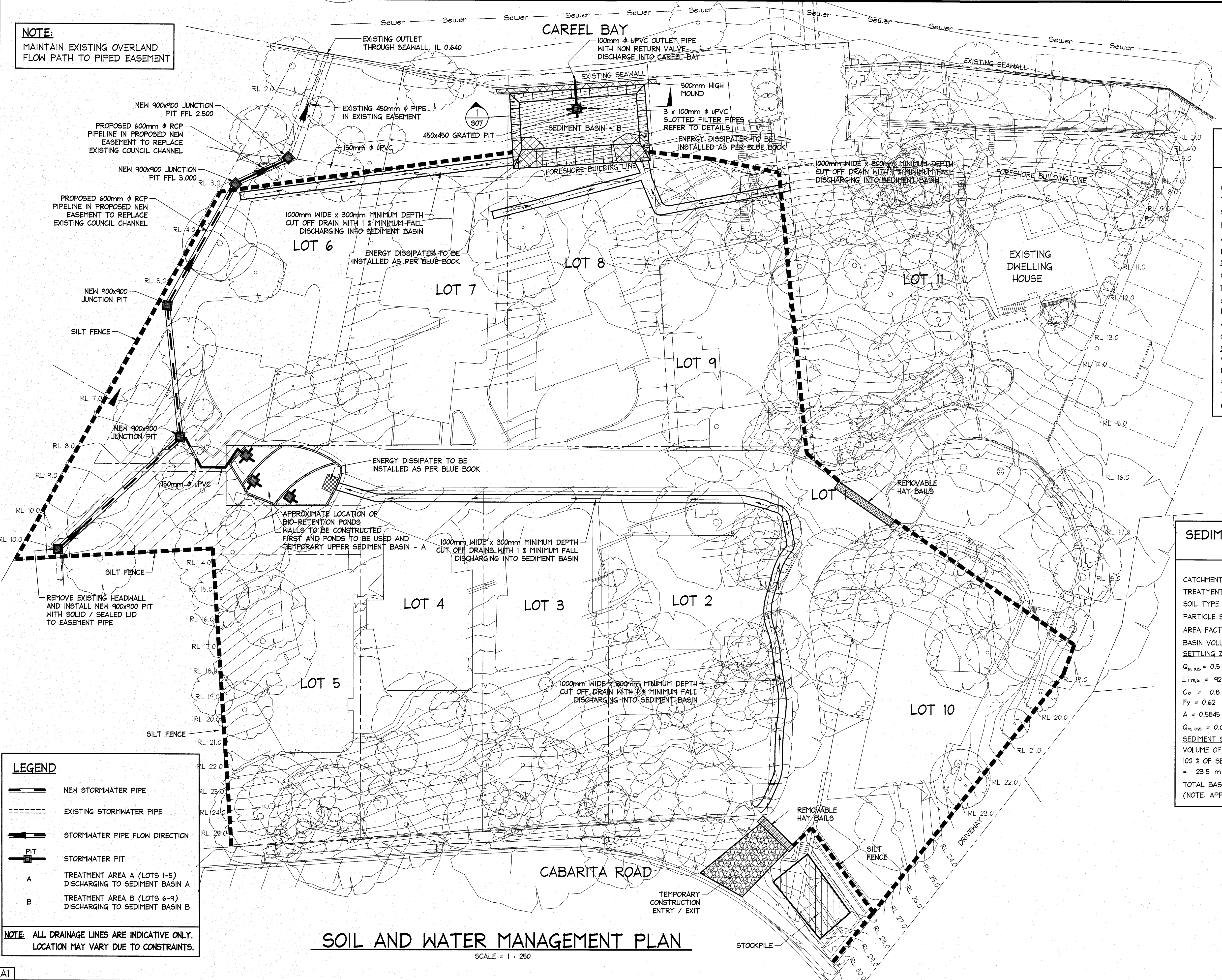


NOTE:
MAINTAIN EXISTING OVERLAND
FLOW PATH TO PIPED EASEMENT

NOTES:

