

STORMWATER MANAGEMENT PLAN

88 BOWER STREET MANLY

 **National
Engineering
Register**
ENGINEERS
AUSTRALIA
Con Katsoulas
BE (Civil), MIEAust, CPEng No. 449924

SHEET INDEX:

SHEET No.	TITLE	AMMENDMENT No.
1	INDEX SHEET	0
2	STORMWATER DETAIL PLAN	0
3	LOWER GROUND FLOOR PLAN	0
4	LEVEL 1 PLAN	0
5	ENTRY LEVEL PLAN	0
6	ROOF PLAN	0
7	RAINWATER TANK DETAIL & DRIVEWAY LONG SECTION	0
8	DRIVEWAY LONG SECTION	0
9	EROSION AND SEDIMENT CONTROL PLAN	0



FLOWPATH



FLOOR WASTE



FS-1 FLOW SPREADER AND DOWNPIPE TYPE 1



PROPOSED GRATED PIT



PROPOSED SEALED WATER TIGHT PIT



RAINHEAD



SUMP OVERFLOW



PROPOSED STORMWATER PIPE - GRAVITY



PROPOSED V-DRAIN



C PROPOSED STORMWATER PIPE - CHARGED



RM PROPOSED RISING MAIN (PRESSURE PIPE)



SS PROPOSED SUBSOIL DRAIN



PROPOSED BUILDING - GROUND FLOOR



PROPOSED BUILDING - FIRST FLOOR



PROPOSED CONTOURS

LEGEND

IL 0.00

PIT/PIPE INVERT LEVEL

TK 0.00

TOP OF KERB LEVEL



GRATED DRAIN

+ 00.00

EXISTING SURFACE LEVEL

+ 00.00

PROPOSED SURFACE LEVEL



IP SEALED INSPECTION OPENING



DP-1 DOWNPIPE - TYPE 1



HIP ROOF



FLAT ROOF



TERRACE/BALCONY



BASIX ROOF AREA DRAINING TO RAINWATER TANK



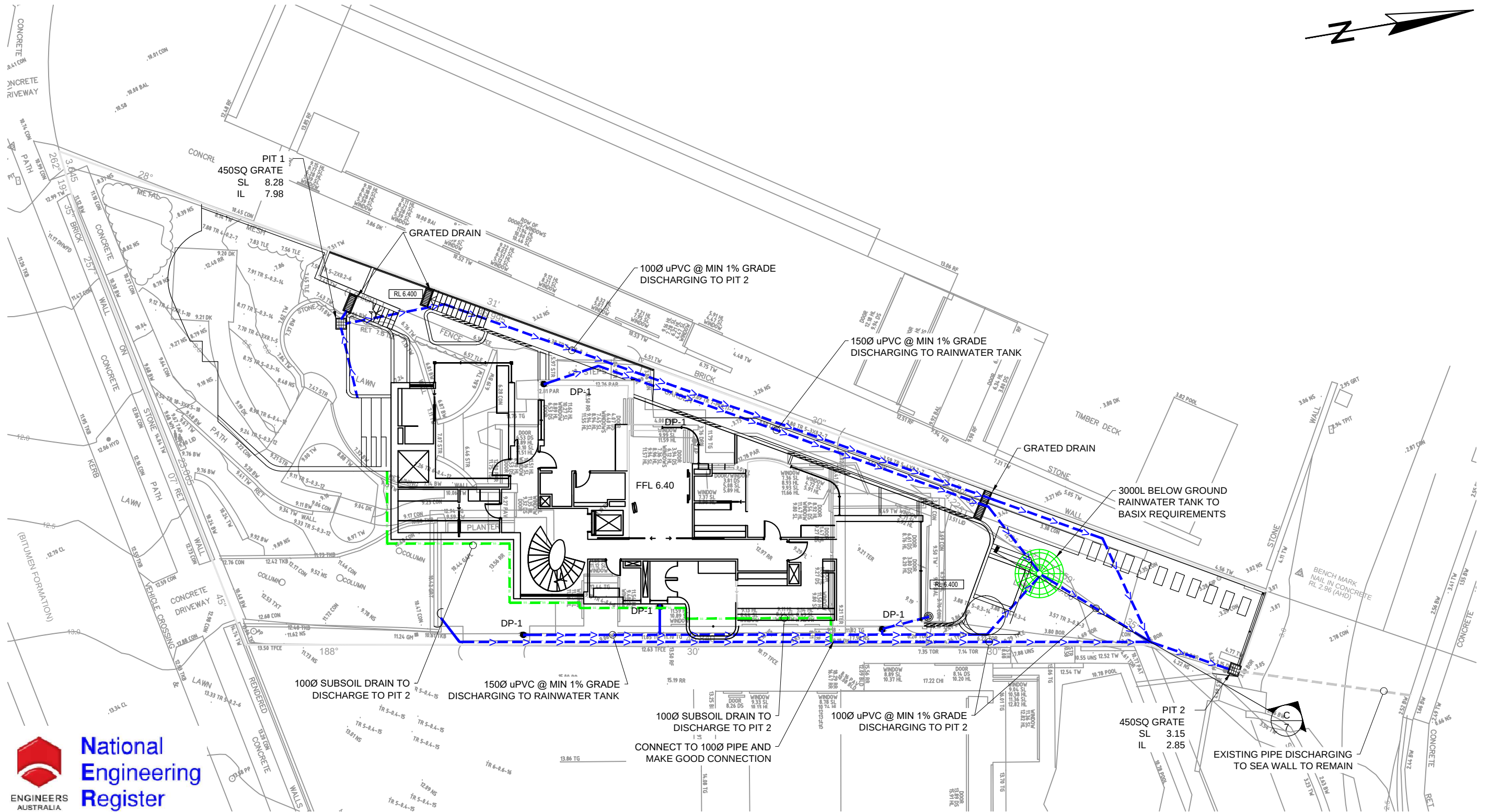
AREA BYPASSING ON-SITE DETENTION TANK

- NOTES:
- ALL PROPOSED PITS TO BE 450 x 450 CAST IN-SITU OR PRECAST PITS UNLESS SHOWN OTHERWISE.
 - ALL CHARGED LINE PIPES TO BE 100Ø uPVC SEWER CLASS UNLESS SHOWN OTHERWISE
