GEOTECHNICAL RISK MANAGEMENT POLICY FOR PITTWATER

FORM NO. 1 – To be submitted with Development Application

Development Application for ______________________________

Name of Applicant

Address of site **7 PACIFIC ROAD, PALM BEACH**

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 1/12/16 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 $2million.

I have:

Please mark appropriate box

☒ 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

☒ I 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 paragraph 6.0 of the Geotechnical Risk Management Policy for Pittwater - 2009. I confirm the results of the risk assessment for the proposed development are in compliance with the Geotechnical Risk Management Policy fro 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 am of the opinion that the Development Application only involves Minor Development/Alterations that do not require a Detailed Geotechnical Risk Assessment and hence my report is in accordance with the Geotechnical Risk Management Policy for Pittwater – 2009 requirements for Minor Development/Alterations.

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

Geotechnical Report Details:

Report Title: Geotechnical Report **7 PACIFIC ROAD, PALM BEACH**

Report Date: 1/12/16

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 **7 PACIFIC ROAD, PALM BEACH**

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 **7 PACIFIC ROAD, PALM BEACH**

Report Date: 1/12/16

Author : BEN WHITE

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

Please mark appropriate box

☒ Comprehensive site mapping conducted 20/10/16
(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 20/10/16

☒ 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 & Additions at **7 Pacific Road, Palm Beach.**

1. Proposed Development

1.1 Construct an addition to the downhill side of the house.

1.2 Details of the proposed development are shown on 7 drawings prepared by Nanna Lesiuk, drawings numbered DA:03 to 09, issue A, dated November 2016.

2. Site Description

2.1 The site was inspected on the 20th October, 2016.

2.2 This residential property is on the low side of the road and has a NE aspect. It is located on the moderate to steeply graded upper middle reaches of a hillslope. At the road frontage the natural slope falls at an angle of ~27° that eases to ~11° at the uphill side of the house. The slope increases again to ~36° near the lower boundary. Sandstone beds are exposed above and below the house and where the grade is steeper the rock steps down the property. The slope above the property eases to moderate angles. The land surface below falls at steep angles.

2.3 At the road frontage a suspended concrete driveway runs down and across the slope then cuts back 180° to a timber framed and clad garage (Photos 1 & 2). The driveway is supported by concrete piers, some of which can be seen to be founded directly onto medium strength sandstone bedrock (Photo 3). Below the driveway is a steep, densely vegetated slope that has been terraced with three retaining walls (Photo 4). The upper wall is a concrete block wall and the middle wall is a brick wall. Both walls are ~1.0m high and from what could be seen of them through the dense vegetation, they appear stable. The lower wall is a concrete block wall ~1.4m high. It also appears stable and is supported directly onto medium strength sandstone. Below the garage is a densely vegetated slope that falls to the top of a cut made to accommodate the house. The cut is through medium strength sandstone, is ~2.0m high and is considered to be stable (Photo 5). The part three storey brick and timber framed and clad house is in good condition (Photo 6). No significant cracking or movement was observed in its external supporting walls and its supporting concrete piers stand vertical. A tiled patio area extends off the downhill side of the house and around a pool that displays no signs of movement. A lawn covered fill below the house is supported by a timber retaining wall reaching ~1.2m high. The wall is tilting to ~8° (Photo 7). The movement in the retaining wall appears to be partly due to bowing of the soldier posts and partly due to the inadequate embedment. Below the wall, a large fill provides a level platform for a lawn that is supported by a timber crib wall ~2.0m high at its SE end (Photo 8), and by a timber soldier pile wall at its NW end. The crib wall displays some minor movement but is currently considered stable. See **section 15** for recommended maintenance. The height of the soldier pile wall could not be accurately determined due to the dense exotic vegetation below it but was observed to be tilting to a maximum of ~5°. See **section 15** for recommended maintenance. Below these walls is a very steep slope with a dense covering of exotic vegetation that continues to the lower boundary (Photo 9).

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 laminate lenses.

4. Subsurface Investigation

One Hand Auger Hole (AH) was put down to identify the soil materials. Two Dynamic Cone Penetrometer (DCP) tests were put down to determine the relative density of the overlying soil and the depth to bedrock. The location of the tests are shown on the site plan. It should be noted that a level of caution should be applied to 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. The results are as follows:

AUGER HOLE 1 (~RL75.1) **–** AH1 (Photo 10)

Depth	Material Encountered
0.0 to 0.4	**SANDY SOIL,** dark brown, medium to course grained with fine trace organic matter.
0.4 to 0.9	**CLAY,** brown and mottled orange, firm, fine grained.

