

★ Star rating: 5.1

BERS Pro v4.3.0.0 (3.13) cannot be used to model 'roof windows'. Roof windows are 'openable or fixed windows in a roof' and do not have a shaft, as distinct from skylights which incorporate a built-in shaft and are not ventilated. BERS Pro v4.3 can only model skylights. If a roof window is present on the floor plan then this certificate is not valid.

Water Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Fixtures			
The applicant must install showerheads with a minimum rating of 3 star (> 7.5 but <= 9 L/min) in all showers in the development.		✓	✓
The applicant must install a toilet flushing system with a minimum rating of 4 star in each toilet in the development.		✓	✓
The applicant must install taps with a minimum rating of 4 star in the kitchen in the development.		✓	
The applicant must install basin taps with a minimum rating of 4 star in each bathroom in the development.		✓	
Alternative water			
Rainwater tank			
The applicant must install a rainwater tank of at least 3000 litres on the site. This rainwater tank must meet, and be installed in accordance with, the requirements of all applicable regulatory authorities.	✓	✓	✓
The applicant must configure the rainwater tank to collect rain runoff from at least 200 square metres of the roof area of the development (excluding the area of the roof which drains to any stormwater tank or private dam).		✓	✓
The applicant must connect the rainwater tank to: - all toilets in the development - the cold water tap that supplies each clothes washer in the development - at least one outdoor tap in the development (Note: NSW Health does not recommend that rainwater be used for human consumption in areas with potable water supply.)		✓ ✓ ✓	✓ ✓ ✓
Thermal Comfort Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Simulation Method			
The applicant must attach the certificate referred to under "Assessor Details" on the front page of this BASIX certificate (the "Assessor Certificate") to the development application and construction certificate application for the proposed development (or, if the applicant is applying for a complying development certificate for the proposed development, to that application). The applicant must also attach the Assessor Certificate to the application for an occupation certificate for the proposed development.			
The Assessor Certificate must have been issued by an Accredited Assessor in accordance with the Thermal Comfort Protocol.			
The details of the proposed development on the Assessor Certificate must be consistent with the details shown in this BASIX certificate, including the Cooling and Heating loads shown on the front page of this certificate.			
The applicant must show on the plans accompanying the development application for the proposed development, all matters which the Assessor Certificate requires to be shown on those plans. Those plans must bear a stamp of endorsement from the Accredited Assessor to certify that this is the case. The applicant must show on the plans accompanying the application for a construction certificate (or complying development certificate, if applicable), all thermal performance specifications set out in the Assessor Certificate, and all aspects of the proposed development which were used to calculate those specifications.	✓	✓	✓
The applicant must construct the development in accordance with all thermal performance specifications set out in the Assessor Certificate, and in accordance with those aspects of the development application or application for a complying development certificate which were used to calculate those specifications.		✓	✓
The applicant must construct the floors and walls of the dwelling in accordance with the specifications listed in the table below.	✓	✓	✓
Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
Hot water			
The applicant must install the following hot water system in the development, or a system with a higher energy rating: gas instantaneous with a performance of 6 stars.	✓	✓	✓
Cooling system			
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 living area: 3-phase airconditioning; Energy rating: EER 3.0 - 3.5		✓	✓
The applicant must install the following cooling system, or a system with a higher energy rating, in at least 1 bedroom: 3-phase airconditioning; Energy rating: EER 3.0 - 3.5		✓	✓
The cooling system must provide for day/night zoning between living areas and bedrooms.		✓	✓
Heating system			
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 living area: 3-phase airconditioning; Energy rating: EER 3.0 - 3.5		✓	✓
The applicant must install the following heating system, or a system with a higher energy rating, in at least 1 bedroom: 3-phase airconditioning; Energy rating: EER 3.0 - 3.5		✓	✓
The heating system must provide for day/night zoning between living areas and bedrooms.		✓	✓
Ventilation			
The applicant must install the following exhaust systems in the development: At least 1 Bathroom: individual fan, not ducted; Operation control: manual switch on/off Kitchen: individual fan, ducted to façade or roof; Operation control: manual switch on/off Laundry: natural ventilation only, or no laundry; Operation control: n/a		✓ ✓ ✓	✓ ✓ ✓
Artificial lighting			
The applicant must ensure that the "primary type of artificial lighting" is fluorescent or light emitting diode (LED) lighting in each of the following rooms, and where the word "dedicated" appears, the fittings for those lights must only be capable of accepting fluorescent or light emitting diode (LED) lamps: at least 5 of the bedrooms / study; dedicated		✓	✓
Energy Commitments	Show on DA plans	Show on CC/CDC plans & specs	Certifier check
- at least 3 of the living / dining rooms; dedicated - the kitchen; dedicated - all bathrooms/toilets; dedicated - the laundry; dedicated - all hallways; dedicated		✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓
Natural lighting			
The applicant must install a window and/or skylight in 4 bathroom(s)/toilet(s) in the development for natural lighting.	✓	✓	✓
Other			
The applicant must install a gas cooktop & electric oven in the kitchen of the dwelling.		✓	
The applicant must construct each refrigerator space in the development so that it is "well ventilated", as defined in the BASIX definitions.		✓	
The applicant must install a fixed outdoor clothes drying line as part of the development.		✓	

<u>AREAS</u>	
SITE:	1364 m ²
GROUND FLOOR:	170.01 m ²
FIRST FLOOR:	180.21 m ²
GARAGE:	34.09 m ²
PORCH:	10.59 m ²
BALCONY:	6.22 m ²
ALFRESCO:	45.52 m ²
	m ²
TOTAL:	446.63 m ²

2.4	SHADOWS JUNE
2.3	SITE ANALYSIS
2.2	CONSTRUCTION MANAGEMENT
2.1	NEIGHBOUR NOTIFICATION PLAN
7	SECTION
6	ELEVATIONS
5	ELEVATIONS
4	FIRST FLOOR PLAN
3	GROUND FLOOR PLAN
2	SITE PLAN
1	COVER SHEET
SHEET	DESCRIPTION

CLIENT'S SIGNATURE: _____ DATE: _____

ClarendonHomes

BL No. 2298C
ABN 18 003 892 706

Clarendon Homes (NSW) P/L
21 Solent Circuit, Baulkham Hills NSW 2153
T: (02) 8851 5300

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DIMENSIONS TO BE READ IN
PREFERENCE TO SCALING

PRODUCT:
BOSTON 42
Hamptons
R/H Garage

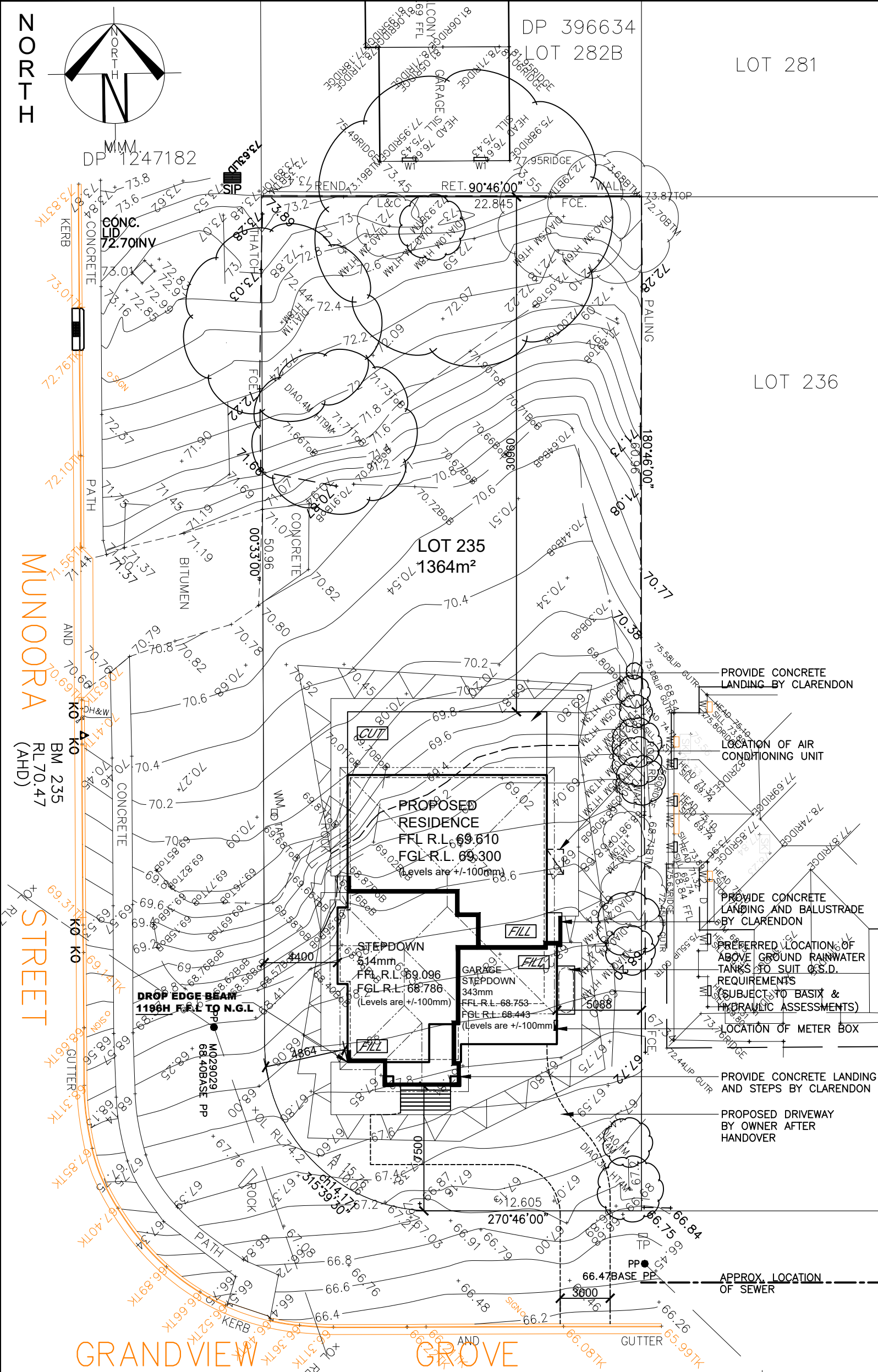
Sapphire Specification

CLIENT:
Ms. WEIR

SITE ADDRESS:
**Lot 235 No.50 (DP 4889)
Grandview Grove
SEAFORTH 2092**

DA Drawings

DRAWN: SMC	DATE: 12.03.19	Rev: C
RATIO @ A3: N/A	CHECKED: Checked By	
SHEET: 1	JOB No: 29913445	NSW



LOT 235
D.P: 4889
L.G.A: NORTHERN BEACHES

**SITING HAS BEEN COMPLETED
IN ACCORDANCE WITH
MANLY DCP 2013**

SITE AREA	1364 m²
FLOOR SPACE RATIO	
GROUND FLOOR:	155.8 m²
FIRST FLOOR:	170.4 m²
TOTAL LIVING AREA:	326.2 m²
(EXCL. EXTERNAL WALLS/GARAGE/PORCH/STAIR VOID)	
FLOOR SPACE RATIO:	23.9 %
MAX. ALLOWABLE BY COUNCIL:	45 %

TOTAL OPEN SPACE	
TOTAL OPEN SPACE AREA:	1077.4 m²
(EXCLUDES BUILDINGS AND DRIVEWAY)	
	79.0 %
MIN. REQUIRED BY COUNCIL:	55 %

LANDSCAPED AREA	
TOTAL LANDSCAPE AREA:	1034.2 m²
(EXCLUDES HARD SURFACES)	
	96.0 %
MIN. REQUIRED BY COUNCIL:	35 %
(% OF TOTAL OPEN SPACE)	

PRIVATE OPEN SPACE	
TOTAL OPEN SPACE AREA:	791.8 m²
(MIN. DIMENSION OF 3.0m)	
MIN. REQUIRED BY COUNCIL:	12 m²

HEIGHT RESTRICTION	
MAXIMUM RIDGE HEIGHT	8.5 m
MAXIMUM WALL HEIGHT	6.5 m
(F.F.L. MUST BE ACCURATE. CHANGES IN LEVELS MAY NOT COMPLY WITH REQUIREMENTS)	

Maximum 1000mm CUT
Maximum 1000mm FILL
NO EXCAVATION WITHIN 900mm OF BDY

WIND CLASSIFICATION: "N2"
SLAB CLASSIFICATION: "M "

NOTE:
ALL GROUND LINES ARE APPROXIMATE.
EXTENT OF FILL & BATTER WILL BE
DETERMINED ON SITE. SEDIMENT BARRIERS
ARE TO BE CUSTOMISED SITE SPECIFIC

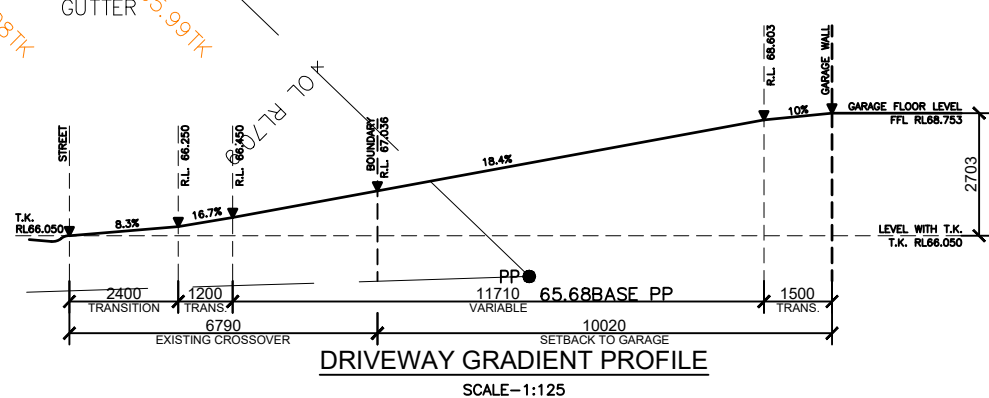
**STORMWATER TO
STREET VIA RAINWATER
TANK AND O.S.D**
REFER TO HYDRAULIC DETAILS

SITE PLAN

SCALE 1:200

GENERAL NOTES

- A) THIS SURVEY IS SPECIFICALLY FOR CONTOUR PURPOSES ONLY. THE BOUNDARIES OF THE SUBJECT PROPERTY HAVE NOT BEEN INVESTIGATED
B) AREAS AND DIMENSIONS ARE SUBJECT TO SURVEY
C) SERVICES SHOWN HAVE BEEN DERIVED FROM VISUAL EVIDENCE APPARENT AT THE TIME OF SURVEY. THE RELEVANT SERVICE AUTHORITY SHALL BE CONTACTED TO VERIFY THE EXISTENCE AND POSITION OF ALL SERVICES PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION OR EXCAVATION
D) CONTOURS ARE INDICATIVE OF SURFACE TOPOGRAPHY ONLY. SURVEYED SPOT LEVELS ARE THE ONLY VALUES TO BE RELIED ON FOR REDUCED LEVELS ON PARTICULAR FEATURES.



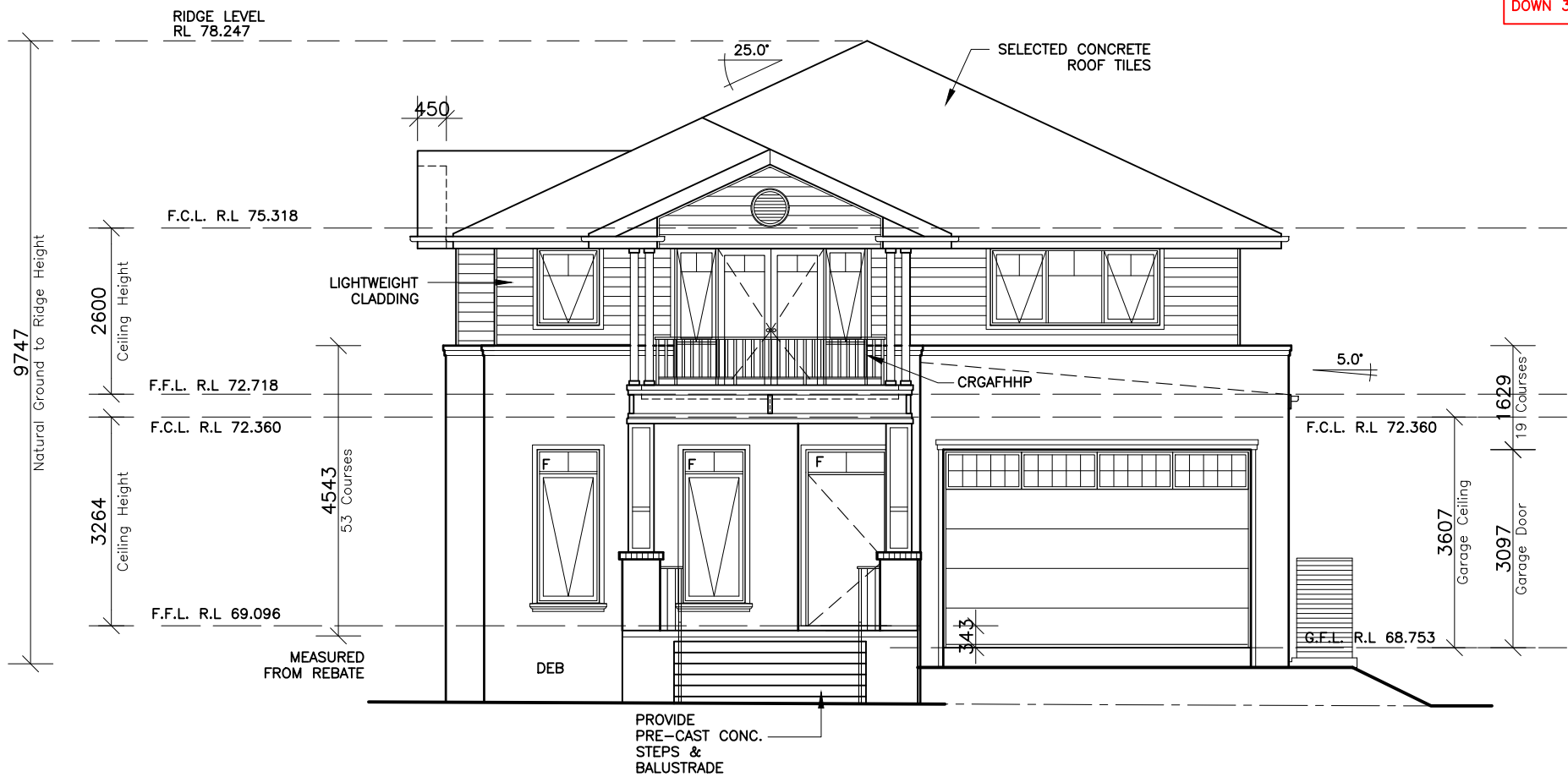
CLIENT'S SIGNATURE: _____ DATE: _____

ClarendonHomes BL No. 2298C ABN 18 003 892 706 Clarendon Homes (NSW) P/L 21 Solent Circuit, Baulkham Hills NSW 2153 T: (02) 8851 5300	© ALL RIGHTS RESERVED This plan is the property of CLARENDON HOMES (NSW) P/L Any copying or altering of the drawing shall not be undertaken without written permission from CLARENDON HOMES (NSW) P/L # DIMENSIONS TO BE READ IN PREFERENCE TO SCALING	PRODUCT: BOSTON 42 Hamptons R/H Garage Sapphire Specification	CLIENT: Ms. WEIR	DA Drawings		
			SITE ADDRESS: Lot 235 No.50 (DP 4889) Grandview Grove SEAFORTH 2092	DRAWN: BG	DATE: 04.02.19	Rev: C
				RATIO @ A3: 1:250	CHECKED: BG	
				SHEET: 2	JOB No: 29913445	NSW