1. ALL DIMENSIONS TO BE VERIFIED ON SITE BY BUILDER BEFORE COMMENCING WITH WORK.



SEDIMENT BASIN CALCULATION SUMMARY

CATCHMENT AREA A =	4,080 m ²
TREATMENT AREA =	N/A
SOIL TYPE =	TYPE C (ASSUMED)
PARTICLE SIZE =	0.100mm (ASSUMED)
AREA FACTOR =	635
BASIN VOLUME = SETTLING ZONE VOLUME + SEDIMENT STORAGE VOLUME	
<u>SETTLING ZONE VOLUME:</u>	
$Q_{45, 0.25} = 0.5 \times (0.00278 \times C_{50} \times F_y \times 1.1784 \times A) \text{ m}^3/\text{s}$	
$1.1784 \times$	= 92.2
$C_{50} =$	0.8
$F_y =$	0.62
$A = 0.4080 \text{ Ha}$	
$Q_{45, 0.25} =$	0.0259 m ³ /s
<u>SEDIMENT STORAGE ZONE VOLUME:</u>	
VOLUME OF SEDIMENT STORAGE ZONE	
100 % OF SETTLING ZONE VOLUME	
=	16.5 m ³
TOTAL BASIN VOLUME REQUIRED = 33 m ³	
(NOTE: APPROX. 115 m ³ PROVIDED)	

VOLUME OF SETTLING ZONE

(6.35 x 0.45, 0.25) m³

= 16.5 m³

SEDIMENT BASIN CALCULATION SUMMARY

SEDIMENT BASIN B

CATCHMENT AREA A =	5,845 m ²
TREATMENT AREA =	N/A
SOIL TYPE =	TYPE C (ASSUMED)
PARTICLE SIZE =	0.100mm (ASSUMED)
AREA FACTOR =	635
BASIN VOLUME = SETTLING ZONE VOLUME + SEDIMENT STORAGE VOLUME	
<u>SETTLING ZONE VOLUME:</u>	
$Q_{45, 0.25} = 0.5 (0.00278 \times C_w \times F_y \times I_{1175, 45} \times A)$	m ³ /s
$I_{1175, 45} = 92.2$	
$C_w = 0.8$	
$F_y = 0.62$	
$A = 0.5845$	Ha
$Q_{45, 0.25} = 0.037$	m ³ /s
<u>SEDIMENT STORAGE VOLUME:</u>	
VOLUME OF SEDIMENT STORAGE ZONE	
100 % OF SETTLING ZONE VOLUME	
=	23.5 m ³
TOTAL BASIN VOLUME REQUIRED = 47 m ³	
(NOTE: APPROX. 75 m ³ PROVIDED)	



