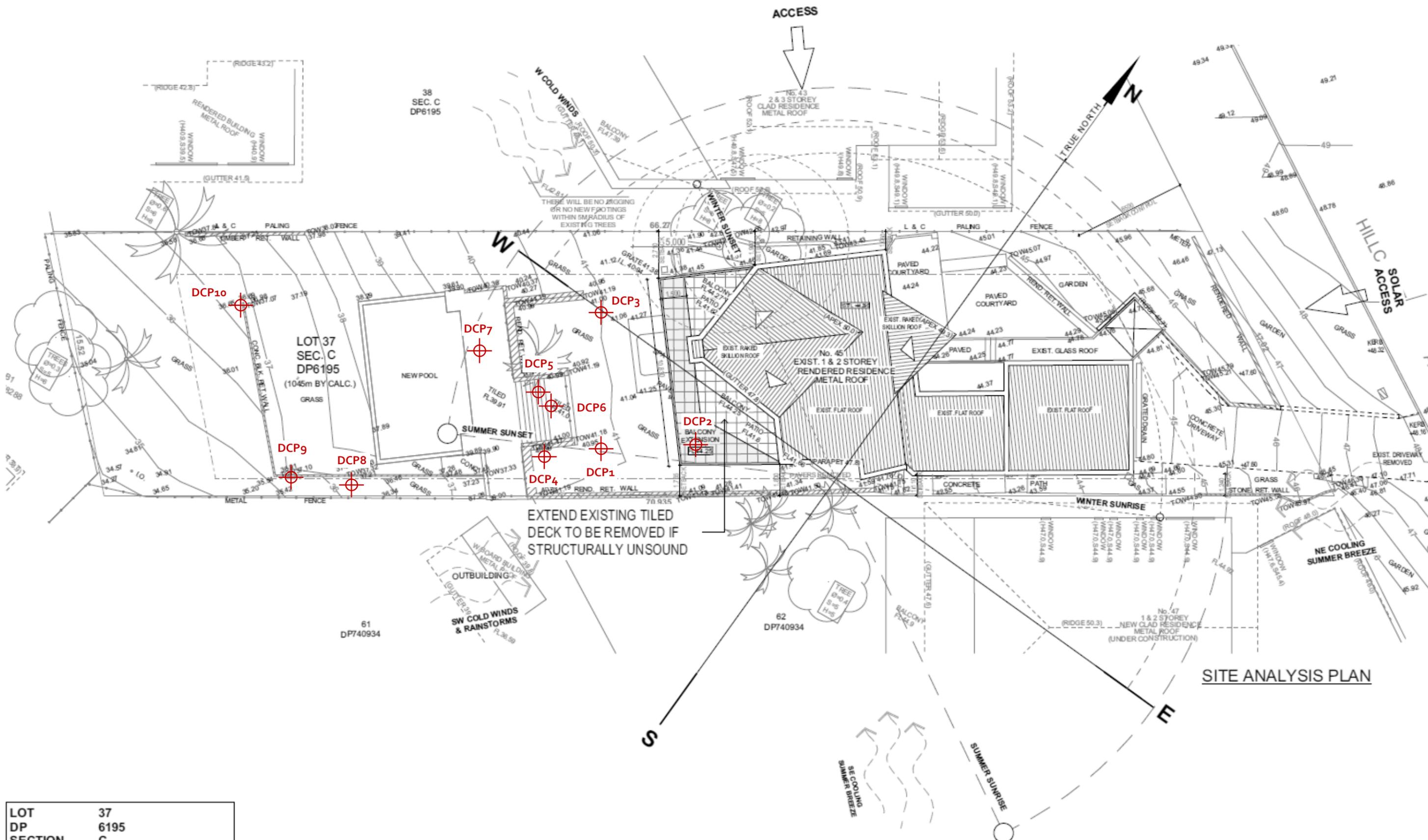
Important Information about Your Report

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 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 ANALYSIS PLAN

LOT 37
 DP 6195
 SECTION C

SITE AREA = 1045 m²

TRUE NORTH:

NOTES (E & OE)

- All structures including stormwater & drainage to engineer's details.
- Do not obtain dimensions by scaling drawings.
- All dimensions are to be checked on site prior to starting work.
- These drawings are to be read in conjunction with all other consultant's drawings and specifications.
- All workmanship & materials shall be in accordance with the requirements of current editions including amendments of the National Construction Code, relevant Australian Standards & local council requirements.
- New materials are to be used throughout unless otherwise noted.
- Concrete footings, slab, structural beams or any other structural members are to be designed by a practicing engineer.