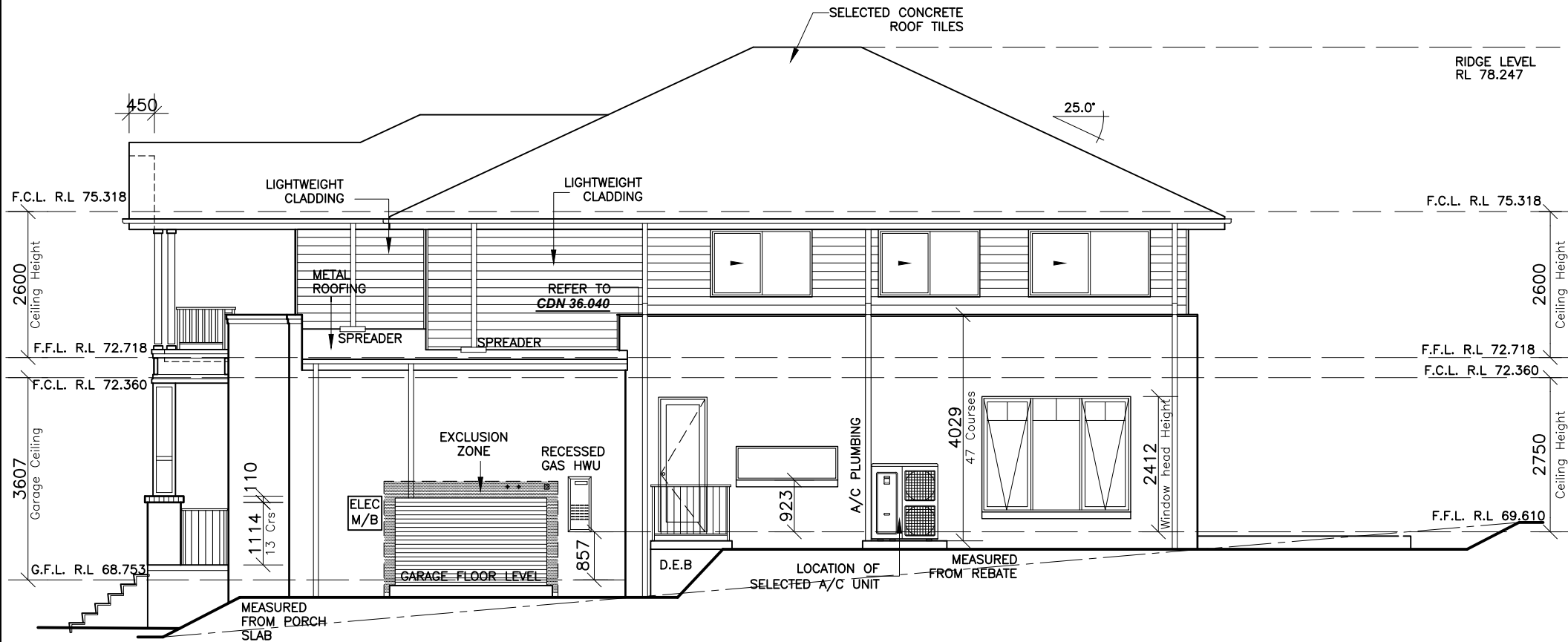
NOTES:
FOR DROP-OFF'S REFER
TO FRAMING DETAILS
CDN 21.010-21.080

NOTE TO FRAMEMAKER:

FIRST FLOOR WET AREAS TO
HAVE FLOOR JOISTS STEPPED
DOWN 37mm



SOUTH ELEVATION - 1



EAST ELEVATION - 2

CLIENT'S SIGNATURE: _____ DATE: _____

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PRODUCT:
BOSTON 42
Hamptons
R/H Garage

Sapphire Specification

CLIENT:
Ms. WEIR

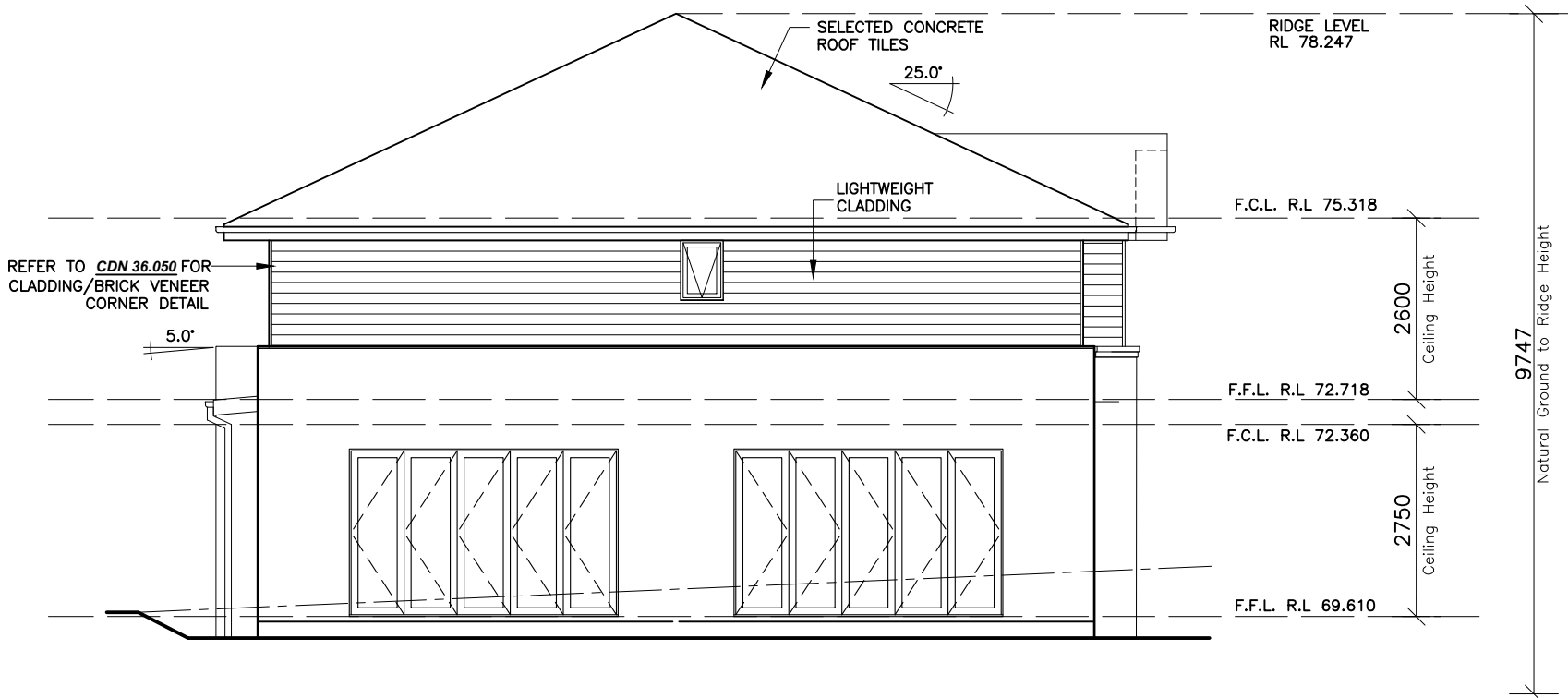
SITE ADDRESS:
Lot 235 No.50 (DP 4889)
Grandview Grove
SEAFORTH 2092

DA Drawings

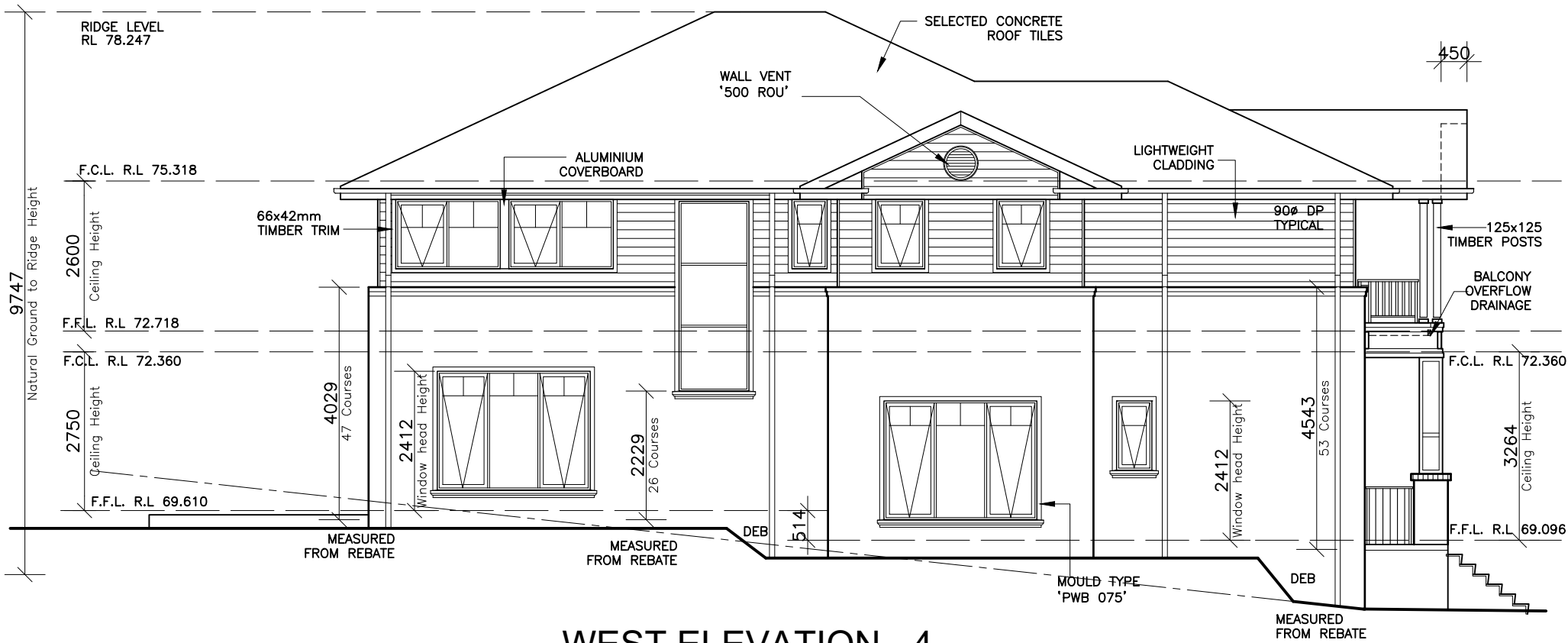
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RATIO @ A3: 1:100	CHECKED: Checked By	
SHEET: 5	JOB No: 29913445	NSW

NOTES:
FOR DROP-OFF'S REFER
TO FRAMING DETAILS
CDN 21.010-21.080

NOTE TO FRAMEMAKER:
FIRST FLOOR WET AREAS TO
HAVE FLOOR JOISTS STEPPED
DOWN 37mm



NORTH ELEVATION - 3



WEST ELEVATION - 4

CLIENT'S SIGNATURE: _____ DATE: _____

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Hamptons
R/H Garage

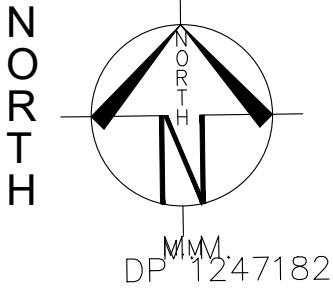
Sapphire Specification

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Ms. WEIR

SITE ADDRESS:
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Grandview Grove
SEAFORTH 2092

DA Drawings

DRAWN: SMC	DATE: 12.03.19	Rev: C
RATIO @ A3: 1:100	CHECKED: Checked By	
SHEET: 6	JOB No: 29913445	NSW



MUNNOORA
STREET
BM 235
RL 70.47
(AHD)

STREET

GRANDVIEW

GROVE

NEIGHBOURS NOTIFICATION

CLIENT'S SIGNATURE:

DATE:

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ABN 18 003 892 706

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PRODUCT:

BOSTON 42
Hamptons
R/H Garage

Sapphire Specification

CLIENT:

Ms. WEIR

SITE ADDRESS:

Lot 235 No.50 (DP 4889)
Grandview Grove
SEAFORTH 2092

DA Drawings

DRAWN:

SMC

DATE:

12.03.19

Rev:

C

RATIO @ A3:

1:250

CHECKED:

Checked By

SHEET:

2.1

JOB No:

29913445

NSW

DP 396634
LOT 282B

LOT 281

LOT 235

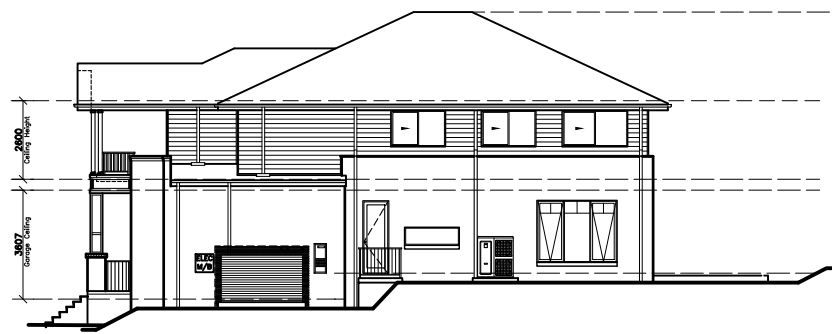
D.P: 4889

L.G.A: NORTHERN BEACHES

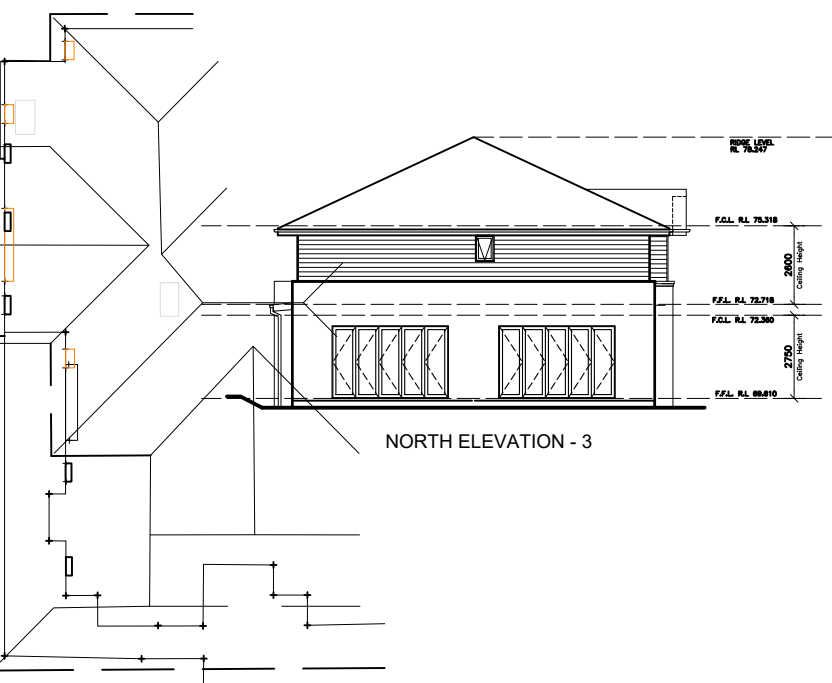
SITING HAS BEEN COMPLETED
IN ACCORDANCE WITH
MANLY DCP 2013



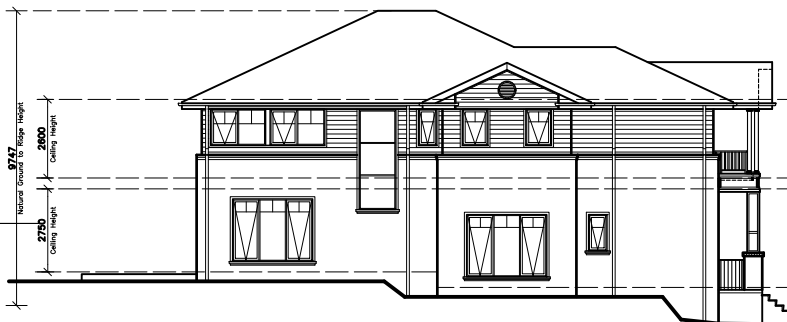
SOUTH ELEVATION - 1



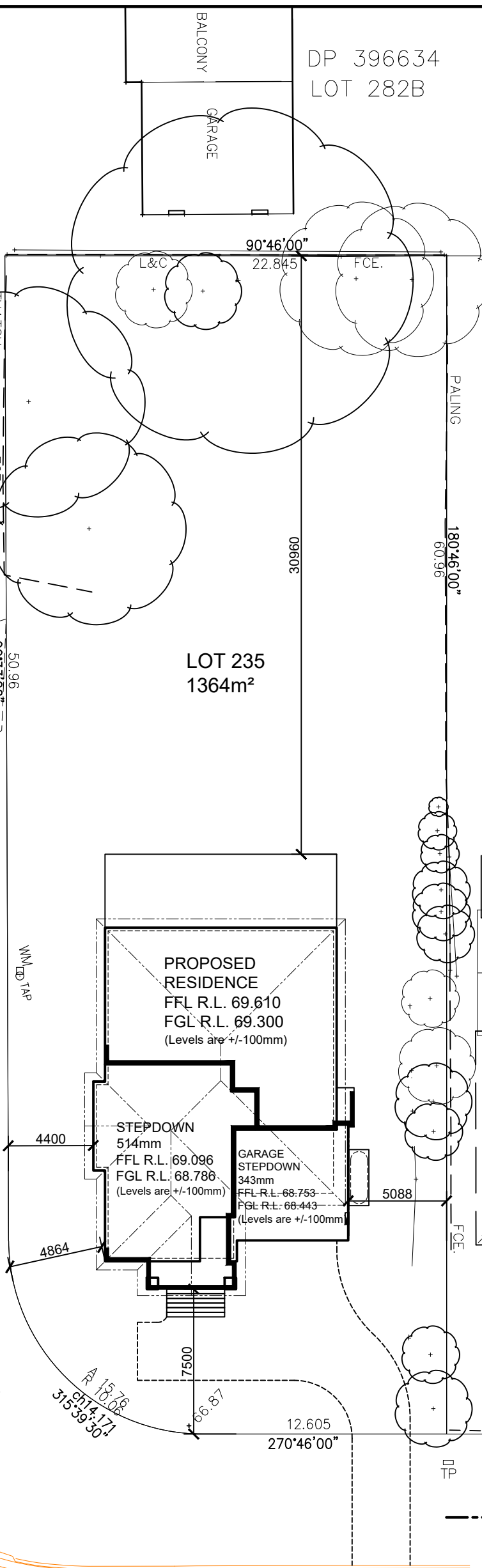
EAST ELEVATION - 2



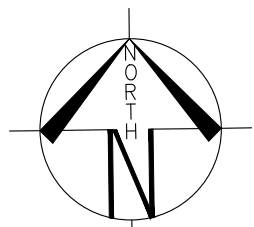
NORTH ELEVATION - 3



WEST ELEVATION - 4



NORTH



DP 1247182

DP 396634
LOT 282B

LOT 281

LOT 235
D.P: 4889
L.G.A: NORTHERN BEACHES

SITING HAS BEEN COMPLETED
IN ACCORDANCE WITH
MANLY DCP 2013

MUNNOORA

BM 235
RL 70.47
(AHD)

STREET

GRANDVIEW

GROVE

CONSTRUCTION MANAGEMENT PLAN EROSION AND SEDIMENT CONTROL PLAN

CLIENT'S SIGNATURE: _____ DATE: _____

ClarendonHomes

BL No. 2298C
ABN 18 003 892 706

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DIMENSIONS TO BE READ IN
PREFERENCE TO SCALING

PRODUCT:
BOSTON 42
Hamptons
R/H Garage

Sapphire Specification

CLIENT:
Ms. WEIR

SITE ADDRESS:
Lot 235 No.50 (DP 4889)
Grandview Grove
SEAFORTH 2092

DA Drawings

DRAWN: SMC	DATE: 12.03.19	Rev: C
RATIO @ A3: 1:250	CHECKED: Checked By	
SHEET: 2.2	JOB No: 29913445	NSW

APPROXIMATE LOCATION
OF SEDIMENT FENCE

APPROXIMATE LOCATION
OF SEDIMENT FENCE

PORTABLE
TOILET



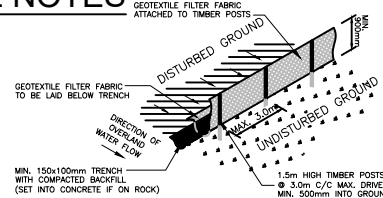
DENOTES TREES TO BE
REMOVED BY OWNER PRIOR
TO CONSTRUCTION

NOTE:
TEMPORARY SECURITY FENCING TO
THE PERIMETER OF THE BOUNDARY
WHERE REQUIRED TO PREVENT
PUBLIC ACCESS ONTO THE SITE

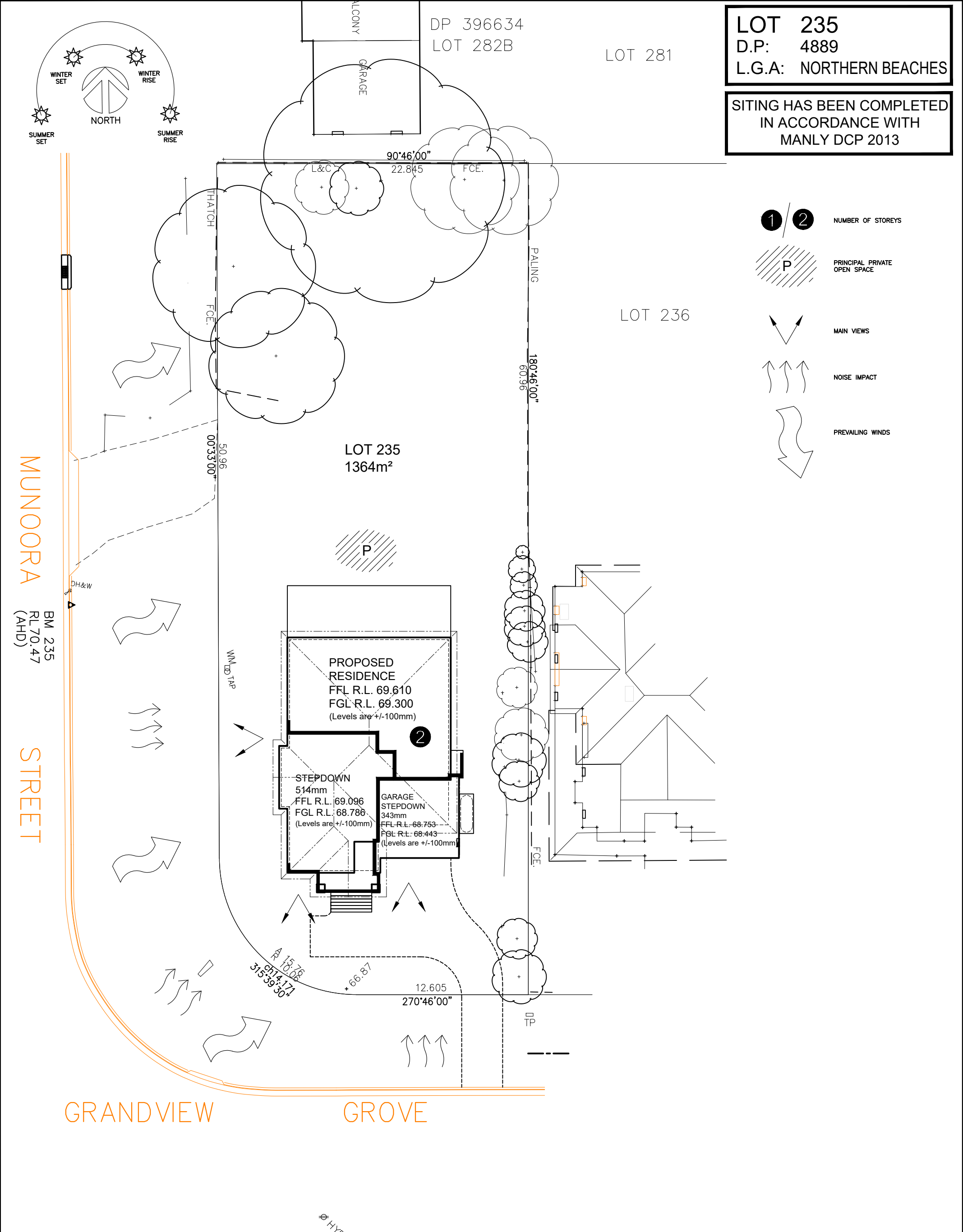
NOTE:
GROUND LINES ARE APPROXIMATE.
EXTENT OF CUT AND FILL BATTERS
WILL BE DETERMINED ON SITE.
SEDIMENT BARRIERS ARE
CUSTOMISED TO SITE CONDITIONS

SEDIMENT CONTROL NOTES

1. ALL EROSION AND SEDIMENTATION CONTROL MEASURES, INCLUDING REVEGETATION AND STORAGE OF SOIL AND TOPSOIL, SHALL BE IMPLEMENTED TO THE STANDARDS OF THE SOIL CONSERVATION OF NSW AND INSPECTED DAILY BY THE SITE MANAGER.
2. ALL DRAINAGE WORKS SHALL BE CONSTRUCTED AND STABILIZED AS EARLY AS POSSIBLE DURING DEVELOPMENT.
3. SEDIMENT TRAPS SHALL BE CONSTRUCTED AROUND ALL INLET PITS, CONSISTING OF 300mm WIDE x 300mm DEEP TRENCH.
4. ALL SEDIMENT BASINS AND TRAPS SHALL BE CLEANED WHEN THE STRUCTURES ARE A MAXIMUM OF 60% FULL OF SOIL MATERIALS, INCLUDING THE MAINTENANCE PERIOD.
5. ALL DISTURBED AREAS SHALL BE REVEGETATED AS SOON AS THE RELEVANT WORKS ARE COMPLETED.
6. SOIL AND TOPSOIL STOCKPILES SHALL BE LOCATED AWAY FROM DRAINAGE LINES AND AREA WHERE WATER MAY CONCENTRATE. ALL ROADS AND FOOTPATHS TO BE SWEEPED DAILY.
7. FILTER SHALL BE CONSTRUCTED BY STRETCHING A FILTER FABRIC (PROPEX OR APPROVED EQUIVALENT BETWEEN POST AT 3.0m CENTRES. FABRIC SHALL BE BURIED 150mm ALONG ITS LOWER EDGE.
8. DUST PREVENTION MEASURES TO BE MAINTAINED AT ALL TIMES.



SEDIMENT FENCE
NOT TO SCALE



CLIENT'S SIGNATURE: _____ DATE: _____

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				DRAWN: SMC	DATE: 12.03.19	Rev: C
				RATIO @ A3: 1:250	CHECKED: Checked By	
				SHEET: 2.3	JOB No: 29913445	NSW

SITING HAS BEEN COMPLETED
IN ACCORDANCE WITH
MANLY DCP 2013

LOT 281

LOT 236

FCE.

NORTH

TN

DP^{M.M.M.} 1247182

MUNOORA

BM 235
RL 70.47
(AHD)

STREET

GRANDVIEW

GROVE

SHADOW DIAGRAM @ 21ST JUNE

HYD



SHADOW CAST AT 9.00am
ON JUNE 21st

SHADOW CAST AT 12.00pm
ON JUNE 21st

SHADOW CAST AT 3.00pm
ON JUNE 21st

CLIENT'S SIGNATURE: _____ DATE: _____

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Hamptons
R/H Garage

Sapphire Specification

CLIENT:
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SEAFORTH 2092

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RATIO @ A3: 1:250	CHECKED: Checked By	
SHEET: 2.4	JOB No: 29913445	NSW

ClarendonHomes

SEAFORTH

BOSTON 42 - HAMPTONS FAÇADE

Lot 235 No. 50 Grandview Grove

EXTERNAL COLOUR SELECTIONS

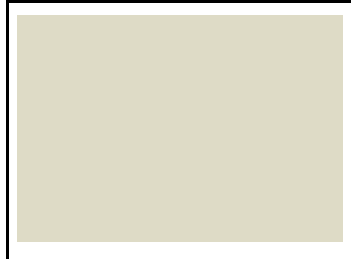
Original - 2 April 2019

MAIN BODY (BRICK)



Bristol | Canyon Cloud P201-N4

FRONT DOOR



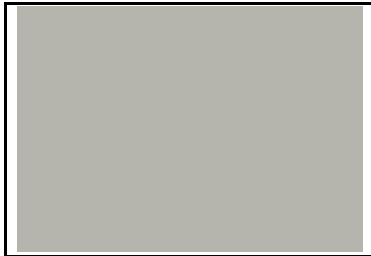
Taubmans | Surfmist CB 23

ROOF (TILE)



Boral | Terracotta | Eclipse

PAINT FINISH 1



Bristol | Canyon Cloud P201-N4

PAINT FINISH 2



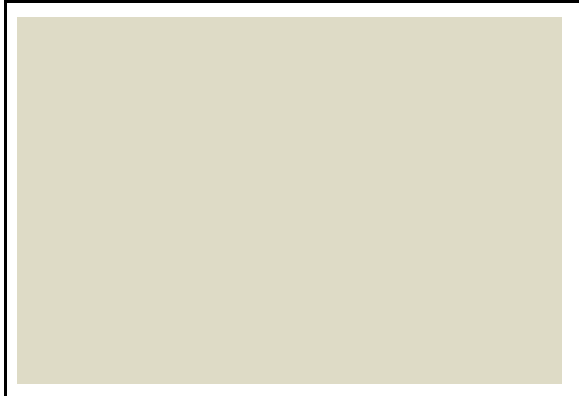
Taubmans | Surfmist CB 23

FEATURE TILE



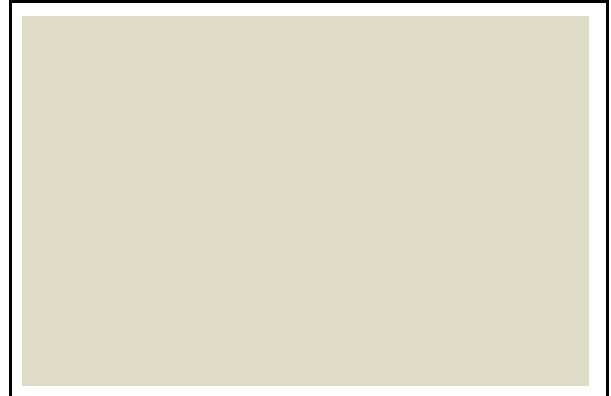
Tile Direct | Bluestone/ Flame

GUTTER/FASCIA



Colorbond | Surfmist

WINDOWS



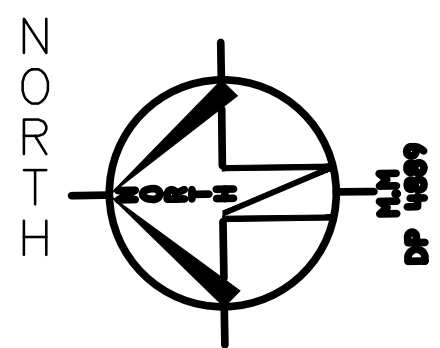
Taubmans Surfmist CB23

GARAGE



Dynamic | Ranch Stockton on Surfmist



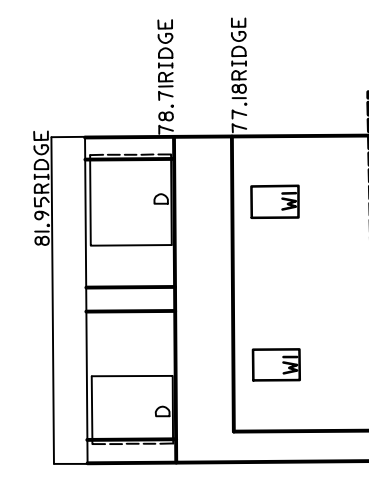


HOW TO PROTECT SURVEY MARKS
BEFORE WORKS COMMENCE
The Surveyor will be responsible for the protection of the survey marks. The client must ensure that the survey marks are not disturbed or destroyed. If the client is responsible for the protection of the survey marks, they must ensure that the survey marks are not disturbed or destroyed. If the client is responsible for the protection of the survey marks, they must ensure that the survey marks are not disturbed or destroyed.

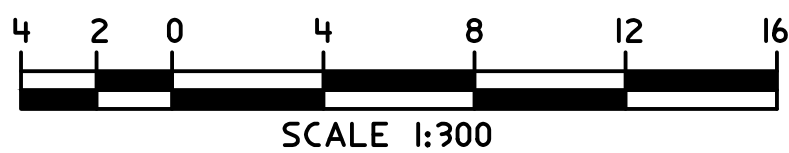
SK: DENOTES SKYLIGHT
D: DENOTES DOOR
W: DENOTES WINDOW

ALL TREE HEIGHTS AND SPREAD ARE APPROXIMATE ONLY
AND ARE SHOWN FOR TENDER PURPOSES ONLY.
ALL TREE RELATED ISSUES TO BE REFERRED TO AN ARBORIST

APPROXIMATE POSITION OF SEWER MAIN.
REFER TO SEWER DIAGRAM FOR DETAILS.
NOTE: PRIOR TO ANY DESIGN AND CONSTRUCTION, A
SEWER PEGOUT MUST BE UNDERTAKEN TO DETERMINE
THE EXACT LOCATION OF THE SEWER LINE.