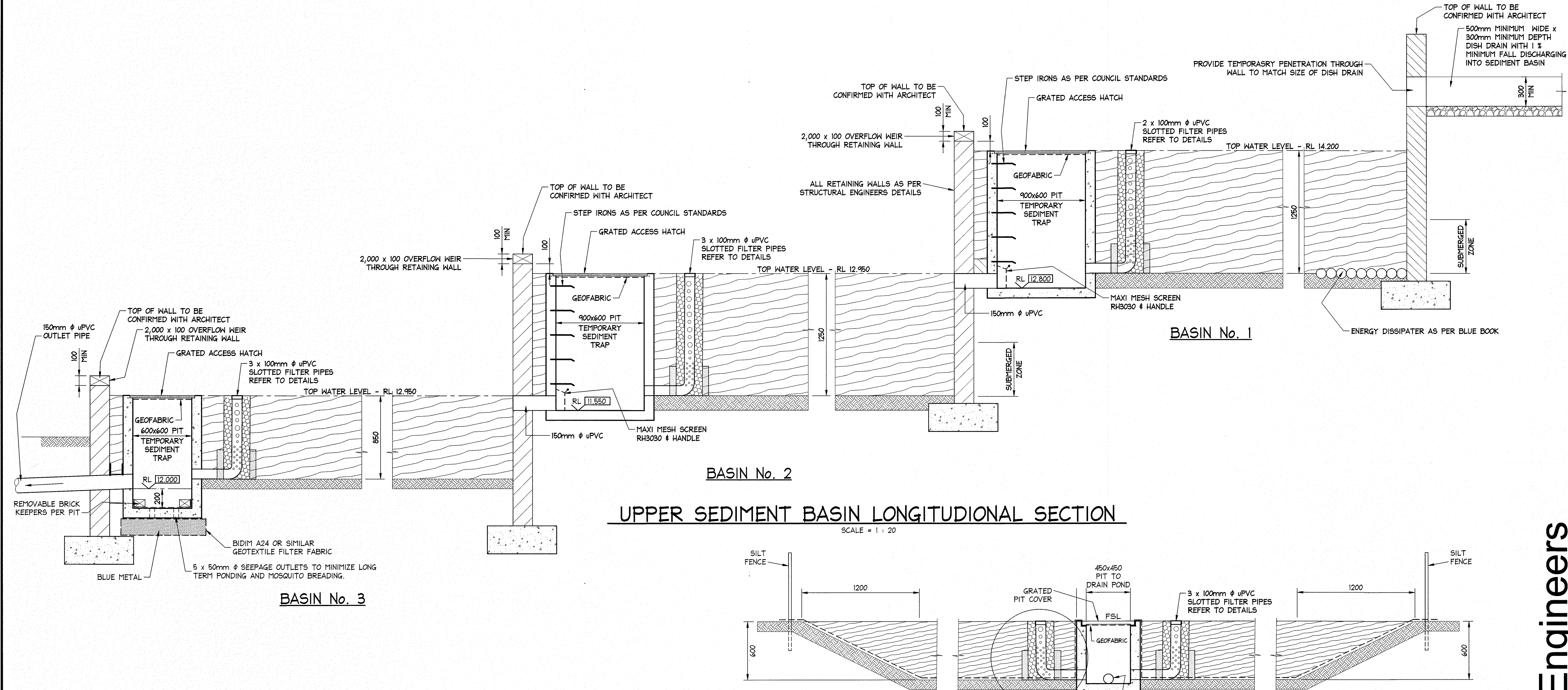
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IF IN DOUBT ASK