Refusal @ 0.9m, auger grinding on rock surface. 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** (~RL75.1)	**DCP 2** (~RL73.7)
0.0 to 0.3	3	Rock Exposed at Surface
0.3 to 0.6	7	
0.6 to 0.9	19	
0.9 to 1.2	30	
1.2 to 1.5	#	
	End of Test @ 1.0m	

#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 @ 1.0m, DCP still very slowly going down, orange and red rock fragments on dry tip, dark red clay in collar above tip.

DCP2 – Rock exposed at surface below ~1.2m high retaining wall.

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 natural sandy soils over sandy clays that cover the bench step formation. In the test locations the depth to rock ranged between 0.0 to 1.0m below the current surface, being deeper due to filling placed on the lower side of the house. 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. See the Type Section attached for a diagrammatical representation of the expected ground materials.

6. Groundwater

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

7. Surface Water

No evidence of surface flows was observed on the property during the inspection. It is expected that some sheet wash will move onto the site from above the property during heavy down pours. Pacific Road will not intercept the sheet wash from above as the road edges are not guttered.

8. Geotechnical Hazards and Risk Analysis

No geotechnical hazards were observed above or beside the property. The steeply graded land surface that falls below the house and continues below is a potential hazard (**Hazard One**). The timber crib retaining wall near the lower boundary is a potential hazard (**Hazard Two**).

Risk Analysis Summary

HAZARDS	Hazard One	Hazard Two
TYPE	The steep slope that falls from below the house to the lower boundary and continues beyond failing and impacting on the existing house and proposed works (Photo 9).	The timber crib retaining wall near the lower boundary failing and impacting on the property below (Photo 8).
LIKELIHOOD	'Unlikely' (10^{-4})	'Possible' (10^{-3})
CONSEQUENCES TO PROPERTY	'Medium' (15%)	'Medium' (20%)
RISK TO PROPERTY	'Low' (2×10^{-5})	'Moderate' (5×10^{-5})
RISK TO LIFE	5.5×10^{-7}/annum	2.5×10^{-6}/annum
COMMENTS	This level of risk is 'ACCEPTABLE'.	This level of risk is 'TOLERABLE'. Risk will move to acceptable provided the wall is monitored by the owners on an ongoing biannual basis. See **section 15** for maintenance.

(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.

Stormwater from the existing house is either discharged beside the house or is piped underground and the discharge location could not be visually identified. It is recommended a drainage easement be obtained from the downhill neighbouring property and all stormwater or drainage runoff from the proposed development be piped to the street below. If this option is not feasible a spreader pipe system is suitable as a last resort, provided flows are kept close to natural runoff for the site. All stormwater is to be piped through any tanks that may be required by the regulating authorities.

11. Excavations.

Apart from those for footings no excavations are shown on the plans.

12. Retaining Walls

No retaining walls are shown on the plans.

13. Site Classification

The site classification in accordance with AS2870-2011 for footings supported on sandstone bedrock is Class A.

14. Foundations

Pads or shallow piers supported off medium strength sandstone are suitable footings for the proposed addition. Where this ground material is not exposed at the surface it is expected to be at a maximum depth of ~1.0m below the current surface. Where the footings are over an exposed sloping rock surface they may be supported off a levelling strip or off level pads cut into the rock. Assume a maximum allowable bearing pressure of 1.2MPa for footings supported off medium strength sandstone.

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 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.

15. Site Maintenance

Where slopes exceed 30° such as that below the house it is prudent for the owners to occasionally inspect the slope (say annually or after heavy rainfall events, whichever occurs first). Should any significant signs of movement be seen or changes in the erosional process or drainage regime be observed a geotechnical professional should be consulted to assess the slope. The previous Risk Analysis is conditional on this general observation being carried out.

All retaining walls on the property are to be inspected for new movement on a biannual basis or after prolonged heavy rainfall, whichever occurs first by the owners of the subject property (Photo 8 & 9). A photographic record of those inspections is to be kept as a record and for future reference. Should further movement be observed a geotechnical professional is to be engaged to assess the movement and provide a plan for remediation should it be required.

16. 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 owner or 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 professional before concrete is placed while the excavation equipment is still onsite and before steel reinforcement is installed.

White Geotechnical Group Pty Ltd.

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

Photo 1

Photo 2

Photo 3

Photo 4

Photo 5

Photo 6

Photo 7

Photo 8

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 tests 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.