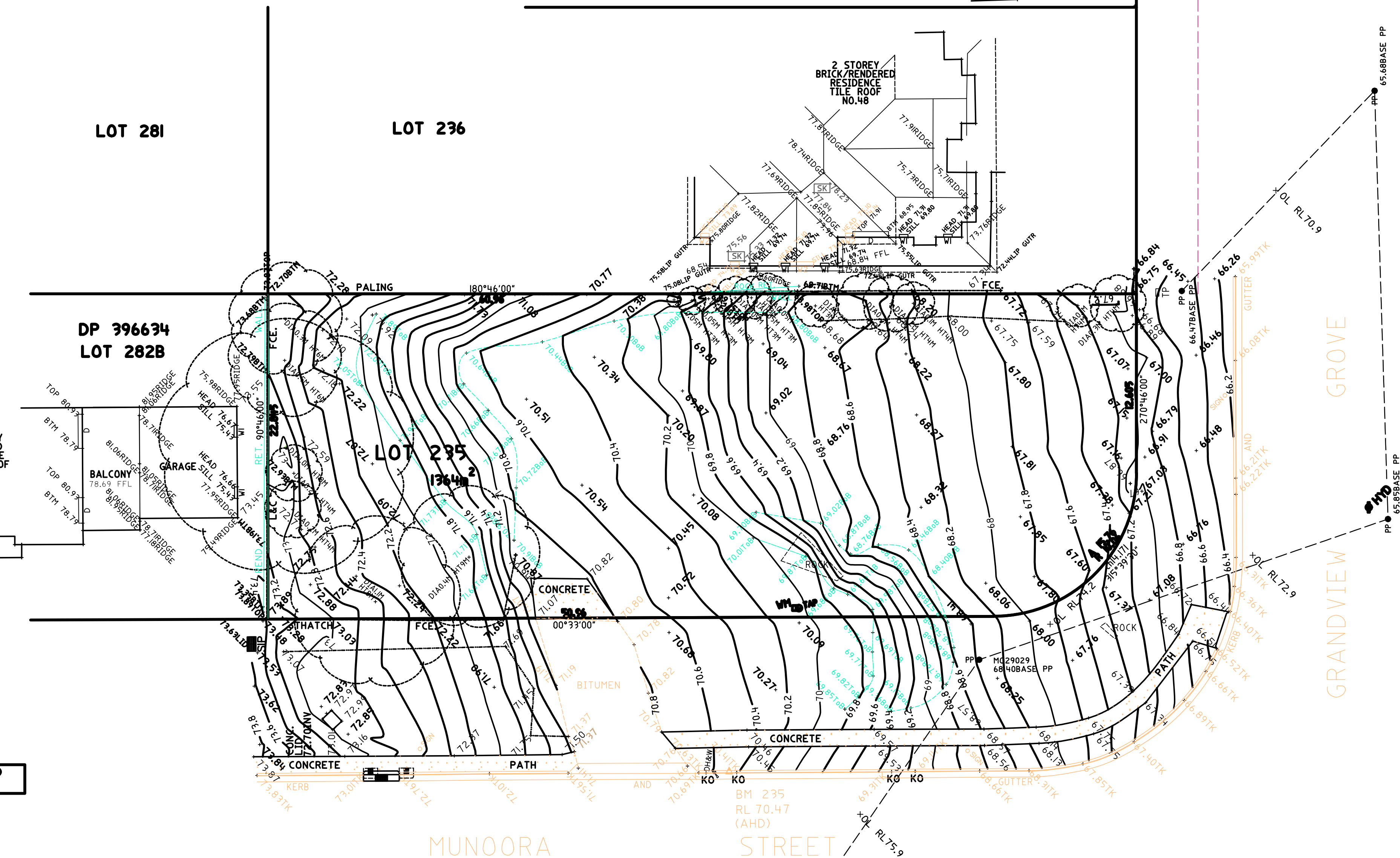
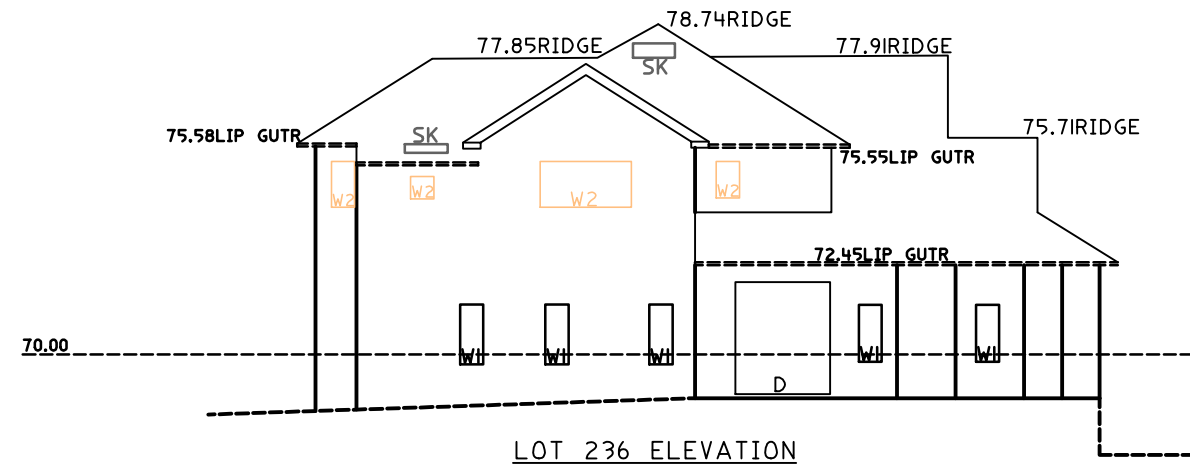


THE BOUNDARY POSITION IS APPROXIMATE ONLY AND SHOULD
BE VERIFIED PRIOR TO ANY CONSTRUCTION WORKS.



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- GENERAL NOTES
- THIS SURVEY IS SPECIFICALLY FOR CONTOUR PURPOSES ONLY. THE BOUNDARIES OF THE SUBJECT PROPERTY HAVE NOT BEEN INVESTIGATED AND THE POSITION SHOWN IS APPROXIMATE ONLY.
 - AREAS AND DIMENSIONS ARE SUBJECT TO SURVEY.
 - PITS AND SERVICES SHOWN HAVE BEEN DERIVED FROM VISUAL EVIDENCE APPARENT AT THE TIME OF SURVEY. THE RELEVANT SERVICE AUTHORITY SHALL BE CONTACTED TO VERIFY THE EXISTENCE AND POSITION OF ALL SERVICES PRIOR TO DA & THE COMMENCEMENT OF ANY CONSTRUCTION OR EXCAVATION.
 - CONTOURS ARE INDICATIVE OF SURFACE TOPOGRAPHY ONLY. SURVEYED SPOT LEVELS ARE THE ONLY VALUES TO BE RELIED ON FOR REDUCED LEVELS ON PARTICULAR FEATURES.
 - THIS SURVEY HAS BEEN CARRIED OUT UNDER CLAUSE 9 OF THE SURVEYING AND SPATIAL INFORMATION REGULATION 2017.



LOCALITY SKETCH

UBD AREA: SYD REVISION: 54
MAP: 197 REF: B9 Appr.
GPS
E

SYMBOLS & ABBREVIATIONS:			
GP	GULLY PIT	-E-	OVERHEAD ELEC LINE
SIP	SURFACE INLET PIT	-S-	SEWER LINE
SIC	SEWER INSPECTION COVER	VC	VEHICLE CROSSING
MH	SEWER MANHOLE	CLP	LIGHT POLE
SWMH	STORMWATER MANHOLE	EC	ELECTRICITY CONDUIT
W/M	WATER METER	TC	TELECOM CONDUIT
EL	ELECTRICITY BOX	TP	TELECOMMUNICATION
HYD	WATER HYDRANT	GM	GAS METER
SV	STOP VALVE	FP	FLUSHING POINT

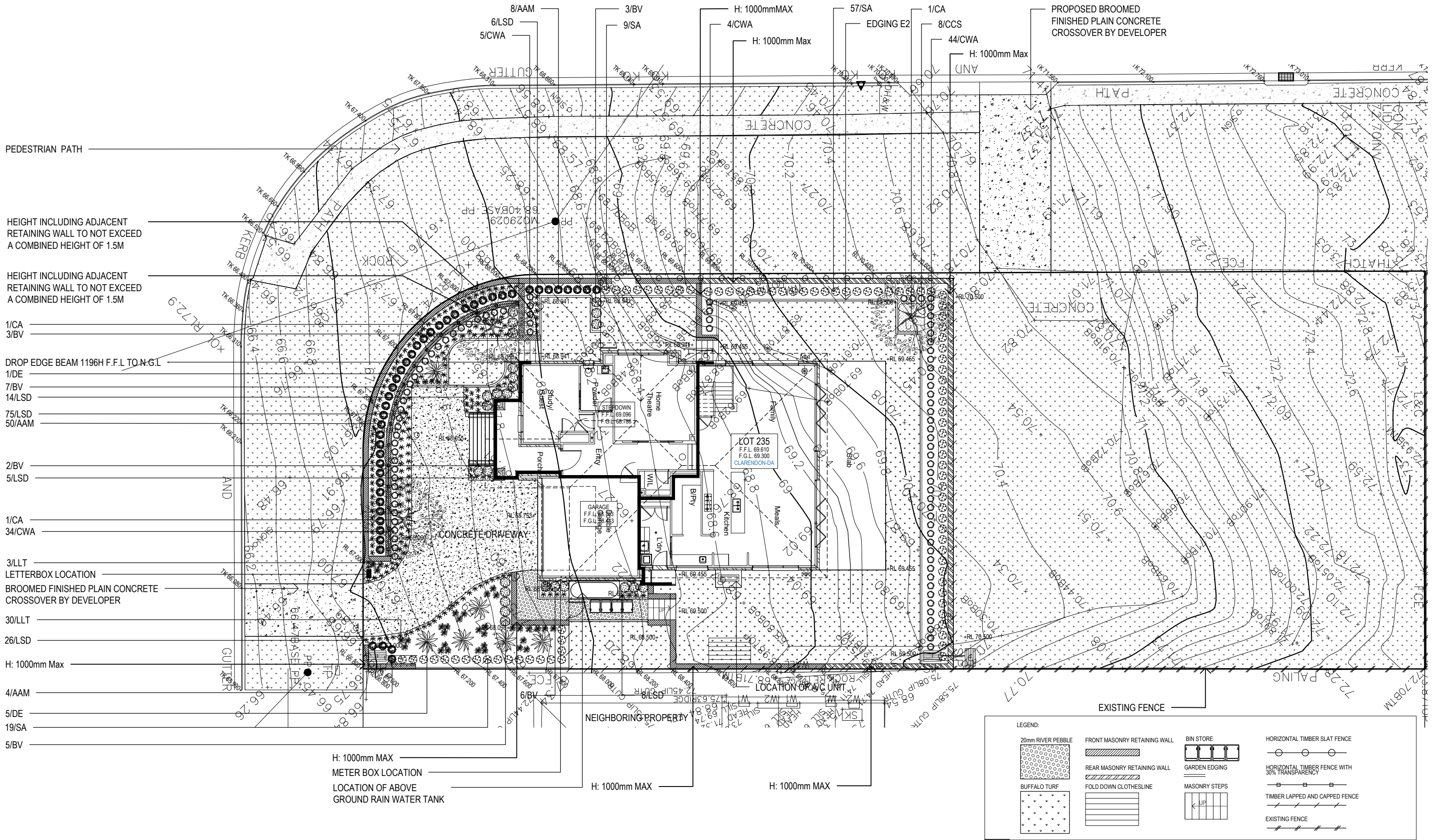
ASPECT DEVELOPMENT & SURVEY Pty. Ltd.
CONSULTING REGISTERED SURVEYORS
ABN 60 078 649 000

SUITE 1
103 VANESSA STREET
KINGS GROVE NSW 2208
PH: (02) 9554 8388
FAX: (02) 9554 8588
admin@aspectsurvey.com.au

PO BOX 161
KINGS GROVE NSW 1480
DX 11392
HURSTVILLE

PROJECT			
OUR REFERENCE	21/1047371/264997	SECTION	
LOT 235	DP 4889	SOURCE	SCMS 19/11/18
DATUM	AHD	REDUCED LEVEL	71.12
ORIGIN OF LEVELS	SSM 82113	DATE	10/01/19
SURVEYED DS/MD		DATE	16/01/19
DRAWN	JZ	SCALE	1: 300 A3 SHEET

CLIENT: CLARENDON HOMES Pty Ltd
REF: WEIR
REF: 29913445
ADDRESS: 50 GRANDVIEW GROVE
SUBURB: SEAFORTH



PEDESTRIAN PATH

HEIGHT INCLUDING ADJACENT
RETAINING WALL TO NOT EXCEED
A COMBINED HEIGHT OF 1.5M

HEIGHT INCLUDING ADJACENT
RETAINING WALL TO NOT EXCEED
A COMBINED HEIGHT OF 1.5M

1/CA
3/BV

DROP EDGE BEAM 1196H F.F.L TO N.G.L

1/DE
7/BV
14/LSD
75/LSD
50/AAM

2/BV
5/LSD

1/CA
34/CWA

3/LLT
LETTERBOX LOCATION

BROOMED FINISHED PLAIN CONCRETE
CROSSOVER BY DEVELOPER

30/LLT
26/LSD

H: 1000mm Max

4/AAM

5/DE
19/SA

5/BV

H: 1000mm MAX

METER BOX LOCATION

LOCATION OF ABOVE
GROUND RAIN WATER TANK

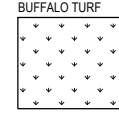
NEIGHBORING PROPERTY

H: 1000mm MAX

H: 1000mm MAX

EXISTING FENCE

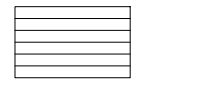
LEGEND:



FRONT MASONRY RETAINING WALL

REAR MASONRY RETAINING WALL

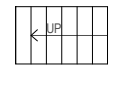
FOLD DOWN CLOTHESLINE



BIN STORE

GARDEN EDGING

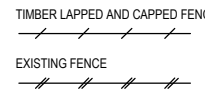
MASONRY STEPS



HORIZONTAL TIMBER SLAT FENCE

HORIZONTAL TIMBER FENCE WITH
30% TRANSPARENCY

TIMBER LAPPED AND CAPPED FENCE



EXISTING FENCE

C	landscape design for DA reviewed	25.03.19
B	landscape design for DA reviewed	25.03.19
A	landscape design for DA	21.03.19
Issue	Description	Date



Phone: 02 8801 1825

Building A Suite 9
24 Lexington Drive
Bella Vista NSW 2153

Structural Landscape
Licence: #239872C

General Notes:

Prior to use for building construction the Builder must ensure that they are in possession of a Construction Certificate and all other required Council approvals.

Contractors must verify all dimensions on site before commencing fabrication or preparation of workshop drawings, and verify all errors and omissions with the Architect. Use figured dimensions only. Do not scale from drawings.

