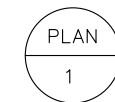
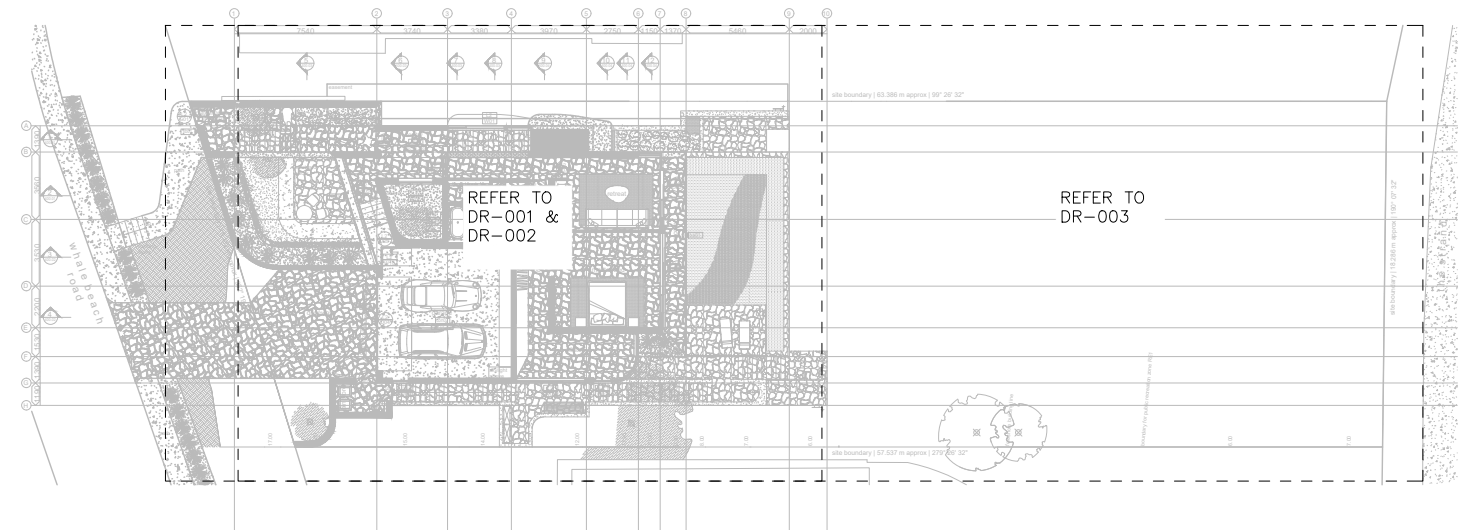


32 THE STRAND, WHALE BEACH

STORMWATER MANAGEMENT PLAN

DRAWING NUMBER	DRAWING TITLE
DR-000	LEGEND
DR-001	PIPE LAYOUT – SECOND FLOOR
DR-002	PIPE LAYOUT – FIRST FLOOR
DR-003	PIPE LAYOUT – GROUND FLOOR
DR-110	DETAILS



SITE LAYOUT
1: 400


NOTES:

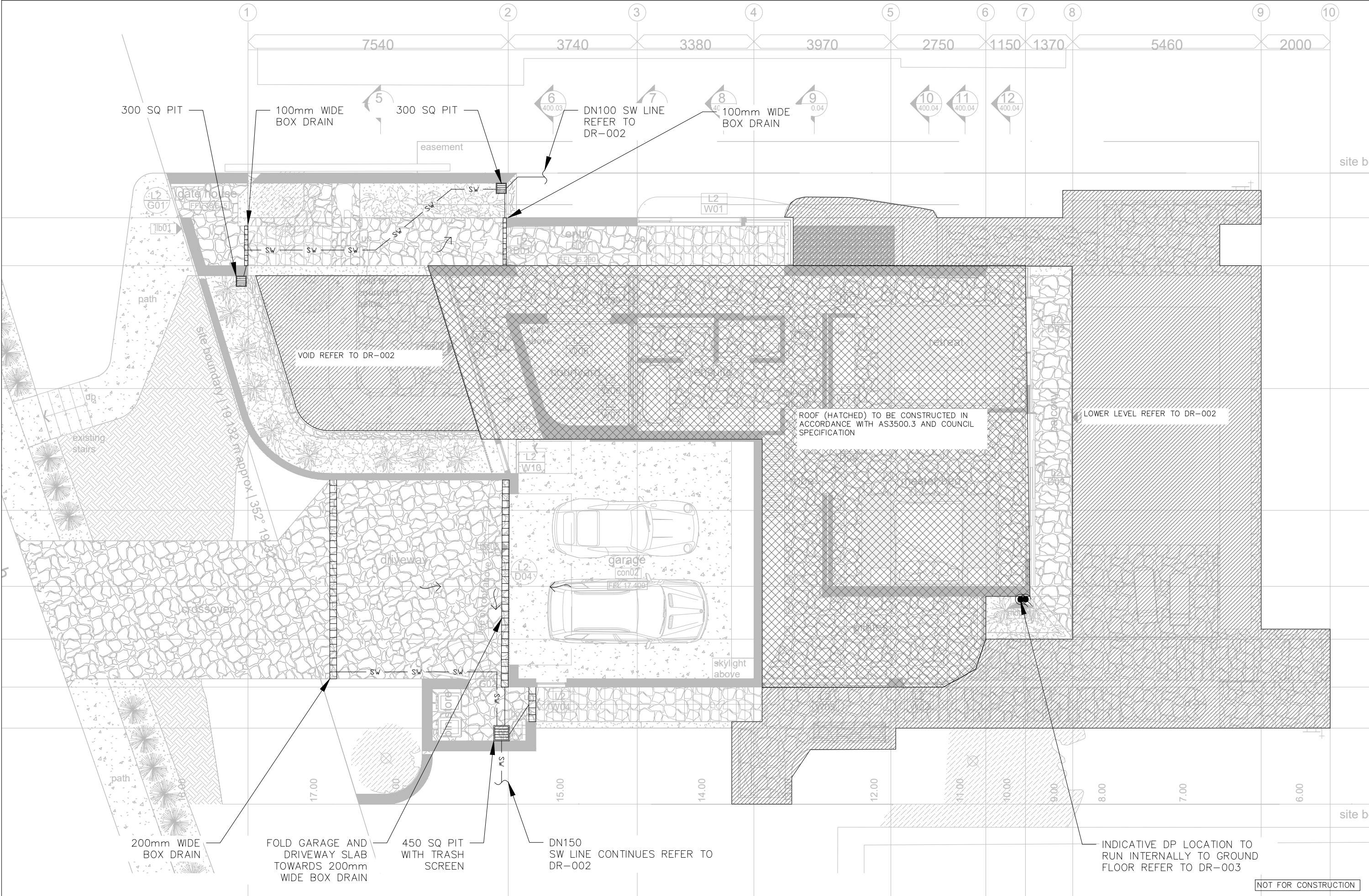
- ALL DIMENSIONS TO BE CONFIRMED ON SITE PRIOR TO CONSTRUCTION.
- SITE LAYOUT BASED ON ARCHITECTURAL PLANS BY SHAUNLOCKYERARCHITECTS (APRIL 2019).
- LOCATION OF ALL SERVICES MUST BE CONFIRMED ON SITE PRIOR TO COMMENCEMENT OF EXCAVATION WORKS.
- ALL STORMWATER DRAINAGE PIPES AND ASSOCIATED DEVICES ARE TO BE INSTALLED IN ACCORDANCE WITH THE RELEVANT STANDARDS, THE BUILDING CODE OF AUSTRALIA, MANUFACTURER'S RECOMMENDATIONS, SYDNEY CATCHMENT AUTHORITY RECOMMENDED PRACTICE, AND LOCAL COUNCIL, AS APPLICABLE.
- ALL INVERT LEVELS PROVIDED ON THIS DRAWING ARE REDUCED TO AHD AND BASED ON INTERPOLATED SURFACE LEVELS AND SYSTEM REQUIREMENTS
- WHERE POSSIBLE, PIPEWORK SHALL BE LOCATED EXTERNAL TO THE BUILDING.
- DOWNPIPES AND STORMWATER LINES TO BE SEALED DN100 uPVC UNLESS OTHERWISE NOTED.
- STORMWATER PIPES TO BE GRADED AT A MINIMUM 1% UNLESS NOTED OTHERWISE.
- ALTERNATIVE GUTTER AND DOWNPIPE CONFIGURATION MAY BE INSTALLED PROVIDED IT COMPLIES WITH AS3500.
- ALL PIPE AND CONDUITS TO BE MARKED IN ACCORDANCE WITH AS1345 – 1995.
- TRENCHES AND SERVICE SEPARATIONS IN ACCORDANCE WITH AS/NZS 5601, AS/NZS 3500, AND AS/CA S009.