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REV:	DATE:	DESCRIPTION:
A	28/10/2024	Preliminary Plans
B	27/11/2024	Development Application
C	16/12/2024	Balcony amendment

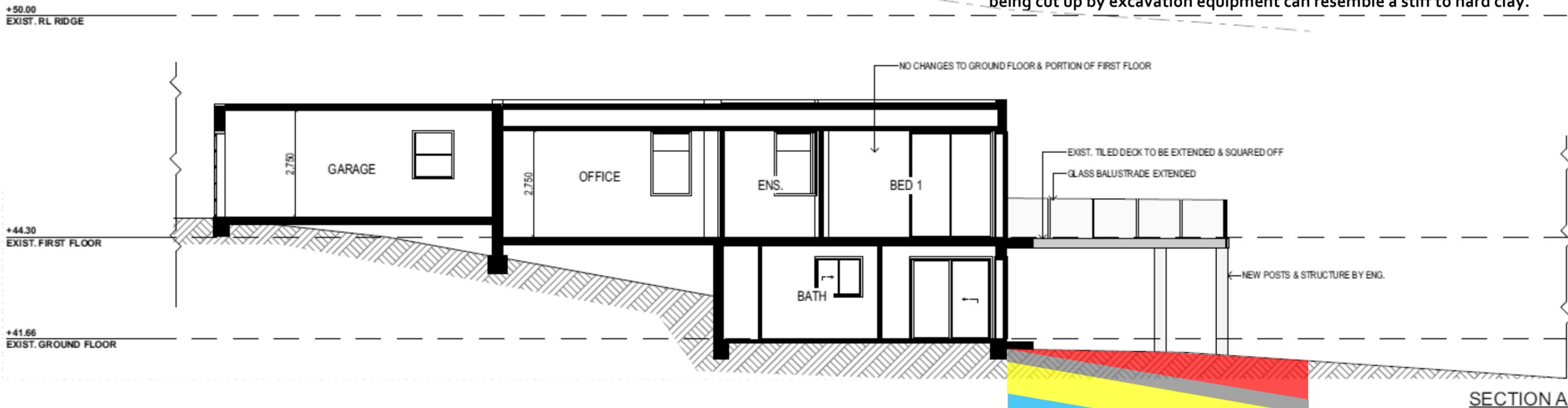
PROPOSED ALTERATIONS AND ADDITIONS
 45 HILLCREST AVE, MONA VALE 2103
 CLIENT:
 STEPHEN WOODS & KERRIE WILSON

DRAWING TITLE:
 SITE ANALYSIS PLAN

DATE: DEC/24	DRAWN BY: PP	SCALE: 1:200 @ A3
JOB No: 1077/24	CHECKED BY: JJ	DRAWING No: DA.02

TYPE SECTION – Diagrammatical Interpretation of expected Ground Materials

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



SECTION A

SPECIFICATION NOTES

- INTERNAL LINING**
- PROVIDE PLASTERBOARD LINING.
 - INSTALL TO MANUFACTURERS SPECIFICATIONS & AS 2589
- EXTERNAL WALLS:**
- BRICK VENEER WALLS WITH SELECTED BRICKS TO DWELLING.
 - LIGHTWEIGHT TIMBER OR COMPOSITE WALL CLADDING IN ACCORDANCE WITH NCC VOL 2 PART 3.5.4.
 - LIGHTWEIGHT METAL WALL CLADDING IN ACCORDANCE WITH NCC VOL 2 PART 3.5.5.
- FLOOR:**
- GROUND FLOOR TO BE REINFORCED CONCRETE SLAB IN ACCORDANCE WITH AS 2870.
 - FIRST FLOOR TO BE TIMBER FRAMED FINISHED WITH T&G HARDWOOD FLOORING.
- WET AREAS:**
- ALL WATERPROOFING TO AS 3740
 - PROVIDE A GUARANTEED FLEXIBLE WATERPROOF MEMBRANE TO ALL WET AREA FLOORS & SHOWERS
 - WALLS TO MANUFACTURERS INSTRUCTIONS
- BEARERS AND JOISTS:**
- SHALL BE INSTALLED TO COMPLY WITH AS 1684 AS AMENDED FOR TIMBER COMPONENTS OR AS 3620 FOR LIGHTWEIGHT STEEL FRAMING SECTIONS OR AS PER THE NASH ALTERNATIVES TO AS 3623.
- ANT CAPS:**
- SHALL BE INSTALLED IN ACCORDANCE WITH AS 3680.
- PROFILED STEEL ROOF:**
- COLORBOND ROOF CLADDING
 - NCC VOL 2 PART 3.5.1.
 - DESIGN AND INSTALLATION SHALL BE IN ACCORDANCE WITH AS/NZS 1562.
- ROOF TILES OR SHINGLES:**
- NCC VOL 2 PART 3.5.2.
- CONCRETE:**
- SHALL BE IN ACCORDANCE WITH NCC VOL 1 PART B1.4 OR VOL 2 PART 3.2.3.
 - ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH CURRENT EDITIONS OF THE AS 3800.