Scale: 1:200@A3

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Drawing Title:
DA - LANDSCAPE PLAN

Plan No:
1 of 2

Drawn:
CAD

Approved:
JS



Project:
NEW RESIDENCE

Client Job No:
29913445

Client:
LINDSAY BENNELONG DEVELOPMENTS

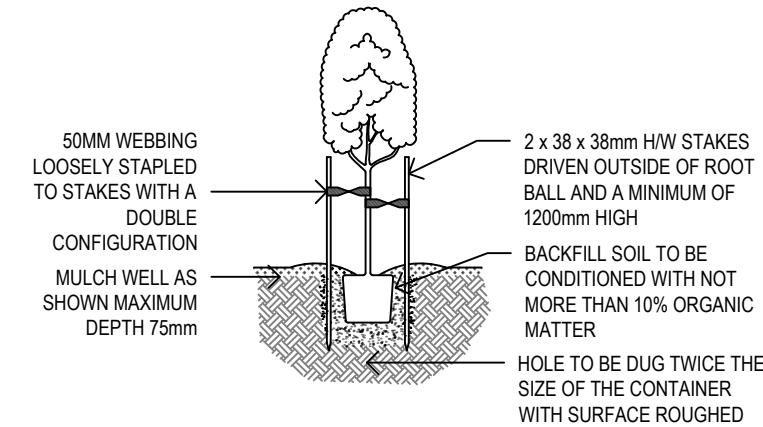
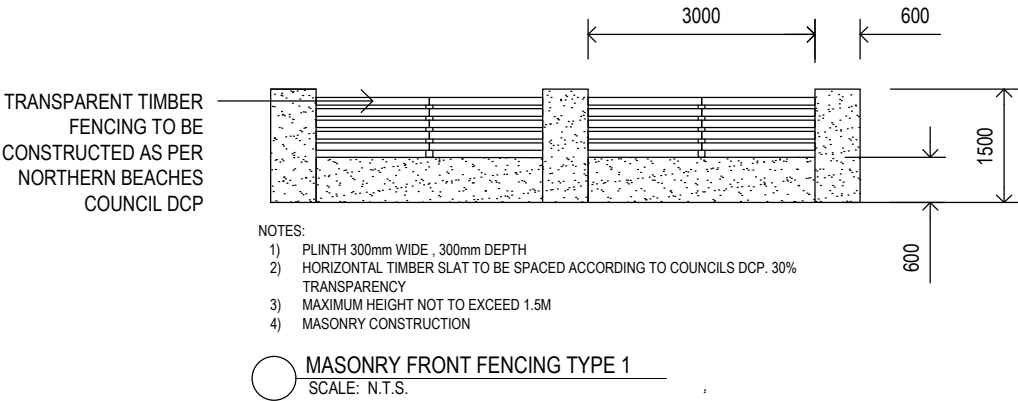
Project Address:
**LOT 235 NO.50 GRANDVIEW GROVE
SEAFORTH NSW 2092**

PLANTING SCHEDULE: AUSTRALIAN NATIVE SELECTION

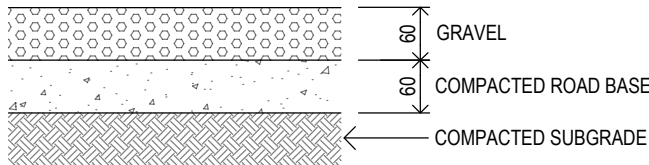
PLANT CODE	BOTANICAL NAME	COMMON NAME	No.	POT SIZE	MATURE HEIGHT	SPACING
TREES						
CA	<i>Cupaniopsis anacardioides</i>	Tuckaroo	3	75lt	10m	-
SHRUBS & FEATURE PLANTS						
DE	<i>Doryanthes excelsa</i>	Gymea Lily	6	300ml	2.5m	-
LLT	<i>Lomandra longifolia</i> 'Tanika'	Tanika	33	200mm	0.6m	0.5m
CWA	<i>Callistemon 'White Anzac'</i>	Callistemon 'White Anzac'	87	200mm	1.2m	0.m
SA	<i>Syzygium australe</i> 'Hinterland Gold'	Lilly Pilly	85	300mm	4.0m	0.6m
BV	<i>Baeckea virgata</i>	Twiggy Heath Myrtle	26	250mm	3.0m	0.6m
AAM	<i>Acmena smithii</i> 'Alyn Magic'	Lilly Pilly Alyn Magic	62	250mm	0.4m	0.5m
GROUND COVERS & BORDERS						
CCS	<i>Convolvulus cneorum</i> 'Silver Bush'	Silver Bush	8	150mm	0.6m	0.5m
LSD	<i>Liriope spicata</i> 'Silver Dragon'	Liriope Silver Dragon	134	150mm	0.25m	0.4m
TURF						
	<i>Stenotaphrum secundatum</i>	Buffalo Turf				

NOTES:

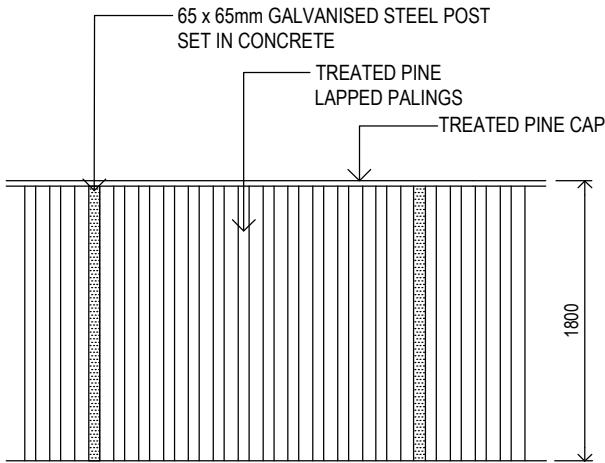
- 1) SIDE & REAR BOUNDARY FENCING SHOULD BE 1800mm H FRAMED HORIZONTAL TIMBER SLAT FENCING WITH 65mm X 65mm STEEL POST. GATES TO MATCH FENCE MATERIALS.
- 2) ALL LANDSCAPED AREAS TO HAVE A MINIMUM 1:100 FALL TOWARDS STORM WATER DRAINS. OR AWAY FROM THE BUILDING FOR POSSIBLE OVERLAND WATER DRAINAGE.
- 3) ALL EXISTING TREES RETENTION / PROTECTION TO COUNCIL SPECIFICATION.
- 4) DRIVEWAY LAYOUT TO BE CONSTRUCTED FROM ARCHITECTURAL CONSTRUCTION DRAWINGS.
- 5) SIDE PATH/FRONT PATH TO BE CONSTRUCTED BY CLIENT UNLESS OTHERWISE NOTED ON ARCHITECTURAL PLANS.
- 6) RETAINING WALL HEIGHTS AND LEVELS ARE SUBJECT TO CHANGE DUE TO SITE CONDITIONS.
- 7) ALL RETAINING WALLS VISIBLE FROM THE STREET TO BE MASONRY WITH COLOURS COHESIVE THOSE ON THE FRONT FACADE OF THE DWELLING.
- 8) ALL IMPORTED SOIL TO GARDEN AREAS TO BE OF PREMIUM GARDEN MIX STANDARD AT 300MM DEPTH .
- 9) TURF TO BE LAID ON A 150MM MINIMUM BASE OF 80% SAND 20% SOIL MIX. REFER TO DETAIL.
- 10) ALL GARDEN AREAS TO BE COVERED WITH A MINIMUM OF 75MM OF 14MM PINE BARK MULCH.
- 11) GARDEN EDGING IS TO BE INSTALLED BETWEEN ALL ADJOINING SOFT LANDSCAPE FINISHES. REFER TO DETAIL.
- 12) THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SUB-GRADE EXCAVATION AND PREPARATION TO ALLOW FOR PROFILE DEPTH REQUIREMENTS.
- 13) BEFORE LANDSCAPE WORK IS COMMENCED, CONTRACTOR IS TO ESTABLISH THE POSITION OF ALL SERVICE LINES.



TYPICAL TREE PLANTING DETAIL
SCALE: N.T.S.

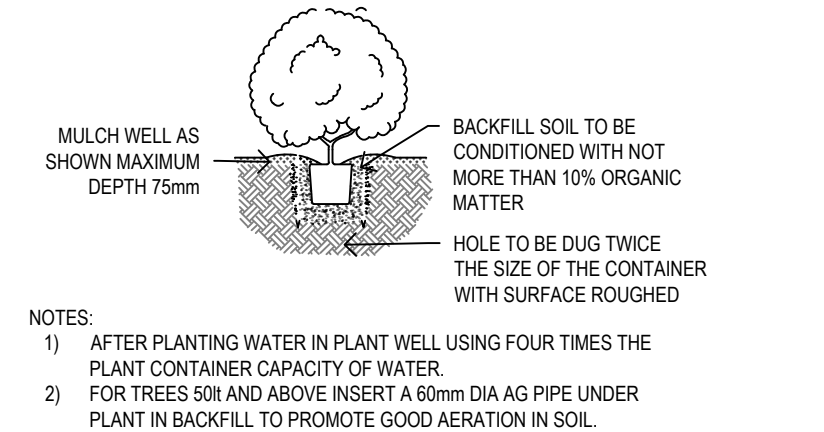


STANDARD PEBBLE DETAIL
SCALE: N.T.S.

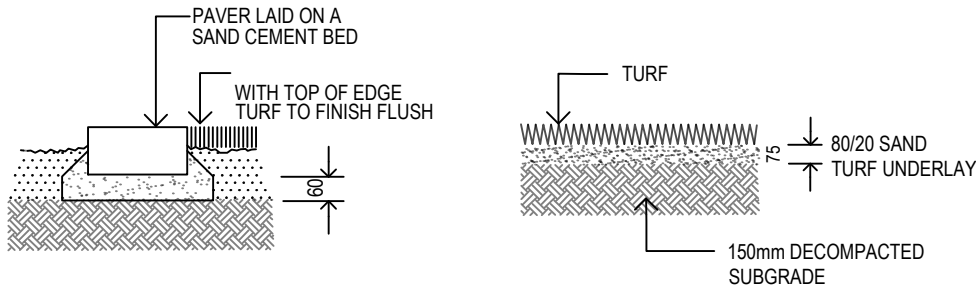


- NOTES:
- 1) ALL FIXINGS TO BE GALVANISED
- 2) ALL GATES TO HAVE GALVANISED TRIP LATCHES FITTED

F1 1.8M BOUNDARY FENCE DETAIL
SCALE: N.T.S.

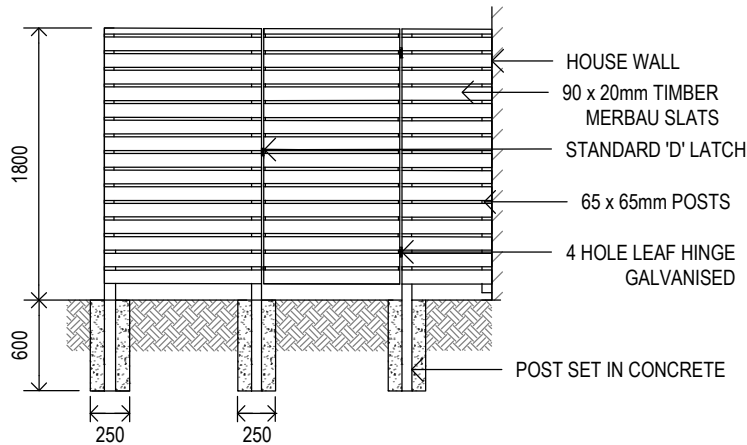


TYPICAL SHRUB PLANTING DETAIL
SCALE: N.T.S. Tube, 150mm, 200mm, Pot Size



BRICK GARDEN EDGE DETAIL E2
SCALE: N.T.S.

TURF DETAIL
SCALE: N.T.S.



- NOTES:
- ALL GATES TO HAVE GALVANISED TRIP LATCHES FITTED

F2 HORIZONTAL HARDWOOD TIMBER GATE & PANEL INFILL DETAIL
SCALE: N.T.S.

C	landscape design for DA reviewed	25.03.19
B	landscape design for DA reviewed	25.03.19
A	landscape design for DA	21.03.19
Issue	Description	Date



Phone: 02 8801 1825

Building A Suite 9
24 Lexington Drive
Bella Vista NSW 2153

Structural Landscape
Licence: #239872C

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Drawing Title: SCHEDULES & NOTES		
Plan No: 2 of 2		
Drawn: CAD	Checked: KER	Approved: JS

Project: NEW RESIDENCE
Client: LINDSAY BENNELONG DEVELOPMENTS
Project Address: LOT 235 NO.50 GRANDVIEW GROVE SEAFORTH NSW 2092

Prepared by:



Prepared for:
PDC HOLDINGS PTY LTD



PLAN INDEX		
No.	PLAN	REV
PRELIMINARIES		
000	COVER SHEET	
001	GENERAL LAYOUT PLAN, NOTES & LEGEND	F
002	SITE REGRADING PLAN & SECTIONS	F
003	PLAN OF SUBDIVISION	F
SEDIMENT & EROSION CONTROL		
100	SEDIMENT & EROSION CONTROL CONCEPT PLAN	F
102	SEDIMENT & EROSION CONTROL NOTES & DETAILS	F
ENGINEERING & ROADWORKS		
200	ENGINEERING PLAN	F
201	PROPOSED DWELLING PLAN	F

DA: _____



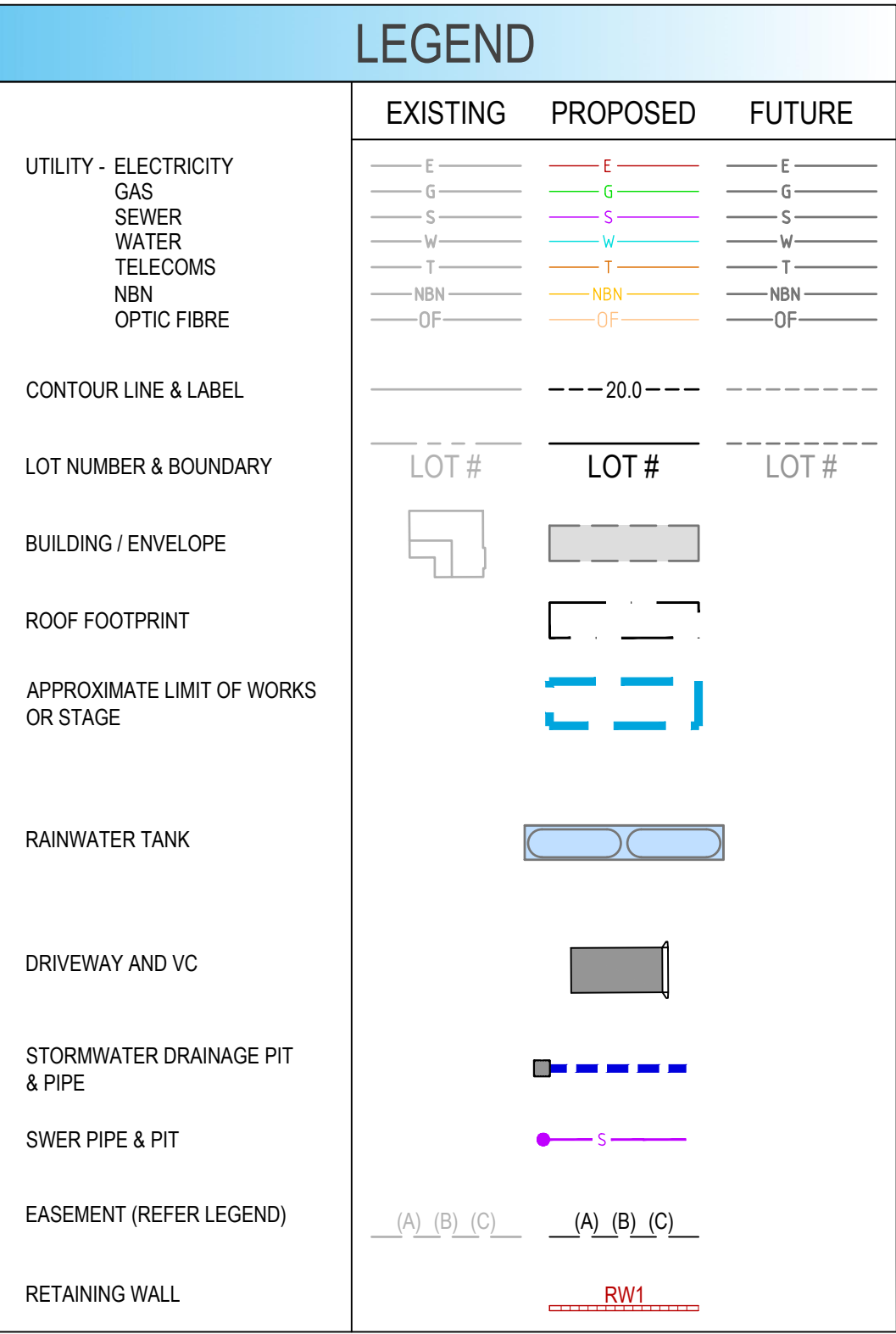
SITE / LOCATION (Image courtesy of Nearmap 23.07.2018)

LOT 235, D.P. 4889

50 GRANDVIEW GROVE, SEAFORTH

LOT AND DRAINAGE DESIGN

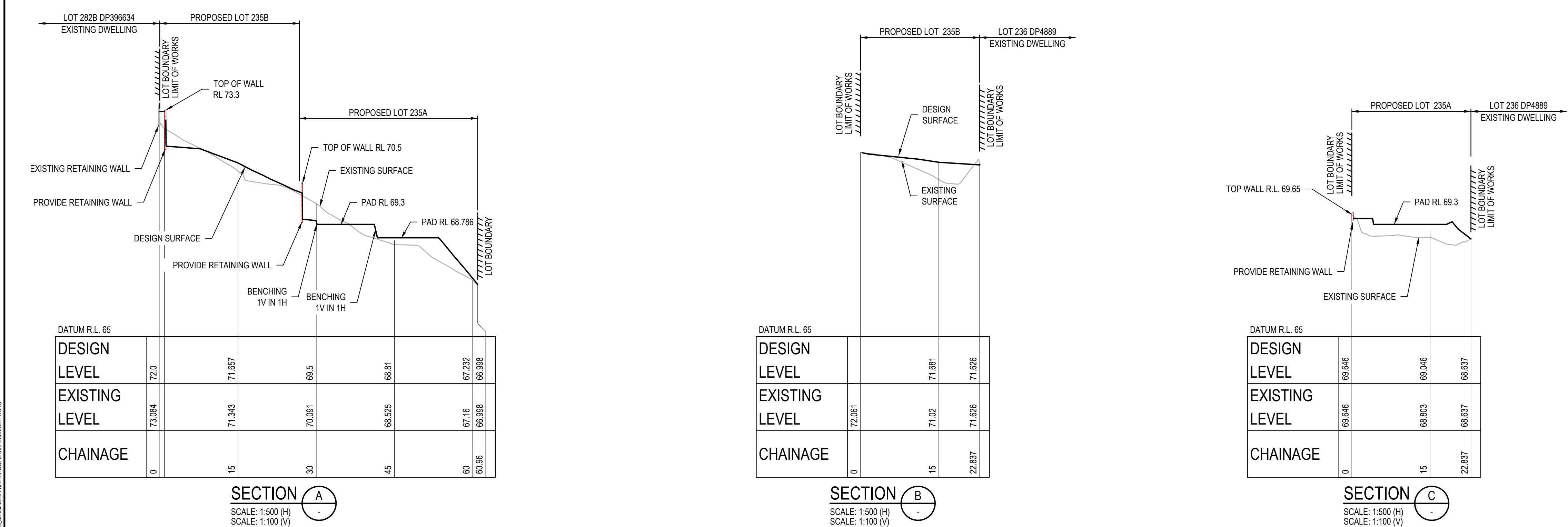
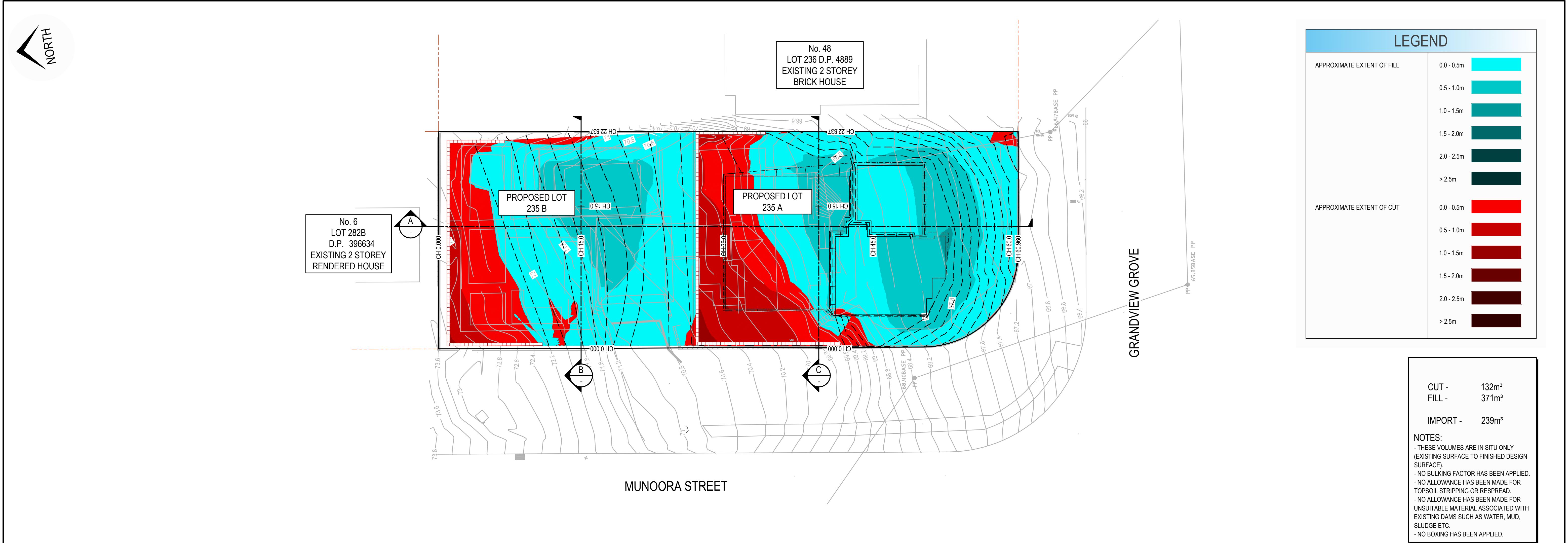
ISSUED FOR **DEVELOPMENT APPLICATION**
NOT FOR CONSTRUCTION



IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY
LOCATE AND AVOID DAMAGE TO THEM AS SPECIFIED BY EACH
UTILITIES EXCAVATION GUIDE LINES/STANDARDS.



Project No.
18-48
Milestone
DA
Plan
001
Revision
F



ISSUED FOR **DEVELOPMENT APPLICATION**
NOT FOR CONSTRUCTION

Revision	F	KW	CW	SM	25/03/2019	ADD PLAN OF SUBDIVISION	Disclaimer and Copyright: ALL DIMENSIONS TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION. USE WRITTEN DIMENSIONS ONLY. DO NOT SCALE. THESE DRAWINGS, PLANS, AND SPECIFICATIONS AND THE COPYRIGHT ARE THE PROPERTY OF ORION CONSULTING ENGINEERS PTY LTD AND MUST NOT BE REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE PERMISSION OF ORION CONSULTING ENGINEERS PTY LTD	Scale: 0 5 10 15 20 25 30 35 40 45 50 SCALE 1:500 (A1) SCALE 1:1000 (A3) 0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0 SCALE 1:200 (A1) SCALE 1:400 (A3) 0 1 2 3 4 5 6 7 8 9 10 SCALE 1:100 (A1) SCALE 1:200 (A3)	For: PDC HOLDINGS PTY LTD	By:  Orion Consulting ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au	Project: 50 GRANDVIEW GROVE, SEAFORTH ROAD & DRAINAGE DESIGN	Title: SITE REGRADING PLAN & SECTIONS	Project No. 18-48 Milestone DA Plan 002 Revision F
	E	KW	CW	SM	18/03/2019	UPDATE SITE LAYOUT							
	D	KW	CW	SM	11/01/2019	COUNCIL COMMENTS ADDRESSED							
	C	KW	CW	SM	27/11/2018	ISSUED FOR DEVELOPMENT APPLICATION							
	B	KW	CW	SM	21/11/2018	ISSUED FOR DEVELOPMENT APPLICATION							
	A	KW	CW	SM	11/09/2018	ISSUED FOR DEVELOPMENT APPLICATION							
	First Issue	KW	CW	SM	11/09/2018								
Drawn	Design	Appd.	Date	Revision Description									

No. 48
LOT 236 D.P. 4889
EXISTING 2 STOREY
BRICK HOUSE

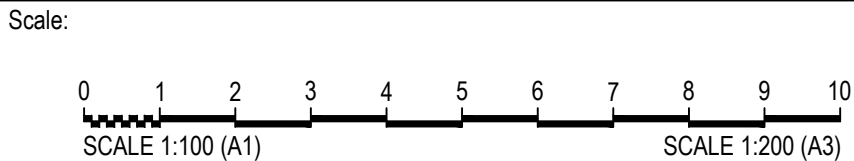
PROPOSED LOT 235A
AREA = 753.97 m²

ISSUED FOR **DEVELOPMENT APPLICATION**
NOT FOR CONSTRUCTION

LEGEND	
EXISTING SURVEY CADASTRAL BOUNDARIES	
SITE EXTENTS	
EASEMENTS	
(A)	DENOTES 1.5m DRAINAGE EASEMENT

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MUNOORA STREET



For:

PDC HOLDINGS
PTY LTD



ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project:

50 GRANDVIEW GROVE,
SEAFORTH
ROAD & DRAINAGE DESIGN

Title:

PLAN OF
SUBDIVISION

Project No.
18-48
Milestone
DA
Plan
003
Revision
F



Revision	F	KW	CW	SM	25/03/2019	ADD PLAN OF SUBDIVISION	Disclaimer and Copyright: ALL DIMENSIONS TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION. USE WRITTEN DIMENSIONS ONLY, DO NOT SCALE. THESE DRAWINGS, PLANS, AND SPECIFICATIONS AND THE COPYRIGHT ARE THE PROPERTY OF ORION CONSULTING ENGINEERS PTY LTD AND MUST NOT BE REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE PERMISSION OF ORION CONSULTING ENGINEERS PTY LTD	Scale:	For: PDC HOLDINGS PTY LTD	By: Orion Consulting ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au		Project: 50 GRANDVIEW GROVE, SEAFORTH ROAD & DRAINAGE DESIGN	Title: SEDIMENT & EROSION CONTROL CONCEPT PLAN	Project No. 18-48 Milestone DA Plan 100 Revision F
	E	KW	CW	SM	18/03/2019	UPDATE SITE LAYOUT								
	D	KW	CW	SM	11/01/2019	COUNCIL COMMENTS ADDRESSED								
	C	KW	CW	SM	27/11/2018	ISSUED FOR DEVELOPMENT APPLICATION								
	B	KW	CW	SM	21/11/2018	ISSUED FOR DEVELOPMENT APPLICATION								
	A	KW	CW	SM	11/09/2018	ISSUED FOR DEVELOPMENT APPLICATION								
First Issue	KW	CW	SM	11/09/2018		Revision Description								
	Drawn	Design	Appd.	Date										

ALL EROSION AND SEDIMENT CONTROL MEASURES, INCLUDING REVEGETATION AND STORAGE OF SOIL AND TOPSOIL, SHALL BE IMPLEMENTED TO THE REQUIREMENTS OF THE "ENVIRONMENT PROTECTION AUTHORITY" AND "DEPT OF LAND AND WATER CONSERVATION". MEASURES OUTLINED IN THE SEDIMENT & EROSION CONTROL PLAN MUST BE IMPLEMENTED PRIOR TO AND MAINTAINED DURING AND AFTER THE CONSTRUCTION WORKS.

TOPSOIL FROM ALL AREAS TO BE DISTURBED SHALL BE STOCKPILED AND LATER RESPREAD TO AID REVEGETATION IN THOSE AREAS.

ALL DRAINAGE WORKS SHALL BE CONSTRUCTED AND STABILIZED AS EARLY AS POSSIBLE DURING DEVELOPMENT.

ALL TAIL-OUT DRAINS SHALL BE GRASSED AND TRAPEZOIDAL IN SECTION. STRAW BALES SHALL BE PLACED AS A SEDIMENT CONTROL DEVICE WHERE REQUIRED.

VEHICULAR TRAFFIC SHALL BE CONTROLLED DURING DEVELOPMENT CONFINING ACCESS WHERE POSSIBLE TO PROPOSED OR EXISTING ROAD ALIGNMENTS. AREAS TO BE LEFT UNDISTURBED SHALL BE MARKED OFF.

DISTURBANCE OF VEGETATION SHALL BE LIMITED TO FILL AREAS, ROADWAYS AND DRAINAGE LINES. NO LOT GRADING SHALL BE CARRIED OUT IN UNDISTURBED AREAS WITHOUT CONSULTATION WITH COUNCIL'S ENGINEER.

ALL DISTURBED AREAS SHALL BE REVEGETATED WITHIN 14 WORKING DAYS FROM THE CONCLUSION OF LAND SHAPING.

MINIMISE DUST BY WATERING WHEN REQUIRED.

SPILL AND TOPSOIL STOCKPILES SHALL BE LOCATED AWAY FROM DRAINAGE LINES AND AREAS WHERE WATER MAY CONCENTRATE.

IF STOCKPILES ARE TO BE IN PLACE FOR LONGER THAN 14 DAYS THEN THEY SHALL BE STABILIZED BY COVERING WITH A MULCH OR WITH TEMPORARY VEGETATION.

FOLLOWING CONSTRUCTION, TOPSOIL SHALL BE RESPREAD TO A MINIMUM DEPTH OF 100mm ON THE BARE SOIL SURFACES AND REVEGETATE.

ALL STOCKPILES TO BE (MAX) 2m HIGH AND PROTECTED WITH SILT FENCE.

LOCATION AND EXTENT OF SOIL AND WATER MANAGEMENT DEVICES IS DIAGRAMMATIC ONLY AND THE ACTUAL REQUIREMENTS SHALL BE CONFIRMED ON SITE.

THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE GUIDELINES SET OUT IN "MANAGING URBAN STORMWATER SOILS AND CONSTRUCTION " 4TH EDITION AND THE ACCOMPANYING ROAD AND DRAINAGE PLANS.

CONFORMITY WITH THIS PLAN SHALL IN NO WAY REDUCE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT AGAINST WATER DAMAGE DURING THE COURSE OF THE CONTRACT.

MANAGEMENT DEVICES SHALL BE MAINTAINED ON A REGULAR BASIS, WHERE CLEANING IS REQUIRED, THE SEDIMENT SHALL BE REMOVED TO A POINT NOMINATED BY THE ENGINEER.

PRIOR TO THE COMMENCEMENT OF ANY EARTHWORKS, AND AFTER THE PROPOSED LINES HAVE BEEN PRICED AND/OR PERMANENTLY MARKED, THE SITE MUST BE INSPECTED BY COUNCIL'S REPRESENTATIVE AND THE APPLICANT'S REPRESENTATIVE TO IDENTIFY AND APPROPRIATELY MARK:-

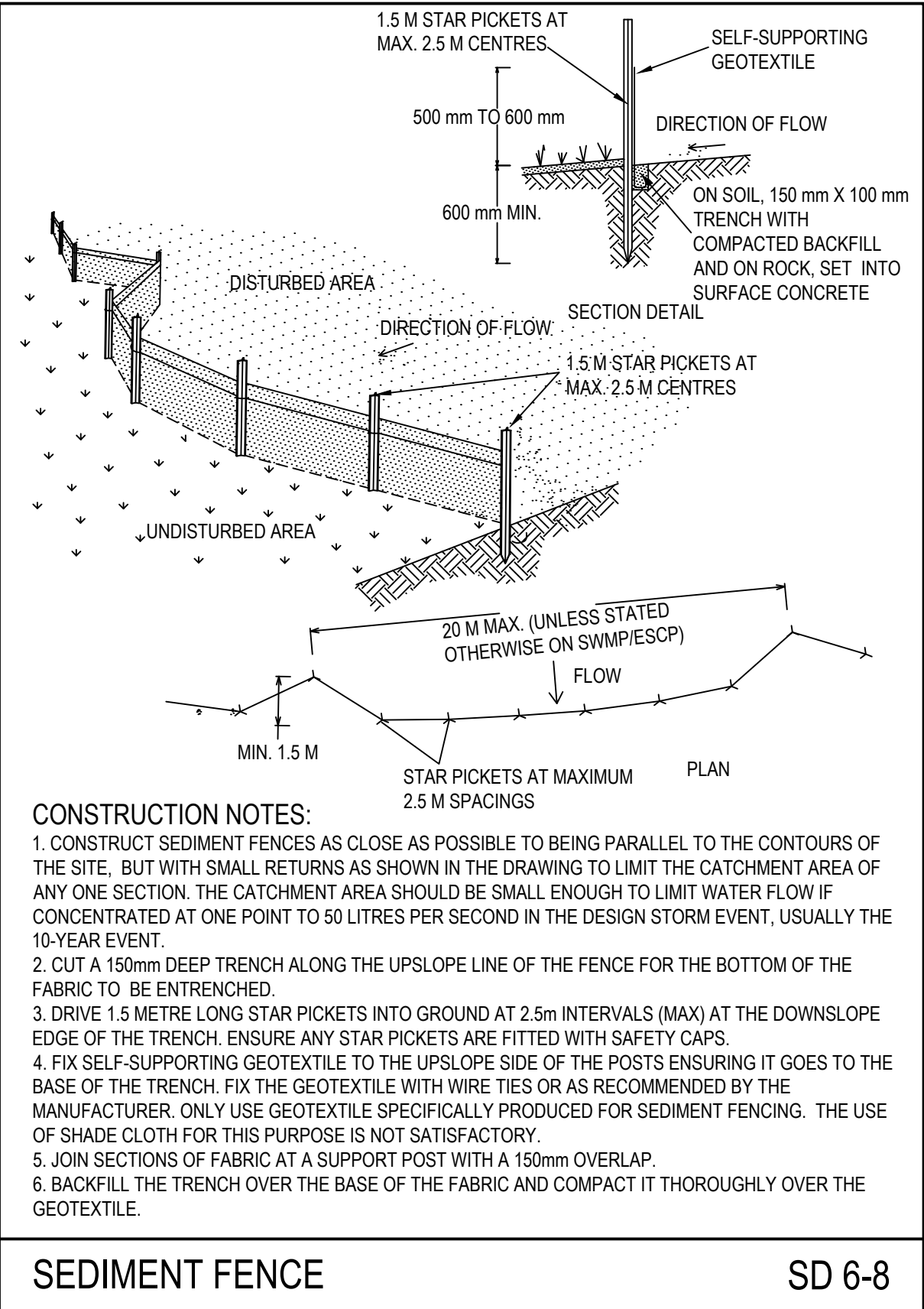
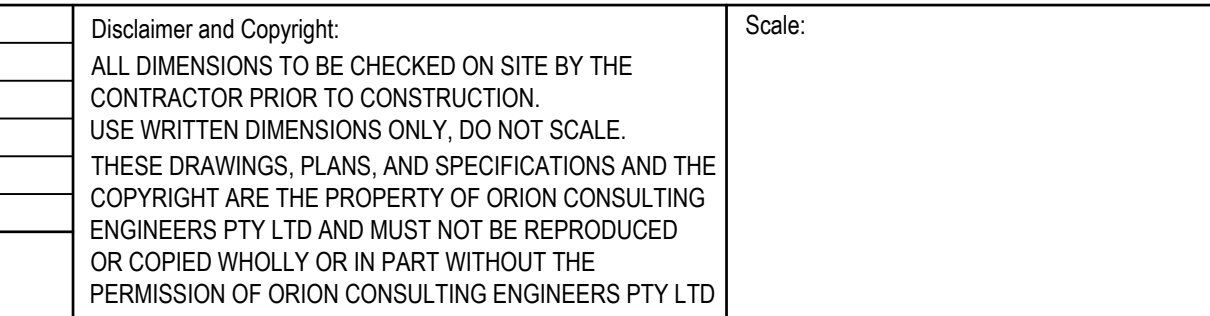
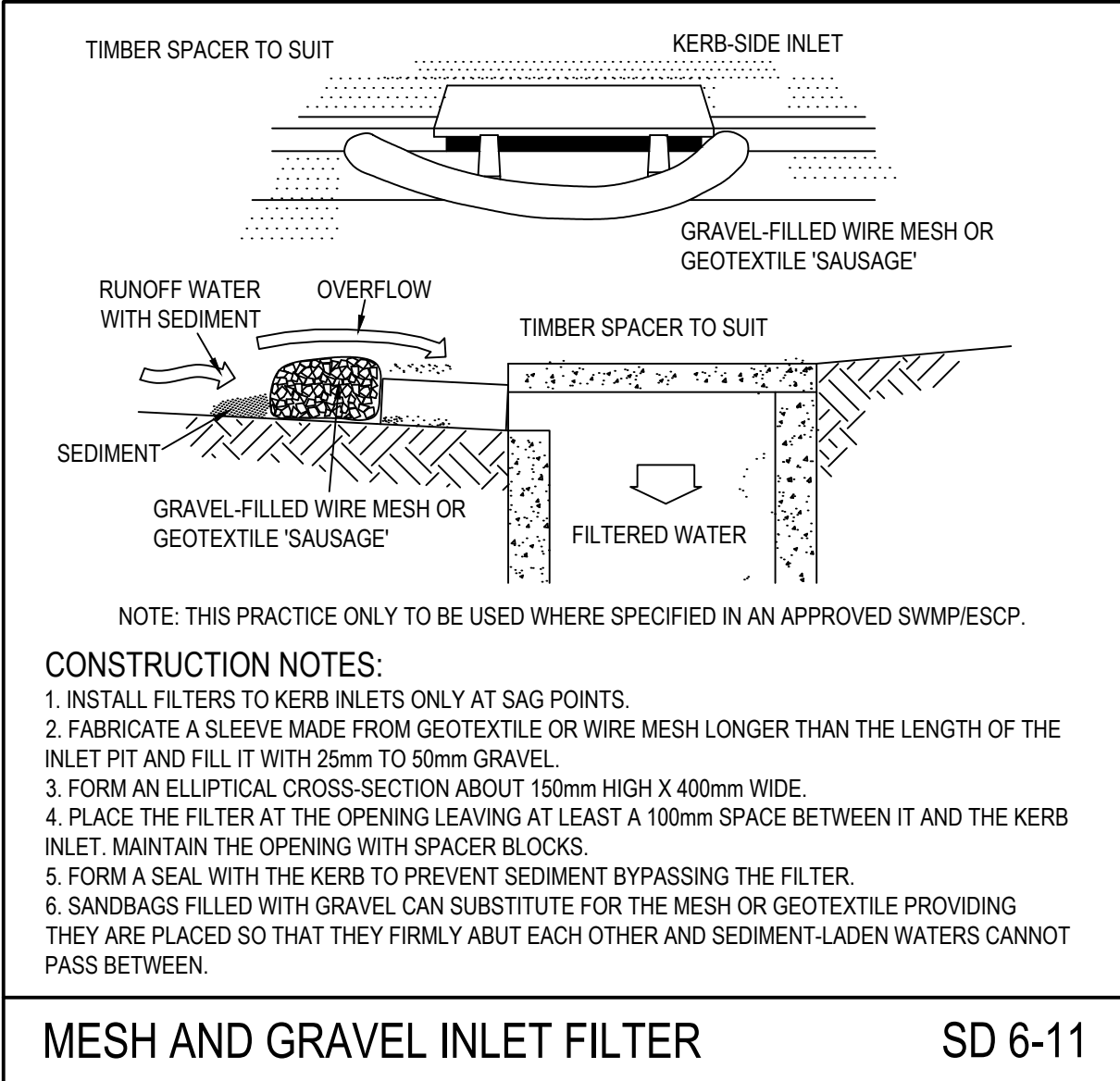
- a) THE TREES TO BE RETAINED.
- b) ALL TREES TO BE LEFT UNDISTURBED AND TO BE CORDONED OFF.