LEGEND:

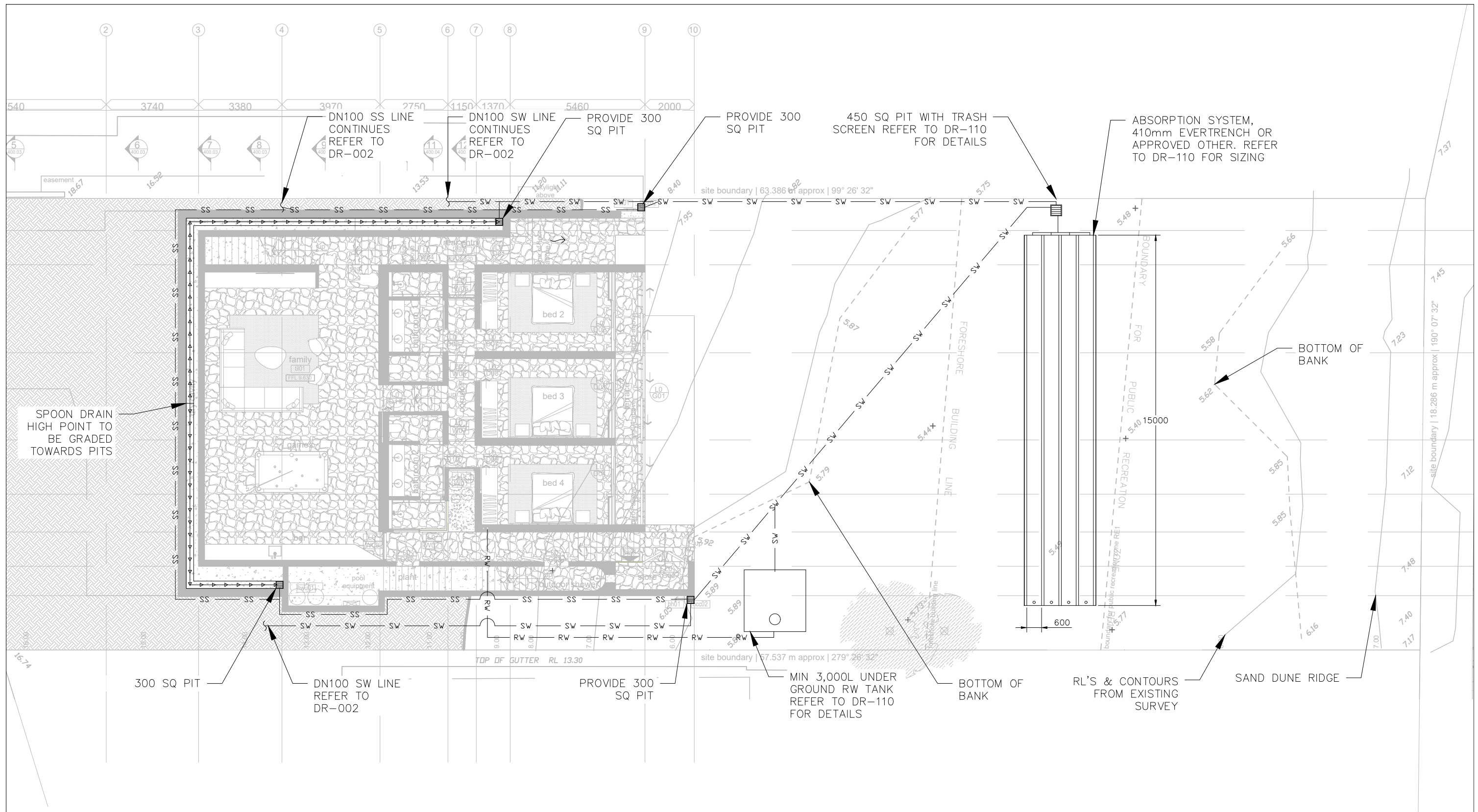
- DOWNPIPE
- SW — STORMWATER PIPE
- RW — RAINWATER PIPE
- SS — SUBSOIL PIPE
- DRAINAGE PIT
- IO INSPECTION OPENING