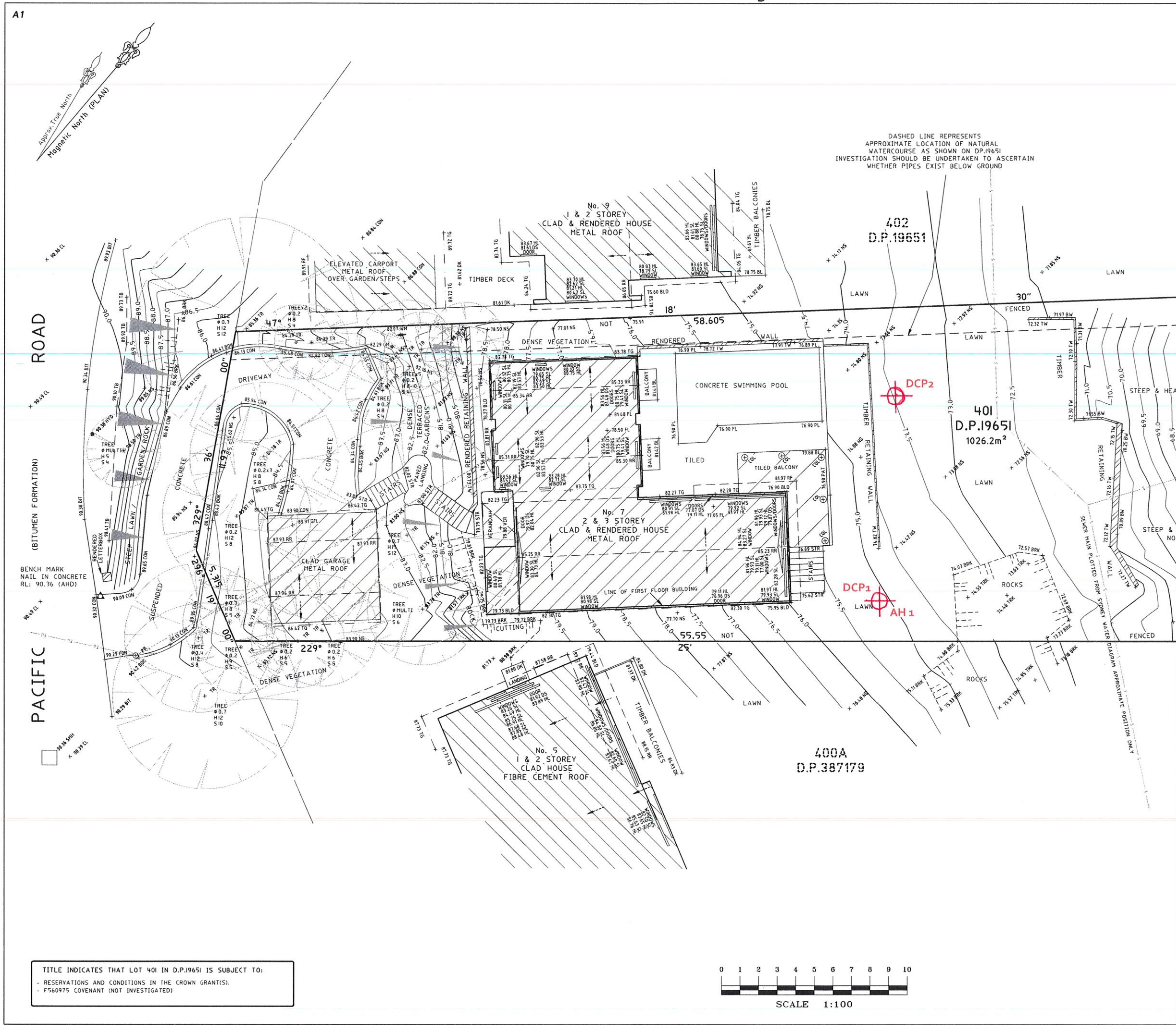
- The report addresses issues relating to your specific design and site. If the proposed project design changes, aspects of the report may no longer apply. Contact White Geotechnical if this occurs.

- 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.