 - ALL DOWNPIPES TO BE 90Ø uPVC OR 100 x 50 UNLESS OTHERWISE SHOWN
 - ALL NON-PRESSURE STORMWATER PIPES TO BE 100Ø uPVC UNLESS SHOWN OTHERWISE
 - ALL GRATED DRAINS TO BE MINIMUM 150 WIDE GALVANIZED HEAVY DUTY GRATES.
 - ALL NON-TRAFFICABLE PITS TO BE LIGHT DUTY. PITS IN TRAFFICABLE AREAS TO BE HEAVY DUTY.
 - ALL WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH COUNCILS SPECIFICATIONS.
 - ALL PITS GREATER THAN 1.2m DEPTH SHALL INCLUDE STEP IRONS AND HAVE MINIMUM CLEAR DIMENSIONS OF 600 x 600.
 - ALL PITS ARE TO BE BENCHED TO ALLOW SMOOTH FLOW OF WATER THROUGH PITS
 - ALL DOWNPIPES SHALL CONFORM TO AS/NZS 1866 FOR ALUMINIUM PIPES AND AS 1254, AS/NZS 1260, AS 1273, AS/NZS 1477, AS/NZS 2179.2 AND AS 2032 FOR uPVC PIPES.
 - ALL BOX GUTTERS SHALL COMPLY WITH AS/NZS 2179.1
 - ALL BOX GUTTERS SHALL BE CONSTRUCTED WITH A MINIMUM 1:200 GRADE TO SUMP/DOWNPIPES
 - ALL DRAINAGE WORKS SHALL BE IN ACCORDANCE WITH AS 3500.3.2

DOWNPIPE TYPE	DOWNPIPE SIZES	
	ROUND	RECTANGULAR
1	90Ø	100 X 75
2	100Ø	100 X 75
3	125Ø	100 X 100
4	150Ø	150 X 150

FOR DA APPROVAL

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ARCHITECT SQUILLACE								DESIGNED: C.K.		SCALE: AS SHOWN		
CONSULTANT -	No.	AMMENDMENT	DATE	No.	AMMENDMENT	DATE		CHECKED: C.K.		DATUM: AHD		
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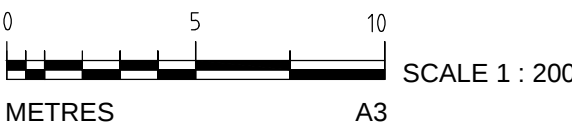


