

140 OCEAN STREET, NARRABEEN NSW

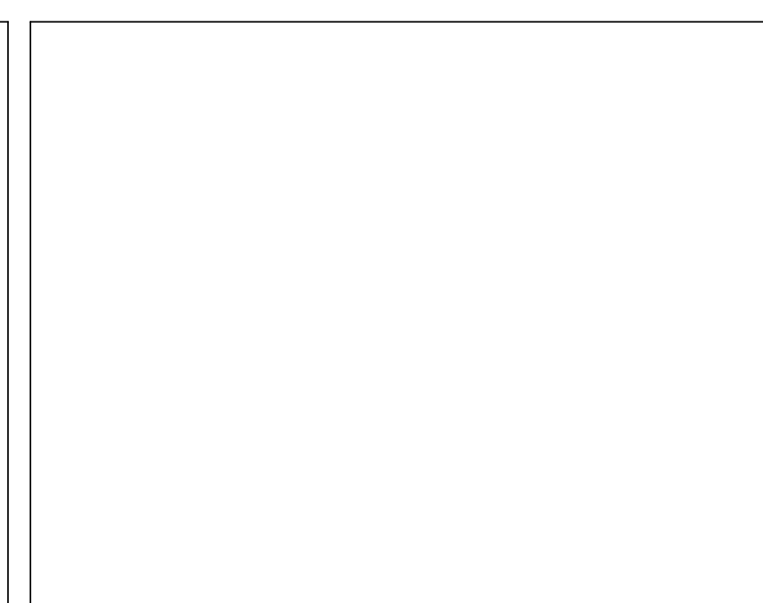
DRAWING LIST:

- DA000 - COVER SHEET
- DA004 - DEMOLITION PLAN
- DA005 - SITE ANALYSIS
- DA006 - SHADOW DIAGRAMS
- DA009 - SITE LAYOUT PLAN
- DA010 - LANDSCAPE PLAN
- DA101 - GROUND FLOOR PLAN
- DA102 - LEVEL 01 PLAN
- DA103 - ROOF PLAN
- DA105 - ELEVATION NORTH & SOUTH
- DA106 - ELEVATION EAST & WEST
- DA110 - SECTION AA & BB
- DA200 - EXTERNAL FINISHES

BASIX & NATHERS:

BASIX and Thermal Comfort Inclusions- 140 Ocean Street, Narrabeen	
Floors	Concrete slab on ground Concrete between levels, no insulation required Suspended concrete floor with R1.9 insulation
Walls	External walls: 150 mm Concrete wall with R2.5 insulation (insulation only value) to the single dwelling H1 150 mm Concrete wall with R2.0 insulation (insulation only value) to the units Apt 01 & Apt 02 External colour Medium colour modelled (0.475<SA<0.7) Walls with-in dwellings: Plasterboard on studs, no insulation required Inter-tenancy walls: 150mm Concrete panel to walls adjacent to neighbours, no insulation required
Windows	Aluminium framed glazing to the units Apt 01 & Apt 02: Group A – awning + bifold + casement windows + hinged glazed doors U-value: 4.80 (equal to or lower than) SHGC: 0.51 (±10%) Group B – sliding doors/windows + fixed glazing + louvered windows U-value: 4.80 (equal to or lower than) SHGC: 0.59 (±10%) Aluminium framed performance glazing to the single dwelling H1: Group A – awning + bifold + casement windows + hinged glazed doors U-value: 4.30 (equal to or lower than) SHGC: 0.47 (±10%) Group B – sliding doors/windows + fixed glazing + louvered windows U-value: 4.30 (equal to or lower than) SHGC: 0.53 (±10%) Given values are AFRC, total window system values (glass and frame)
Ceilings	Plasterboard ceiling, R4.0 insulation (insulation only value) where roof above Plasterboard ceiling, no insulation where neighbouring units are above Note: All ceiling penetrations have been modelled in accordance with NatHERS protocols, all downlights are assume sealed LED downlights, one every 2.5m2.
Roof	Concrete roof with water proofing membrane, no insulation required. External colour Medium (0.47<SA<0.7)
Floor Coverings	Tiles throughout
Alternative water	Tank size: 3,000L, collecting from at least 100m2 roof area Connected to outdoor tap for irrigation of landscaping common and private
Hot water system	Electric heat pump – air sourced - 26 to 30 STCs
Heating & Cooling	All units to have individual, single phase, reverse cycle air conditioning to living areas and none to bedrooms. A minimum efficiency of 3.0 stars is required for cooling and heating
Alternative energy	2.0 KW Photovoltaic for the dwelling.
Appliances to multi- units	3 star water and energy rating to dish washers and clothes washer 3 star water energy rating to clothes dryer
Ventilation	Kitchen - Individual fan, externally ducted to roof or façade, manual on/off switch Bathrooms - Individual fan, externally ducted to roof or façade, interlocked to light Laundry - Individual fan, externally ducted to roof or façade, interlocked to light
Others	Gas Cooktop & Electric oven Well-ventilated fridge space Air conditioning day-night zoned between bedrooms and living areas

Rev	Description	Date
A	DRAFT DA	03/12/19
B	ISSUED FOR DA	19/12/19



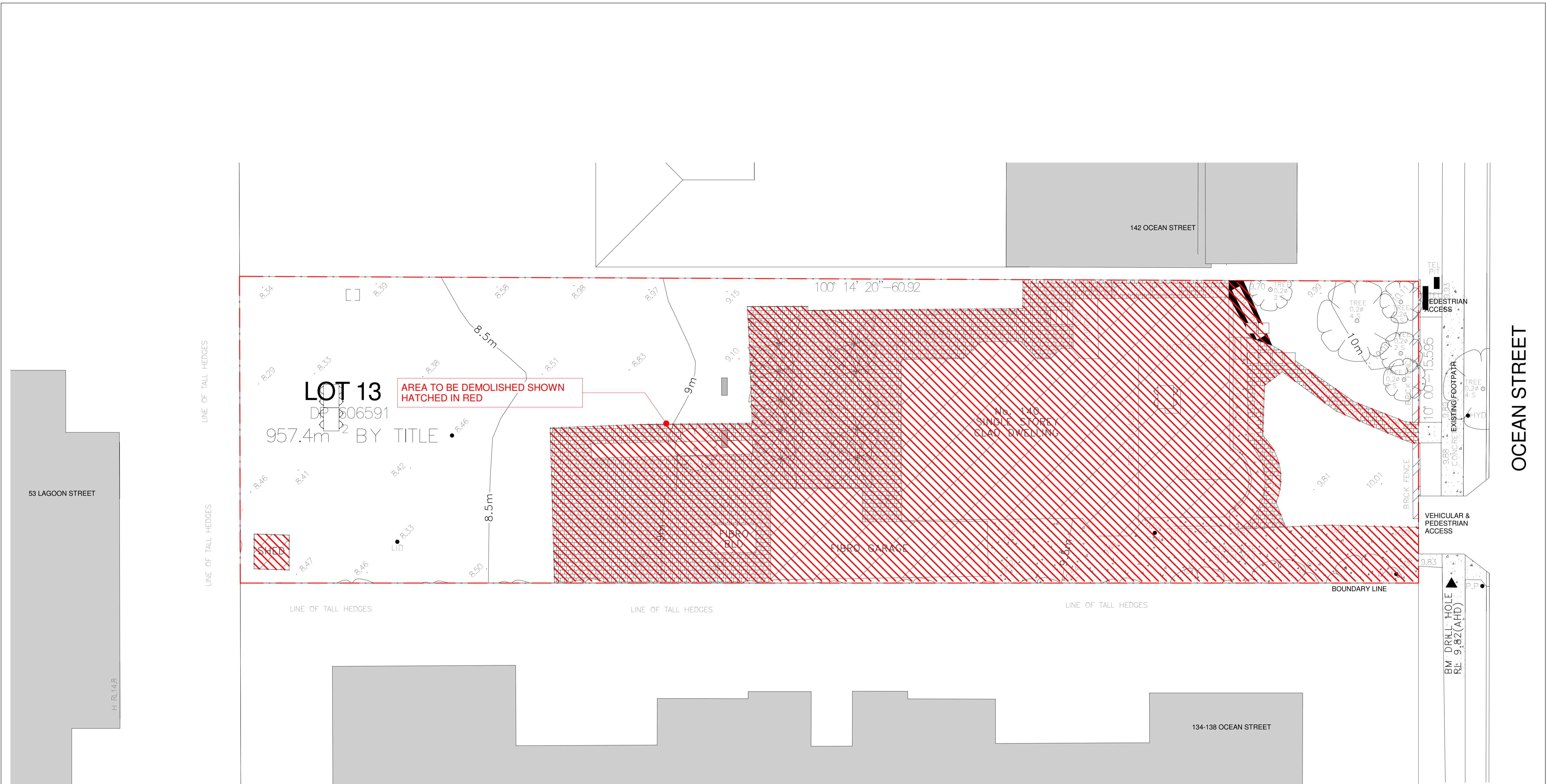


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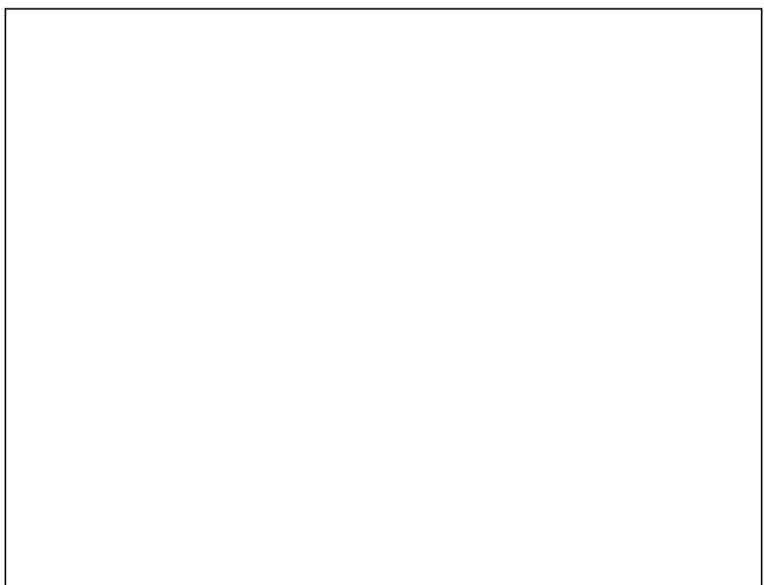
PROJECT	140 OCEAN STREET, NARRABEEN
TITLE	COVER SHEET

CLIENT		
MISSIONARY SISTERS OF BLESSED VIRGIN MARY		
DRAWN BY JB	CHECKED BY JO'B	DATE 23/11/19
SCALE (@ A1) 1 : 100		PROJECT NUMBER 2019_002
DRAWING NUMBER DA000		REV B



