



yours locally

Sydney South West
39 Elyard Street
Narellan NSW 2567
PO Box 3190 Narellan DC 2567
P 1300 368 534 F 02 4655 2411
Web www.localgroup.com.au

BUSHFIRE HAZARD ASSESSMENT



Site Details:
Lot 14
Parent Lot/DP 32/5464
House No. (Unknown)
Bubalo Street
Warriewood NSW 2102

Report Prepared for:
Mr Nogueira & Ms De Moraes Nogueira
C/- Rawson Homes Pty Ltd
Building F, Level 2, Suite 1
1 Homebush Bay Drive
Rhodes NSW 2138

Construction of a two storey dwelling

Executive Summary

As required by Northern Beaches Council a bushfire risk assessment has been carried out in accordance with the procedures and requirements outlined in *Planning for Bushfire Protection (2006) Addendum – Appendix 3 (2010)* as issued by the NSW Rural Fire Service (RFS). A summary of the findings of this assessment are provided below. Subject to the recommendations provided in this report, the proposed development has the potential to comply with the aims and objectives of *Planning for Bushfire Protection (2006)*.

Site Address							
							Lot 14
							Parent Lot/DP 32/5464
							House No. (Unknown)
							Bubalo Street
							Warriewood NSW 2102
GPS Coordinates							
						Latitude:	-33.655499
						Longitude:	151.13971
Aspect							
							South East
Fire Danger Index Applied							
							FDI 100
Vegetation Classifications							
North East	Managed Land	South East	Managed Land	South West	Forest	North West	Managed Land
Distance to Vegetation							
North East	>140m	South East	>140m	South West	118m	North West	>140m
Effective Slope							
North East	N/A	South East	N/A	South West	Flat / Upslope	North West	N/A
Bushfire Attack Level							
North East	BAL-LOW	South East	BAL-LOW	South West	BAL-LOW	North West	BAL-LOW

Contents Page

Executive Summary	2
1. Project Brief	4
2. Introduction	4
3. The Proposed Development	4
4. Assessment of Site Characteristics	5
4.1 Slope	7
4.2 Surrounding Vegetation Types	8
4.3 Category of Bushfire Attack	10
5. Construction and Landscaping Recommendations	10
6. Conclusion	11
7. References	12
8. Appendices	12

1. Project Brief

We have been engaged by Rawson Homes Pty Ltd to assess the threat posed to this development in the event of a bushfire. Current fire maps prepared by Northern Beaches Council in accordance with the requirements of Section 146 of the *Environmental Planning and Assessment Act 1979* (as amended) (EPAA) indicate that the site is situated within a bushfire prone area (BPA). The aim of this report is to identify the Bushfire Attack Level (BAL) to which the proposed development should be constructed under *AS 3959-2009: Construction of buildings in bushfire-prone areas* and the NSW variations as contained within *Addendum: Appendix 3 of Planning for Bushfire Protection* (2010) by the NSW Rural Fire Service to outline the provisions required to facilitate the fighting of bushfires.

The site is located at Lot 14, Bubalo Street, Warriewood NSW 2102.

This report will supplement the development application to Northern Beaches Council for the proposed development of a new dwelling and has been prepared in accordance with the procedures and requirements contained within *Planning for Bushfire Protection* (2006) – *A Guide for Councils, Planners, Fire Authorities and Developers* with *Addendum: Appendix 3* (2010) as issued by the NSW Rural Fire Service.

The report relies upon the following information:

- Inspection of the site
- Details of the proposed dwelling produced by Rawson Homes Pty Ltd (See Appendix 2)

2. Introduction

As required by Northern Beaches Council and in accordance with the requirements of Section 79BA of EPAA, a bushfire assessment of the site has been carried out. This was done in accordance with the procedures and requirements contained within *AS 3959-2009* and *Addendum: Appendix 3* (2010) of *Planning for Bushfire Protection* (2006) as issued by the NSW Rural Fire Service. The findings have been outlined in this report to determine compliance with the Building Code of Australia.

The assessment of the site found that any development on the site is not at significant risk of bushfire attack. Construction to the Bushfire Attack Level of **BAL-LOW** to all elevations of the proposed building is recommended.

3. The Proposed Development

The proposed development is a two storey dwelling. The dwelling will feature a living room, dining, kitchen, study, three bedrooms with three bathrooms and double garage. The development will have a building footprint area totalling 107.1m². Landscaped areas are proposed to cover approximately 55.14m² (20%) of the site.

The building will be on a reinforced concrete slab with timber frames and timber roof trusses. A brick, weatherboard and rendered finish veneer with a concrete tile roof covering will form the façade of the dwelling.

4. Assessment of Site Characteristics

The site is located in suburb of Warriewood, within Northern Beaches Local Government Area. The site is located on Bubalo Street, which will provide access to the property. The site borders onto similar lots on the northern, eastern and western aspects. The southern aspect of the site faces a roadway, then onto managed lands.

The site is rectangular in shape, with a street frontage of 9 metres, with the total subject lot size being 270m².

The development site has downward slope from the left of the property to the right. Figure 1 below displays the allotment boundaries and their surroundings as given by the NSW Government 'SixMaps' website.



Figure 1 – Aerial Mapping showing the lot boundary (NSW SixMaps 2019)

All aspects of the subject site face towards vacant lots ready for the construction of similar dwellings or public infrastructure assets such as roadways and footpaths. These properties and assets are reduced vegetation forms (i.e. maintained lawns and gardens) as well as areas of non-vegetation (i.e. dwellings, roads, paths, ancillary structures) and as such, are not considered to harbour any predominant vegetation formations which are described in *Planning for Bushfire Protection* (2006). Any future developments within this area should come under the R3 – Medium Density Residential planning codes as per Pittwater Local Environmental Plan 2014.



Figure 2 – Photograph showing the north eastern aspect of the site



Figure 3 – Photograph showing the south eastern aspect of the site



Figure 4 – Photograph showing the south western aspect of the site



Figure 5 – Photograph showing the north western aspect of the site

As seen within Figures 2-5, all aspects of the site look towards a landscape that is classified as 'Managed Land' as defined within AS 3959-2009. This landscape surrounds the entire site from a 100m distance, with no prominent vegetation in this area.

The vegetation toward the south western aspect was classified as 'Forest', as defined in AS 3959-2009. This is due to the vegetation being dominated by eucalypts with crowns that either touch or overlap. A prominent understorey is present. This vegetation was measured to be within 140m from the proposed developments location. As such this vegetation was noted in accordance with the Site Methodology procedure given in Section A3.5 of *Addendum: Appendix 3 of Planning for Bushfire Protection (2010)* however it was not considered to warrant any BAL construction requirements as specified in Table 2.4.2 of AS 3959-2009.

4.1 Slope

The intensity and rate spread of fires burning uphill increases markedly with increasing slope. This is reflected in an increase in the fire hazard index for a particular fuel type with an increasing slope. Similarly the rate of spread and intensity of fires decreases when they burn downhill. Table 1 below outlines the general slope underneath the vegetation measured to be within 140m of the proposed dwelling to all elevations:

Table 1: Effective Slope

Elevation	Slope	Degrees (°)
North Eastern	-	-
South Eastern	-	-
South Western	Flat / Upslope	0-5
North Western	-	-

These slope measurements are based on measurements acquired during a site inspection on the 22nd August 2019, a site plan prepared by Rawson Homes Pty Ltd (Job no. A/9185 – Issue B, Dated 29/07/2019).

4.2 Surrounding Vegetation Types

The fuel categories in *Planning for Bushfires Protection* are described using botanical terminology, such as “forest” and “grassy woodland”. It should be noted that when used for bushfire hazard assessment these terms refer to the fuel production capacity and flammability of different vegetation types. Therefore their meaning and application for bushfire hazard assessment may differ from their use in a strictly botanical context.

There are not any prominent forms of vegetation within a 100m distance of the proposed dwelling location. This is based on measurements taken during the site inspection and supplemented by satellite image data from Nearmap. Figure 6 displays a 140m radius surrounding the site. While the vegetation to the south west of the site was measured to be within 140m, the vegetation did not contribute to any BAL requirements.



Figure 6 – 140m radius of the proposed dwelling (Nearmap 2019)

Using the information provided on the site plan produced by Rawson Homes Pty Ltd and by measuring distances as part of the site inspection, the distance between the proposed developments façade to predominant vegetation was determined and is given in Table 2.

Table 2: Setbacks from vegetation

Facade	Distance to Predominant Vegetation
North Eastern	>140m
South Eastern	>140m
South Western	118m
North Western	>140m

4.3 Category of Bushfire Attack

In accordance with the Table 2.4.2 of *AS 3959-2009*, all elevations of the proposed development have been determined as being located within an area of a Bushfire Attack Level considered LOW (BAL-LOW). This is due to there being insufficient risk to warrant specific Bushfire construction requirements. This is predicated on low threat vegetation and non-vegetated areas surrounding the site. Table 3 outlines the construction requirements for the proposed development elevations.

Table 3: BAL construction requirements for the development

Elevation	Level of Construction as per AS 3959-2009
Northern	BAL – LOW
Eastern	BAL – LOW
Southern	BAL – LOW
Western	BAL – LOW

5. Construction and Landscaping Recommendations

This site has been assessed to be within an area that will require a bushfire attack level of **BAL-LOW for all elevations of the dwelling**. Attached as an Appendix 1 are the construction requirements for BAL-LOW from Section 4 of Australian Standard *AS3959-2009: Construction of buildings in bushfire prone areas*.

However, even though the dwelling is located within 140m of bushfire threatening vegetation, the following construction and landscaping techniques are recommended to mitigate the risk of potential ember attack from this vegetation:

- Using non-combustible gutter and valley guards in the dwelling to limit the accumulation of debris in gutters.
- Storage of combustible materials as far from the dwelling as possible

6. Conclusion

In conclusion, construction standards for building within bushfire-prone areas are set out in Australian Standard *AS 3959-2009: Construction of Buildings in Bushfire Prone Areas. Addendum: Appendix 3 (2010) of Planning for Bushfire Protection (2006)* provides a procedure for determining the category of bushfire attack and the appropriate level of construction. It is considered that the proposed dwelling is not at particular risk warranting a specific construction standard as given in *AS 3959-2009*, hence a **BAL-LOW rating** is recommended for the proposed development.