SITE PLAN
SCALE: 1:200



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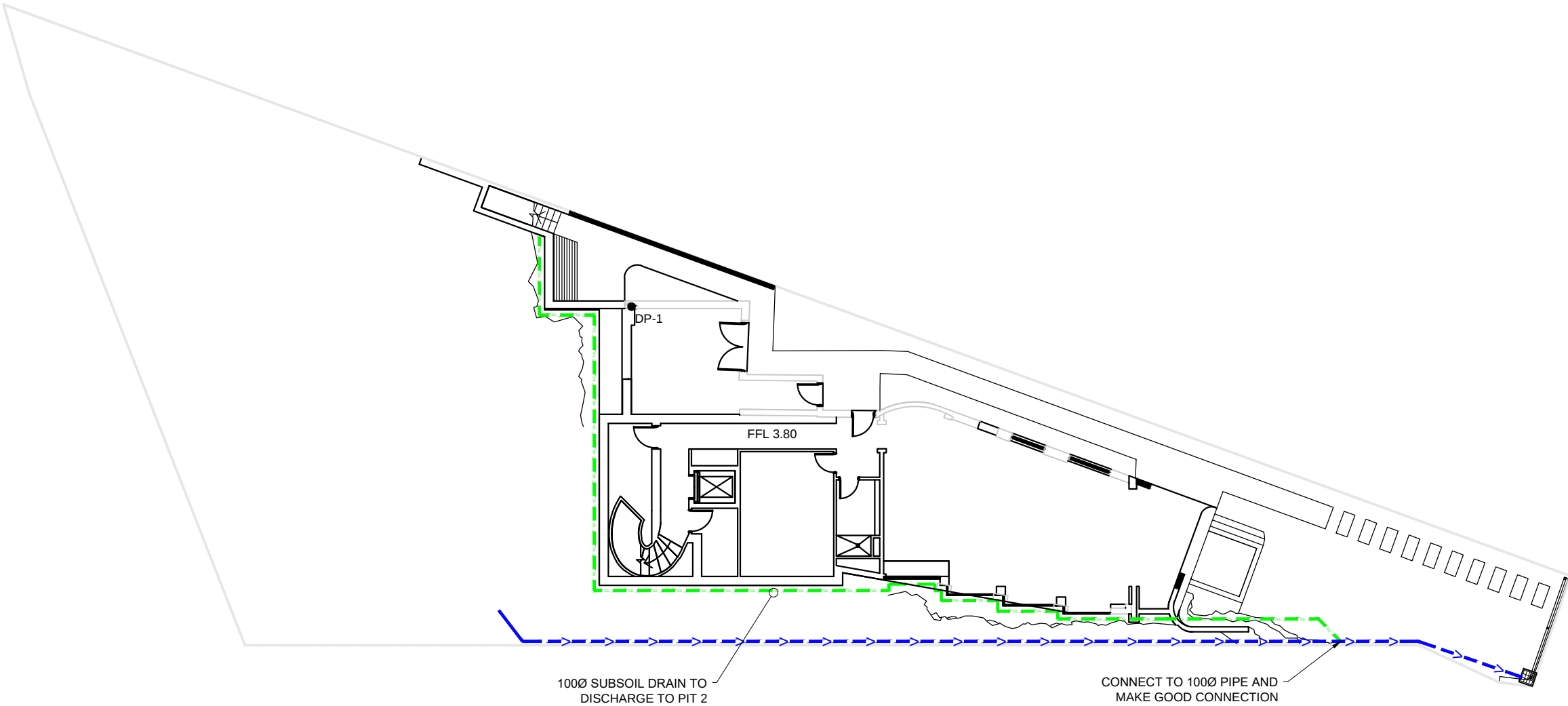


FOR DA APPROVAL

ALL PIPES TO BE 1000 uPVC
UNLESS OTHERWISE SHOWN

ALL GUTTERS TO HAVE MIN.
8500mm2 X-SECT AREA.