1 DEMOLITION PLAN
1 : 100

Rev	Description	Date
A	DRAFT DA	03/12/19
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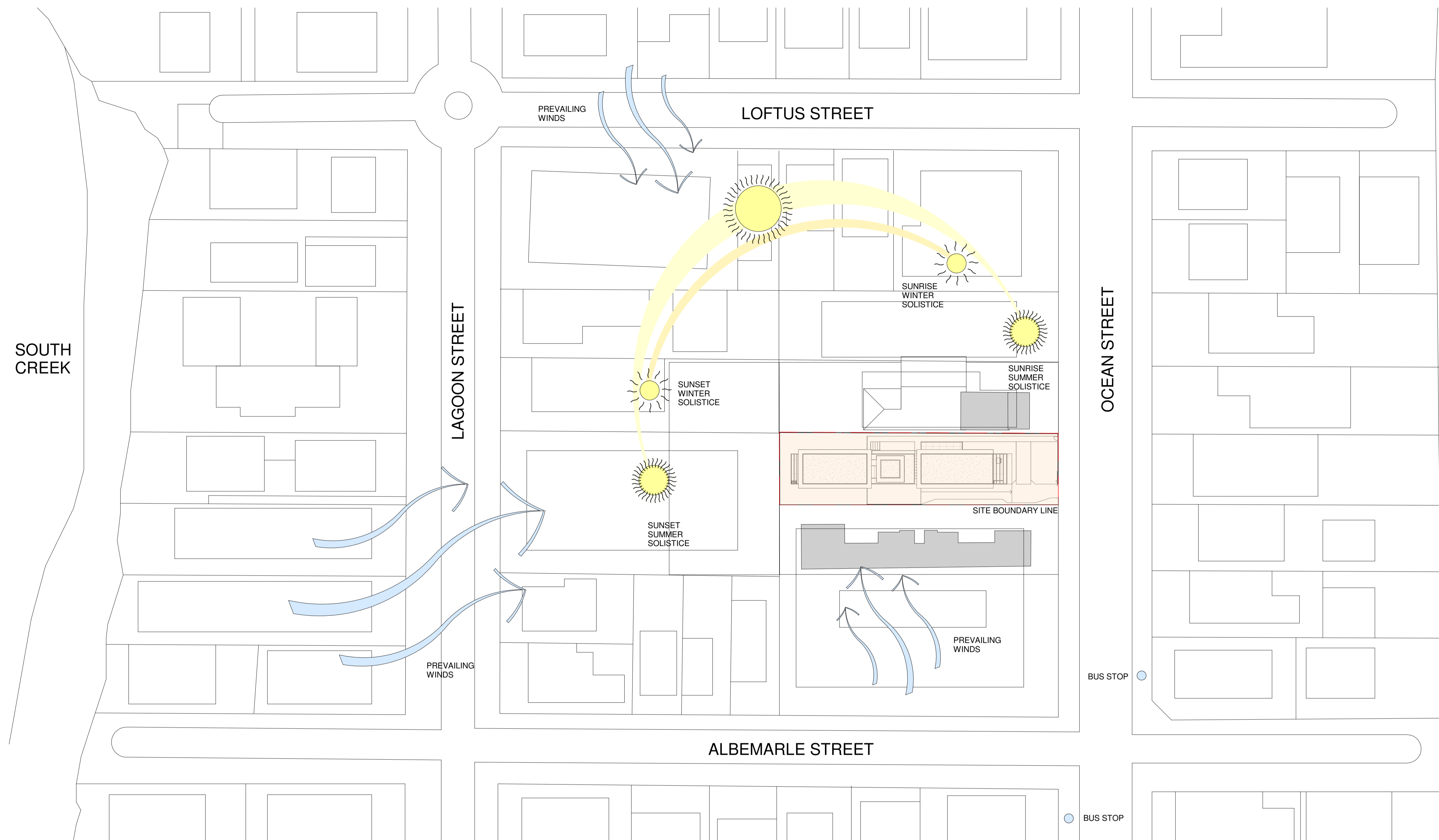
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PROJECT
140 OCEAN STREET, NARRABEEN

TITLE
DEMOLITION PLAN

CLIENT
MISSIONARY SISTERS OF BLESSED VIRGIN MARY

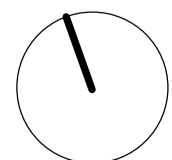
DRAWN BY JB	CHECKED BY JO'B	DATE 11/11/19
SCALE (@ A1) 1 : 100		PROJECT NUMBER 2019_002
DRAWING NUMBER DA004		REV B



1 SITE ANALYSIS
1 : 500

MAP UNDERLAY BASED ON GOOGLE MAPS

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A	DRAFT DA	03/12/19
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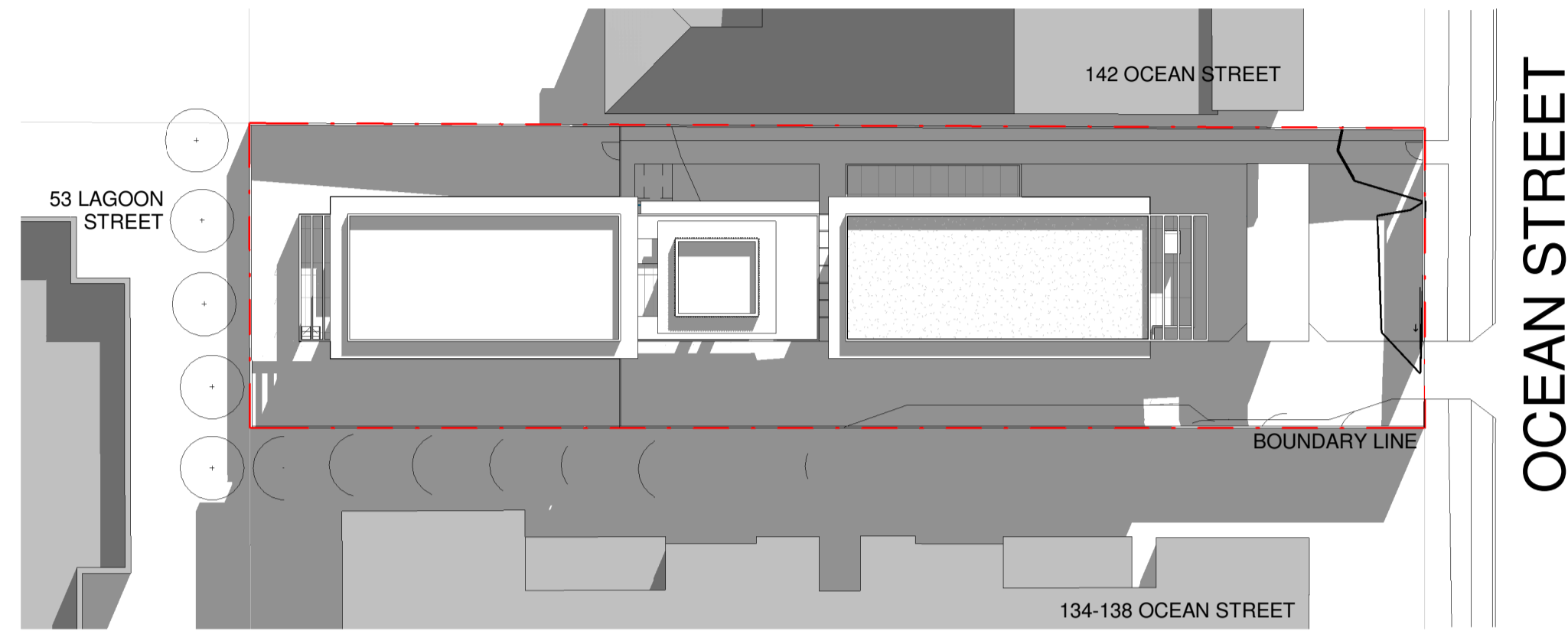
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PROJECT
140 OCEAN STREET, NARRABEEN

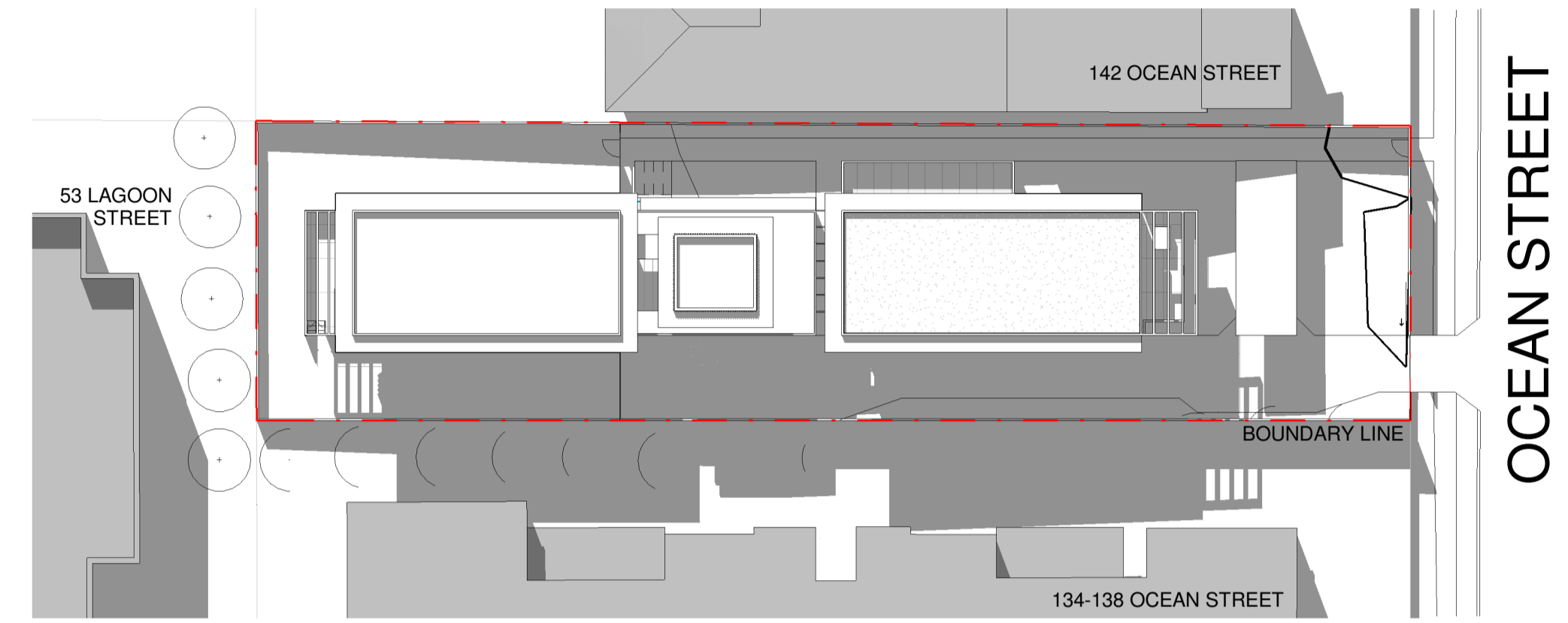
TITLE
SITE ANALYSIS

CLIENT
MISSIONARY SISTERS OF
BLESSED VIRGIN MARY

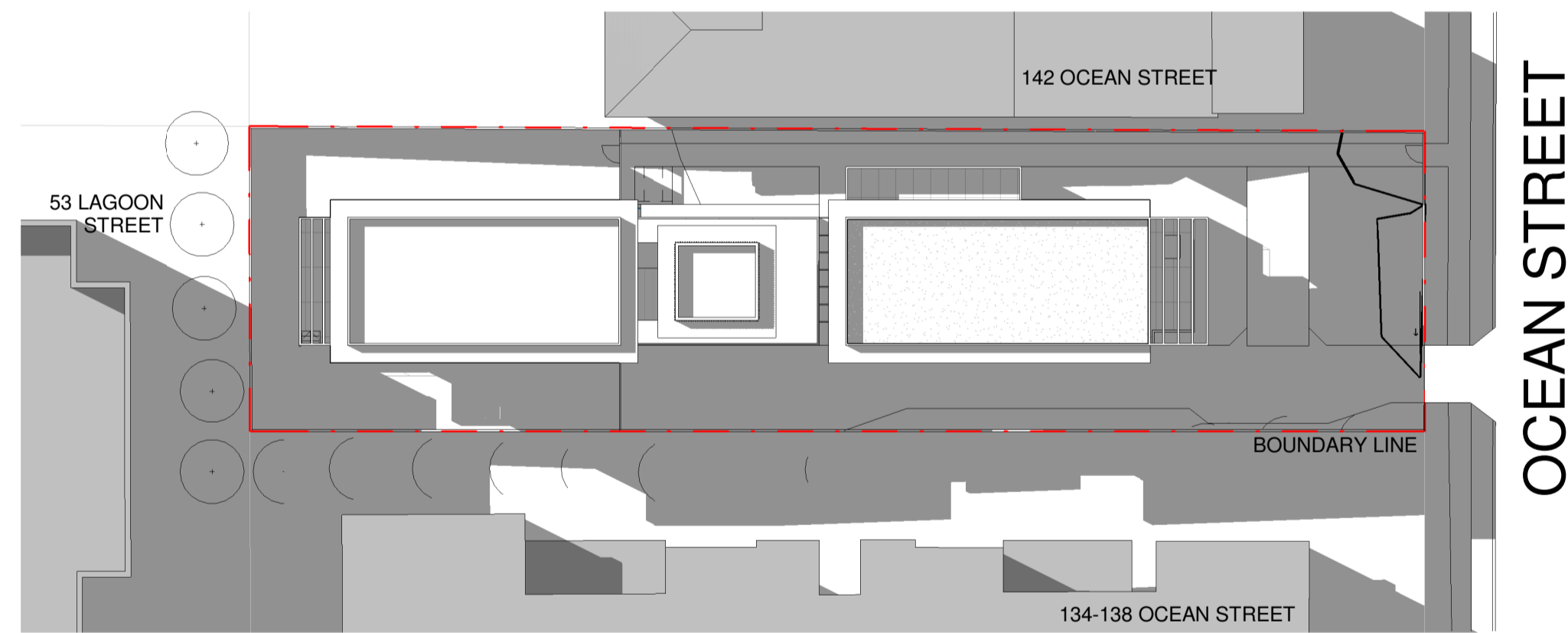
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DRAWING NUMBER DA005		REV B