However, as the development is located within 140m of bushfire threatening vegetation, the following recommendations are made for the dwelling to mitigate the risk of ember attack:

- Using non-combustible gutter and valley guards in the dwelling to limit the accumulation of debris in gutters.
- Storage of combustible materials as far from the dwelling as possible



Craig Hardy
MBA; M.App.Sc.(Env.Toxicology); B.App.Sc.(Env.Health)
Accredited Certifier – Building Surveying A2 – 0167
BPAD-D Certified Practitioner – 24168

August 2019

7. References

- Nearmap Pty Ltd (2019) *PhotoMaps by Nearmap*. Available: <http://maps.au.nearmap.com/>. Last accessed 28/08/19
- NSW Rural Fire Service (2006) *Planning for Bushfire Protection, A Guide for Councils, Planners, Fire Authorities, Developers and Home Owners*. NSW Rural Fire Service, Lidcombe NSW.
- NSW Rural Fire Service (2010) *Planning for Bushfire Protection: Addendum Appendix 3*. NSW Rural Fire Service, Lidcombe NSW.
- NSW State Government. (2019). *SixMaps*. Available: <https://maps.six.nsw.gov.au/>. Last accessed 28/08/19
- Ramsay C & Dawkins D (1993) *Building in Bushfire Prone areas – Information and Advice*. CSIRO and Standards Australia.
- Standards Australia (2009) *Australian Standard AS 3959–2009: Construction of Buildings in Bushfire-Prone Areas*. SAI Global Ltd, Sydney.

8. Appendices

1. Proposed Development Plans provided by Rawson Homes Pty Ltd – Job no. A/9185, Issue B, Dated 29/07/2019

SITE NOTES:

BEFORE STARTING WORK ON SITE CHECK FOLLOWING:

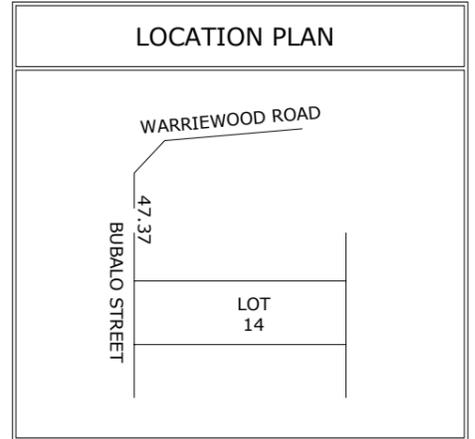
- SERVICE LOCATIONS
- SEWER CONNECTION POSITION
- DRIVEWAY ALIGNMENT & LEVELS

DP ○ INDICATES DOWNPIPE LOCATION

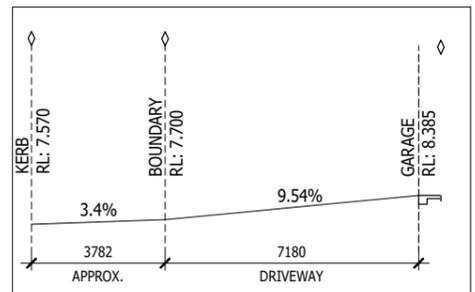
N2 WIND CATEGORY

0.89m FALL ACROSS BUILDING ENVELOPE

DRIVEWAY AND FRONT PATH TO COMPLY WITH AS2890



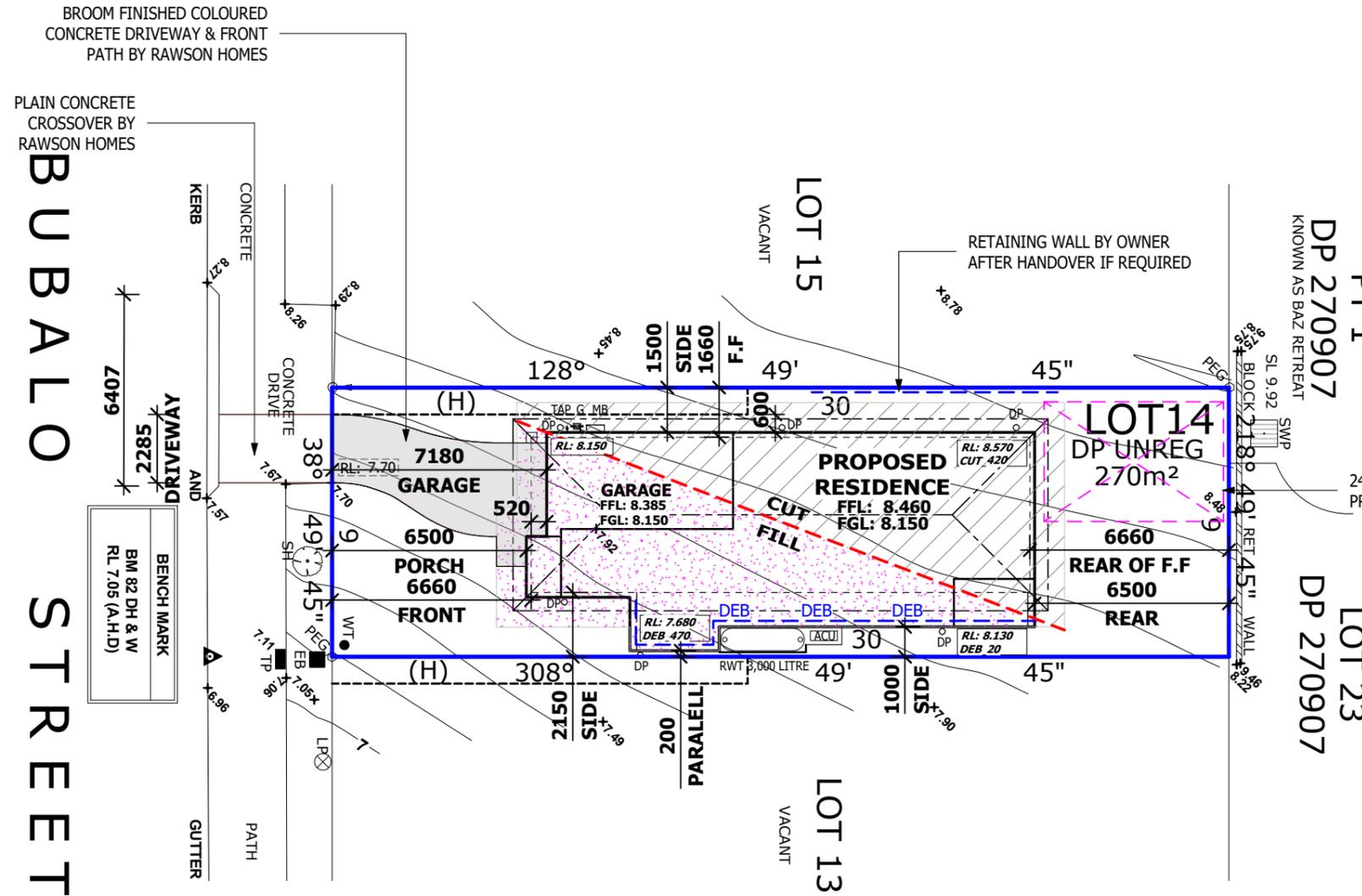
24m² (6m x 4m) PRINCIPAL PRIVATE OPEN SPACE .



DRIVEWAY GRADIENT

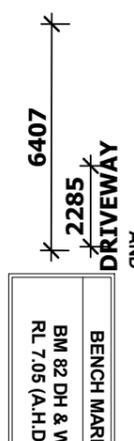
1 : 200

(H): EASEMENT FOR ACCESS & MAINTENANCE 0.9 WIDE



PLAIN CONCRETE CROSSOVER BY RAWSON HOMES

BUBALO STREET



LOT 13

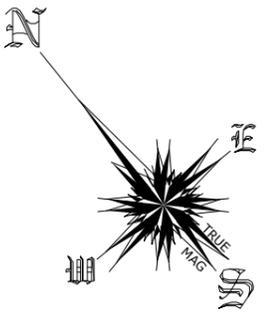
LOT 13

LOT 15

PT 1
DP 270907
KNOWN AS BAZ RETREAT

LOT 23
DP 270907

RETAINING WALL BY OWNER AFTER HANDOVER IF REQUIRED



WARNING - UNREGISTERED PLAN

LEGEND

DT - DENOTES DEAD TREE	PP - POWER POLE
EB - ELECTRICAL BOX	SMH - SEWER MAN HOLE
EM - ELECTRICAL METER	SIO - SEWER INSPECTION OPENING
G - GAS METER	SV - SEWER VENT PIPE STOP VALVE
H - HYDRANT	S - DENOTES TREE STUMP
RO - HYDRANT RECYCLED	SWP - DENOTES STORM WATER PIT
KO - DENOTES KERB OUTLET	T - DENOTES TREE
LP - LIGHT POLE	TP - TELESTRA PIT
LH - LAMP POLE	WT - WATER TAG
MH - MAN HOLE	WM - WATER METER
▲ - BENCH MARK	▭ - GULLY PIT
① - PHOTO POINT	▬ - VEHICULAR CROSSING

GENERAL SITING NOTES

- ALL PROPOSED FINISH FLOOR LEVELS AND CUT/FILL REQUIREMENTS SUBJECT TO CONFIRMATION UPON COMPLETION OF ARCHITECTURAL PLANS.
- ALL PROPOSED FINISH FLOOR LEVELS ARE SUBJECT TO CONFIRMATION WITH STEP-DOWNS NOMINATED PRIOR TO EXCAVATION BY BUILDER, EXCAVATOR AND/OR CONCRETOR.
- ALL FLOOR AREA CALCULATIONS ARE TO BE CONFIRMED UPON THE COMPLETION OF FINAL ARCHITECTURAL PLANS.
- ALL ALLOWANCES FOR STEPS/STAIRS THAT MAY BE REQUIRED ARE SUBJECT TO FINAL ARCHITECTURAL PLANS.
- ALL ALLOWANCES FOR RETAINING WALLS ARE SUBJECT TO FINAL ARCHITECTURAL PLANS.