NOT FOR CONSTRUCTION


This drawing is confidential and shall only be used for the purposes of this project.					Scale	THE SIGNING OF THIS TITLE BLOCK CONFIRMS THE DESIGN AND DRAFTING OF THIS PROJECT HAVE BEEN PREPARED AND CHECKED IN ACCORDANCE WITH THE STELLEN QUALITY ASSURANCE SYSTEM				 Stellen Stellen Consulting ABN 61 149 095 189		This design complies with: AS3500.3:2015		32 THE STRAND, WHALE BEACH																													
<div>REVISIONS</div> <table><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td>1</td><td>SSD</td><td>05/07/2019</td><td>RELOCATE RW TANK</td><td>IRW</td></tr><tr><td>0</td><td>SSD</td><td>17/06/2019</td><td>FOR DA SUBMISSION</td><td>IRW</td></tr><tr><td>No.</td><td>BY</td><td>DATE</td><td>DESCRIPTION</td><td>APPD</td></tr></table>																	1	SSD	05/07/2019	RELOCATE RW TANK	IRW	0	SSD	17/06/2019	FOR DA SUBMISSION	IRW	No.	BY	DATE	DESCRIPTION	APPD	NA				DO NOT SCALE. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED				LEGEND			
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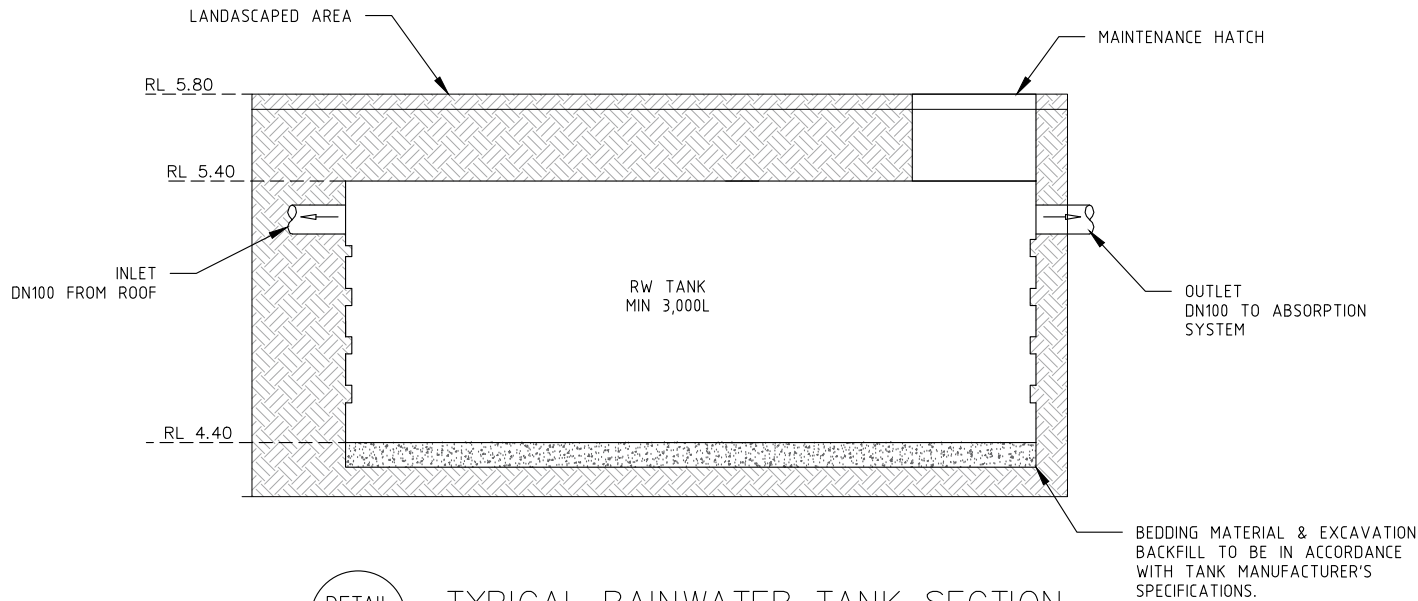


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				PIPE LAYOUT - SECOND FLOOR														
REVISIONS								DESIGNED	LES	CHECKED	IRW							
								DRAWN	LES	CHECKED	IRW							
								APPROVED	IRW	DATE	05/07/2019							
	DO NOT SCALE. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED																	
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REVISIONS						1:150	DESIGNED	SSD	CHECKED	IRW		PIPE LAYOUT - GROUND FLOOR												
							DRAWN	SSD	CHECKED	IRW														
							APPROVED	IRW	DATE	05/07/2019														
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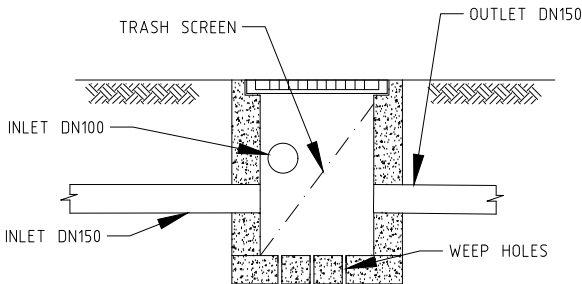
DETAIL
1