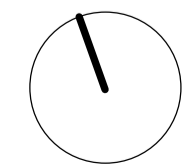
1 SHADOW DIAGRAM 21st JUN 9.00AM
1 : 300



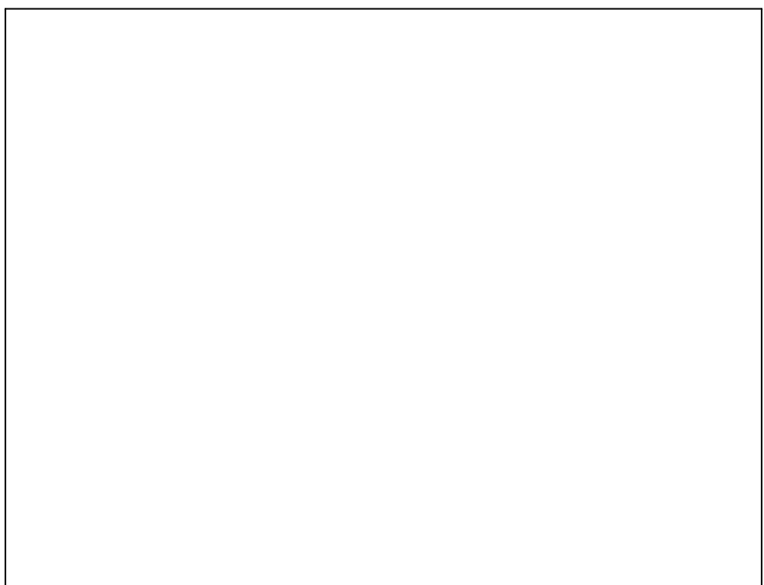
2 SHADOW DIAGRAM 21st JUN 12.00PM
1 : 300



3 SHADOW DIAGRAM 21st JUN 3.00PM
1 : 300



Rev	Description	Date
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B	ISSUED FOR DA	19/12/19

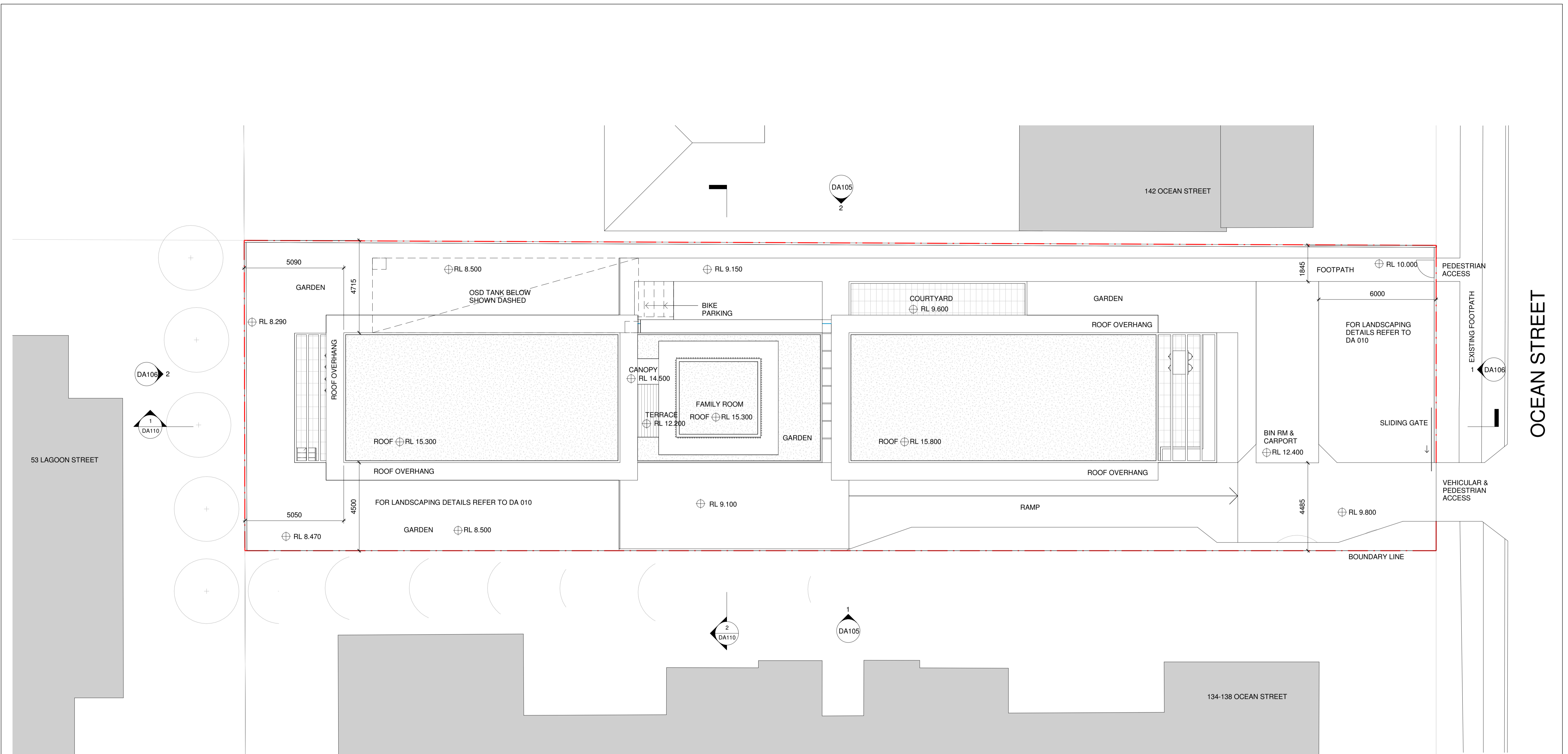


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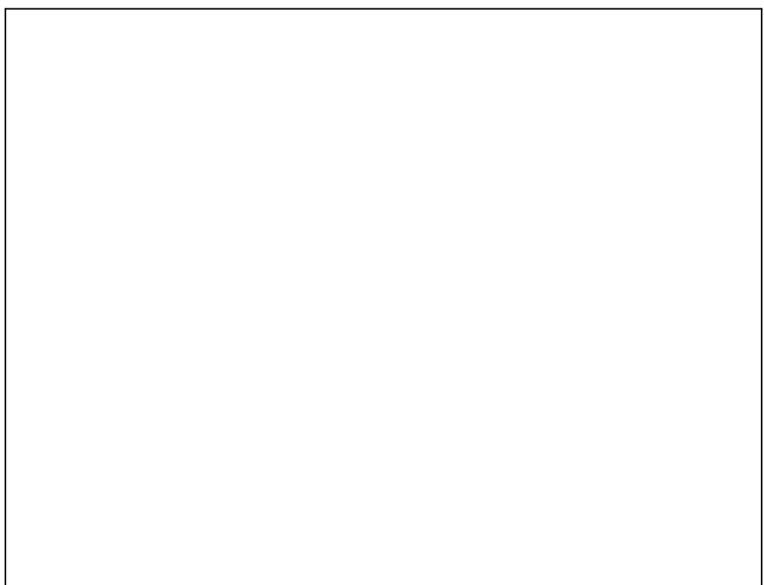
PROJECT	140 OCEAN STREET, NARRABEEN	
TITLE	SHADOW DIAGRAMS	

CLIENT		
MISSIONARY SISTERS OF BLESSED VIRGIN MARY		
DRAWN BY JB	CHECKED BY JO'B	DATE 13/12/19
SCALE (@ A1) 1 : 300		PROJECT NUMBER 2019_002
DRAWING NUMBER DA006		REV B



1 SITE LAYOUT PLAN
1 : 100

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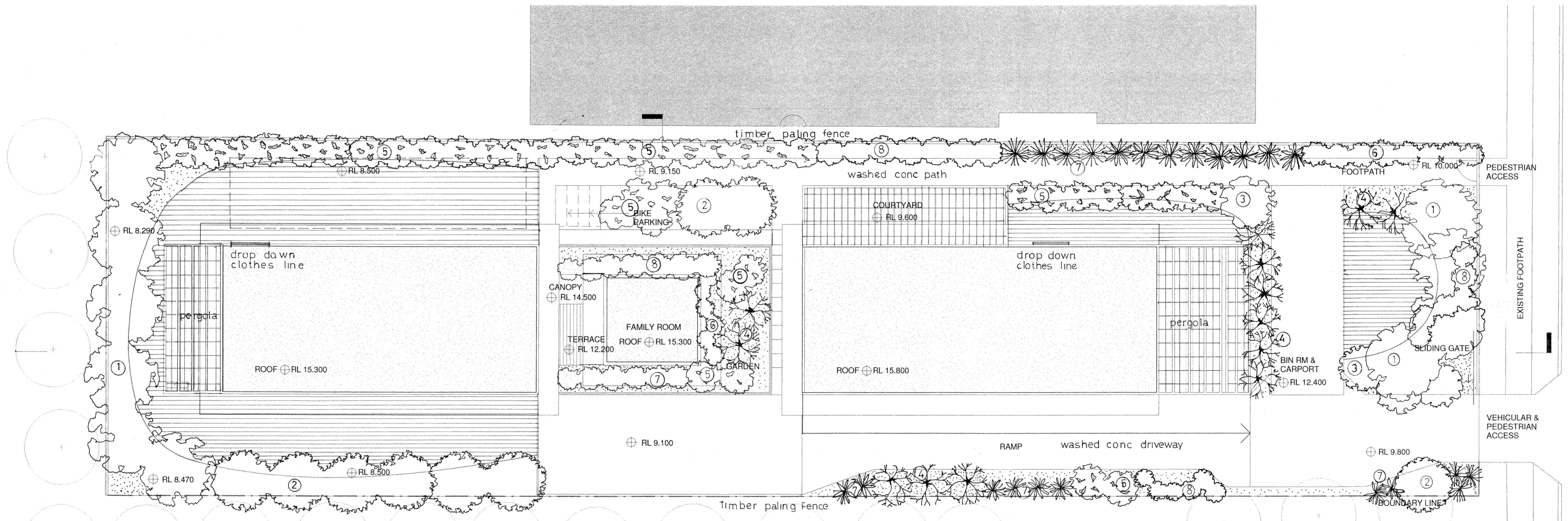
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PROJECT
140 OCEAN STREET, NARRABEEN