- FOOTINGS:**
- FOOTINGS TO BE IN ACCORDANCE WITH AS 1480.
 - FOOTINGS TO BE IN ACCORDANCE WITH NCC VOL 2 PARTS 3.2.3, 3.2.4 AND 3.2.5
 - ALL REINFORCEMENTS SHALL CONFORM TO AS 1302, AS 1303 AND AS 1304.
- BRICK AND BLOCKWORK:**
- CONSTRUCTION OF MASONRY BUILDINGS SHALL BE AS PER AS 3700 OR AS 4773.
- CARPENTRY:**
- TIMBER TO COMPLY WITH AS 1170.2 OR AS 4055.
 - ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 1684 AND 1720 AS APPLICABLE.
- TIMBER FRAMING:**
- TO COMPLY WITH NCC VOL 2 PART 3.4
 - GROUND FLOOR TIMBERS SHALL BE ONLY OF HARDWOOD, CYPRESS PINE OR PRESSURE TREATED RADIATA OR CANADA PINE BELOW A HEIGHT OF 300mm ABOVE FINISHED GROUND LEVEL AND MUST NOT BE BUILT INTO BRICKWORK.
 - SUBFLOOR VENTILATION SHALL CONFORM TO NCC VOL 2 PART 3.4.1.
 - IN BUSHFIRE PRONE AREAS SPECIAL CONDITIONS APPLY.
 - WHERE TERMITE BARRIERS NEED TO BE INSPECTED, 400mm CLEARANCE IS REQUIRED BETWEEN THE UNDERSIDE OF BEARER AND GROUND SURFACE.
 - USE TREATED TIMBER WHERE REQUIRED FOR DURABILITY.
 - DO NOT USE TIMBER UNSUITABLE FOR EXPOSURE TO MOISTURE IN EXPOSED LOCATION.
 - PROVIDE STRUCTURE BRACING IN ACCORDANCE WITH AS 1684
 - PROVIDE STRUCTURE TIEDOWN IN ACCORDANCE WITH AS 1684
 - USE GALVANISED FIXINGS WHERE EXPOSED TO WEATHER.
- TERMITE CONTROL:**
- TO BE IN ACCORDANCE WITH TO AS 3680.1
 - SHALL BE IN ACCORDANCE WITH NCC VOL 2 PART 3.1.4 OR VOL 1 PART B.14.
- FLASHING AND CAPPINGS:**
- SELECTION AND INSTALLATION OF METAL RAINWATER GOODS REFER TO AS 2180
 - FLASH PROJECTIONS ABOVE THE ROOF WITH TWO PART FLASHINGS CONSISTING OF AN APRON FLASHING AND OVERFLASHING, WITH AT LEAST 100mm OVERLAP.
 - PROVIDE FOR INDEPENDENT MOVEMENT BETWEEN ROOF AND PROJECTION.
- CONCRETE BLOCKS OR BRICKS:**
- TO COMPLY WITH TO AS 4465 MASONRY BUILDING BLOCKS/PAVER.