EXISTING TREES GREATER THAN 8m IN HEIGHT WITHIN 3m OF THE PROPOSED BUILDING OR ANY TREES WITHIN PROPOSED DRIVEWAY TO BE REMOVED BY OWNER PRIOR TO CONSTRUCTION

SITE CALCULATIONS DA

GROUND FLOOR	80.18 m ²
FIRST FLOOR	86.57 m ²
TOTAL LIVING AREA	166.75 m ²
SITE AREA	270.00 m ²
BUILDING FOOTPRINT	107.10 m ²
DRIVEWAY & PATH	21.19 m ²
TOTAL LANDSCAPE AREA	55.14 m ²
LANDSCAPE AREA (%)	20 %
FRONT LANDSCAPE (%)	68.77 %
FLOOR SPACE RATIO	0.62 :1
SITE COVERAGE	71.73 %
LANDSCAPE AREA (4m)	32.9 %



NOTES:
PLEASE NOTE: DETAILS SHOWN ON THESE PLANS ARE INTENDED TO BE ACCURATE - HOWEVER INFORMATION WRITTEN INTO INDIVIDUAL CONTRACTS WILL TAKE PRECEDENCE OVER PLANS
* ALL DIMENSIONS ARE IN MILLIMETRES
* DO NOT SCALE - USE WRITTEN DIMENSIONS
* ALL DIMENSIONS ARE TO STRUCTURAL FRAMES ONLY EXCLUDING FINISHED SURFACES

RAWSON HOMES
1 HOMEBUSH BAY DRIVE, BLDG. F
LEVEL 2, SUITE 1
RHODES NSW 2138
TELEPHONE 02 8765 5500
FAX 02 8765 8099
Builder's licence No. 33493C

CLIENT:
MR. R. M. NOGUEIRA & MS. K. J. DE MORAES
NOGUEIRA
SITE ADDRESS:
LOT 14 (DP UNREG)
BUBALO STREET
WARRIEWOOD NSW 2102

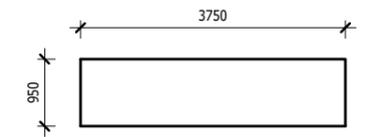
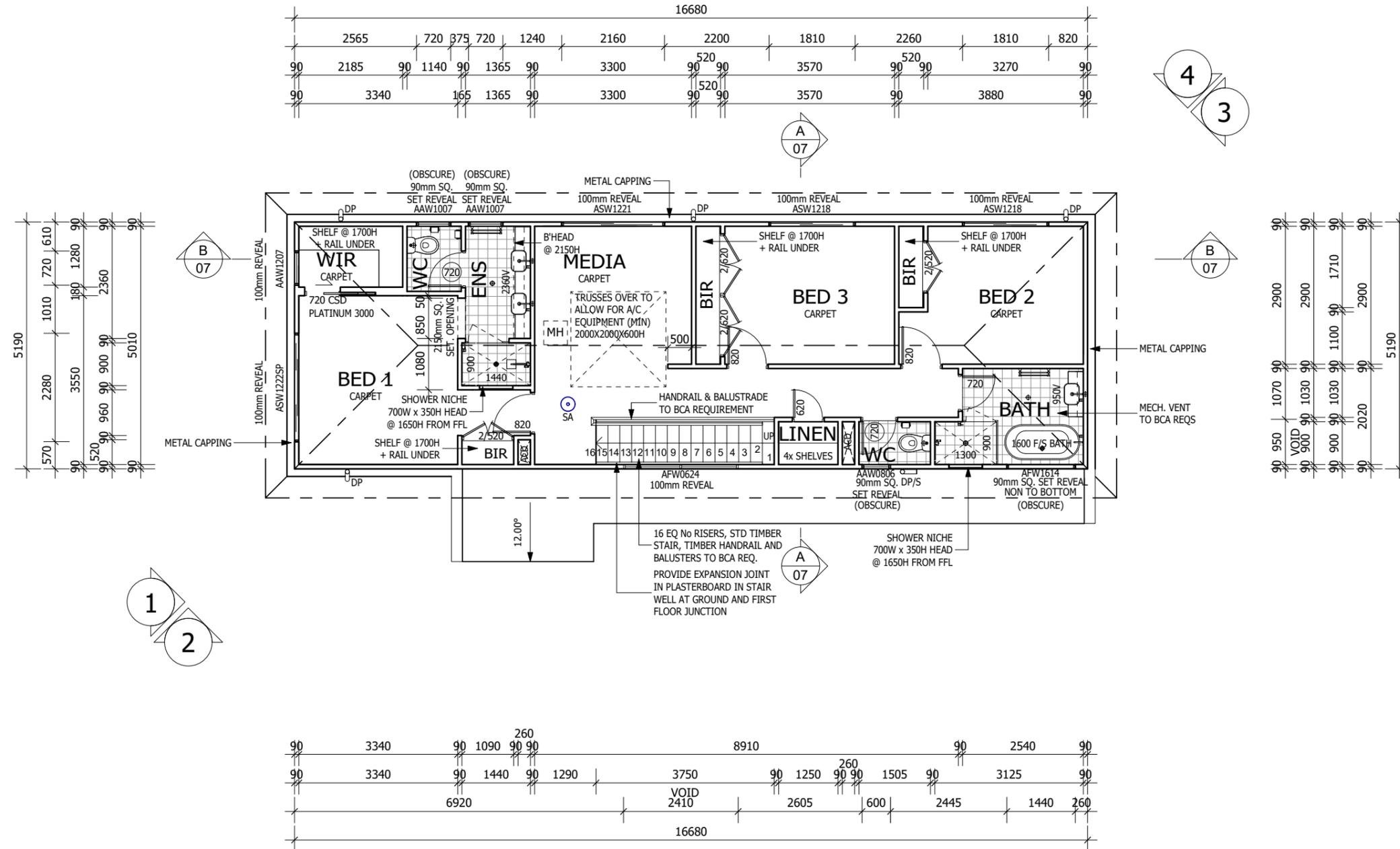
HOUSE TYPE
MODEL: ELLERSTON 22 MKI (OPTION1)
FACADE: CLASSIC
TYPE: SINGLE GARAGE
SPECIFICATION: SYDNEY & HUNTER BASE
DRAWING TITLE:
SITE PLAN

DRAWN BY: DH	DATE DRAWN: 25.06.19	CHECKED BY: DH	APPROVED FOR CONSTRUCTION:
COUNCIL AREA: NORTHERN BEACHES		SCALE: 1 : 200	
JOB No: A009185	DRWG No: 02	ISSUE: B	

NOTES:

- HEIGHT OF ALL SQ.SETS 2150mm FROM FFL UNLESS OTHERWISE SHOWN.
- HEIGHT OF ALL INTERNAL DOORS 2040H TO FIRST FLOOR
- ALL EXTERNAL DOORS TO BE FITTED WITH DRAFT EXCLUSION DEVICE
- WC DOORS TO BE FITTED WITH LIFT-OFF HINGES
- WIND CLASSIFICATION N2 RATING
- WINDOW OPENING SIZES TO BE CHECKED BEFORE FRAMES ARE CONSTRUCTED
- FRAMES & TRUSSES TO SATISFY AS 1684 SAA TIMBER FRAMING CODE
- ROOF SPACE TO BE VENTILATED BY EAVE VENTS
- RESTRICTORS TO BE FITTED TO ALL 1ST FLOOR OPENABLE WINDOWS WITH A SILL HEIGHT LESS THAN 1.7 M ABOVE FFL. IN ACCORDANCE WITH BCA CLAUSES 3.9.2.5

THIS DRAWING IS SUBJECT TO COPYRIGHT LAWS AND MAY NOT BE COPIED WITHOUT THE WRITTEN PERMISSION OF RAWSON HOMES PTY LTD-ACN 053 733 841



STAIR VOID

T:\RAWSON HOMES\CONTRACTS AND JOB FILES\A009185 Nogueira - Lot 14, Bubalo Street, Warriewood NSW 2102\A009185 Submission Plans.rvt

NOTES:
PLEASE NOTE: DETAILS SHOWN ON THESE PLANS ARE INTENDED TO BE ACCURATE - HOWEVER INFORMATION WRITTEN INTO INDIVIDUAL CONTRACTS WILL TAKE PRECEDENCE OVER PLANS
* ALL DIMENSIONS ARE IN MILLIMETRES
* DO NOT SCALE - USE WRITTEN DIMENSIONS
* ALL DIMENSIONS ARE TO STRUCTURAL FRAMES ONLY EXCLUDING FINISHED SURFACES

RAWSON HOMES
1 HOMEBUSH BAY DRIVE, BLDG. F
LEVEL 2, SUITE 1
RHODES NSW 2138
TELEPHONE 02 8765 5500
FAX 02 8765 8099
Builder's licence No. 33493C



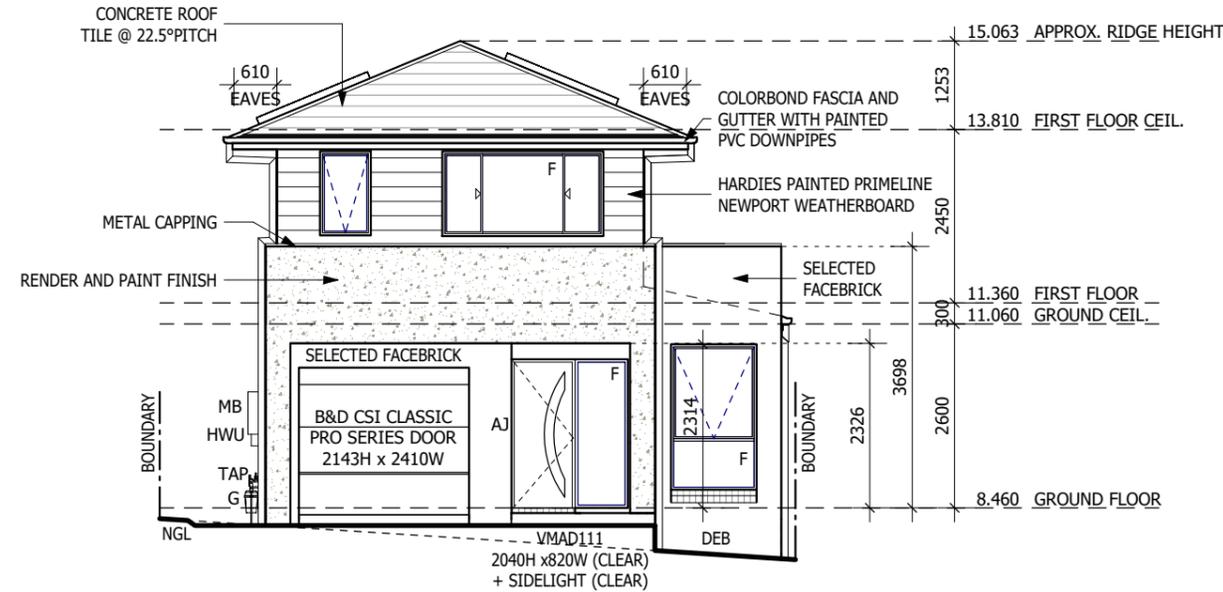
CLIENT:
MR. R. M. NOGUEIRA & MS. K. J. DE MORAES NOGUEIRA
SITE ADDRESS:
**LOT 14 (DP UNREG)
BUBALO STREET
WARRIEWOOD NSW 2102**