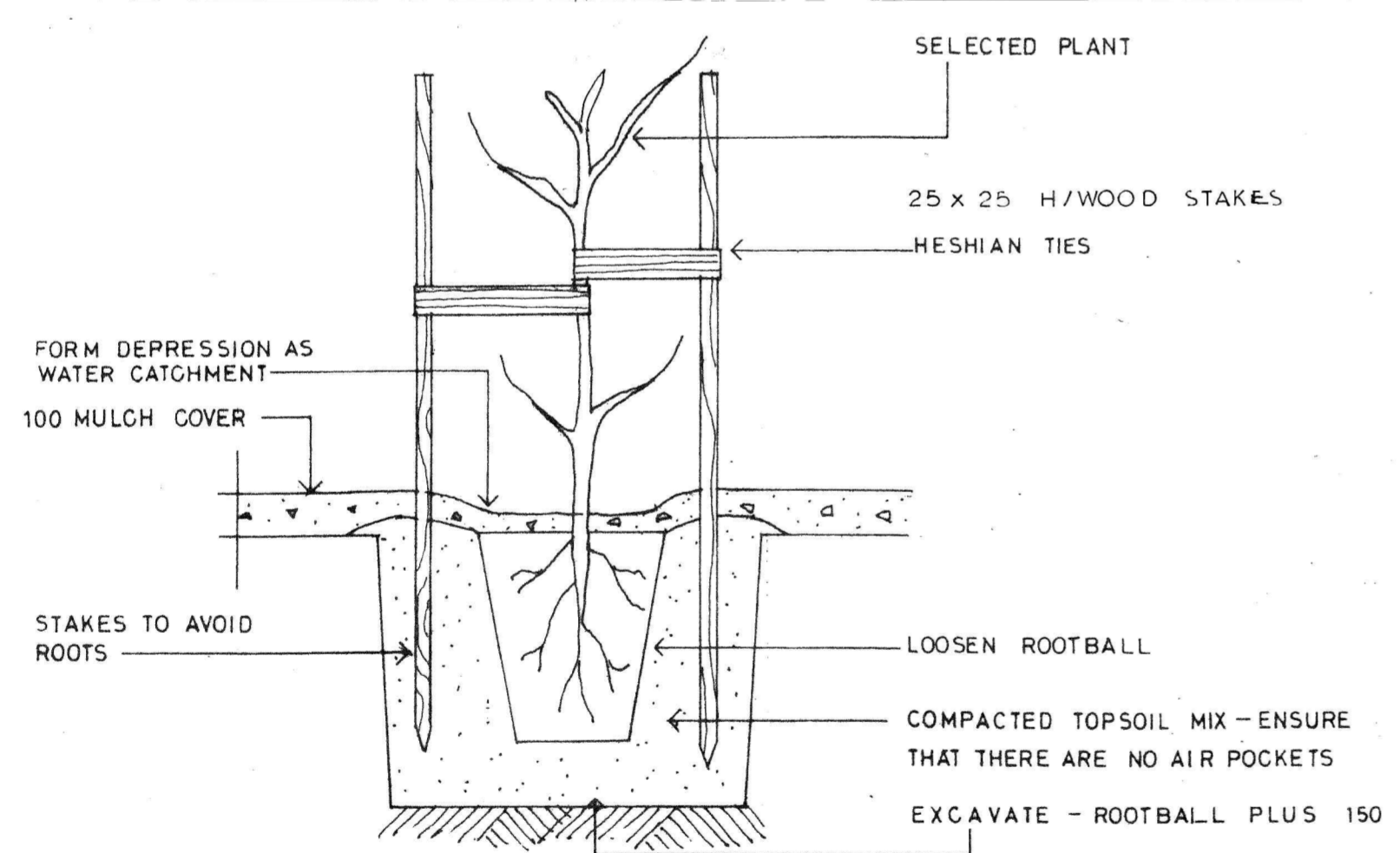
TITLE
SITE LAYOUT PLAN

CLIENT
MISSIONARY SISTERS OF BLESSED VIRGIN MARY

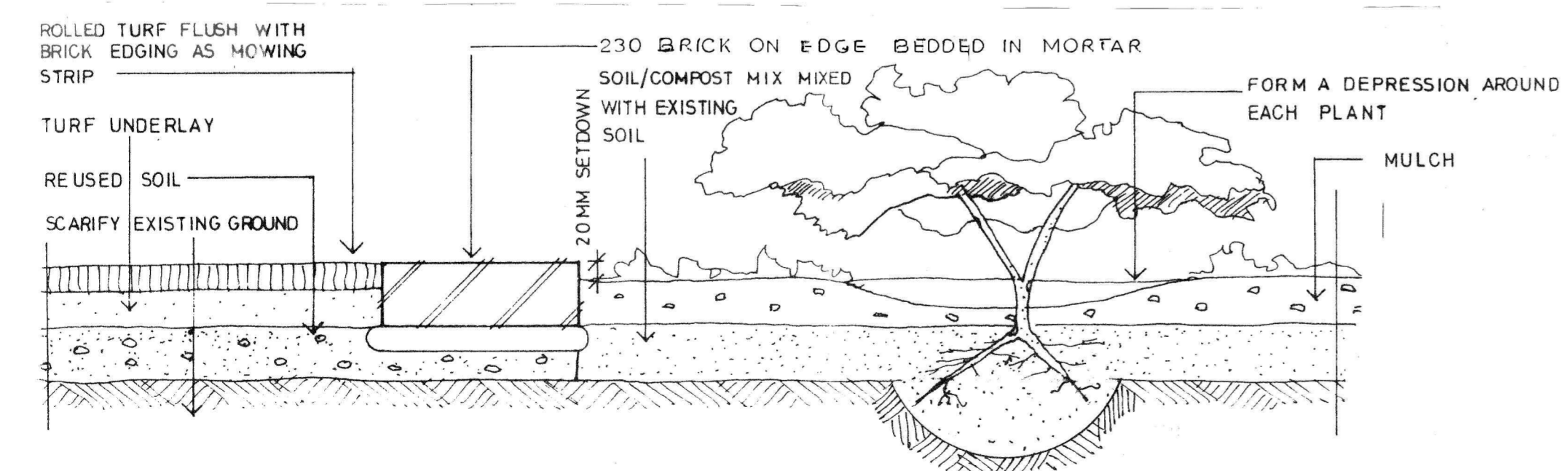
DRAWN BY JB	CHECKED BY JO'B	DATE 08/09/19
SCALE (@ A1) 1 : 100		PROJECT NUMBER 2019_002
DRAWING NUMBER DA009		REV B



OCEAN STREET



TYPICAL PLANTING & STAKING DETAILS (NTS)



TYPICAL IN GROUND PLANTING DETAILS

LANDSCAPE KEY

- NEW PLANT - MATURE SIZE SHOWN REFER TO PLANTING SCHEDULE FOR SPECIES SELECTION
- PINE BARK MULCH WITH MIXED GROUND COVERS PLANTED IN A RANDOM FASHION
- KIKUYU TURF WITH 230 BRICK ON EDGE ADJOINING PLANTERS
- SELECTED PAVERS

PLANTING SCHEDULE

KEY	BOTANICAL NAME	COMMON NAME	APPROX SPACINGS	MATURE HEIGHT	POT SIZE	STAKING	NO OFF	
SMALL TREE								
①	<i>banksia serrata</i>	red honeysuckle	4 M	4 M	4 L	YES	10	
②	<i>ceratopetalum gummiferum</i>	nsw christmas bush	4 M	4 M	4 L	YES	9	
LARGE SHRUB								
③	<i>callistemon linearis</i>	narrow leaved bottle brush	3 M	3 M	3 L	YES	4	
④	<i>leptospermum scoparium</i>	roseum	2.5 M	2.5 M	3 L	YES	12	
SMALL SHRUB								
⑤	<i>prostanthera ovalifolia</i>	oval leaf mint bush	2 M	2 M	3 L	NO	38	
⑥	<i>westringia fruticosa</i>	coastal rosemary	1 M	1 M	2 L	NO	16	
⑦	<i>violacea iriodes</i>	native iris	1 M	1 M	2 L	NO	29	
⑧	<i>eriostemon myoporoides</i>	long leafed wax flower	1 M	1 M	2 L	NO	26	
GROUND COVERS & CLIMBERS								
	<i>hybberthia obtusifolia</i>	showy guinea flower	-	-	1 L		20	
	<i>leptospermum flavescens</i>	pacific beauty	-	-	1 L		20	
	<i>trachelospermum jasminoides</i>	star jasmim	-	-	1 L		20	
							TOTAL	204

Rev	Description	Date
A		

LANDSCAPE PLAN

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PROJECT
**PROPOSED DEVELOPMENT
140 OCEAN STREET,
NARRABEEN**

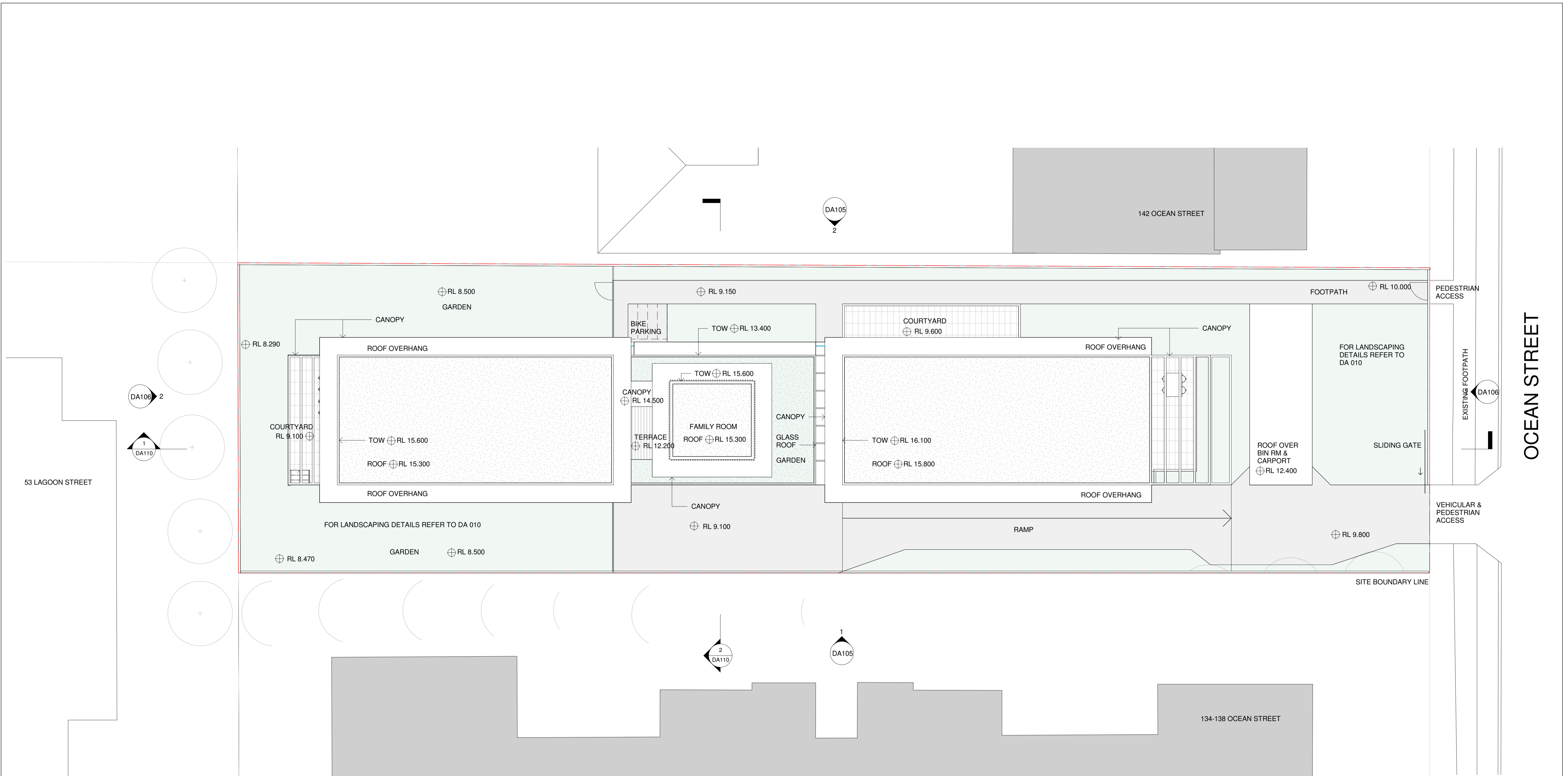
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CLIENT
**MISSIONARY SISTERS OF
BLESSED VIRGIN MARY**