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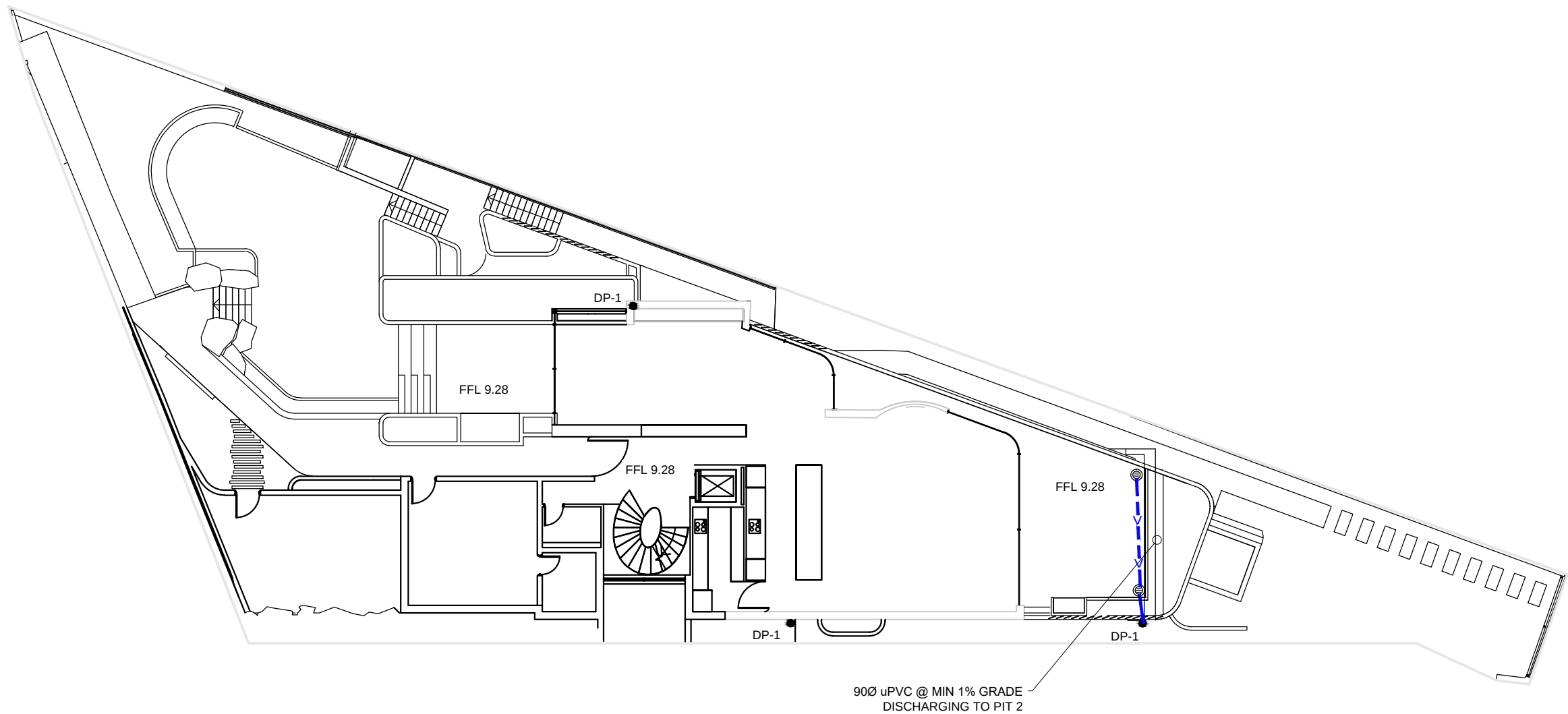
LOWER GROUND FLOOR PLAN
SCALE: 1:200