HOUSE TYPE
MODEL: **ELLERSTON 22 MKI (OPTION1)**
FACADE: **CLASSIC**
TYPE: **SINGLE GARAGE**
SPECIFICATION: **SYDNEY & HUNTER BASE**
DRAWING TITLE:
FIRST FLOOR

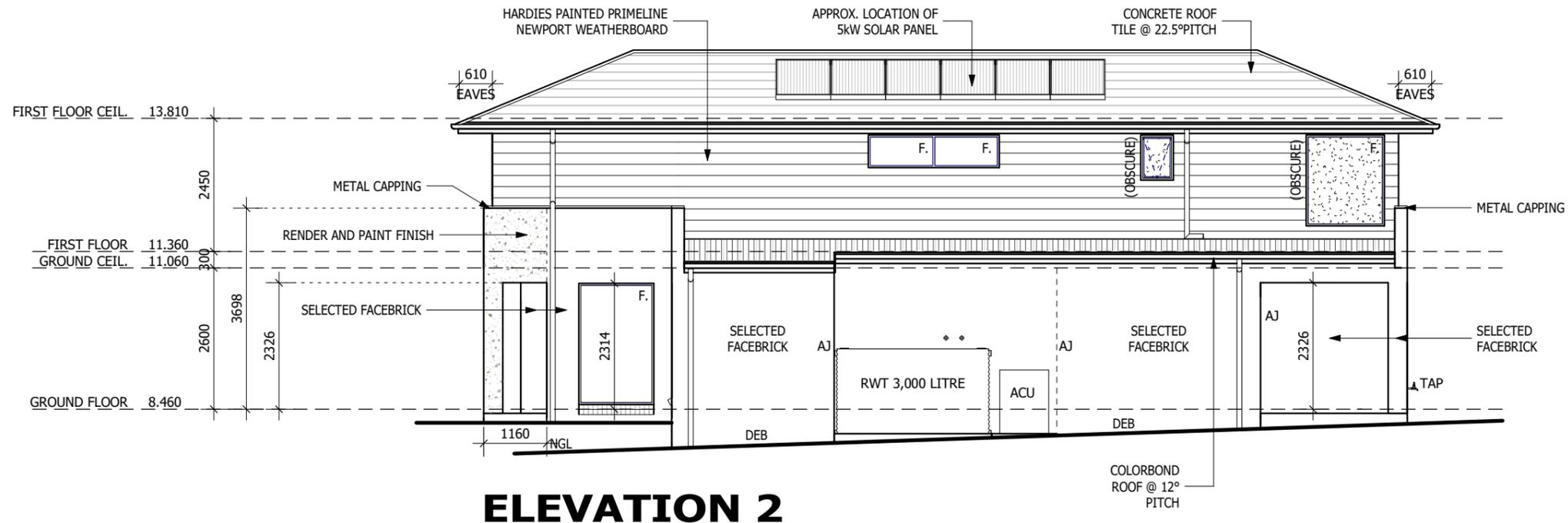
DRAWN BY: DH	DATE DRAWN: 25.06.19	CHECKED BY: DH	APPROVED FOR CONSTRUCTION:
COUNCIL AREA: NORTHERN BEACHES		SCALE: 1 : 100	
JOB No: A009185	DRWG No: 04	ISSUE: B	

THIS DRAWING IS SUBJECT TO COPYRIGHT LAWS AND MAY NOT BE COPIED WITHOUT THE WRITTEN PERMISSION OF RAWSON HOMES PTY LTD-ACN 053 733 841

NYLON MESH FLYSCREENS TO ALL OPENING WINDOWS, SLIDING AND STACKER DOORS (EXCLUDING HINGED DOORS)



ELEVATION 1



ELEVATION 2

NOTES:
PLEASE NOTE: DETAILS SHOWN ON THESE PLANS ARE INTENDED TO BE ACCURATE - HOWEVER INFORMATION WRITTEN INTO INDIVIDUAL CONTRACTS WILL TAKE PRECEDENCE OVER PLANS
* ALL DIMENSIONS ARE IN MILLIMETRES
* DO NOT SCALE - USE WRITTEN DIMENSIONS
* ALL DIMENSIONS ARE TO STRUCTURAL FRAMES ONLY EXCLUDING FINISHED SURFACES

RAWSON HOMES
1 HOMEBUSH BAY DRIVE, BLDG. F
LEVEL 2, SUITE 1
RHODES NSW 2138
TELEPHONE 02 8765 5500
FAX 02 8765 8099
Builder's licence No. 33493C



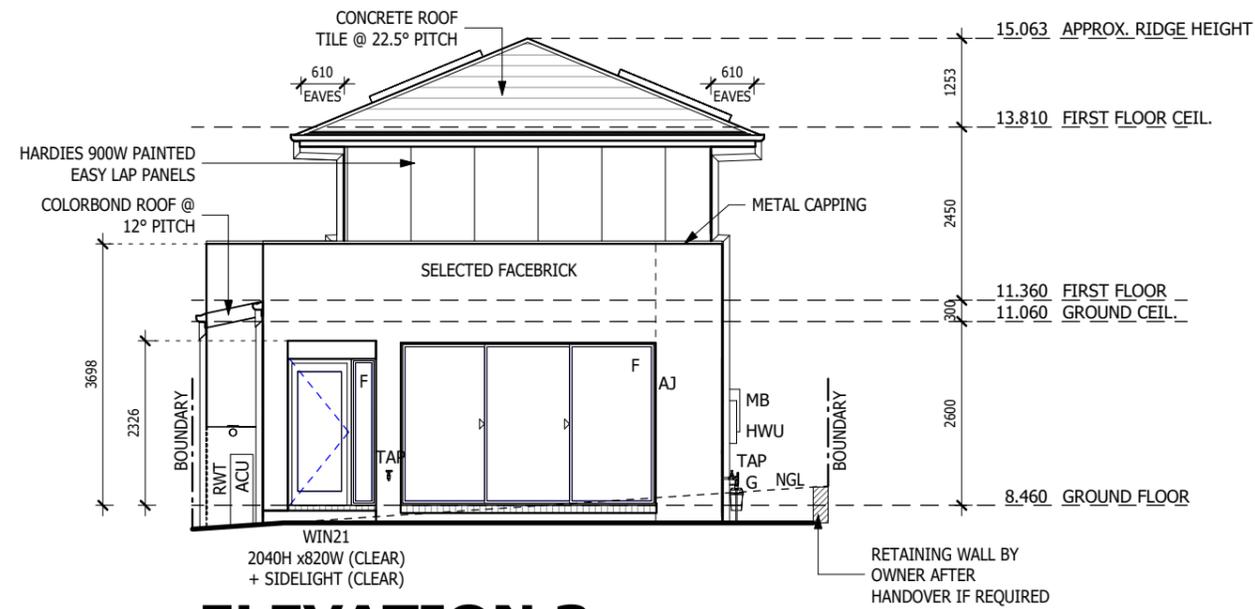
CLIENT:
MR. R. M. NOGUEIRA & MS. K. J. DE MORAES NOGUEIRA
SITE ADDRESS:
**LOT 14 (DP UNREG)
BUBALO STREET
WARRIEWOOD NSW 2102**

HOUSE TYPE
MODEL: **ELLERSTON 22 MKI (OPTION1)**
FACADE: **CLASSIC**
TYPE: **SINGLE GARAGE**
SPECIFICATION: **SYDNEY & HUNTER BASE**
DRAWING TITLE:
ELEVATIONS 1-2

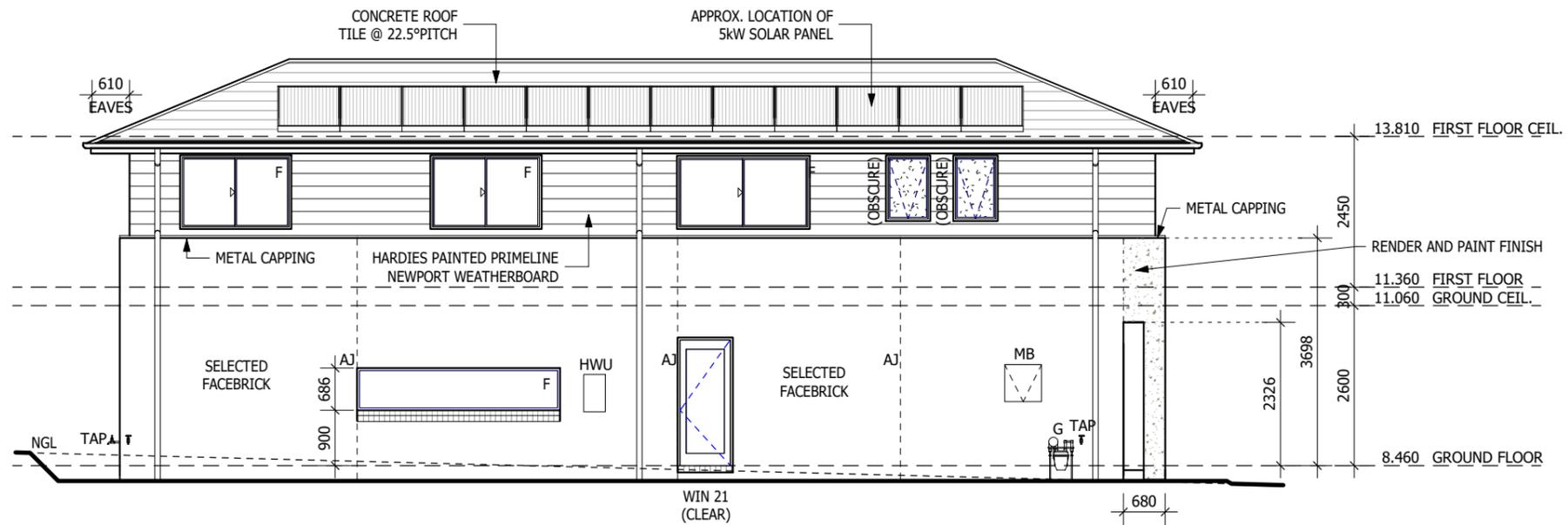
DRAWN BY: DH	DATE DRAWN: 25.06.19	CHECKED BY: DH	APPROVED FOR CONSTRUCTION:
COUNCIL AREA: NORTHERN BEACHES		SCALE: 1 : 100	
JOB No: A009185		DRWG No: 05	ISSUE: B