DRAWN BY JO'B CHECKED BY JO'B DATE 08/09/19

SCALE (@ A1)
1 : 100 PROJECT NUMBER
2019_002

DRAWING NUMBER
SK010 REV
E



1 ROOF PLAN
1 : 100

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A	DRAFT DA	03/12/19
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PROJECT
140 OCEAN STREET, NARRABEEN

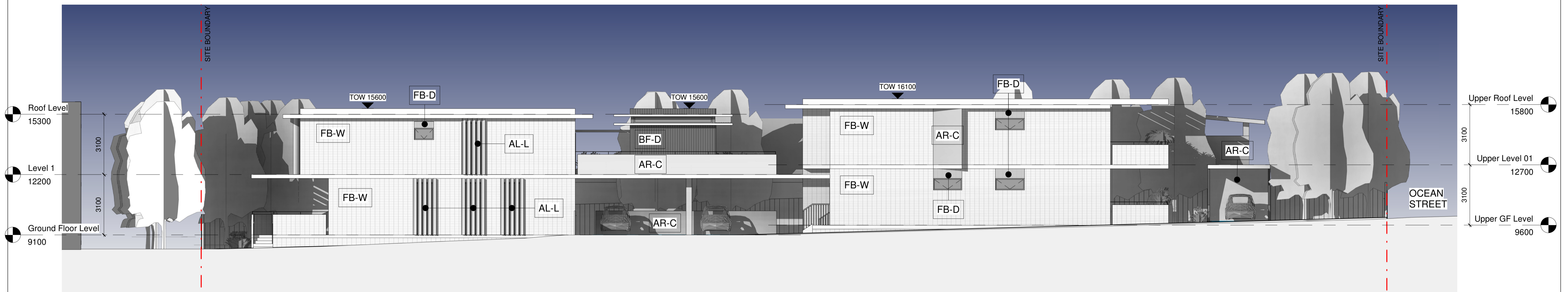
TITLE
ROOF PLAN

CLIENT
MISSIONARY SISTERS OF BLESSED VIRGIN MARY

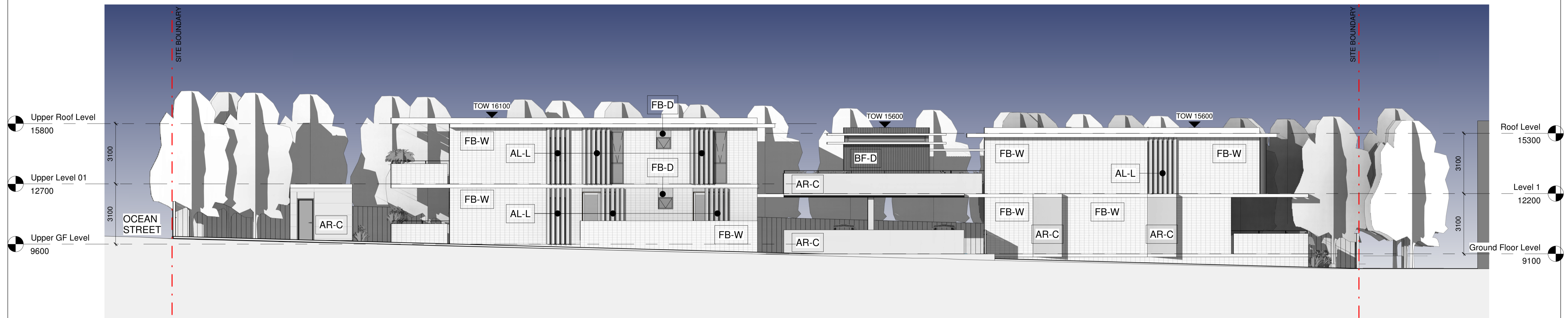
DRAWN BY: JB | CHECKED BY: JO'B | DATE: 08/04/19

SCALE (@ A1): 1 : 100 | PROJECT NUMBER: 2019_002

DRAWING NUMBER: DA103 | REV: B



1 NORTH ELEVATION
1 : 100



2 SOUTH ELEVATION
1 : 100

- FB-W FACE BRICK - WHITE
- FB-D FACE BRICK - DETAIL
- AR-C ARCHITECTURAL CONCRETE
- BF-D BATTEN FINISH - DARK
- AL-L ALUMINIUM LOUVRE

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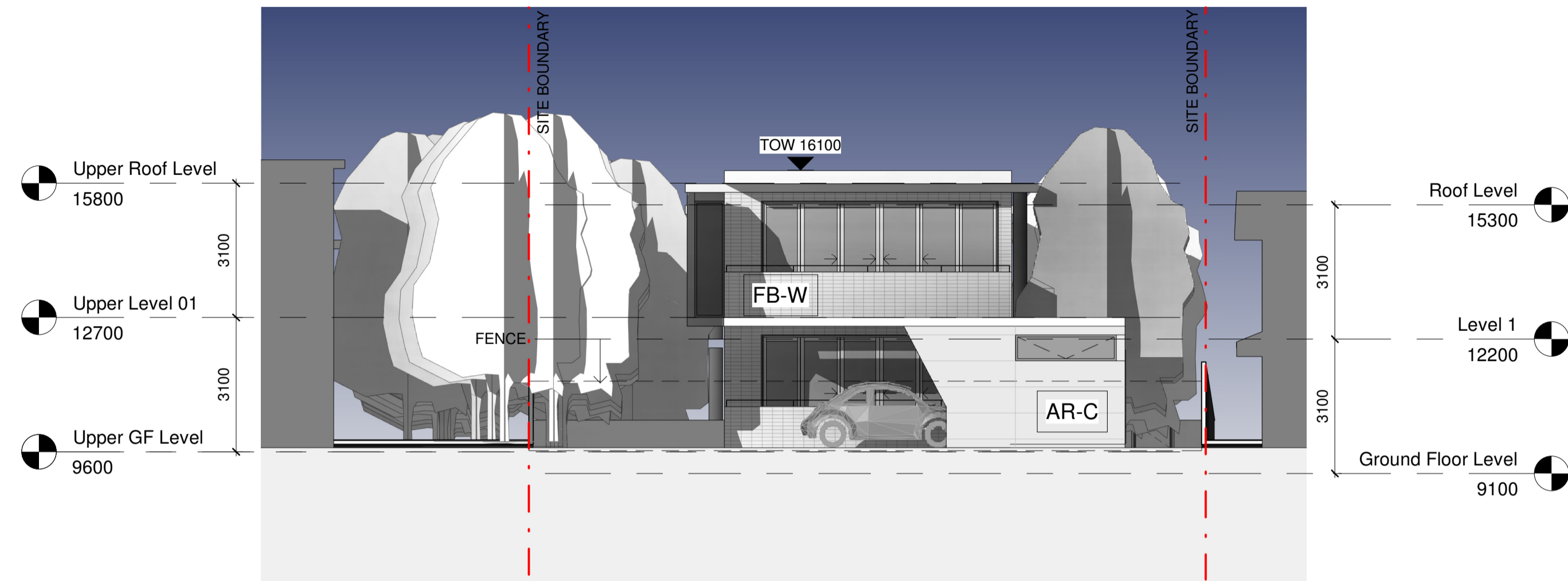


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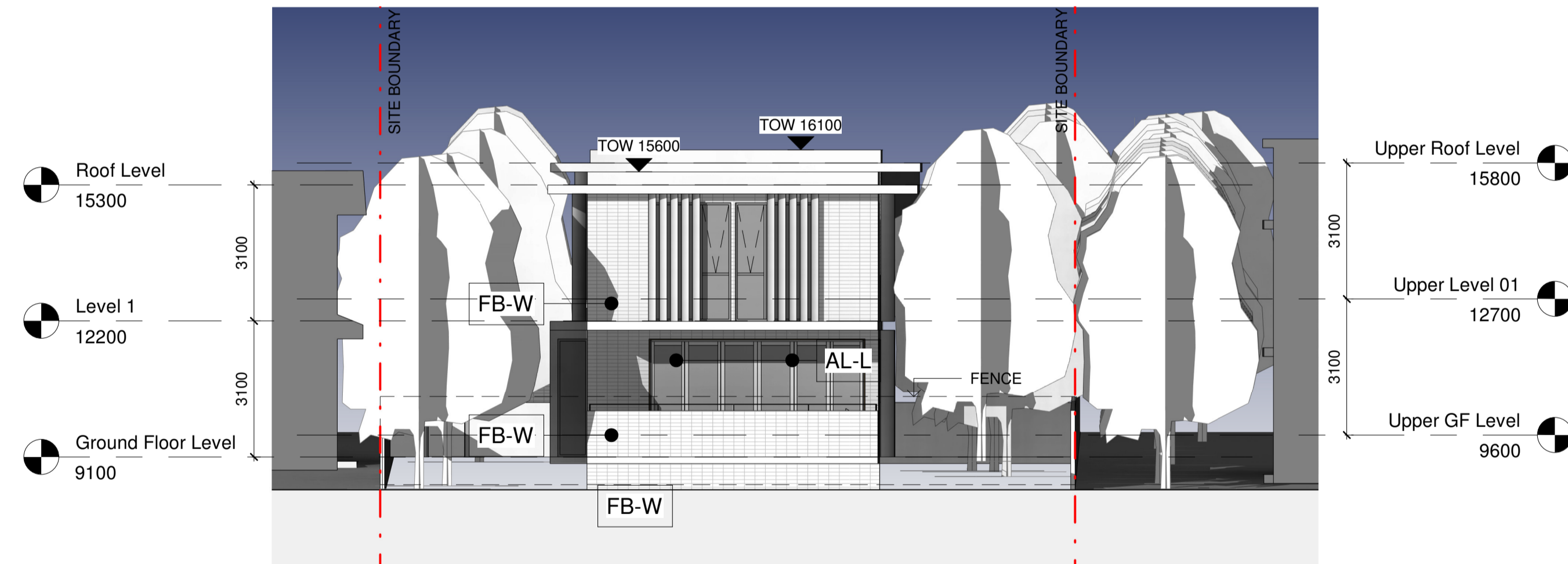
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PROJECT	
140 OCEAN STREET, NARRABEEN	
TITLE	
ELEVATION NORTH & SOUTH	

CLIENT		
MISSIONARY SISTERS OF BLESSED VIRGIN MARY		
DRAWN BY	CHECKED BY	DATE
JB	JO'B	29/08/19
SCALE (@ A1)	PROJECT NUMBER	
1 : 100	2019_002	
DRAWING NUMBER	REV	
DA105	B	