SITE PLAN – showing test locations



TITLE INDICATES THAT LOT 401 IN D.P.19651 IS SUBJECT TO:
- RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S).
- F560975 COVENANT (NOT INVESTIGATED)

SCALE 1:100

LEGEND:

BOK = BACK OF KERB
BL = BALCONY
BIT = BITUMEN
BRK = BOTTOM OF ROCK
BW = BOTTOM WALL
BLD = EXTERNAL BUILDING
CL = CENTRELINE
COL = COLUMN
CON = CONCRETE
DK = DECK
DS = DOOR SILL LEVEL
ELP = ELECTRICITY
FL = FLOOR LEVEL
GFL = GARAGE FLOOR LEVEL
GM = GAS METER
HL = HOOD LEVEL
HYD = HYDRANT
NS = NATURAL SURFACE
PAT = PATIO
PL = POOL
PP = POWER POLE
RF = TOP OF ROOF
RR = ROOF RIDGE
SMH = SEWER MAN HOLE
SL = SILL LEVEL
STR = STAIRS
REND = RENDERED
RET = RETAINING
TB = TOP OF BANK
TG = TOP OF GUTTER
TRK = TOP OF ROCK
TW = TOP WALL
TR = TREE
VER = VERANDAH
WM = WATER METER

— E — = ELECTRICITY OVERHEAD
— S — = SEWER UNDERGROUND
TREE
Ø = TRUNK DIAMETER
H = HEIGHT
S = SPREAD DIAMETER

NOTES

- BOUNDARIES HAVE NOT BEEN DEFINED (TITLE DIMENSIONS ONLY) - BOUNDARY DEFINITION IS SUBJECT TO FURTHER SURVEY.
- A BASIC BOUNDARY SURVEY HAS BEEN UNDERTAKEN SUITABLE FOR COUNCIL DA SUBMISSION (TITLE DIMENSIONS ONLY) - BOUNDARY DEFINITION IS SUBJECT TO FURTHER SURVEY.
- IF CONSTRUCTION ON OR NEAR BOUNDARIES IS REQUIRED IT IS RECOMMENDED THAT THE BOUNDARIES OF THE LAND BE MARKED.
- THIS DETAIL SURVEY IS NOT A "SURVEY" AS DEFINED BY THE SURVEYING AND SPATIAL INFORMATION ACT, 2002.
- TREE SIZES ARE ESTIMATES ONLY.
- THIS PLAN HAS BEEN PREPARED FOR THE EXCLUSIVE USE OF PASCAL & SANDY BEARD
- RELATIONSHIP OF IMPROVEMENTS TO BOUNDARIES IS DIAGRAMMATIC ONLY. WHERE OFFSETS ARE CRITICAL THEY SHOULD BE CONFIRMED BY FURTHER SURVEY.
- EXCEPT WHERE SHOWN BY DIMENSION LOCATION OF DETAIL WITH RESPECT TO BOUNDARIES IS INDICATIVE ONLY.
- ONLY VISIBLE SERVICES HAVE BEEN LOCATED. UNDERGROUND SERVICES HAVE NOT BEEN LOCATED. DIAL BEFORE YOU DIG SERVICES (ph 1100) SHOULD BE USED AND A FULL UTILITY INVESTIGATION, INCLUDING A UTILITY LOCATION SURVEY, SHOULD BE UNDERTAKEN BEFORE CARRYING OUT ANY CONSTRUCTION ACTIVITY IN OR NEAR THE SURVEYED AREA.
- SEWER MAIN PLOTTED FROM SYDNEY WATER SEWER DIAGRAM. LOCATION SHOULD BE MARKED ON SITE IF CRITICAL.
- CRITICAL SPOT LEVELS SHOULD BE CONFIRMED WITH SURVEYOR.
- THIS PLAN IS ONLY TO BE USED FOR THE PURPOSE OF DESIGNING NEW CONSTRUCTIONS.
- CONTOURS SHOWN DEPICT THE TOPOGRAPHY. THEY DO NOT REPRESENT THE EXACT LEVEL AT ANY PARTICULAR POINT. ONLY SPOT LEVELS SHOULD BE USED FOR CALCULATIONS OF QUANTITIES WITH CAUTION.
- CONTOUR INTERVAL - 0.5 metre. - SPOT LEVELS SHOULD BE ADOPTED.
- POSITION OF RIDGE LINES ARE DIAGRAMMATIC ONLY (NOT TO SCALE).
- THE INFORMATION IS ONLY TO BE USED AT A SCALE ACCURACY OF 1:100.
- DO NOT SCALE OFF THIS PLAN / FIGURED DIMENSIONS TO BE TAKEN IN PREFERENCE TO SCALED READINGS.
- COPYRIGHT © CMS SURVEYORS 2015.
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- ANY PERMITTED DOWNLOADING, ELECTRONIC STORAGE, DISPLAY, PRINT, COPY OR REPRODUCTION OF THIS SURVEY SHOULD CONTAIN NO ALTERATION OR ADDITION TO THE ORIGINAL SURVEY.
- THIS NOTICE MUST NOT BE ERASED.