THIS DRAWING IS SUBJECT TO COPYRIGHT LAWS AND MAY NOT BE COPIED WITHOUT THE WRITTEN PERMISSION OF RAWSON HOMES PTY LTD-ACN 053 733 841 ©

NYLON MESH FLYSCREENS TO ALL OPENING WINDOWS, SLIDING AND STACKER DOORS (EXCLUDING HINGED DOORS)



ELEVATION 3



ELEVATION 4

NOTES:
PLEASE NOTE: DETAILS SHOWN ON THESE PLANS ARE INTENDED TO BE ACCURATE - HOWEVER INFORMATION WRITTEN INTO INDIVIDUAL CONTRACTS WILL TAKE PRECEDENCE OVER PLANS
* ALL DIMENSIONS ARE IN MILLIMETRES
* DO NOT SCALE - USE WRITTEN DIMENSIONS
* ALL DIMENSIONS ARE TO STRUCTURAL FRAMES ONLY EXCLUDING FINISHED SURFACES

RAWSON HOMES
1 HOMEBUSH BAY DRIVE, BLDG. F
LEVEL 2, SUITE 1
RHODES NSW 2138
TELEPHONE 02 8765 5500
FAX 02 8765 8099
Builder's licence No. 33493C



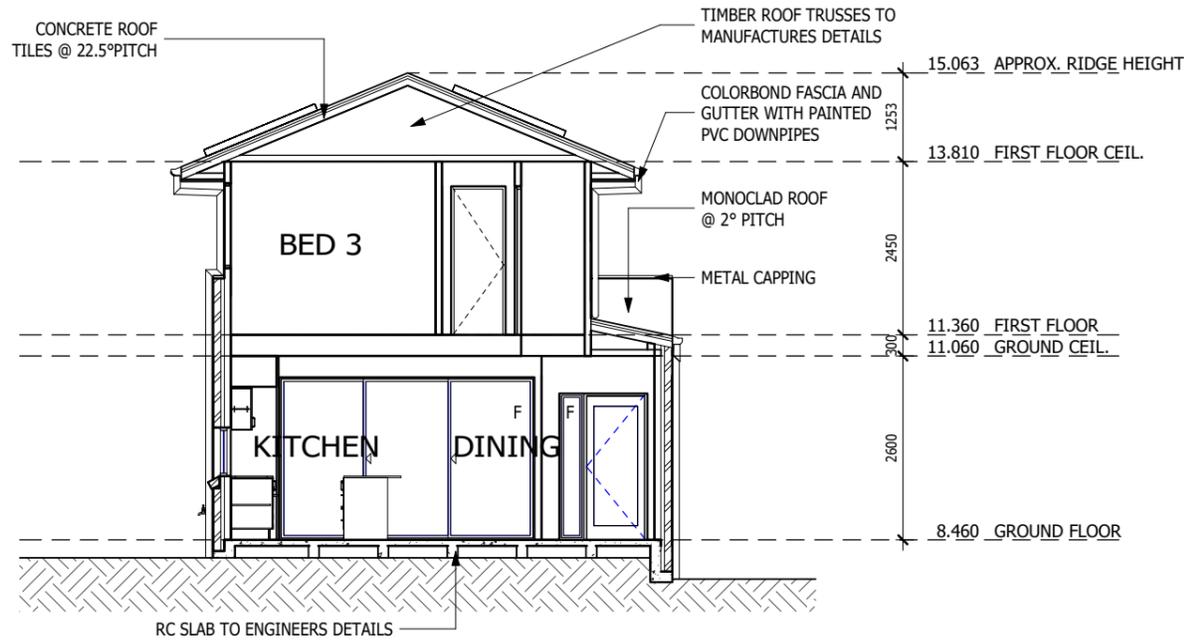
CLIENT:
MR. R. M. NOGUEIRA & MS. K. J. DE MORAES NOGUEIRA
SITE ADDRESS:
**LOT 14 (DP UNREG)
BUBALO STREET
WARRIEWOOD NSW 2102**

HOUSE TYPE
MODEL: **ELLERSTON 22 MKI (OPTION1)**
FACADE: **CLASSIC**
TYPE: **SINGLE GARAGE**
SPECIFICATION: **SYDNEY & HUNTER BASE**
DRAWING TITLE:
ELEVATIONS 3-4

DRAWN BY: DH	DATE DRAWN: 25.06.19	CHECKED BY: DH	APPROVED FOR CONSTRUCTION:
COUNCIL AREA: NORTHERN BEACHES		SCALE: 1 : 100	
JOB No: A009185	DRWG No: 06	ISSUE: B	

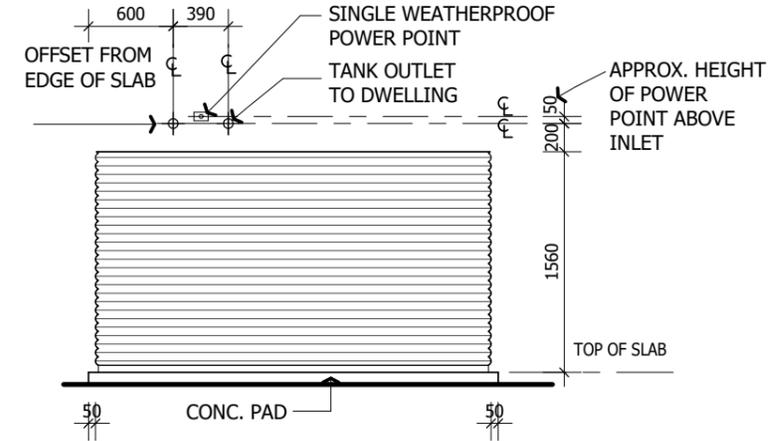
INSULATION NOTE:

- R2.5 THERMAL BATTS TO EXTERNAL WALLS INCLUDING INTERNAL WALL BETWEEN GARAGE & HOUSE (EXCLUDES EXTERNAL WALLS OF GARAGE).
- R4.1 THERMAL BATTS TO CEILINGS WITH ROOF OVER (EXCLUDING CEILINGS OVER GARAGE, PORCH, ALFRESCO & DECK).



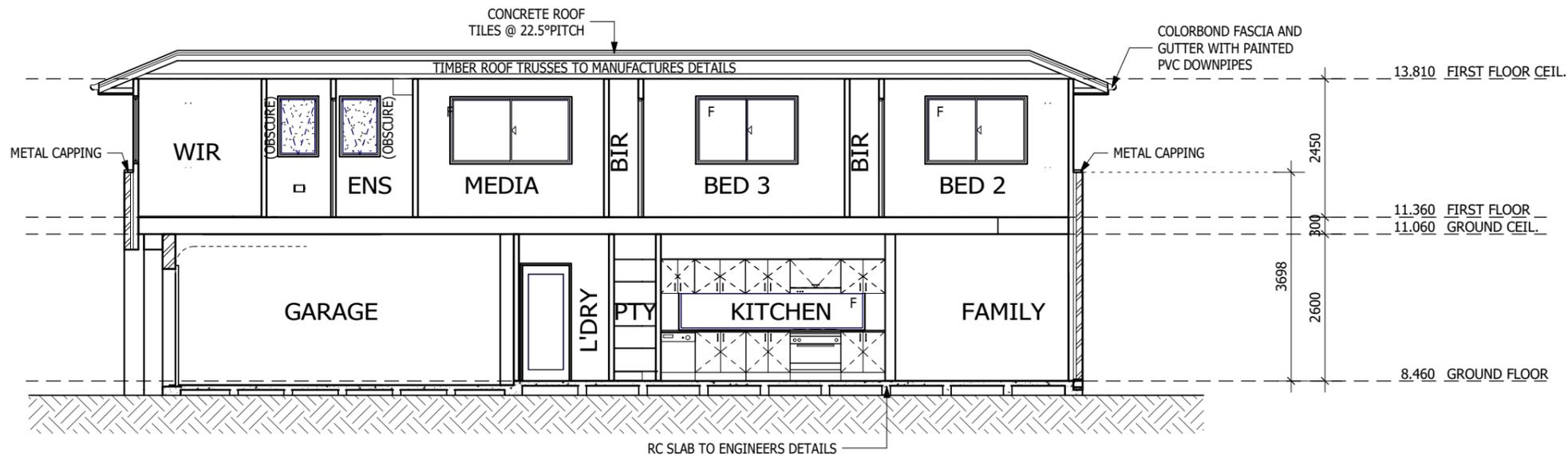
SECTION A-A

1 : 100



RAINWATER TANK DETAIL

1 : 50



SECTION B-B

1 : 100

NOTES:
PLEASE NOTE: DETAILS SHOWN ON THESE PLANS ARE INTENDED TO BE ACCURATE - HOWEVER INFORMATION WRITTEN INTO INDIVIDUAL CONTRACTS WILL TAKE PRECEDENCE OVER PLANS
* ALL DIMENSIONS ARE IN MILLIMETRES
* DO NOT SCALE - USE WRITTEN DIMENSIONS
* ALL DIMENSIONS ARE TO STRUCTURAL FRAMES ONLY EXCLUDING FINISHED SURFACES