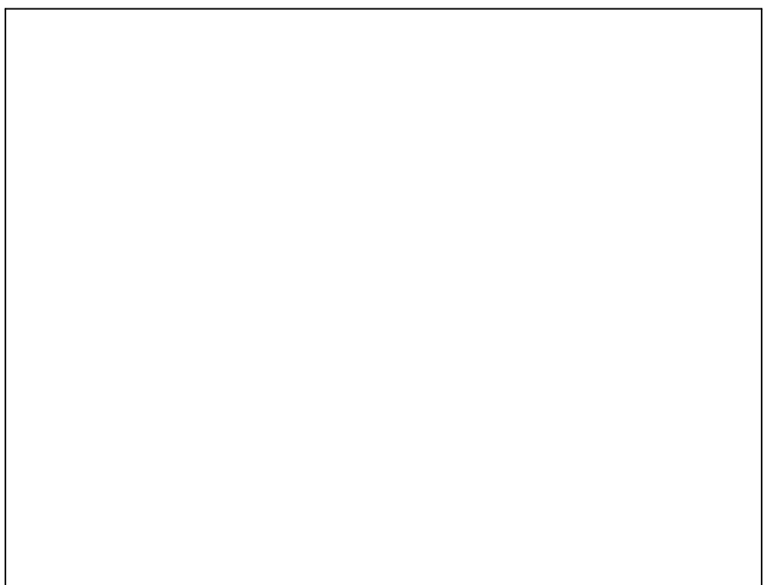
1 EAST ELEVATION
1 : 100



2 WEST ELEVATION
1 : 100

- FB-W FACE BRICK - WHITE
- FB-D FACE BRICK - DETAIL
- AR-C ARCHITECTURAL CONCRETE
- BF-D BATTEN FINISH - DARK
- AL-L ALUMINIUM LOUVRE

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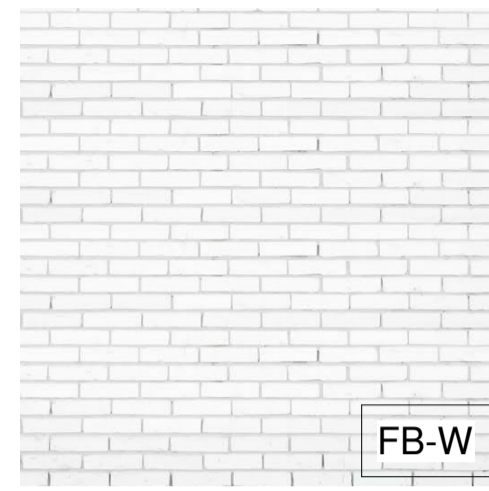



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PROJECT	140 OCEAN STREET, NARRABEEN	
TITLE	ELEVATION EAST & WEST	

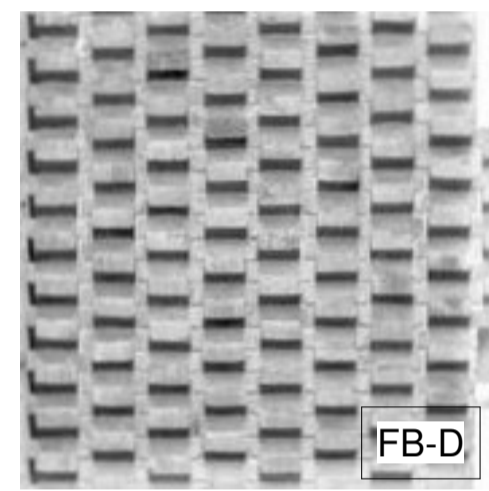
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SCALE (@ A1) 1 : 100		PROJECT NUMBER 2019_002
DRAWING NUMBER DA106		REV B



FB-W FACE BRICK - WHITE



ALUMINIUM FRAMED WINDOW



FB-D FACE BRICK - DETAIL



BALCONY BALUSTRADE



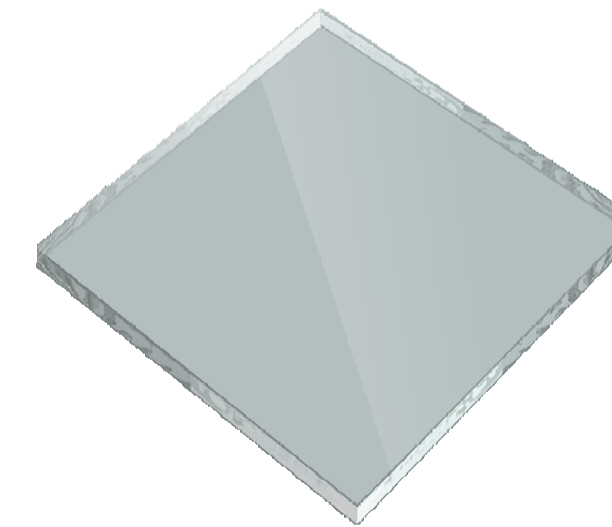
AR-C ARCHITECTURAL CONCRETE - OFF WHITE



BF-D BATTEN FINISH - DARK

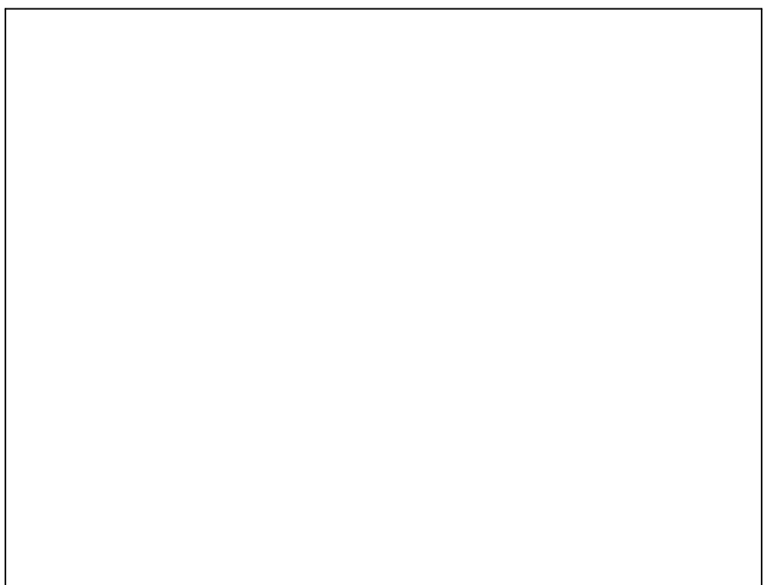


AL-L ALUMINIUM LOUVRE



CLEAR GLASS

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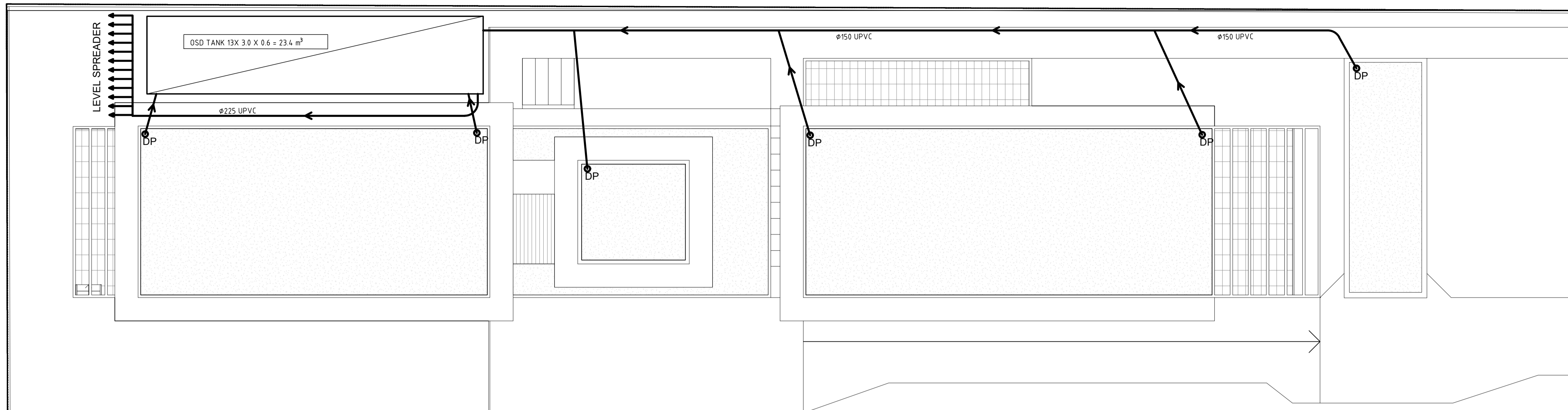


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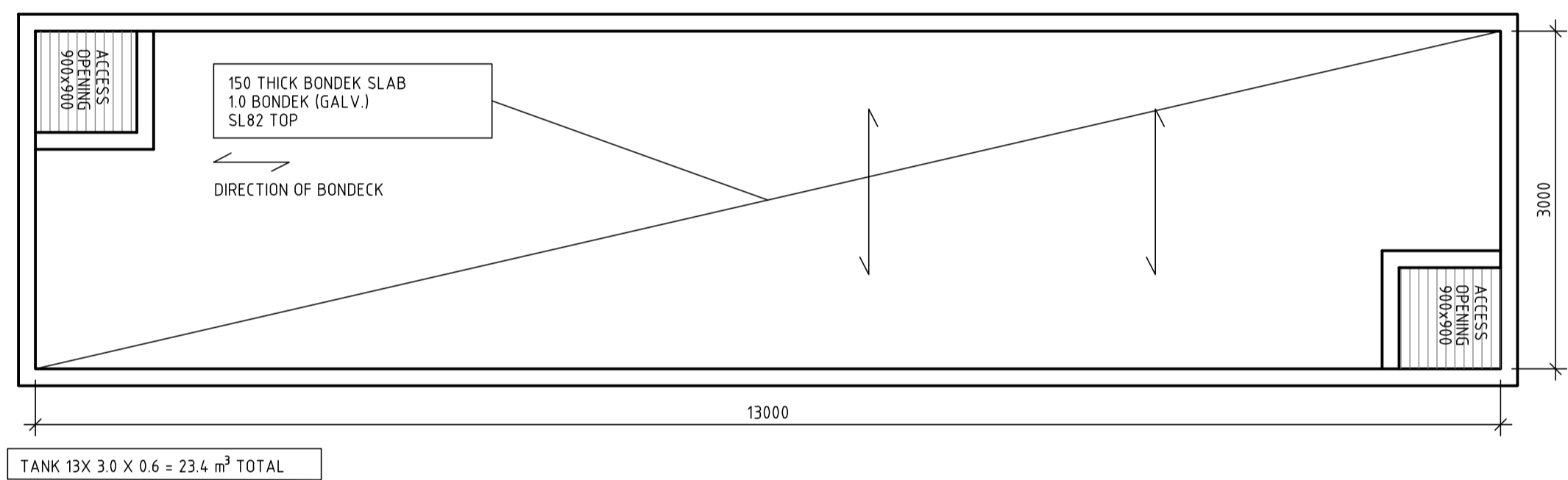
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PROJECT	140 OCEAN STREET, NARRABEEN
TITLE	EXTERNAL FINISHES

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DRAWN BY	CHECKED BY	DATE
JB	JO'B	23/11/19
SCALE (@ A1)		PROJECT NUMBER
NTS		2019_002
DRAWING NUMBER		REV
DA200		B



SITE PLAN
1:100



PLAN ON DETENTION TANK
1:50

SITE PARAMETERS	
ZONE	1
SITE AREA	950 m ²
OSD REQUIRED	22.8 m ³
OSD PROVIDED	23.4 m ³
5YEAR PRE-DEVELOPMENT FLOW RATE	36 l/sec
100YEAR POST-DEVELOPMENT DISCHARGE RATE	36 l/sec
ORIFICE DIAMETER	165 mm