- LIGHTING:**
- 40% OF NEW OR ALTERED LIGHT FIXTURES TO BE FITTED WITH FLUORESCENT, COMPACT FLUORESCENT, OR LIGHT-EMITTING-DIODE (LED) LAMPS
- DOORS & WINDOWS:**
- ALL FRAMED WINDOWS SHALL BE INSTALLED IN ACCORDANCE WITH AS 2047-48 FOR ALUMINIUM WINDOWS AND AS 2047 FOR TIMBER WINDOWS.
 - ALUMINIUM FRAMED WINDOWS AND DOORS.
 - WEATHER STRIPPING IS TO BE PROVIDED TO ALL EXTERNAL WINDOWS AND DOORS.
- STAIRS, HANDRAILS AND BALUSTRADES:**
- NCC VOL 2 PARTS 3.9.1 AND 3.9.2
 - RELATIONSHIP OF RISER TO GOING SHALL BE BETWEEN 12 AND 1:1.35 UNLESS OTHERWISE DIRECTED TO GOING SHALL BE BETWEEN 12 AND 1:1.35 UNLESS OTHERWISE DIRECTED OR AS PERMITTED IN AS 1657.
 - BALUSTRADES SHALL BE PROVIDED TO ALL LANDINGS, RAMPS, DECKS, ROOFS AND OTHER ELEVATED PLATFORMS WHERE THE VERTICAL DISTANCE FROM THAT LEVEL IS MORE THAN 1m ABOVE THE ADJOINING FLOOR OR FINISHED GROUND LEVEL.
 - THE HEIGHT OF BALUSTRADE MUST BE A MINIMUM OF 1m HIGH ABOVE LANDING AND NOT LESS THAN 865mm ABOVE THE NOSINGS OF ANY STAIR TREADS OR FLOOR RAMP AND HAVE NO OPENING GREATER THAN 125mm.
 - THE HEIGHT OF BALUSTRADE TO THE NEW STAIRCASES IS TO BE MEASURED A MINIMUM 865mm ABOVE THE NOSING LINE AND HAVE NO OPENING GREATER NO OPENING GREATER THAN 125mm.
- SLIP RESISTANCE:**
- MATERIALS TO BE USED FOR SURFACES OF FLOORS, STAIR LANDING, STEPS AND NOSINGS SHALL BE IN ACCORDANCE WITH THE CLASSIFICATIONS FOR SLIP RESISTANCE AS APPLY IN AS 4586 AND HB198.
- STORMWATER:**
- EAVES GUTTERS, VALLEY GUTTERS AND DOWPIPES**
- TO COMPLY WITH AS/NZS 2179 FOR METAL AND AS 1273 FOR UPVC COMPONENTS.
 - IN ACCORDANCE WITH NCC VOL 2 PART 3.5.3
 - NEW DOWNPIPES TO BE CONNECTED INTO EXISTING STORMWATER LINE
 - COLORBOND GUTTERS AND DOWNPIPES
 - MINIMUM SLOPE OF EAVES AND GUTTERS 1:200

- WATERPROOFING FOR EXTERNAL TILED BALCONIES:**
- WATERPROOFING TO COMPLY WITH AS 4654
- GLAZING:**
- NCC VOL 1 PARTS B 1.4, D 3.12, F1.13 OR NCC VOL 2 PART 3.6
- SMOKE DETECTOR/ALARMS:**
- NCC VOL 2 PART 3.7.5. FIRE/SMOKE DETECTORS COMPLYING WITH THE REQUIREMENTS OF THE LOCAL GOVERNMENT ACT AND/OR STATE OR TERRITORY REGULATIONS MUST BE FITTED IN THE LOCATIONS REQUIRED AND APPROVED BY THE AUTHORITY AND SHALL BE INSTALLED IN ACCORDANCE WITH AS 3788.
 - INSTALLATIONS IN BUILDINGS OTHER THAN CLASS 1 AND 10 MUST BE INSTALLED AND MANAGED TO COMPLY WITH NCC SPEC. E2.2a.
 - MULTIPLE ALARMS WITHIN HOUSES AND SOLE OCCUPANCY UNITS MUST BE HARD WIRED AND INTERCONNECTED.
- WASTE MANAGEMENT:**
- ALL WASTE SHALL BE TAKEN AWAY BY TRUCKS TO A SUITABLE LANDFILL OR RECYCLE DEPOT.
 - ALL WASTE SHALL BE COVERED DURING TRANSPORTATION.
 - WASTE GENERATED DURING CONSTRUCTION SHALL BE PLACED IN STEEL BINS AND TAKEN AWAY BY AN APPROVED CONTRACTOR TO A APPROVED LANDFILL SITE.
- SEDIMENT CONTROL:**
- A FILTER CLOTH SYSTEM SHALL BE INSTALLED TO STOP ANY SEDIMENT ENTERING COUNCILS STORMWATER SYSTEM.
- NOTE:**
- ALL PLANS ARE TO BE READ IN CONJUNCTION AND COMPLY WITH THE BASIX CERTIFICATE, BUSHFIRE AND GEOTECH REPORTS.