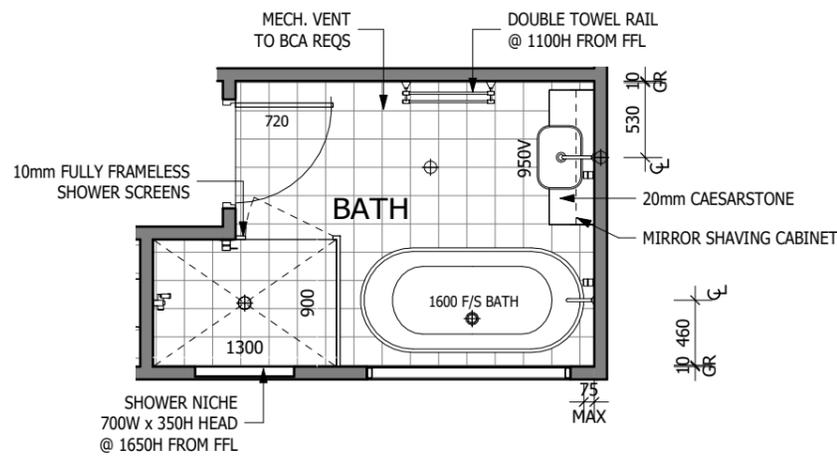
RAWSON HOMES
1 HOMEBUSH BAY DRIVE, BLDG. F
LEVEL 2, SUITE 1
RHODES NSW 2138
TELEPHONE 02 8765 5500
FAX 02 8765 8099
Builder's licence No. 33493C



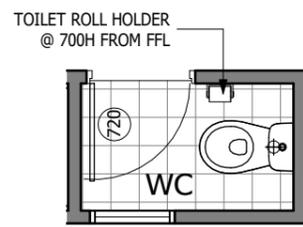
CLIENT:
MR. R. M. NOGUEIRA & MS. K. J. DE MORAES NOGUEIRA
SITE ADDRESS:
**LOT 14 (DP UNREG)
BUBALO STREET
WARRIEWOOD NSW 2102**

HOUSE TYPE
MODEL: **ELLERSTON 22 MKI (OPTION1)**
FACADE: **CLASSIC**
TYPE: **SINGLE GARAGE**
SPECIFICATION: **SYDNEY & HUNTER BASE**
DRAWING TITLE:
SECTIONS

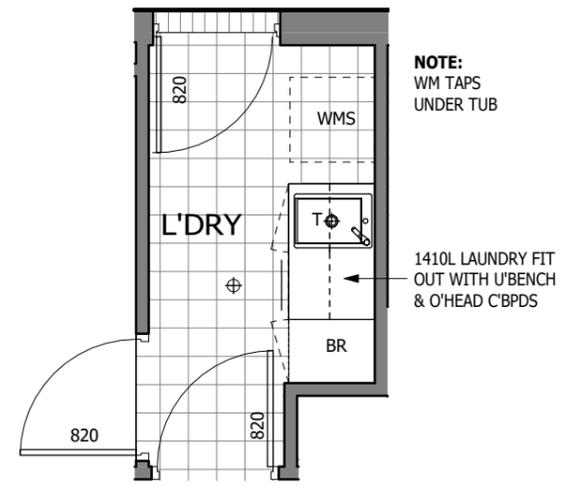
DRAWN BY: DH	DATE DRAWN: 25.06.19	CHECKED BY: DH	APPROVED FOR CONSTRUCTION:
COUNCIL AREA: NORTHERN BEACHES		SCALE: As indicated	
JOB No: A009185	DRWG No: 07	ISSUE: B	



BATH PLAN
1 : 50



WC PLAN
1 : 50



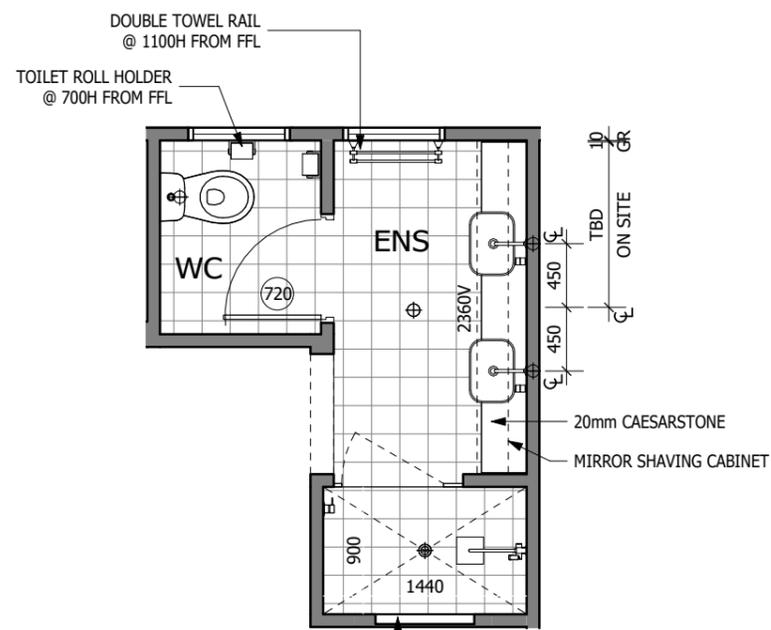
L'DRY PLAN
1 : 50

LAUNDRY / WC

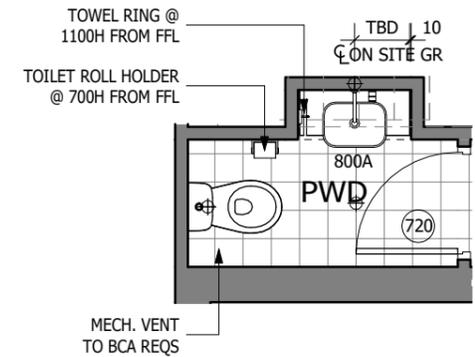
- PROVIDE SKIRTING TILE TO PERIMETER WALLS OF LAUNDRY
- TILED SPLASHBACK OVER LAUNDRY TUB & BENCH @ 650mm HIGH

BATHROOM

- PROVIDE FULL HEIGHT TILING TO BATHROOM + ENSUITE
- 1900H SHOWER HEAD FROM FFL TO UNDERSIDE OF SHOWER HEAD
- FLOATING VANITIES
- FRAMELESS POLISHED EDGE BATHROOM MIRRORS (EXCLUDING BACKING BOARD)
- WALL MOUNTED TAPS & SPOUT TO VANITIES & BATH
- SMART FLOOR WASTE TO ALL WET AREA
- SKIRTING TILE TO PERIMETER WALLS OF WC AND POWDER



ENS PLAN
1 : 50



PWD PLAN
1 : 50

NOTES:
PLEASE NOTE: DETAILS SHOWN ON THESE PLANS ARE INTENDED TO BE ACCURATE - HOWEVER INFORMATION WRITTEN INTO INDIVIDUAL CONTRACTS WILL TAKE PRECEDENCE OVER PLANS
* ALL DIMENSIONS ARE IN MILLIMETRES
* DO NOT SCALE - USE WRITTEN DIMENSIONS
* ALL DIMENSIONS ARE TO STRUCTURAL FRAMES ONLY EXCLUDING FINISHED SURFACES

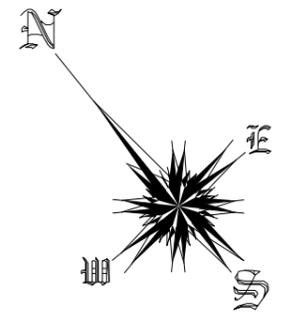
RAWSON HOMES
1 HOMEBUSH BAY DRIVE, BLDG. F
LEVEL 2, SUITE 1
RHODES NSW 2138
TELEPHONE 02 8765 5500
FAX 02 8765 8099
Builder's licence No. 33493C



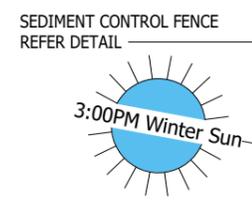
CLIENT:
MR. R. M. NOGUEIRA & MS. K. J. DE MORAES NOGUEIRA
SITE ADDRESS:
**LOT 14 (DP UNREG)
BUBALO STREET
WARRIEWOOD NSW 2102**

HOUSE TYPE
MODEL: **ELLERSTON 22 MKI (OPTION1)**
FACADE: **CLASSIC**
TYPE: **SINGLE GARAGE**
SPECIFICATION: **SYDNEY & HUNTER BASE**
DRAWING TITLE:
WET AREA PLANS

DRAWN BY: DH	DATE DRAWN: 25.06.19	CHECKED BY: DH	APPROVED FOR CONSTRUCTION:
COUNCIL AREA: NORTHERN BEACHES		SCALE: 1 : 50	
JOB No: A009185	DRWG No: 08	ISSUE: B	