HYDRAULIC NOTES

- ALL SERVICES ARE TO BE LOCATED IN THE FIELD IN CONJUNCTION WITH A RESPONSIBLE OFFICER OF EACH RELEVANT AUTHORITY PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- DRAINAGE PITS ARE TO BE 450 mm SQUARE OR LARGER AND FITTED WITH A GALVANISED GRATE.
- DRAINAGE PIPE SIZES ARE ø100 mm UNLESS NOTED.
- DRAINAGE PIPES SHALL BE SEWER GRADE PVC UNLESS NOTED.
- ALL BARE SOIL AREAS ARE TO BE PROTECTED FROM EROSION BY TEMPORARY MEASURES AND RE-VEGETATED AT CESSATION OF CONSTRUCTION.
- A SEDIMENT CATCHMENT POND IS TO BE PROVIDED AT THE RATE OF 120 m³ CAPACITY PER HECTARE DRAINED. THE DETENTION TANKS MAY BE USED FOR THIS PURPOSE, PROVIDED SUFFICIENT WATER IS RETAINED AS A POOL DURING CONSTRUCTION & ADEQUATE SAFETY FENCING IS PROVIDED.
- THE DOWNHILL BOUNDARY OF THE SITE IS TO BE PROTECTED BY HAY BALE OR FILTER FABRIC FENCE DURING CONSTRUCTION AS SHOWN IN ATTACHED DETAIL.
- THE STREET DRAINAGE PIT LOCATED DOWNHILL OF THE SITE SHALL BE PROTECTED FROM SEDIMENT WITH HAY BALES.
- A SINGLE CONSTRUCTION ENTRANCE SHALL BE ESTABLISHED IN THE MANNER SHOWN IN ATTACHED DETAIL.
- ALL EROSION PROTECTION MEASURES TO MEET THE REQUIREMENTS OF THE DEPT. OF CONSERVATION AND LAND MANAGEMENT AS OUTLINED IN URBAN EROSION & SEDIMENT CONTROL, SC5 TECH HANDBOOK No.2 1978 UNLESS SPECIFIED BY COUNCIL.

PIPE MAXIMUM FLOW TABLE (BASED ON $d = 0.0656A + MANNINGS n = 0.012$)

SLOPE (%)	100 mm PVC		150 mm PVC		225 mm PVC	
	D (m)	Q (l/s)	D (m)	Q (l/s)	D (m)	Q (l/s)
1	5.6	85	16.5	260	48.6	750
2	7.9	120	23.3	360	68.7	1060
3	9.7	150	28.6	440	84.2	1300
4	11.2	175	33.0	510	97.2	1500
5	12.5	190	36.9	570	109	1680
10	17.7	240	52.2	810	154	2380

EIA - EQUIVALENT IMPERVIOUS AREA

GENERAL NOTES

- THESE NOTES SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANTS DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTION AS ISSUED DURING THE COURSE OF THE CONTRACT. ALL DISCREPANCIES SHALL BE REFERRED TO THE ARCHITECT OR ENGINEER BEFORE PROCEEDING WITH THE WORK.
- DIMENSIONS SHALL NOT BE OBTAINED BY SCALING THE STRUCTURAL DRAWINGS.
- SETTING OUT DIMENSIONS SHOWN ON THE DRAWINGS SHALL BE VERIFIED BY ON-SITE MEASUREMENT.
- DURING CONSTRUCTION THE STRUCTURE SHALL BE MAINTAINED IN A STABLE CONDITION AND NO PART SHALL BE OVERSTRESSED.
- ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT EDITIONS OF THE SAA CODE AND THE BY-LAWS AND ORDINANCES OF THE RELATIVE BUILDING AUTHORITY.
- EXCAVATIONS SHALL NOT BE PERMITTED WITHIN 2 METRES OF AN EXISTING STRUCTURE WITHOUT PRIOR APPROVAL OR RECOMMENDATIONS FOR SHORING OR UNDERPINNING PROVIDED BY ENGINEER.

FOUNDATIONS AND FOOTINGS

- FOOTINGS HAVE BEEN DESIGNED FOR AN ALLOWABLE INTENSITY OF BEARING PRESSURE OF 150 kPa. THE BUILDER SHALL OBTAIN APPROVAL OF THE FOUNDATION MATERIAL BEFORE PLACING CONCRETE.
- FOOTINGS SHALL BE PLACED UNDER WALLS AND COLUMNS UNLESS OTHERWISE NOTED.

SUB-GRADE

- UNDER ALL SLABS ON GRADE, WHETHER ON CUT OR FILL, REMOVE SOFT SPOTS AND RE-FILL BY COMPACTING CUT SURFACES OR FILL SURFACES IN LAYERS NOT EXCEEDING 200 mm TO 95% DRY DENSITY, ENSURING MINIMUM SETTLEMENT TO SLABS.

CONCRETE WORK

- ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 3600.
- CONCRETE QUALITY SHALL BE AS TABULATED AND SHALL BE VERIFIED BY TESTS.

ELEMENT	SLUMP	MAX SIZE AGG	CEMENT TYPE	ADMIXTURE	MPa CONCRETE GRADE
ALL	80	20	A	NIL	32

REINFORCEMENT

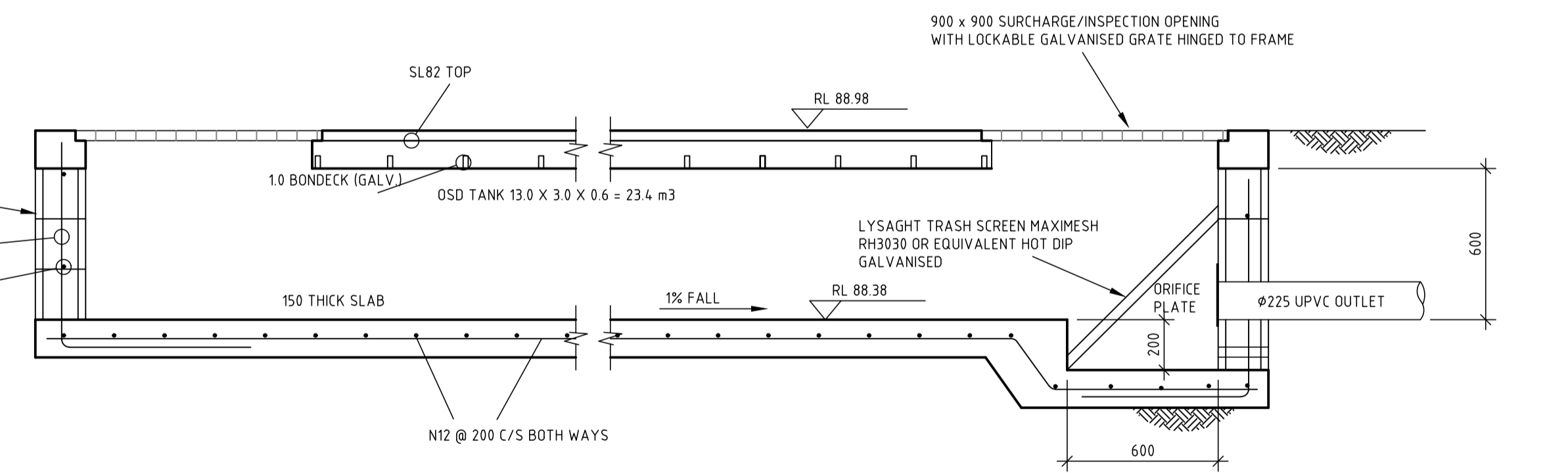
- CLEAR CONCRETE COVERS TO REINFORCEMENT SHALL BE AS FOLLOWS UNLESS OTHERWISE SHOWN.

ELEMENT	CONDITION 1 NOT TO BE EXPOSED TO WEATHER GROUND WATER OR FRESH WATER	CONDITION 2 TO BE EXPOSED TO WEATHER GROUND WATER OR FRESH WATER	CONDITION 3 CAST AGAINST OTHER FORMWORK OR THE GROUND
PAD FOOTINGS & PILE CAPS	-	65	75
STRIP FOOTINGS	-	50	65
SOME OR CAST PIERS	-	50	75
COLUMNS	40	50	75
WALLS, INCLUDING RETAINING WALLS	20	30	65
BEAMS	25	40	65
SLABS, INCLUDING JOISTS & HOLLOW BLOCK CONSTRUCTION	20	30	65
REINFORCEMENT ADJACENT TO HOLLOW BLOCKS INTEGRAL WITH STRUCTURE	5	-	-

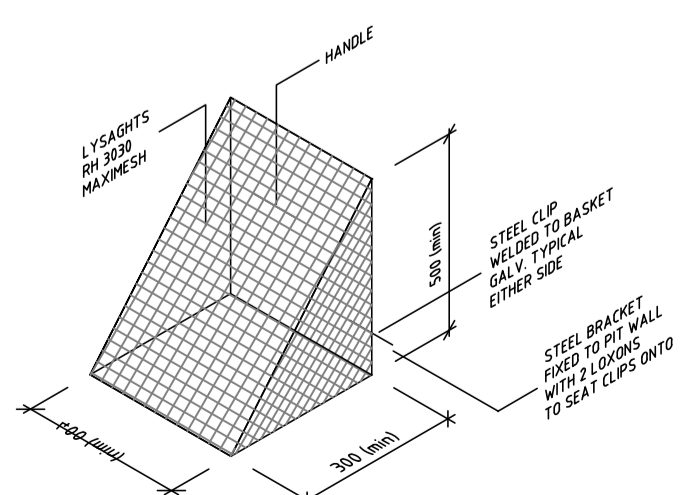
NOTE:

- SLABS POURED OVER A MEMBRANE ON THE GROUND ARE INCLUDED AS CONDITION 2.
- SLABS EXPOSED TO CORROSIVE VAPOURS, CORROSIVE GROUND WATER, SEA WATER OR SPRAY ARE TO HAVE REINFORCEMENT COVER AS NOTED OR NOT LESS THAN AS REQUIRED FOR CONDITION 3.