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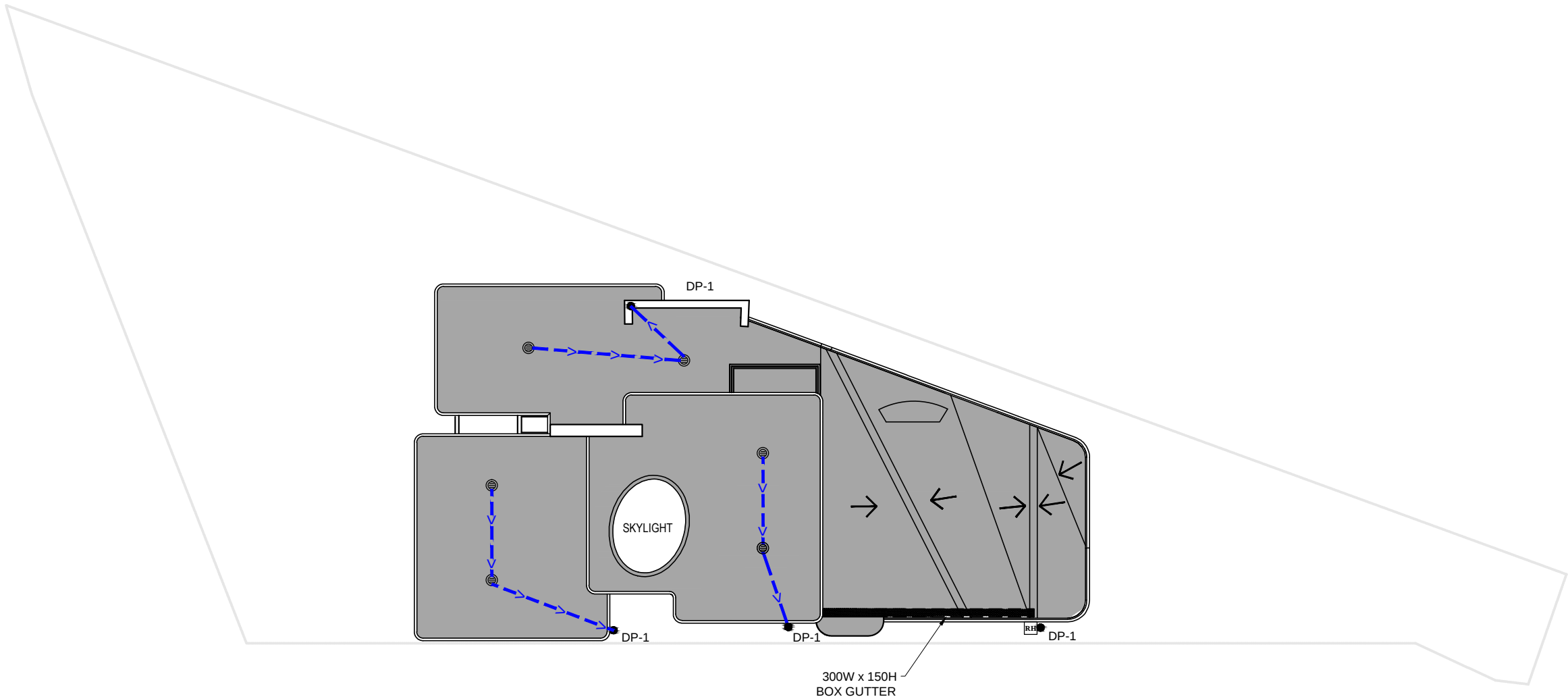
LEVEL 1 PLAN
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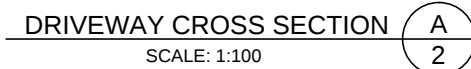