B Consulting Engineers

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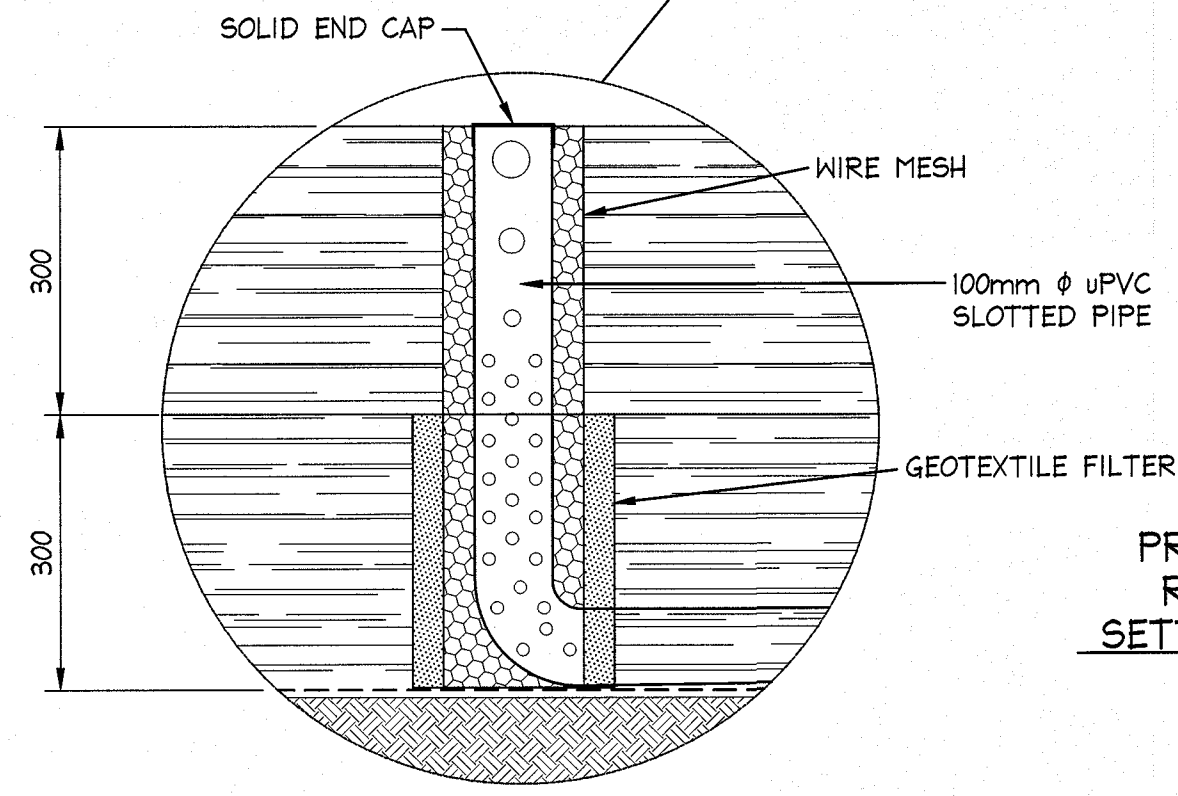
NOTES:
1. ALL DIMENSIONS TO BE VERIFIED ON SITE BY BUILDER BEFORE COMMENCING WITH WORK.



UPPER SEDIMENT BASIN LONGITUDINAL SECTION
SCALE = 1 : 20

SETTLEMENT POND CONSTRUCTION SPECIFICATION:

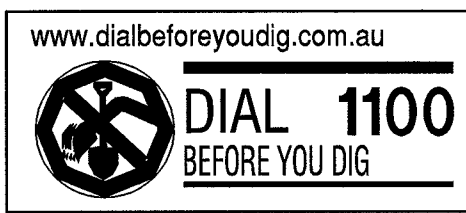
- 1 - SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
- 2 - THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRED AS NEEDED.
- 3 - CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN A MANNER, THAT EROSION AND WATER POLLUTION SHALL BE MINIMIZED.
- 4 - THE SEDIMENT TRAP SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE CONSTRUCTED DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.



- NOTES:
1. ALL EROSION AND SEDIMENT CONTROL MEASURES TO BE INSPECTED AND MAINTAINED DAILY BY SITE MANAGER.
 2. MINIMISE DISTURBED AREAS
 3. ALL STOCKPILES TO BE CLEAR FROM DRAINS, GUTTERS AND FOOTPATHS.
 4. DRAINAGE IS TO BE CONNECTED TO STORMWATER SYSTEM AS SOON AS POSSIBLE.
 5. ROADS AND FOOTPATH TO BE SWEEPED DAILY.