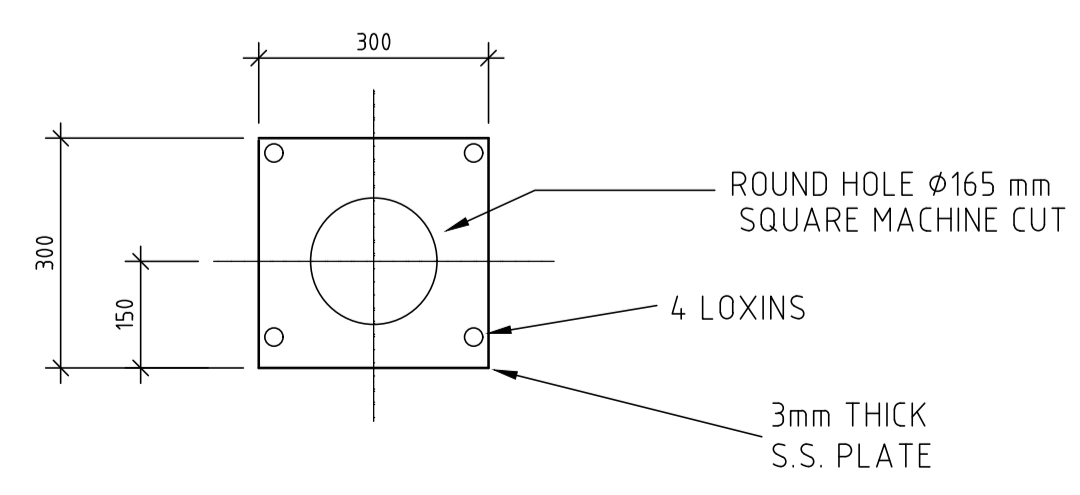
- SIZES OF ELEMENTS DO NOT INCLUDE THICKNESS OF APPLIED FINISHES.
- CONSTRUCTION JOINTS WHERE NOT SHOWN SHALL BE TO THE APPROVAL OF THE ENGINEER.
- BEAM DEPTHS ARE WRITTEN FIRST AND INCLUDE SLAB THICKNESS, IF ANY, UNL.
- NO HOLES OR CHASES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE ELEMENTS WITHOUT PRIOR APPROVAL OF THE ENGINEER.
- REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY. IT IS NOT NECESSARILY SHOWN IN TRUE PROJECTION.
- SPLICES IN REINFORCEMENT MADE IN POSITIONS OTHER THAN SHOWN SHALL BE TO THE APPROVAL OF THE ENGINEER WHERE THE LAP LENGTH IS NOT SHOWN IT SHALL BE SUFFICIENT TO DEVELOP THE FULL STRENGTH OF THE REINFORCEMENT.
- WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED UNLESS SHOWN ON THE STRUCTURAL DRAWINGS.
- PIPES OR CONDUITS SHALL NOT BE PLACED WITHIN THE CONCRETE COVER TO REINFORCEMENT WITHOUT THE APPROVAL OF THE ENGINEER.
- ALL REINFORCING BARS SHALL COMPLY WITH AS 1302. ALL FABRIC SHALL COMPLY WITH AS 1303 AND AS 1304 AND SHALL BE SUPPLIED IN FLAT SHEETS.
- REINFORCING SYMBOLS
S GRADE 2305 DEFORMED BAR
C GRADE 440C COLD WORKED DEFORMED BAR
Y GRADE 440R DEFORMED BAR
R GRADE 230R PLAN BAR
F GRADE 450 WELDED WIRE FABRIC
N GRADE 500 DEFORMED BAR
- THE NUMBER IMMEDIATELY FOLLOWING THESE SYMBOLS IS THE BAR DIAMETER IN MILLIMETRES.
- FABRIC REINFORCEMENT TO BE LAPPED 300 MINIMUM AT ENDS AND SIDES UNL. LAPS IN POSITION OF MAXIMUM MOMENT ARE NOT PERMITTED.
- ALL REINFORCEMENT SHALL BE FULLY SUPPORTED ON INSULATED STEEL, PLASTIC OR CONCRETE CHAIRS SPACED AT 900 AND 750 CENTRES BOTH WAYS UNDER ROOF AND FABRIC REINFORCEMENT RESPECTIVELY. RODS SHALL BE TIED AT ALTERNATE INTERSECTIONS.
- MINIMUM STRIPPING TIMES FOR FORMWORK SHALL BE AS RECOMMENDED IN AS 1599 OR AS DIRECTED BY ENGINEER.



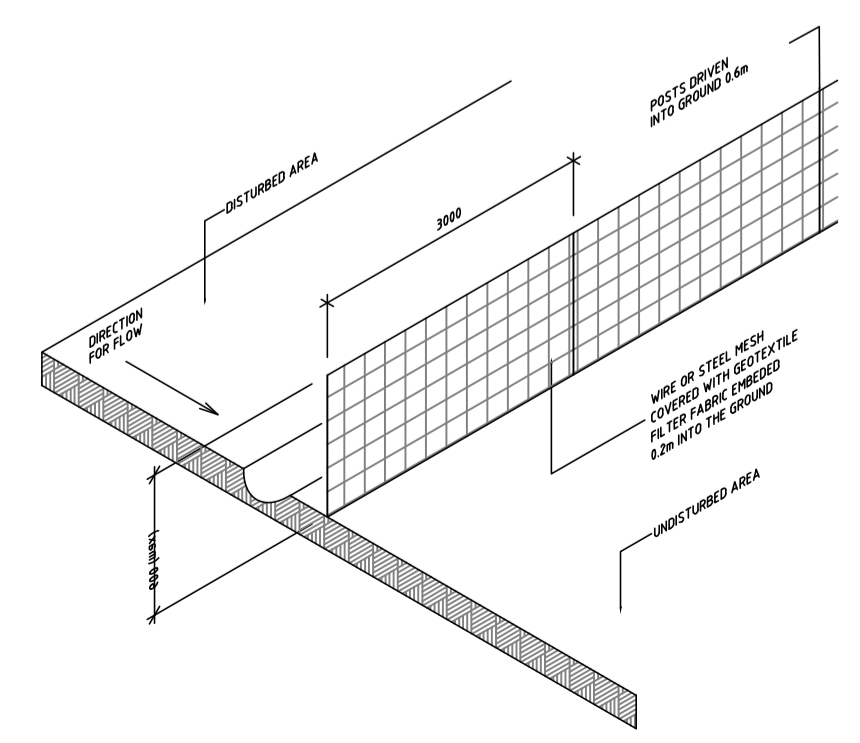
TYPICAL SECTION THRU OSD TANK
1:20



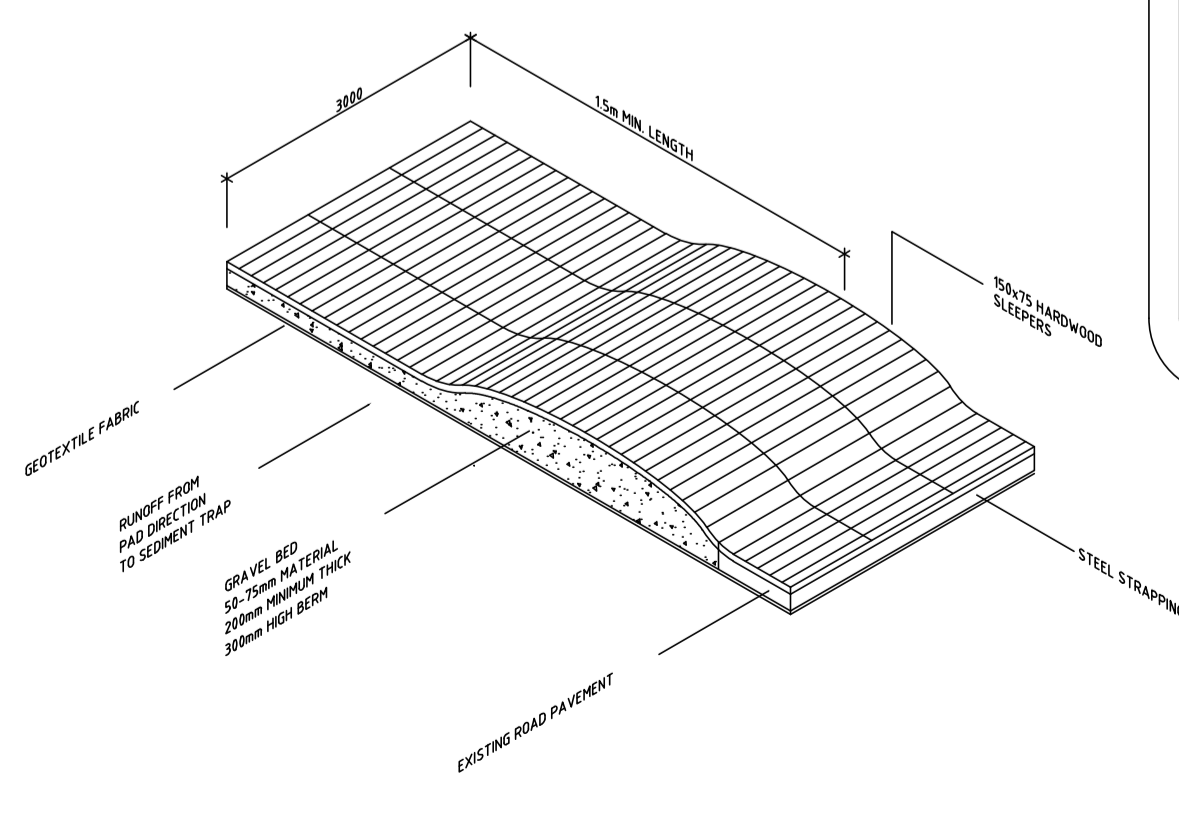
SCREEN DETAIL
N.T.S.



ORIFICE PLATE DETAIL
1:10



SEDIMENT FENCE DETAIL
N.T.S.



TEMPORARY CONSTRUCTION EXIT
N.T.S.

SPECIAL NOTES

- ALL PIPES TO BE LAID ON 75 mm SAND BED WITH THE BARRELS FULLY SUPPORTED ('B' CLASS BEDDING).
- PROVIDE "CLEANING EYES" TO ALL DOWN PIPES NOT DIRECTLY CONNECTED TO PITS.
- "HEAVY DUTY" GRATES AND COVERS ARE TO BE PROVIDED IN TRAFFICABLE AREAS.
- THE SURF IN THE DETENTION TANK SHALL BE DELETED.
- ORIFICE PLATES USED TO RESTRICT THE OUTFLOW MUST BE MACHINED TO THE EXACT DIMENSION AS CALCULATED, FROM MINIMUM 3 mm THICK STAINLESS STEEL OR 3 mm THICK GALVANISED STEEL AFTER MACHINING, THEY MUST BE CAST IN THE PIT WALLS OR PERMANENTLY FIXED IN THE PIT BY SOME APPROVED METHOD SO THEY CANNOT BE EASILY REMOVED.
- A PLAQUE MEASURING NO LESS THAN 400 mm X 200 mm SHALL BE IN SOME WAY PERMANENTLY ATTACHED AND PROMINENTLY DISPLAYED WITHIN THE IMMEDIATE VICINITY OF THE OSD DEVICE. THIS PLAQUE SHALL ADVISE OCCUPERS OF THE PROPERTY OF THE EXISTENCE OF THE OSD DEVICE AND ALSO THAT THE DEVICE IS NOT IN ANY WAY TO BE TAMPERED WITH OR CHANGED WITHOUT PRIOR WRITTEN CONSENT OF COUNCIL.
- THE CONSTRUCTED OSD INSTALLATION MUST BE APPROPRIATELY CERTIFIED BY A SUITABLY QUALIFIED AND EXPERIENCED CONSULTING ENGINEER (GENERALLY OF ENG. QUALIFICATION) WHO MUST STATE THAT IT COMPLIES WITH COUNCIL'S OSD POLICY, ALL RELEVANT CODES AND STANDARDS AND ALSO THAT IT IS GENERALLY IN ACCORDANCE WITH APPROVED PLANS.
- UPON COMPLETION OF THE OSD WORKS, WORK-AS-EXECUTED (WAE) PLANS SHALL BE SUBMITTED TO THE COUNCIL BY THE CONSULTING ENGINEER/REGISTERED SURVEYOR TO VERIFY THAT THE VOLUME OF STORAGE HAS BEEN ATTAINED AND THAT CRITICAL WATER AND FLOOR LEVELS ARE IN ACCORDANCE WITH DESIGN REQUIREMENTS. ANY CHANGES OR VARIATIONS TO THE APPROVED PLANS SHALL BE HIGHLIGHTED IN RED.
- CERTIFICATION ON THE STANDARD FORM FOR ON-SITE DETENTION RECORD OF INSTALLATION ISSUED BY COUNCIL AND WAE PLANS SHALL BE SUBMITTED TOGETHER WITH THE COMPLIANCE CERTIFICATE.

CIVIL & STRUCTURAL ENGINEERING DESIGN SERVICES PTY. LTD.

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CLIENT: MISSIONARY SISTERS OF BLESSED MARY
PROJECT: HYDRAULICS DETAILS FOR NEW DEVELOPMENT AT 140 OCEAN ST, NARRABEEN

Drawn By: KZ
Checked By: E. A. BENNETT M.I.E. Aust.
Date: 13/09/2019
Scale: AS SHOWN
Drawing No: M-11-267490
Amendment: -

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Registered Professional Engineer 19823+
Mr Edward A. Bennett
MIEAust CPEng
Signature: *E. A. Bennett* Date 13/09/2019
Register on the WEB in the Category of
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