ROOF PLAN
SCALE: 1:200

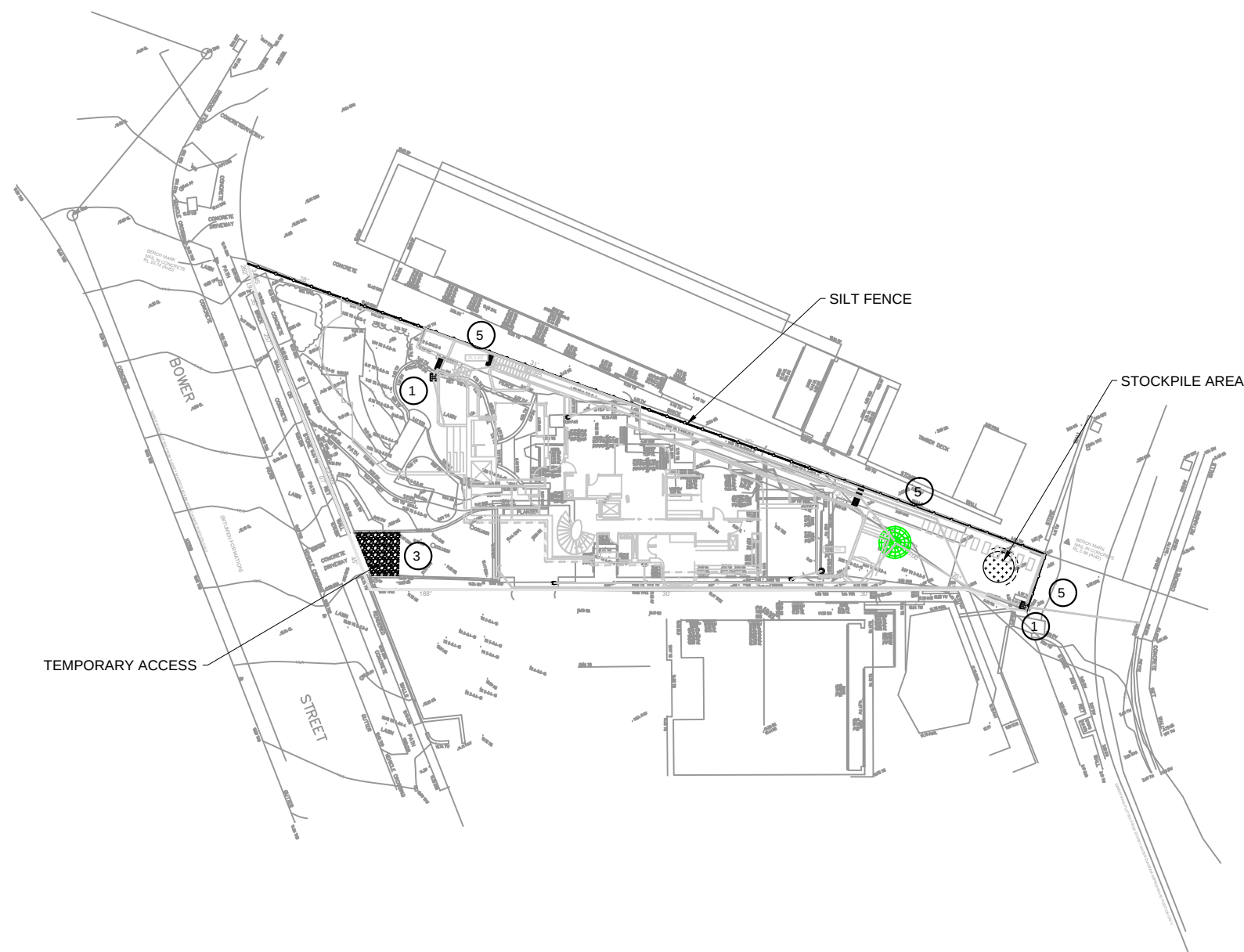
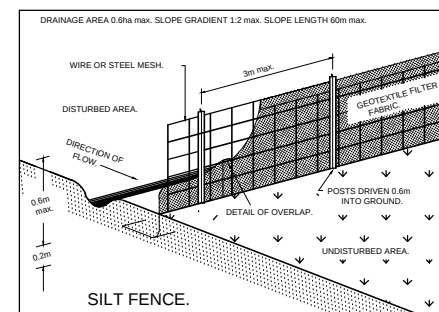
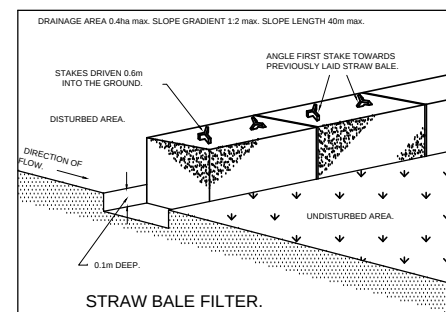
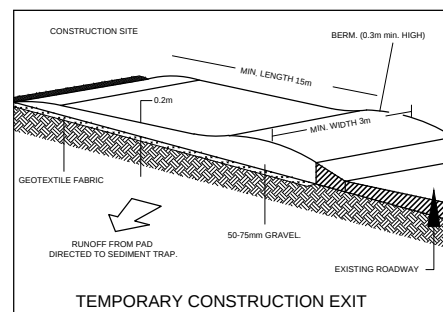
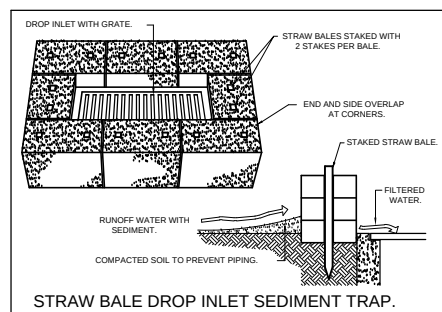
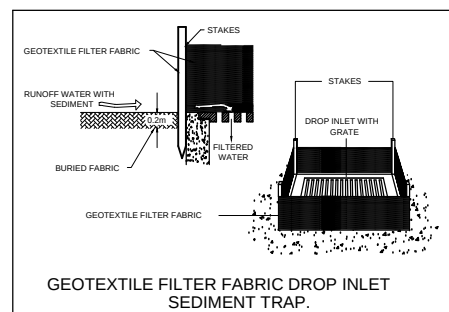