HORIZONTAL DATUM:
CO-ORDINATE SYSTEM: ASSUMED

VERTICAL DATUM:
DATUM: AUSTRALIAN HEIGHT DATUM (AHD)
B.M. ADOPTED: SSM 12810
R.L. 86.236 (ORDER L3)
SOURCE: S.C.I.M.S. (19/03/07)

1	FIRST ISSUE	17/09/15

CLIENT:
PASCAL & SANDY BEARD
7 PACIFIC ROAD
PALM BEACH NSW 2108

SURVEY PLAN
SHOWING DETAIL & LEVELS
OVER LOT 401 IN D.P.19651
7 PACIFIC ROAD
PALM BEACH NSW 2108

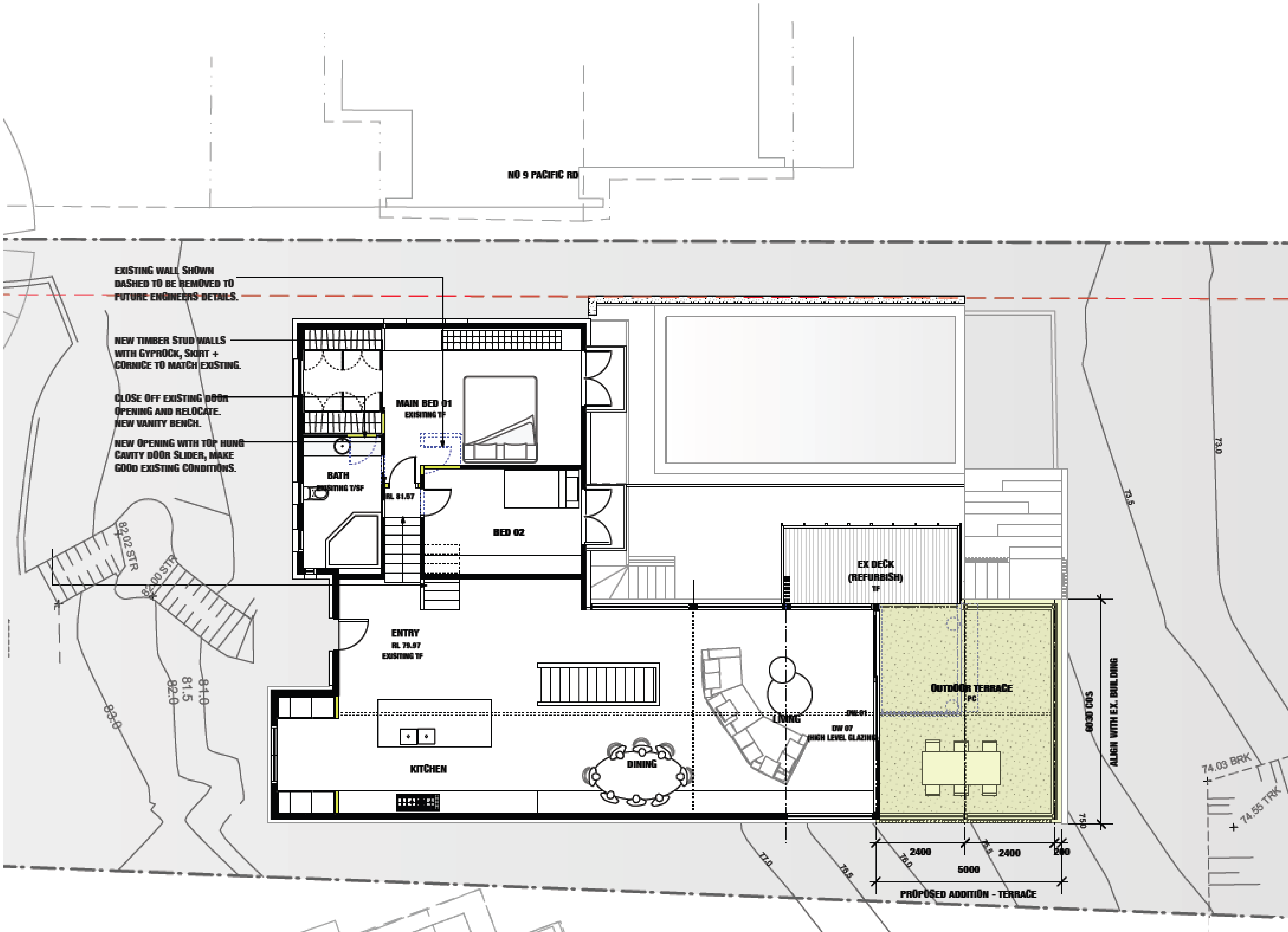
C.M.S. Surveyors Pty Limited
ACN: 096 240 201
PO Box 463 Dee Why NSW 2099
1/32 Campbell Avenue, Dee Why NSW 2099
Telephone: (02) 9971 4802
Facsimile: (02) 9971 4822
E-mail: info@cmssurveyors.com.au