NOTES (E & OE)

- All structures including stormwater & drainage to engineer's details.
- Do not obtain dimensions by scaling drawings.
- All dimensions are to be checked on site prior to starting work.
- These drawings are to be read in conjunction with all other consultant's drawings and specifications.
- All workmanship & materials shall be in accordance with the requirements of current editions including amendments of the National Construction Code, relevant Australian Standards & local council requirements.
- New materials are to be used throughout unless otherwise noted.
- Concrete footings, slab, structural beams or any other structural members are to be designed by a practicing engineer.

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REV:	DATE:	DESCRIPTION:
A	28/10/2024	Preliminary Plans
B	27/11/2024	Development Application
C	16/12/2024	Balcony amendment

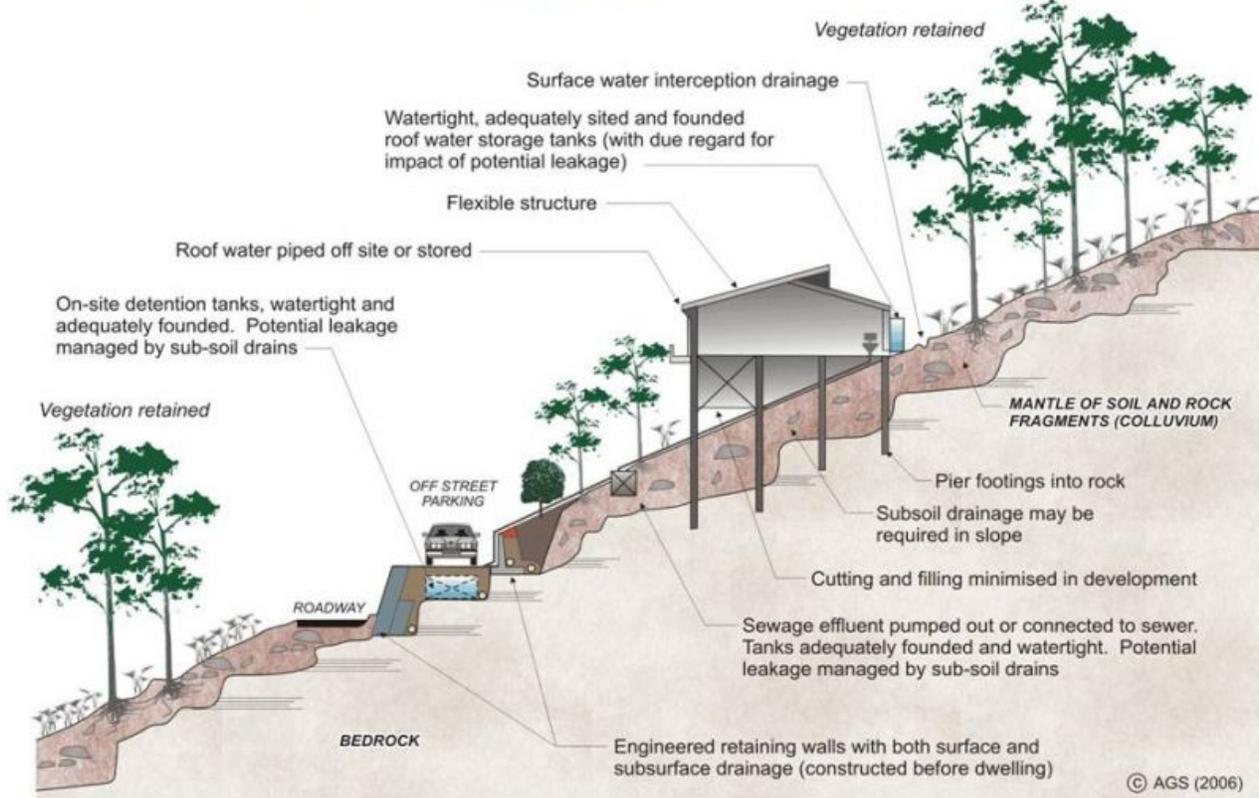
PROPOSED ALTERATIONS AND ADDITIONS
45 HILLCREST AVE, MONA VALE 2103

CLIENT:
STEPHEN WOODS & KERRIE WILSON

DRAWING TITLE:
SECTION A / SPECIFICATION

DATE: DEC/24	DRAWN BY: PP	SCALE: 1:100 @ A3
JOB No: 1077/22	CHECKED BY: JJ	DRAWING No: DA.12

EXAMPLES OF **GOOD** HILLSIDE PRACTICE



EXAMPLES OF **POOR** HILLSIDE PRACTICE