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EROSION CONTROL NOTES:

1. ALL WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH COUNCIL'S STANDARD SPECIFICATIONS AND TO THE SATISFACTION OF COUNCIL'S ENGINEER.
2. EROSION AND SEDIMENTATION CONTROLS SHALL BE CONSTRUCTED AS SHOWN ON SHEET 2 AND 3 OF THIS PLAN AND/OR WHERE DIRECTED BY COUNCIL'S ENGINEER.
3. SEDIMENTATION AND EROSION CONTROL DEVICES SHALL BE IMPLEMENTED PRIOR TO OR IN CONJUNCTION WITH THE FIRST PHASE OF EARTHWORKS AND SHALL BE REMOVED ONLY WHEN THE AREAS ABOVE IT HAVE BEEN STABILISED. EACH SEDIMENTATION AND EROSION CONTROL DEVICE SHALL BE INSPECTED AFTER EACH STORM FOR STRUCTURAL DAMAGE OR CLOGGING BY SILT AND OTHER DEBRIS AND PROMPTLY DESILTED, REPAIRED OR REPLACED IF REQUIRED.
4. TOPSOIL STOCKPILES SHALL BE LOCATED OUTSIDE HAZARD AREAS SUCH AS DRAINAGE DEPRESSIONS.
5. ALL AREAS NOT SUBJECT TO CONSTRUCTION WORKS SHALL BE RETAINED FREE FROM DISTURBANCE OR DAMAGE FOR THE DURATION OF THE WORKS.
6. TREES TO BE RETAINED SHALL BE PROTECTED DURING SITE WORKS AND CONSTRUCTION BY THE ERECTION OF SOLID BARRICADES AT THE DRIP LINE OR AS SPECIFIED BY COUNCIL'S ENGINEER.
7. THE DEVELOPER OR CONTRACTOR WILL TAKE ALL MEASURES TO PREVENT DAMAGE TO TREES AND ROOT SYSTEMS DURING SITE WORKS AND CONSTRUCTION ACTIVITIES INCLUDING THE PROVISION OF WATER, SEWERAGE AND STORMWATER DRAINAGE SERVICES. IN PARTICULAR, WORKS, ERECTION OF STRUCTURES, EXCAVATION OR CHANGES TO SOIL LEVELS WITHIN 4 METRES OF THE TRUNKS OF TREES TO BE RETAINED ARE NOT PERMITTED UNLESS PART OF THE DEVELOPMENT AS APPROVED, AND THE STORAGE OF SPOIL, BUILDING MATERIALS, SOILS OR THE DRIVING OR PARKING OF ANY VEHICLE OR MACHINERY WITHIN 4 METRES OF THE TRUNK OF A TREE TO BE RETAINED, IS NOT PERMITTED.
8. WETTING OF THE SITE SHOULD BE CARRIED OUT AS OFTEN AS NECESSARY AS A FORM OF DUST CONTROL.
9. SILT FENCES TO BE CONSTRUCTED WHERE EVER NATURAL SURFACE SLOPES AWAY FROM DISTURBED AREAS OR WHERE DIRECTED BY THE ENGINEER.

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