LGA: PITTWATER — SHEET 1 OF 1

SURVEYED	DRAWN	CHECKED	APPROVED
MB	MC	MB	SE

SURVEY INSTRUCTION	SCALE	DATE OF SURVEY
6424	1:100 @ A1	31/08/15

DRAWING NAME: 6424Adetail — ISSUE: 1
CAD FILE: 6424Adetail 1.dwg



LEGEND

ROOF:

MR	COLOURBOND METAL ROOF SHEETING/CAPPINGS
G	SELECT COLOURBOND GUTTERS
DP	SELECT COLOURBOND DOWNPIPES
SK	SKYLIGHT

EXTERNAL:

BW	MASONRY (CONC. BLOCK/BRICK)
RM	RENDERED MASONRY
DW	DOORS + WINDOWS - PAINTED TIMBER

INTERNAL:

PB	PLASTERBOARD ON TIMBER STUD FRAME

FLOORS:

TF	TIMBER FLOOR
TD	TIMBER DECKING
T/SF	TILED/STONE FLOOR
PC	POLISHED CONCRETE

CEILINGS:

PB	SET PLASTERBOARD

NEW TIMBER STUD WALLS/STRUCTURE

NEW WORKS

METAL

EXISTING WALLS/WINDOWS TO BE REMOVED - SHOWN AS DOTTED

ISSUE	DESCRIPTION	DATE
A	DEVELOPMENT APPLICATION	NOVEMBER 2016

0 1 2 3 4 5

DRAWING:

DWG. NO: DA

DATE: NOVEMBER 2016

SCALE:

PROJECT :