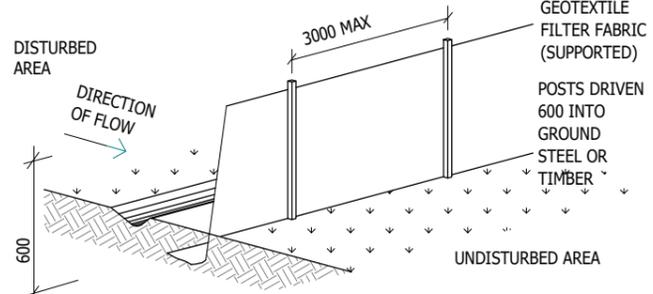
BUBALO STREET



SEDIMENT CONTROL

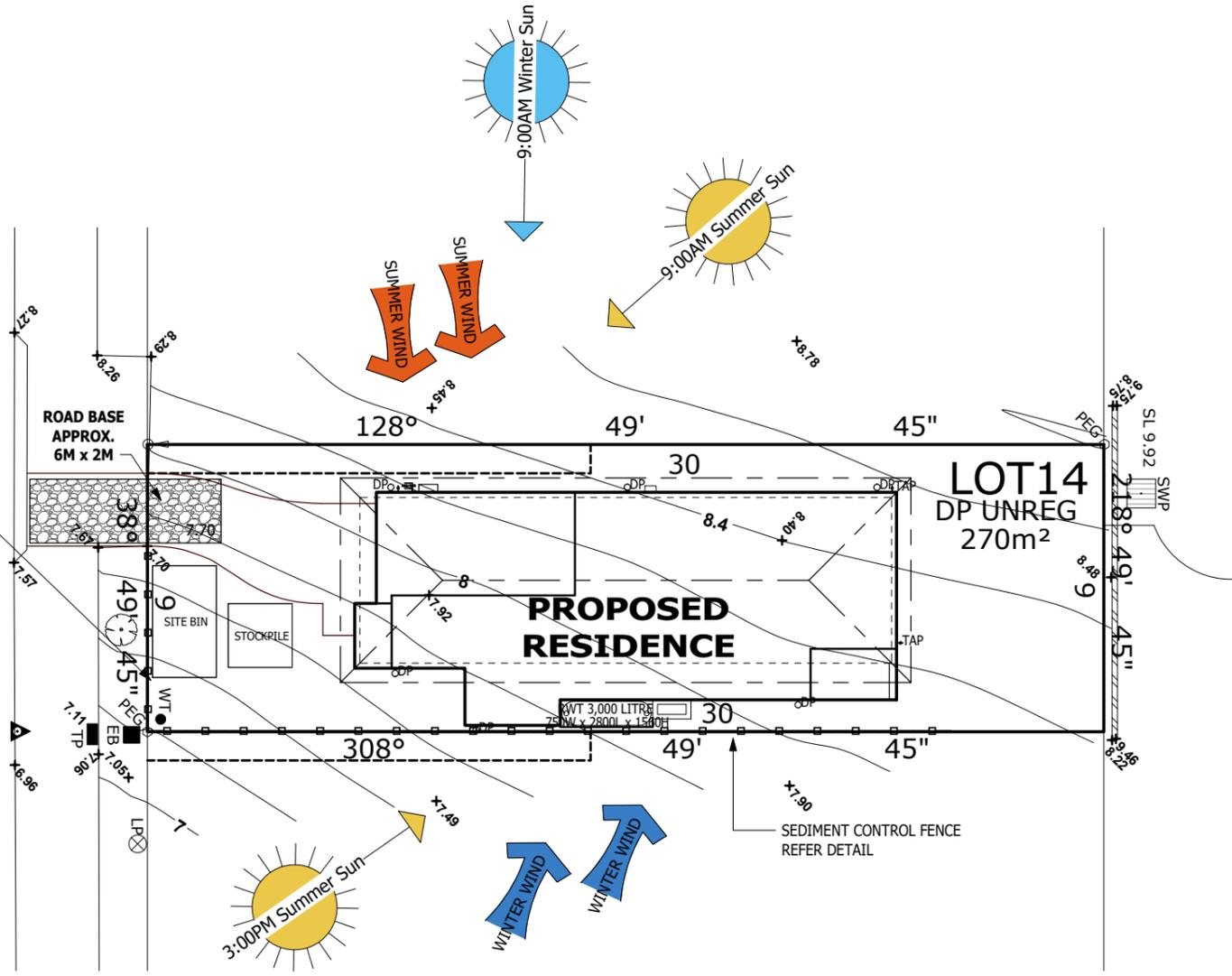
INSTALL SEDIMENT CONTROL STRUCTURES IN LOCATIONS INDICATED ON THIS DRAWING AND AS OTHERWISE REQUIRED TO CONTROL SEDIMENT DURING ALL EXCAVATIONS AND WHILST AREAS OF THE SITE ARE EXPOSED TO EROSION. REVIEW CONTROL MEASURES AND MAINTAIN STRUCTURES DURING CONSTRUCTION.

IF ADDITIONAL MEASURES ARE REQUIRED FOR EROSION AND CONTROL OR BY COUNCIL REQUIREMENTS, REFER TO "URBAN EROSION AND SEDIMENT CONTROL" GUIDELINES PREPARED BY THE DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT.



SEDIMENT FENCE DETAIL

SUITABLE FOR DRAINAGE AREA OF 0.6HA MAX AND SLOPE GRADIENT OF 1:2 MAX WITH LENGTH OF 60M MAX



NOTES:
PLEASE NOTE: DETAILS SHOWN ON THESE PLANS ARE INTENDED TO BE ACCURATE - HOWEVER INFORMATION WRITTEN INTO INDIVIDUAL CONTRACTS WILL TAKE PRECEDENCE OVER PLANS
* ALL DIMENSIONS ARE IN MILLIMETRES
* DO NOT SCALE - USE WRITTEN DIMENSIONS
* ALL DIMENSIONS ARE TO STRUCTURAL FRAMES ONLY EXCLUDING FINISHED SURFACES

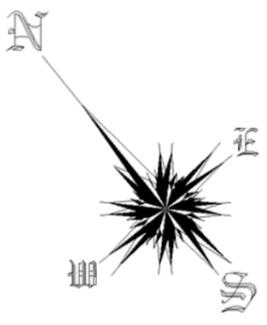
RAWSON HOMES
1 HOMEBUSH BAY DRIVE, BLDG. F
LEVEL 2, SUITE 1
RHODES NSW 2138
TELEPHONE 02 8765 5500
FAX 02 8765 8099
Builder's licence No. 33493C



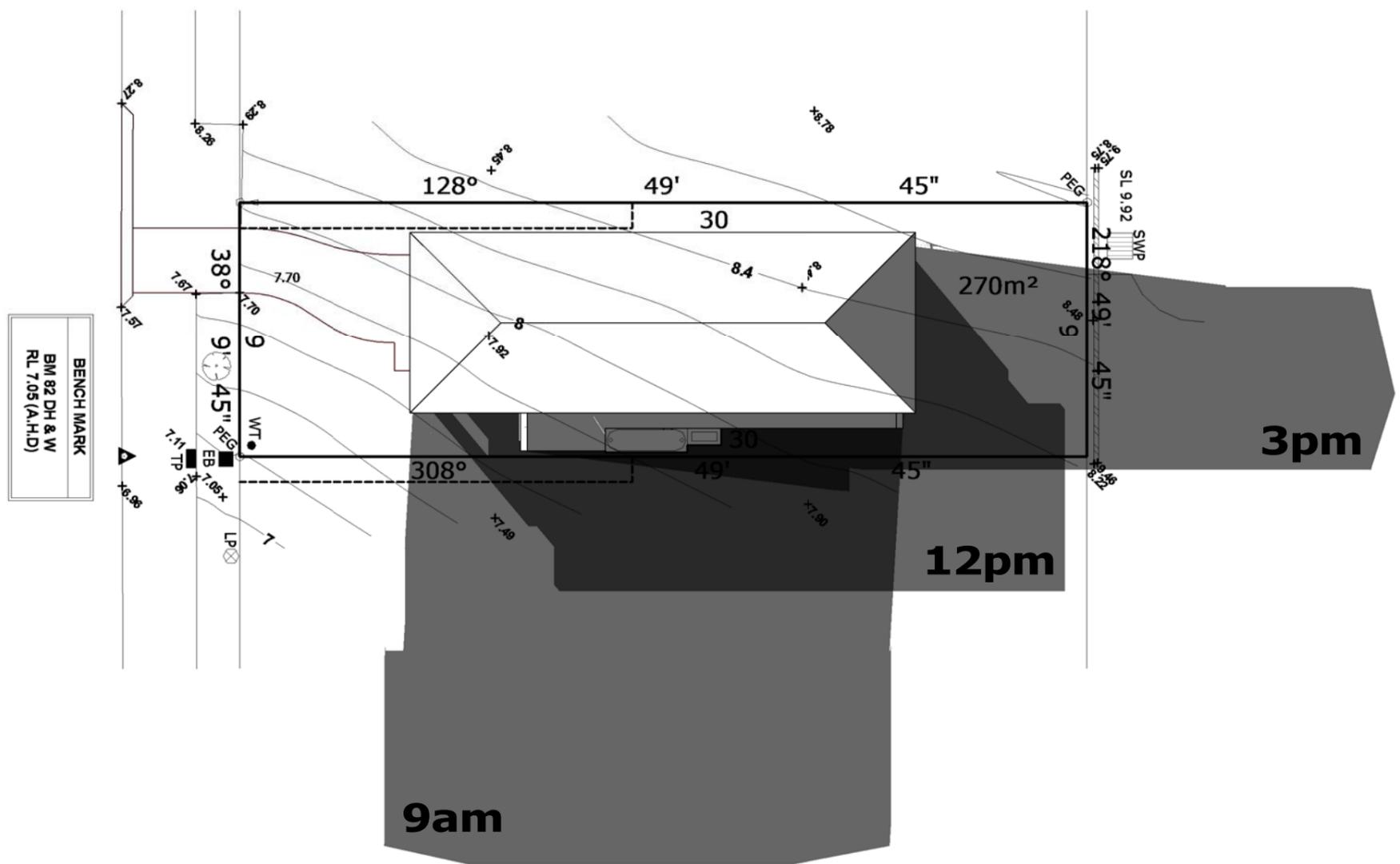
CLIENT:
MR. R. M. NOGUEIRA & MS. K. J. DE MORAES NOGUEIRA
SITE ADDRESS:
**LOT 14 (DP UNREG)
BUBALO STREET
WARRIEWOOD NSW 2102**

HOUSE TYPE
MODEL: **ELLERSTON 22 MKI (OPTION1)**
FACADE: **CLASSIC**
TYPE: **SINGLE GARAGE**
SPECIFICATION: **SYDNEY & HUNTER BASE**
DRAWING TITLE:
SEDIMENT/ANALYSIS PLAN

DRAWN BY: KE	DATE DRAWN: 14.02.19	CHECKED BY: DL	APPROVED FOR CONSTRUCTION:
COUNCIL AREA: NORTHERN BEACHES		SCALE: 1 : 200	
JOB No: A009185	DRWG No: 10	ISSUE: B	



BUBALO



T:\RAWSON HOMES\CONTRACTS AND JOB FILES\A009185 Nogueira - Lot 14, Bubalo Street, Warriewood NSW 2102\A009185 Submission Plans.rvt

NOTES:
 PLEASE NOTE: DETAILS SHOWN ON THESE PLANS ARE INTENDED TO BE ACCURATE - HOWEVER INFORMATION WRITTEN INTO INDIVIDUAL CONTRACTS WILL TAKE PRECEDENCE OVER PLANS
 * ALL DIMENSIONS ARE IN MILLIMETRES
 * DO NOT SCALE - USE WRITTEN DIMENSIONS
 * ALL DIMENSIONS ARE TO STRUCTURAL FRAMES ONLY EXCLUDING FINISHED SURFACES

RAWSON HOMES
 1 HOMEBUSH BAY DRIVE, BLDG. F
 LEVEL 2, SUITE 1
 RHODES NSW 2138
 TELEPHONE 02 8765 5500
 FAX 02 8765 8099
 Builder's licence No. 33493C