NO TREES SHALL BE REMOVED WITHOUT COUNCIL'S CLEARANCE.

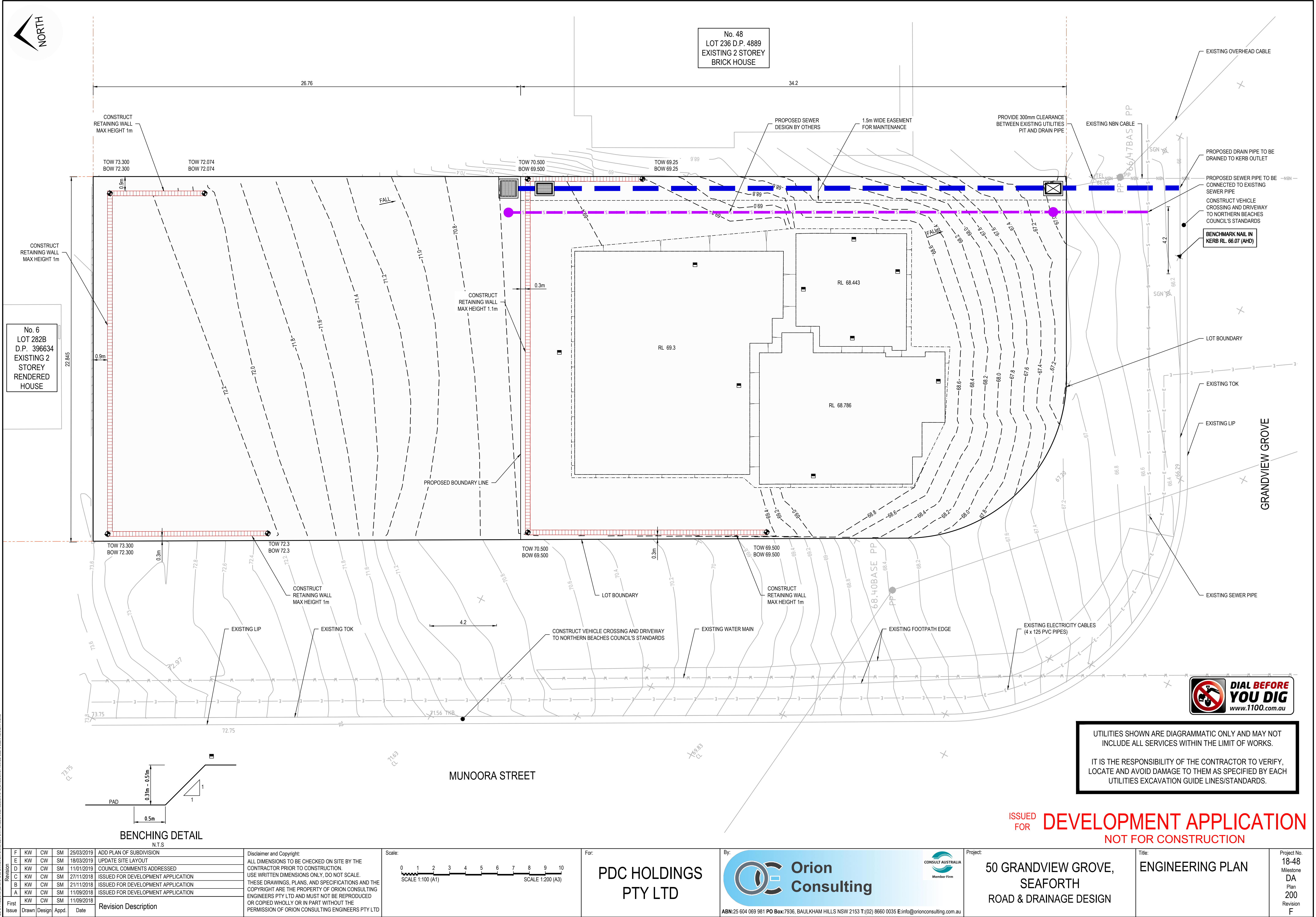
MANAGEMENT DEVICES TO REMAIN UNTIL THE END OF THE MAINTENANCE PERIOD.

ALL STRAW BALES SHALL BE BOUND WITH WIRE. STRAW BALES SHALL BE PLACED END TO END IN A SINGLE ROW AND EMBEDDED INTO THE SOIL TO A DEPTH OF 100mm. EACH BALE SHALL BE SECURELY ANCHORED WITH TWO STEEL STAKES DRIVEN 450mm INTO THE GROUND AND LOCATED ON THE BALE CENTRE LINE.

SILT FENCES SHALL BE CONSTRUCTED BY STRETCHING A FILTER FABRIC (PROPEX OR SIMILAR) BETWEEN POSTS AT 2m (3m MAX) CENTRES. FABRIC SHALL BE BURIED 150mm ALONG ITS LOWER EDGE.

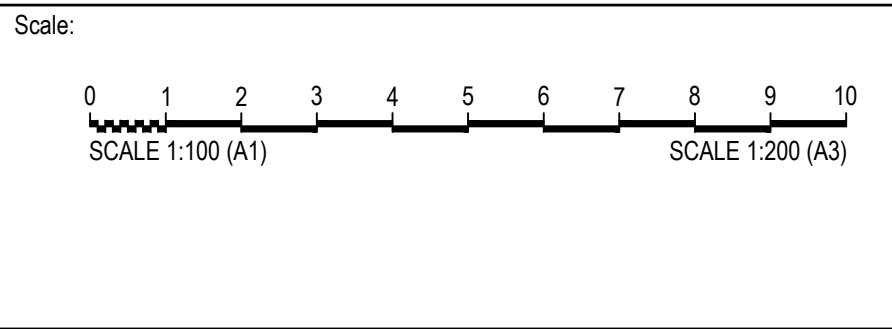


ISSUED FOR DEVELOPMENT APPLICATION
NOT FOR CONSTRUCTION



Revision	Issue	Drawn	Design	Appd.	Date	Revision Description
F	KW	CW	SM		25/03/2019	ADD PLAN OF SUBDIVISION
E	KW	CW	SM		18/03/2019	UPDATE SITE LAYOUT
D	KW	CW	SM		11/01/2019	COUNCIL COMMENTS ADDRESSED
C	KW	CW	SM		27/11/2018	ISSUED FOR DEVELOPMENT APPLICATION
B	KW	CW	SM		21/11/2018	ISSUED FOR DEVELOPMENT APPLICATION
A	KW	CW	SM		11/09/2018	ISSUED FOR DEVELOPMENT APPLICATION
First	KW	CW	SM		11/09/2018	

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For: **PDC HOLDINGS PTY LTD**

By: **Orion Consulting**

ABN:25 604 069 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au

Project: **50 GRANDVIEW GROVE, SEAFORTH ROAD & DRAINAGE DESIGN**

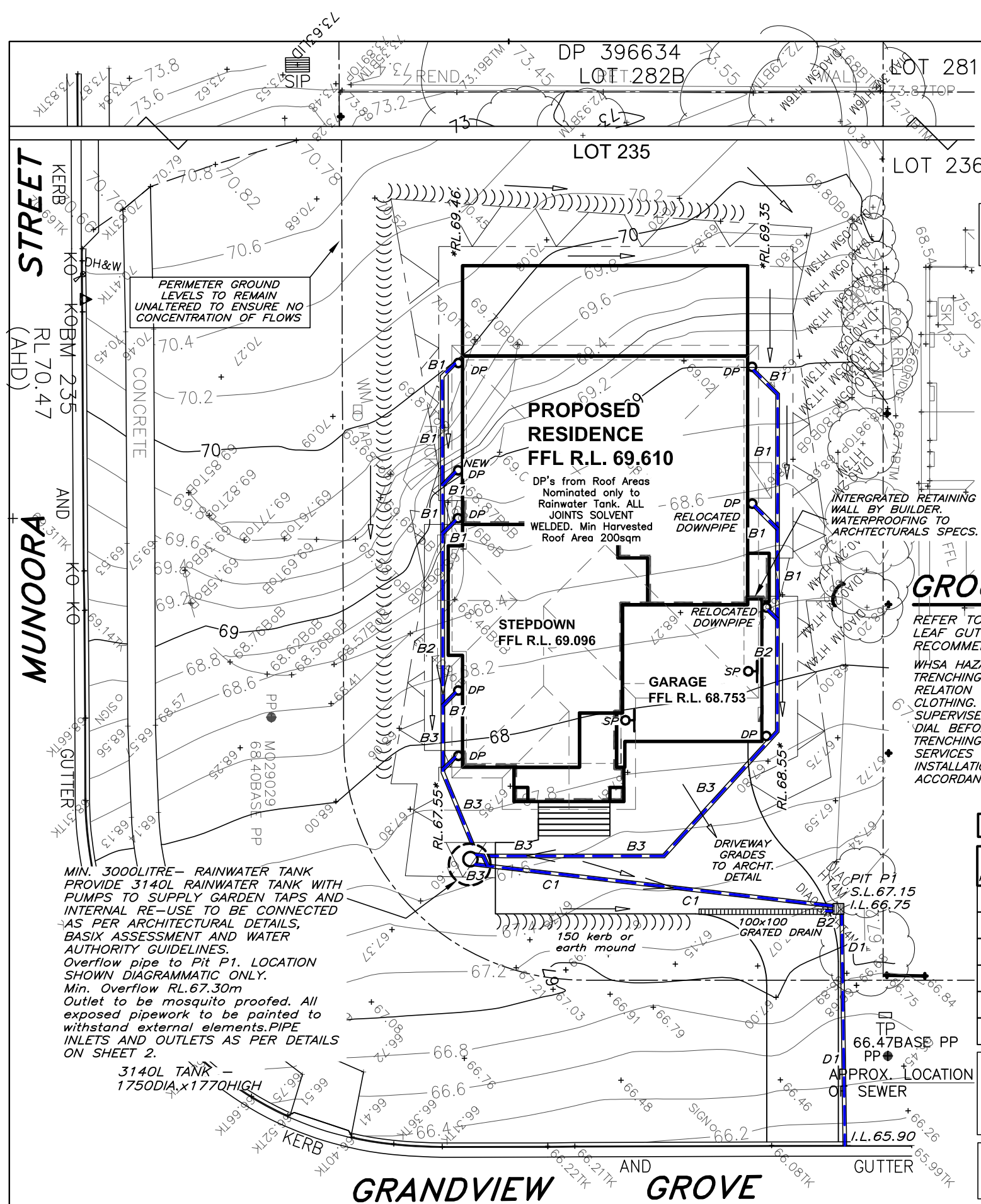
Title: **ENGINEERING PLAN**

Project No. **18-48**
Milestone **DA**
Plan **200**
Revision **F**



ISSUED FOR **DEVELOPMENT APPLICATION**
NOT FOR CONSTRUCTION

Revision	F	KW	CW	SM	25/03/2019	ADD PLAN OF SUBDIVISION	Disclaimer and Copyright: ALL DIMENSIONS TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION. USE WRITTEN DIMENSIONS ONLY, DO NOT SCALE. THESE DRAWINGS, PLANS, AND SPECIFICATIONS AND THE COPYRIGHT ARE THE PROPERTY OF ORION CONSULTING ENGINEERS PTY LTD AND MUST NOT BE REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE PERMISSION OF ORION CONSULTING ENGINEERS PTY LTD	Scale: 	For: PDC HOLDINGS PTY LTD	By:  Orion Consulting ABN:25 604 969 981 PO Box:7936, BAULKHAM HILLS NSW 2153 T:(02) 8660 0035 E:info@orionconsulting.com.au		Project: 50 GRANDVIEW GROVE, SEAFORTH ROAD & DRAINAGE DESIGN	Title: PROPOSED DWELLING PLAN	Project No. 18-48 Milestone DA Plan 201 Revision F
	E	KW	CW	SM	18/03/2019	UPDATE SITE LAYOUT								
	D	KW	CW	SM	11/01/2019	COUNCIL COMMENTS ADDRESSED								
	C	KW	CW	SM	27/11/2018	ISSUED FOR DEVELOPMENT APPLICATION								
	B	KW	CW	SM	21/11/2018	ISSUED FOR DEVELOPMENT APPLICATION								
	A	KW	CW	SM	11/09/2018	ISSUED FOR DEVELOPMENT APPLICATION								
First Issue	KW	CW	SM	11/09/2018		Revision Description								
	Drawn	Design	Appd.	Date										



MIN. 3000LITRE- RAINWATER TANK PROVIDE 3140L RAINWATER TANK WITH PUMPS TO SUPPLY GARDEN TAPS AND INTERNAL RE-USE TO BE CONNECTED AS PER ARCHITECTURAL DETAILS, BASIX ASSESSMENT AND WATER AUTHORITY GUIDELINES. Overflow pipe to Pit P1. LOCATION SHOWN DIAGRAMMATIC ONLY. Min. Overflow RL.67.30m Outlet to be mosquito proofed. All exposed pipework to be painted to withstand external elements. PIPE INLETS AND OUTLETS AS PER DETAILS ON SHEET 2.

3140L TANK - 1750DIA x 1770HIGH

TOTAL PROPOSED HARD SURFACE AREA INCLUDING ROOF AREA MUST NOT EXCEED 40% OTHERWISE OSD REQUIREMENTS WILL APPLY.

GROUND FLOOR LAYOUT

REFER TO SHEET 2 FOR RAINWATER TANK DETAILS. LEAF GUTTER GUARDS OR SIMILAR SCREENING RECOMMENDED TO ALL GUTTERS.

WHSA HAZARD IDENTIFICATION: TRENCHING-ALL PERSONS TO FOLLOW THEIR APPROVED SWMS IN RELATION TO BARRICADING DEEP TRENCHES AND WEARING APPROPRIATE CLOTHING. ANY PERSON WORKING INSIDE A TRENCH MUST BE SUPERVISED BY ANOTHER PERSON. DIAL BEFORE YOU DIG 1100 MUST BE CHECKED BEFORE ANY TRENCHING COMMENCES ON SITE. ANY WORKS NEAR IDENTIFIED SERVICES TO BE CARRIED OUT IN ACCORDANCE WITH THE TRADES SWMS. INSTALLATION OF DOWNPIPES AND GUTTERING TO BE CARRIED OUT IN ACCORDANCE WITH INSTALLERS APPROVED SWMS.

GRATED DRAIN BY OWNER

PIPE SCHEDULE		
REFER TO NOTES FOR PIPE CLASS		
TAG	PIPE DIA.	MIN.GRADE
B1	100	1%
B2	100	2%
B3	100	3%
C1	150	1%
D1	150x100 GAL. PIPE	1%

ALL OTHER SURFACE WATERS TO BE STRICTLY CONNECTED TO A SEPARATE SYSTEM BY OWNER IN ACCORDANCE WITH AS 3500.3:2003 AND BCA PART 3.1.2.3.