BEARD FAMILY
7 PACIFIC ROAD PALM BEACH
LOT 401 D.P. 19651

HOUSED
BY NANNA LESIUK

m:0405128186 e:nannalesiuk@yahoo.com.au

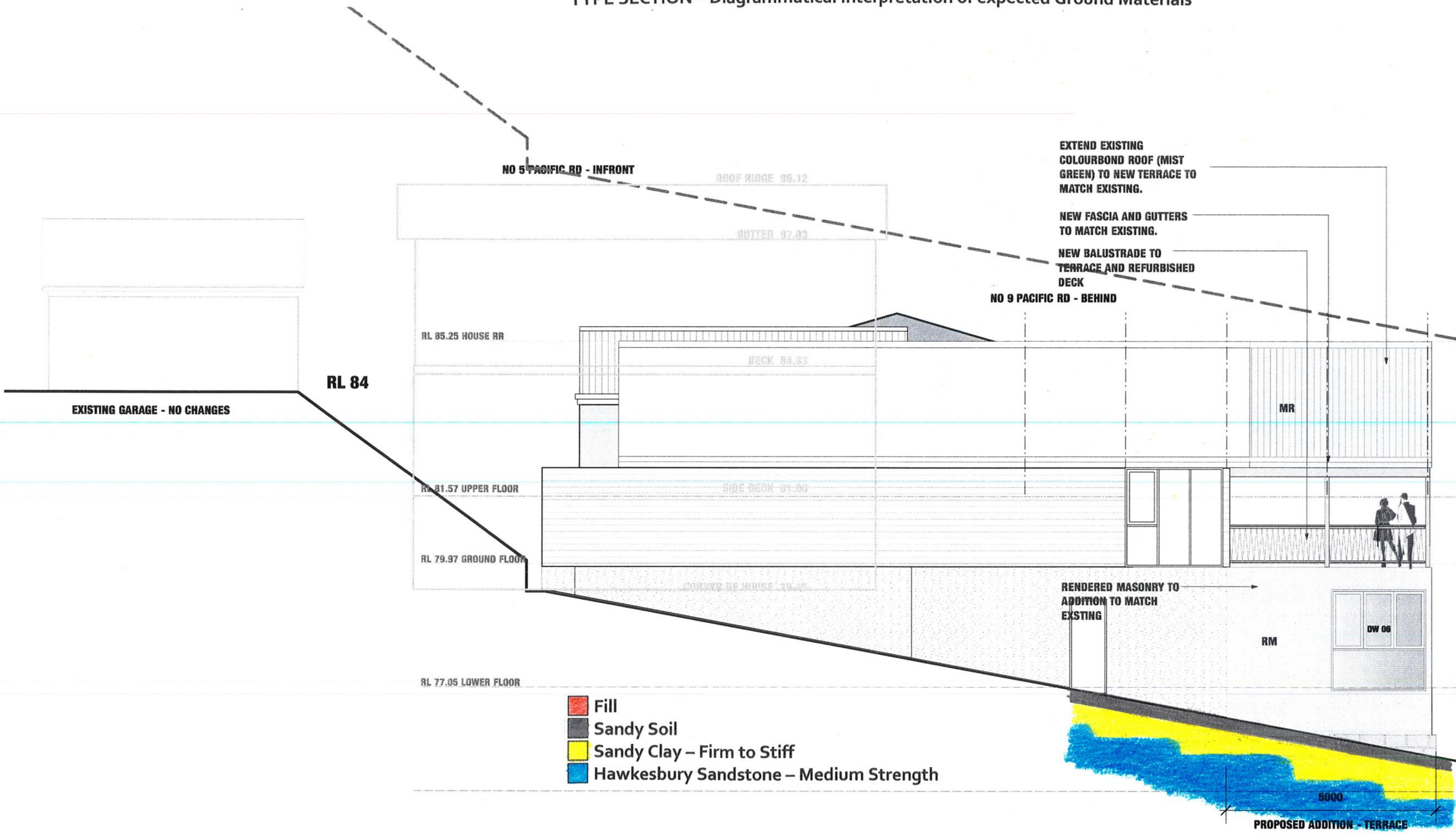
DOOR + WINDOW SCHEDULE

DW01	EAST	5500W X 2100H	TIMBER FRAMED TOP HUNG SLIDING DOORS (3 PANES)	CLEAR GLASS
DW02	NORTH	1270W X 2100H	TIMBER FRAMED FRENCH DOORS	CLEAR GLASS
DW03	NORTH	1270W X 2100H	TIMBER FRAMED FRENCH DOORS	CLEAR GLASS
DW04	NORTH	7250W X 2400H	TIMBER FRAMED TOP HUNG SLIDING DOORS (3 PANES)	CLEAR GLASS
DW05	EAST	4050W X 2400H	TIMBER FRAMED FIXED GLAZING TO 1000AFL. CASEMENT WINDOWS OVER (6 OFF))	CLEAR GLASS
DW06	SOUTH	2245W X 2400H	TIMBER FRAMED FIXED GLAZING TO 1000AFL. CASEMENT WINDOWS OVER (3 OFF))	CLEAR GLASS
DW07	EAST	7.3M2	HIGH LEVEL FIXED GLAZING (TRIANGLE SHAPE)	CLEAR GLASS

00 DA:05 PROPOSED PLAN - GF

SCALE: 1:100

TYPE SECTION – Diagrammatical Interpretation of expected Ground Materials



LEGEND

ROOF:

MR	COLOURBOND METAL ROOF SHEETING/CAPPINGS
G	SELECT COLOURBOND GUTTERS
DP	SELECT COLOURBOND DOWNPIPES
SK	SKYLIGHT

EXTERNAL:

BW	MASONRY (CONC. BLOCK/BRICK)
RM	RENDERED MASONRY
DW	DOORS + WINDOWS - PAINTED TIMBER

INTERNAL:

PB	PLASTERBOARD ON TIMBER STUD FRAME

FLOORS:

TF	TIMBER FLOOR
TD	TIMBER DECKING
T/SF	TILED/STONE FLOOR
PC	POLISHED CONCRETE

CEILINGS:

PB	SET PLASTERBOARD

NEW TIMBER STUD WALLS/STRUCTURE

NEW WORKS

METAL

EXISTING WALLS/WINDOWS TO BE REMOVED - SHOWN AS DOTTED

ISSUE	DESCRIPTION	DATE
A	DEVELOPMENT APPLICATION	NOVEMBER 2016

0 1 2 3 4 5

DOOR + WINDOW SCHEDULE

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DW04	NORTH	7250W X 2400H	TIMBER FRAMED TOP HUNG SLIDING DOORS (3 PANES)	CLEAR GLASS
DW05	EAST	4050W X 2400H	TIMBER FRAMED FIXED GLAZING TO 1000AFL. CASEMENT WINDOWS OVER (6 OFF)	CLEAR GLASS
DW06	SOUTH	2245W X 2400H	TIMBER FRAMED FIXED GLAZING TO 1000AFL. CASEMENT WINDOWS OVER (3 OFF)	CLEAR GLASS
DW07	EAST	7.3M2	HIGH LEVEL FIXED GLAZING (TRIANGLE SHAPE)	CLEAR GLASS

00 DA:09 PROPOSED ELEVATION - SOUTH

SCALE: 1:100

DRAWING:

DWG. NO: DA

DATE: NOVEMBER 2016

SCALE:

PROJECT :

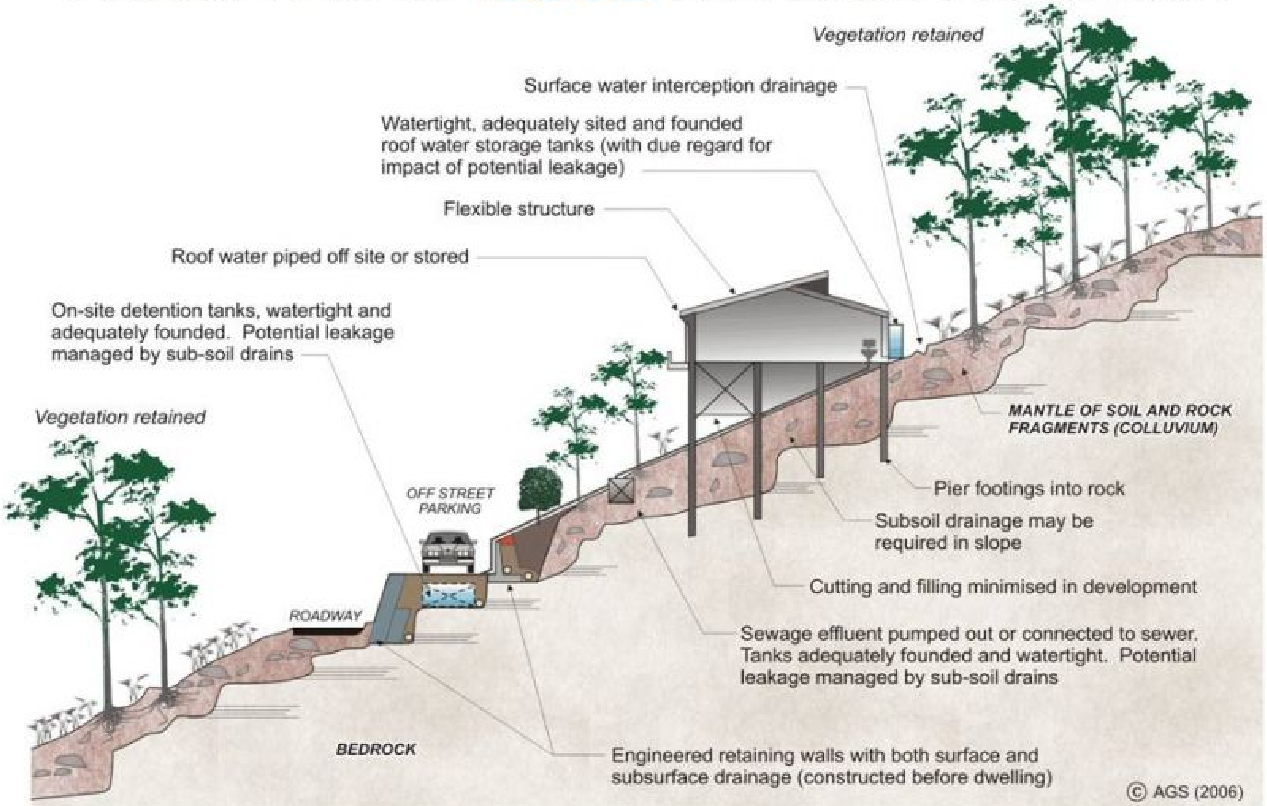
BEARD FAMILY
7 PACIFIC ROAD PALM BEACH
LOT 401 D.P. 19651

HOUSED

BY NANNA LESIUK

m:0405126186 e:nannalesiuk@yahoo.com.au

EXAMPLES OF GOOD HILLSIDE PRACTICE



EXAMPLES OF POOR HILLSIDE PRACTICE