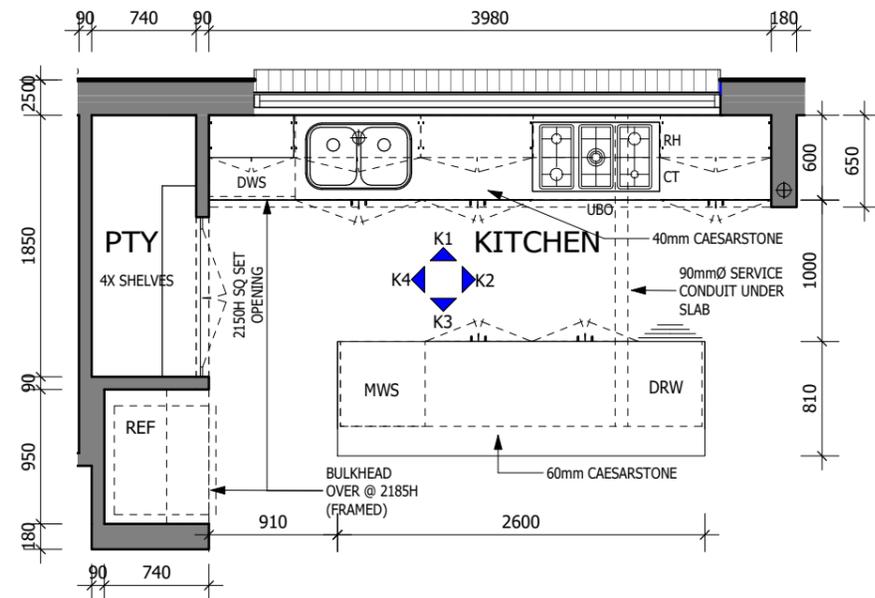
CLIENT:
MR. R. M. NOGUEIRA & MS. K. J. DE MORAES NOGUEIRA
 SITE ADDRESS:
**LOT 14 (DP UNREG)
 BUBALO STREET
 WARRIEWOOD NSW 2102**

HOUSE TYPE
 MODEL: **ELLERSTON 22 MKI (OPTION1)**
 FACADE: **CLASSIC**
 TYPE: **SINGLE GARAGE**
 SPECIFICATION: **SYDNEY & HUNTER BASE**
 DRAWING TITLE:
SHADOW DIAGRAM AT JUNE 21ST

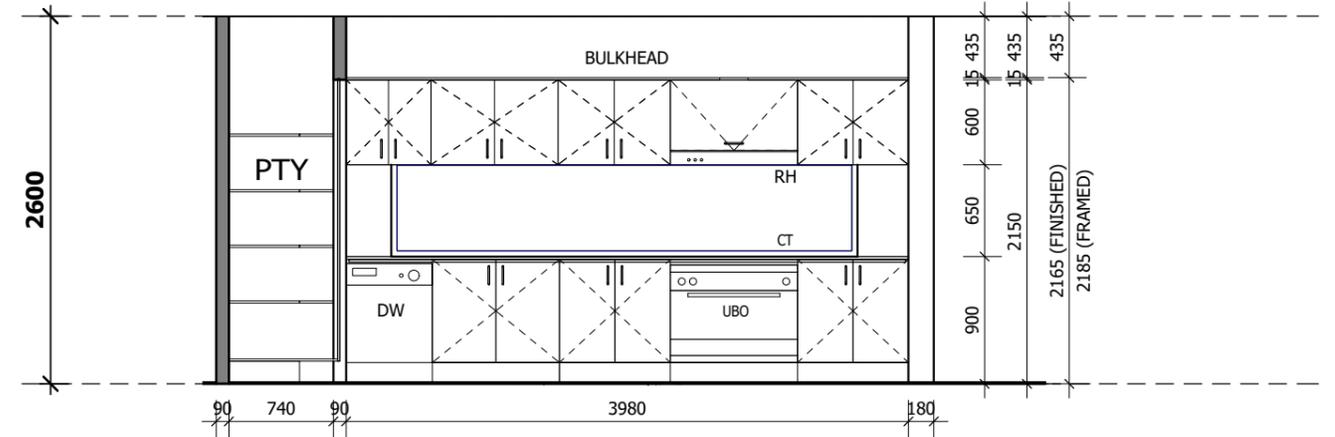
DRAWN BY: KE	DATE DRAWN: 14.02.19	CHECKED BY: DL	APPROVED FOR CONSTRUCTION:
COUNCIL AREA: NORTHERN BEACHES		SCALE: 1 : 200	
JOB No: A009185	DRWG No: 12	ISSUE: B	

THIS DRAWING IS SUBJECT TO COPYRIGHT LAWS AND MAY NOT BE COPIED WITHOUT THE WRITTEN PERMISSION OF RAWSON HOMES PTY LTD-ACN 053 733 841

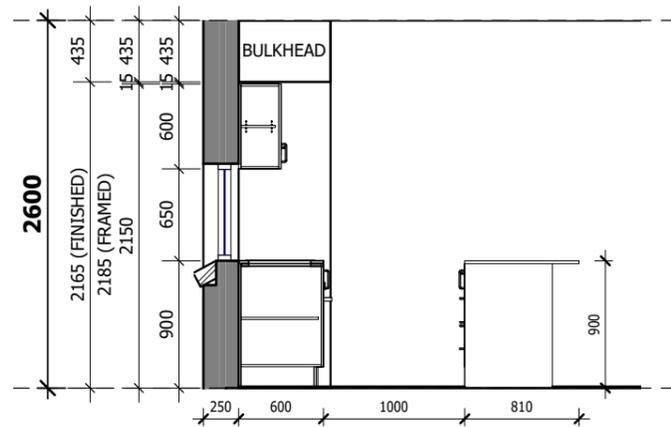
THE KITCHEN LAYOUT SHOWN IS ONLY DIAGRAMATIC ALL DETAILS AND DIMENSIONS TO BE CONFIRMED BY THE MAKER PRIOR TO MANUFACTURE



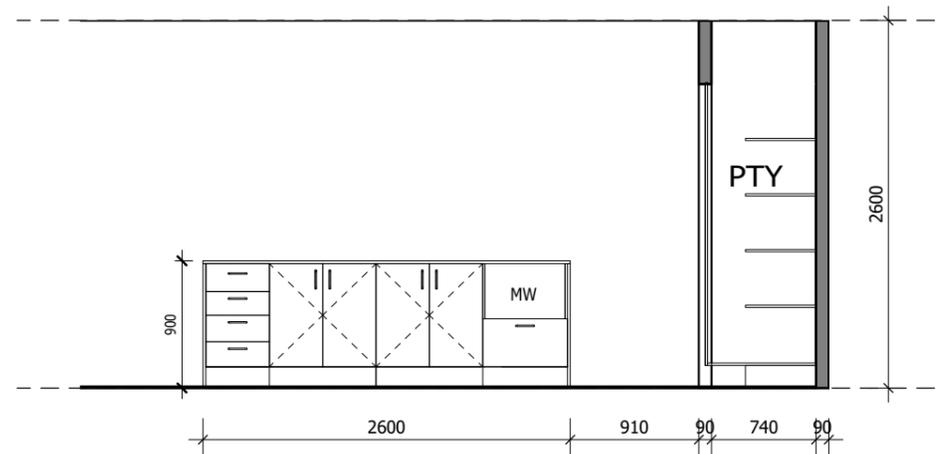
KITCHEN LAYOUT



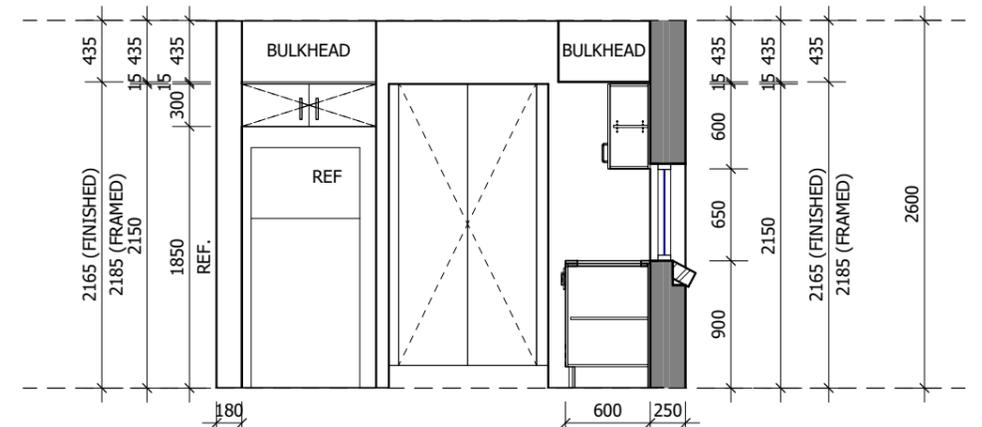
KITCHEN K1



KITCHEN K2



KITCHEN K3



KITCHEN K4

NOTES:
PLEASE NOTE: DETAILS SHOWN ON THESE PLANS ARE INTENDED TO BE ACCURATE - HOWEVER INFORMATION WRITTEN INTO INDIVIDUAL CONTRACTS WILL TAKE PRECEDENCE OVER PLANS
* ALL DIMENSIONS ARE IN MILLIMETRES
* DO NOT SCALE - USE WRITTEN DIMENSIONS
* ALL DIMENSIONS ARE TO STRUCTURAL FRAMES ONLY EXCLUDING FINISHED SURFACES

RAWSON HOMES
1 HOMEBUSH BAY DRIVE, BLDG. F
LEVEL 2, SUITE 1
RHODES NSW 2138
TELEPHONE 02 8765 5500
FAX 02 8765 8099
Builder's licence No. 33493C



CLIENT:
MR. R. M. NOGUEIRA & MS. K. J. DE MORAES
NOGUEIRA
SITE ADDRESS:
LOT 14 (DP UNREG)
BUBALO STREET
WARRIEWOOD NSW 2102

HOUSE TYPE
MODEL: ELLERSTON 22 MKI (OPTION1)
FACADE: CLASSIC
TYPE: SINGLE GARAGE
SPECIFICATION: SYDNEY & HUNTER BASE
DRAWING TITLE:
KITCHEN DETAILS

DRAWN BY: KE	DATE DRAWN: 14.02.19	CHECKED BY: DL	APPROVED FOR CONSTRUCTION:
COUNCIL AREA: NORTHERN BEACHES		SCALE: 1 : 50	
JOB No: A009185	DRWG No: KD	ISSUE: B	