TYPICAL RAINWATER TANK SECTION

NOT TO SCALE

NOTES:

- PIPES TO THE RW TANK MUST BE WATER TIGHT TO PREVENT LEAKAGE THAT RESULTS IN SATURATION OF SOILS AND DAMAGE TO
- RW TANK TO BE A "DURAPLAS 3,000 LITRE LATTICE TANK", APPROVED EQUIVALENT OTHER CAN ALSO BE USED.
- RAINWATER TANK TO BE CONNECTED TO ROOF (AT LEAST 70M²)
- RAINWATER TANK TO BE CONNECTED TO TOILETS FOR FLUSHING, ONE INTERNAL TAP FOR COLD CLOTHES WASHING AND ONE EXTERNAL GARDEN TAP IN LINE WITH BASIX REQUIREMENTS.



DETAIL
2

450 SQUARE MEDIUM DUTY PIT

NOT TO SCALE

NOTES:

- 'LYSAGHT' MAXIMESH RH3030 (HOT DIPPED GALVANISED) OR EQUIVALENT.
- MAXI MESH SCREENS MUST BE PLACED SUCH THAT THE LONG AXIS OF THE OVAL SHAPED HOLES ARE ORIENTATED HORIZONTALLY WITH THE PROTRUDING LIP ANGLED UPWARDS AND FACING TOWARDS THE OUTLET
- 20DIA AT 150 SPACING AT BASE OF SUMP. BEDDING TO BE 100 THICK SAND/GRAVEL MATERIAL, FREE DRAINING WITH SUBSOIL PIPE TO NEAREST DOWNSTREAM PIT, PIPE, KERB OR OUTLET.

SITE DETAILS

SITE AREA	1100m ²
IMPERVIOUS AREA TO ABSORPTION PIT (DA)	465m ²
NOMINAL ABSORPTION RATE (ARn)	0.25 l/m ² /s

ABSORPTION SYSTEM DETAILS

TRENCH CROSS-SECTIONAL AREA	0.175m ²
WIDTH OF TRENCH	2.9m
TRENCH LENGTH	15m

REQUIRED ABSORPTION SYSTEM VOLUME CALCULATION FOR 50 YEAR ARI STORM (BOM)

TIME (min)	RAINFALL INTENSITY (mm/hr)	RUNOFF (l/s)	RUNOFF VOLUME (m ³)	INFILTRATION VOLUME (m ³)	REQUIRED ABSORPTION SYSTEM
t	I (50 YEAR)	$R = I \times DA / 3600$	$RV = R \times t \times \frac{60}{1000}$	$IV = BA \times ARd \times t \times \frac{60}{1000}$	$V_{req} = RV - IV$
5	253	32.68	9.8	2.7	7.1
6	241	31.13	11.21	3.24	7.97
10	203	26.22	15.73	5.4	10.33
20	147	18.99	22.79	10.8	11.99
30	116	14.98	26.97	16.2	10.77
60	74.4	9.61	34.6	32.4	2.2
120	46.4	6.03	43.43	64.8	21.37

PROPOSED ABSORPTION SYSTEM VOLUME	12.84m ³
MAXIMUM REQUIRED ABSORPTION VOLUME	11.99m ³

NOT FOR CONSTRUCTION

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REVISIONS				
1	SSD	05/07/2019	RELOCATE RW TANK	IRW
0	SSD	17/06/2019	FOR DA SUBMISSION	IRW
No.	BY	DATE	DESCRIPTION	APPD

Scale

AS NOTED

DO NOT SCALE. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED

THE SIGNING OF THIS TITLE BLOCK CONFIRMS THE DESIGN AND DRAFTING OF THIS PROJECT HAVE BEEN PREPARED AND CHECKED IN ACCORDANCE WITH THE STELLEN QUALITY ASSURANCE SYSTEM			
DESIGNED	SSD	CHECKED	IRW
DRAWN	SSD	CHECKED	IRW
APPROVED	IRW	DATE	05/07/2019



Stellen Consulting ABN 61 149 095 189

This design complies with:
AS3500.3:2015

32 THE STRAND, WHALE BEACH

DETAILS

Size	A3	Status	FOR DA SUBMISSION	Dwg No.	DR-110	Rev.	1
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