RAINWATER TANKS WITH PUMPS TO SUPPLY GARDEN TAPS AND INTERNAL RE-USE AS PER BASIX ASSESSMENT

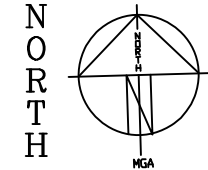
HALF ROUND FLAT BACK GUTTER (7800sqmm)

LEGEND	
R.L. 0.00	NEW REDUCED LEVEL (NEW FINISHED GROUND LEVEL)
+ 00.00	EXISTING LEVEL
S.L. 0.00	SURFACE LEVEL
I.L. 0.00	INVERT LEVEL
T.O.W.	TOP OF WALL LEVEL
G.F.L.0.00	GARAGE FLOOR LEVEL
F.F.L.0.00	FINISHED FLOOR LEVEL
A,B,C etc.	SEE PIPE SCHEDULE
LT	PIPE LABEL
PIT P1	SURFACE INLET PIT
PIT OP1	OVERLAND FLOW PIT
a-a	90mm. AG. LINE
DP	DOWNPIPE-SIZE
REFER TO NOTES FOR DP SIZE	
GP	GULLY PIT
GP	GARDEN GULLY PIT
O/F	OVERFLOW-200x100
RWH/S	RAIN WATER HEAD/SUMP
SP	DP WITH SPREADER
BG	BALCONY GULLY PIT
CE	CLEANING EYE
	GROUND FALL
))))	100 HIGH EARTH MOUNDING

STORMWATER LAYOUT NOTES

- PITS UP TO 600 DEEP TO BE 450 x 450 U.N.O., PITS UP TO 900 DEEP TO BE 600 x 600 U.N.O., PITS UP TO 1200 DEEP TO BE 900 x 600 U.N.O., PITS EXCEEDING 1200 DEEP TO BE 900 SQ. U.N.O. PITS TO BE PRECAST CONCRETE OR RENDERED BRICK WITH CONCRETE HEAVY DUTY GRATES. U.N.O. LIGHT DUTY PITS AND GRATES MAY BE USED ONLY IN LIGHT/FOOT TRAFFICABLE AREAS. U.N.O. ALL PITS TO BE BENCHED TO DISCHARGE PIPES U.N.O. GAL. STEP IRONS TO ALL PITS EXCEEDING 900 DEPTH.
- COVER AND SUMP GRATES SHALL COMPLY WITH AS2733 & AS4198.
- DOWNPIPES TO BE 90 DIA IF CHARGED AND 100 x 50 BOX IF GRAVITY. U.N.O. DP'S SHALL BE INSTALLED IN ACCORDANCE WITH AS3500.3.2:4.11 & AS4198. MAX. ROOF AREA PER DOWNPIPE WITH A NOMINATED GUTTER SIZE TO BE DETERMINED USING MANUFACTURERS SPECIFICATIONS WITH OVERFLOW PROVISIONS BY INSTALLERS.
- PIPES TO HAVE 1% MIN.GRADE U.N.O. BY PIT INVERTS. PIPES TO BE V.C. CLASS 'X' OR U.P.V.C. CLASS STORMWATER PIPE TO AS1254,1260,1273,1477,2179.2 AND WHERE EXPOSED TO DIRECT SUNLIGHT TO HAVE ADEQUATE PROTECTION TO U.V. RADIATION IN ACCORDANCE WITH AS2032. SEWER GRADE/GAL. PIPES AND KERB ADAPTORS TO BE USED WHERE COUNCIL POLICY OR CONSENT REQUIRE SUCH.
- GUTTER OUTLETS SHALL BE FITTED VERTICALLY TO THE SOLE OF THE EAVE GUTTERS. RAINHEADS TO HAVE AN OVERFLOW DUCT OR WEIR 50mm BELOW THEIR CREST.
- PROVIDE OVERFLOW SPITTERS TO ALL COVERED BALCONIES/ TERRACES. NOT TO BE DIRECTED ON TO ROOF SURFACES
- RISING MAINS (PRESSURE PIPE) TO BE IN ACCORDANCE WITH AS3500.1:2.
- SUBSOIL DRAINS TO BE IN ACCORDANCE WITH AS2439.1 CLASS 100 TO BE USED ONLY IN SINGLE DWELLINGS.
- ALL PIPE JOINTS, VALVES TO BE IN ACCORDANCE WITH AS3500.3.2:2.7 & AS3500.3.2
- EXPANSION JOINTS SHALL COMPLY WITH AS3500.3.2:TABLE 4.1 PVC JOINTS AND ACCESSORIES TO COMPLY WITH AS2179.2 & AS4198.
- ALL TRENCHES TO BE IN ACCORDANCE WITH AS3500.3.2:7.2.8-14. EMBEDMENT MATERIAL AND TRENCH FILL TO ALL PIPES & SUBSOIL DRAINS TO BE IN ACCORDANCE WITH AS3500.3.2:7, ALL WORKS TO BE IN ACCORDANCE WITH AS1254, 1741, 2032, 2733, 2865, 3996, 1260, 1477, 2179.1 & 2,2566, 6367, 8301, ARR97 & BCA.
- IT IS THE BUILDER'S RESPONSIBILITY TO CONFIRM THAT LEVELS AND SURVEYS ARE IN ACCORDANCE WITH LEVELS ON SITE & ARE APPROVED BY COUNCIL & ARCHITECT BEFORE COMMENCING WORK.
- NO SEWER VENTS, GULLY PITS OR SIMILAR TO BE LOCATED BELOW THE MAXIMUM WATER SURFACE LEVEL IN DETENTION BASINS. ALL BASIN WALLS TO BE WATERTIGHT & STRUCTURALLY DESIGNED BY A STRUCTURAL ENGINEER.
- ALL FENCES WHICH MAY DIVERT FLOW FROM PROPOSED DIRECTION TO BE RAISED 100mm.
- BUILDER TO ENSURE ALL DRAINAGE AREAS INCLUDING EXPOSED BALCONIES TO HAVE OVERFLOW MECHANISM IN PLACE IN THE EVENT OF BLOCKAGE WITH ADEQUATE OVERFLOW SECTION THROUGH PLANTERS, PARAPETS ETC.
- ALL EXTERIOR FINISHED GROUND LEVELS TO BE SLOPING AWAY FROM PERIMETER WALLS IN ALL CASES.
- ALL HEADROOM CLEARANCES TO BE COORDINATED BETWEEN BUILDER & ARCHITECT. NOTIFY ENGINEER FOR APPROVAL IF ANY CHANGES OCCUR.
- ALL GULLY POSITIONS ARE DIAGRAMMATIC ONLY- BUILDER SHOULD CONSULT ARCHITECTS FOR DIMENSIONS TO LOCATE STORMWATER ELEMENTS U.N.O.
- FIRE RATING TO ARCHITECT'S SPECIFICATION.
- ALL FINISHED FLOOR LEVELS ARE NOMINATED BY ARCHITECT.
- ALL SITE SAFETY MEASURES AND WORK METHOD STATEMENTS PREPARED BY BUILDER/SUB-CONTRACTORS ARE TO BE IMPLEMENTED DURING CONSTRUCTION. NO WORK IS TO COMMENCE UNTIL ALL WORKERS CARRY OUT SITE INDUCTION, PREPARED AND CARRIED OUT BY BUILDER. ANY HAZARD IDENTIFICATION TO BE REPORTED IMMEDIATELY TO SITE SUPERVISOR TO CARRY OUT NECESSARY PROCEDURES TO ELIMINATE HAZARD, PRIOR TO PROCEEDING WITH WORK. STRUCTURAL AND GEOTECHNICAL ADVICE SHOULD BE SOUGHT IN ALL CASES.
- CONFINED SPACES SIGNAGE TO BE INSTALLED IN ACCESSIBLE UNDERGROUND TANKS TO WORK COVER SPECIFICATIONS. ALL PITS EXCEEDING 600mm DEPTH TO HAVE 'J' BOLTS OR SIMILAR INSTALLED TO GRATES.
- MAINTENANCE DEVICES REQ'D BY AUTHORITIES ARE NOT TO BE ASSUMED SHOWN ON DRAWINGS.
- EARTH MOUNDING SHOWN AS TEMPORARY MEASURE UNTIL LANDSCAPING COMPLETED TO DIRECT FLOWS AS SHOWN.

THIS DRAWING IS DIAGRAMMATIC ONLY & NOT TO BE SCALED. IT IS NOT A PART 4A CERT. REFER TO ARCHITECTS DRAWINGS FOR DIMENSIONS. COPYRIGHT IN THIS DRAWING IS NOT PROPERTY OF IBRAHIM STORMWATER CONSULTANTS AND THE DRAWING SHALL NOT BE REPRODUCED OR COPIED, WHOLE OR IN PART, IN ANY FORM WITHOUT THE PRIOR WRITTEN APPROVAL OF IBRAHIM STORMWATER CONSULTANTS



REVISIONS	

ISSUE	PRINTS	ISSUED TO	DATE
1	EMAIL	BUILDER/CLIENT	10-4-19

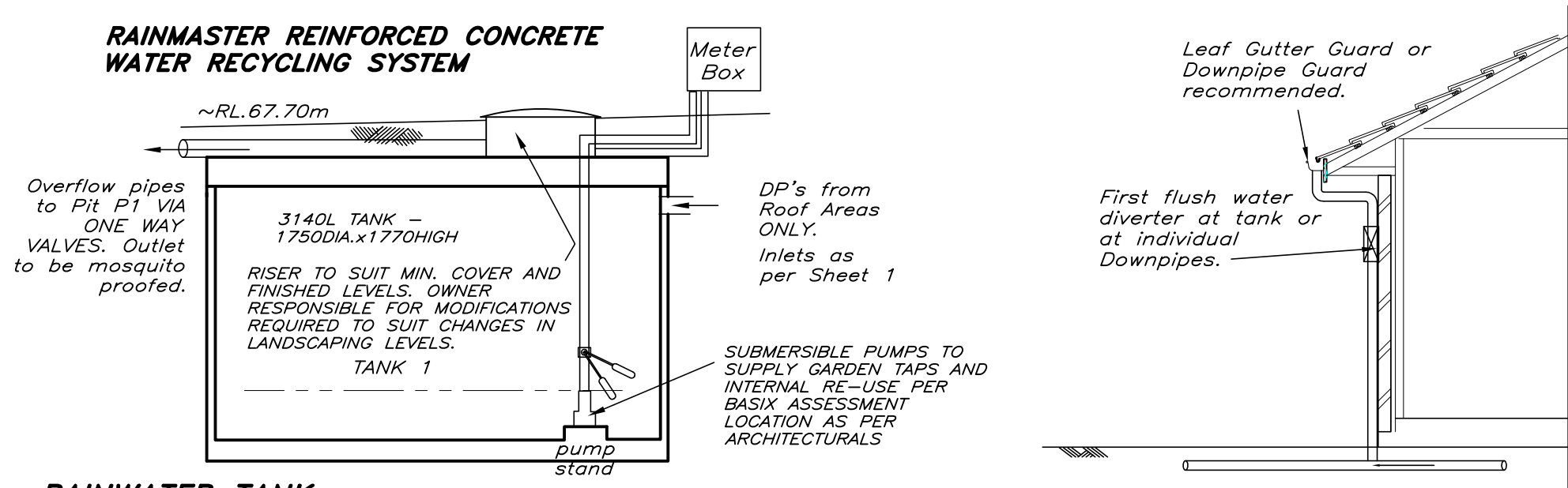
SCALE(A3) 1:200,100 u.n.o.
SCALE BAR - 1m INTERVALS
DATE MAR. 2019
DRAWN M.I.
DESIGNED M.I.
APPROVED



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TELEPHONE: (02) 9980 5515 FAX: (02) 9980 6114
www.stormwater.net.au email: mail@stormwater.net.au

PROJECT
PROPOSED RESIDENCE
AT 50 GRANDVIEW GROVE
SEAFORTH
FOR MS. WEIR

THIS DRAWING
STORMWATER
LAYOUT SH.1
BUILDER
CLARENDON HOMES
JOB NUMBER
C9004-13445
SHEET No.
1 of 2
REVISION



RAINMASTER REINFORCED CONCRETE
WATER RECYCLING SYSTEM

TANK DETAILS SHOWN ARE A SUGGESTED CONFIGURATION ONLY. ANY MODIFICATIONS TO TANK VOLUME OR INLET AND OUTLET LEVELS MUST BE APPROVED BY ENGINEER PRIOR TO COMMENCEMENT OF CONSTRUCTION. TANK SHAPE, & DEVICES SHOWN ARE DIAGRAMMATIC ONLY. MINIMUM OF 450 CLEARANCE (UNLESS L.G.A. REQUIRES LARGER SETBACK) TO SIDE BOUNDARIES MUST BE MAINTAINED. CLIENT IS RESPONSIBLE TO ENSURE COMPLIANCE WITH THIS IN THE INSTALLED STATE.

Charged stormwater lines from Roof Areas ONLY to rainwater tank.

All joints to be solvent welded. All exposed pipework to be painted to withstand external elements.

First flush water diverter at tank to comply with Water Authority and council DCP's. An approved switch system similar to 'Rainbank' to be used via mains. Pumps to manuf. specs.

Rain Tank to be installed and maintained to manufacturers specifications and to comply with all Water Authority Guidelines.

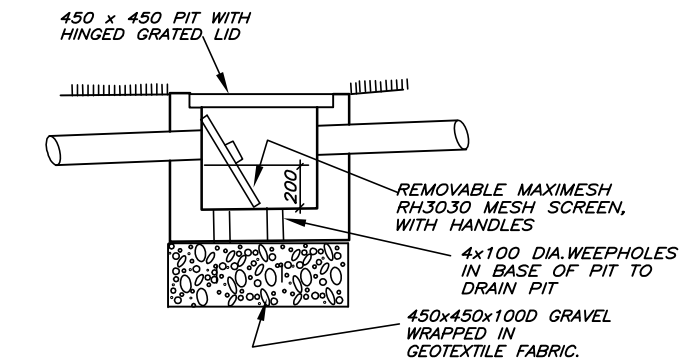
Client to be responsible for maintenance system of charged pipelines. Debris accumulation significantly affects systems performance.

Maintenance program essential.

Structural details for tank base by manufacturer or others.

WHSA HAZARD IDENTIFICATION:
DEEP TRENCHING-ALL PERSONS TO FOLLOW THEIR SWMS IN RELATION TO BARRICADING DEEP TRENCHES AND WEARING APPROPRIATE CLOTHING. ANY PERSON WORKING INSIDE A TRENCH MUST BE SUPERVISED BY ANOTHER PERSON IN ACCORDANCE WORK COVER AND WORKING IN CONFINED SPACES.
DIAL BEFORE YOU DIG 1100 MUST BE CHECKED BEFORE ANY TRENCHING COMMENCES ON SITE. ANY WORKS NEAR IDENTIFIED SERVICES TO BE CARRIED OUT IN ACCORDANCE WITH THE TRADES SWMS.

INSTALLATION OF RAINTANKS: PLUMBER/SITE SUPERVISOR TO ASSESS ACCESS SUITABILITY PRIOR OR POST SLAB CONSTRUCTION. INSTALLATION OF TANKS TO BE CARRIED OUT FOLLOWING SWMS OF TANK SUPPLIER AND PLUMBER. GEOTECHNICAL INVESTIGATIONS FOR BELOW GROUND TANKS TO BE CARRIED OUT BY APPROPRIATELY QUALIFIED PERSONAL IN RELATION TO SUITABLE BATTERS OR SHORING.



SILT ARRESTOR PIT – P1

WHSA
ALL NEARBY SERVICES TO BE LOCATED PRIOR EXCAVATIONS.
ALL PIPES TO BE CUT FLUSH WITH PIT WALLS AND SPARGED.
PITS EXCEEDING 600mm IN DEPTH TO HAVE LOCK DOWN MECHANISM.
SAFETY GEAR TO BE WORN AT ALL TIMES. INCLUDING FOOTWEAR, CLOTHING AND GLOVES AS PER SWMS.

BUILDER/CLIENT TO ENSURE THAT ALL SAFETY MEASURES ARE TAKEN DURING CONSTRUCTION, INCLUDING BUT NOT LIMITED TO, SAFETY FENCING, SIGNAGE, OBTAINING STRUCTURAL AND GEOTECHNICAL ADVICE WHERE EXCAVATIONS ARE NEAR STRUCTURES OR SERVICES, SAFETY MEASURES RECOMMENDED BY PRODUCT SUPPLIERS ETC.

REVISIONS	

<table><tr><th>ISSUE</th><th>PRINTS</th><th>ISSUED TO</th><th>DATE</th></tr><tr><td>1</td><td>EMAIL</td><td>BUILDER/CLIENT</td><td>10-4-19</td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr></table>	ISSUE	PRINTS	ISSUED TO	DATE	1	EMAIL	BUILDER/CLIENT	10-4-19																	SCALE(A3) 1:200, 100 u.n.o. SCALE BAR – 1m INTERVALS DATE MAR . 2019 DRAWN M.I. DESIGNED M.I. APPROVED 	IBRAHIM STORMWATER CONSULTANTS CONSULTING CIVIL ENGINEERS P.O. BOX 400 CHERRYBROOK NSW 2126 TELEPHONE: (02) 9980 5515 FAX: (02) 9980 6114 www.stormwater.net.au email: mail@stormwater.net.au	PROJECT PROPOSED RESIDENCE AT 50 GRANDVIEW GROVE SEAFORTH FOR MS. WEIR	THIS DRAWING STORMWATER DETAILS SH.1 BUILDER CLARENDON HOMES	JOB NUMBER C9004-13445 SHEET No. 2 of 2 REVISION
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