PRECAST OR CAST INSITU PIT
REFER STORMWATER NOTES
SETTLING POND TYPICAL SECTION

SECTION 1
SCALE = 1:20



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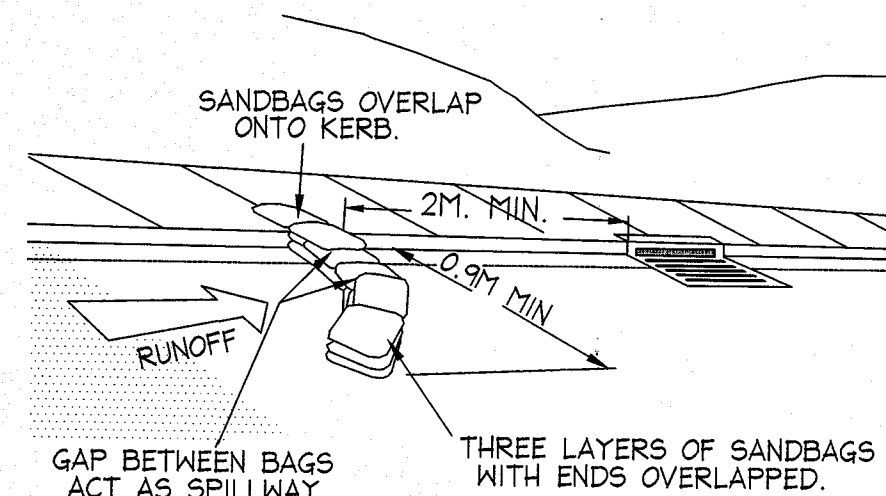
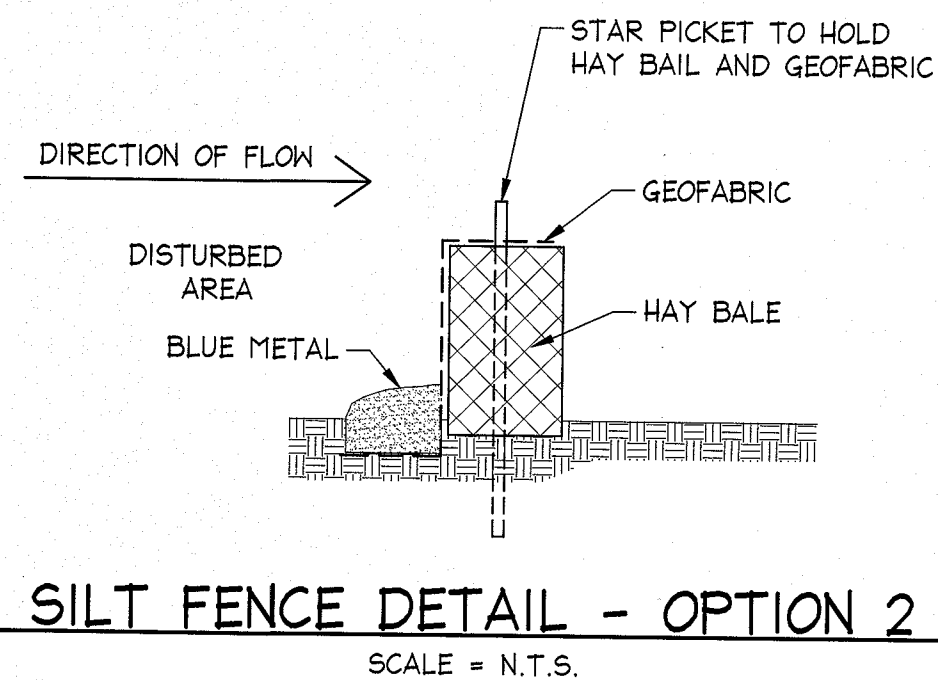
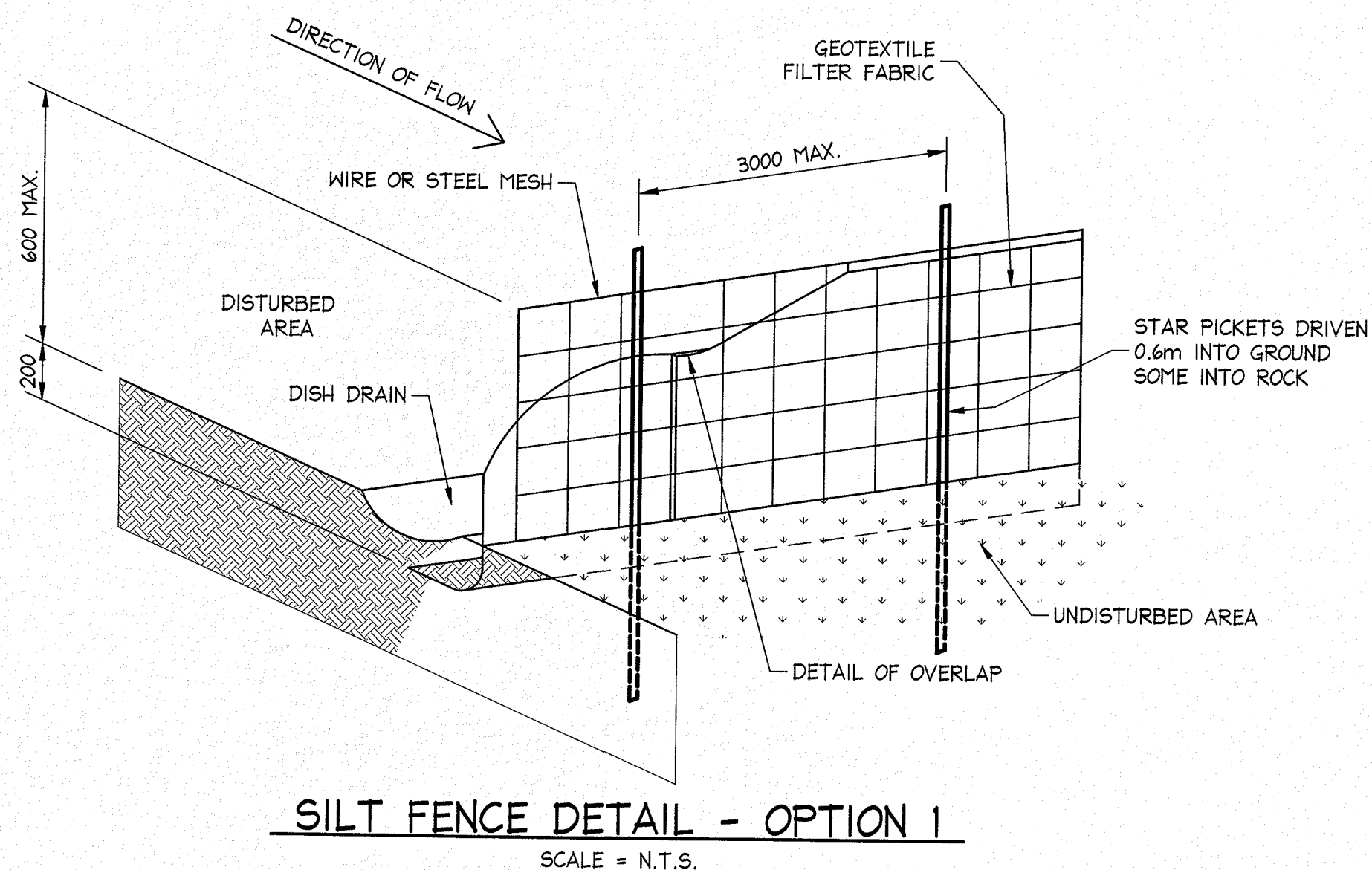
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NB Consulting Engineers

SEDIMENT CONTROL:

1. INSTALL SEDIMENT CONTROL STRUCTURES IN LOCATIONS INDICATED ON DRAWINGS AND AS OTHERWISE REQUIRED TO CONTROL SEDIMENT DURING ALL EXCAVATIONS AND WHILST AREAS OF THE SITE ARE EXPOSED TO EROSION.
2. CONTROL STRUCTURES TO BE AS DETAILED OR AS OTHERWISE REQUIRED BY CERTIFYING AUTHORITY.
3. REVIEW CONTROL MEASURES AND MAINTAIN STRUCTURES DURING CONSTRUCTION.
4. IF ADDITIONAL MEASURES ARE REQUIRED FOR EROSION CONTROL OR BY COUNCIL REQUIREMENTS REFER TO "URBAN EROSION AND SEDIMENT CONTROL" GUIDELINES PREPARED BY THE DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT.



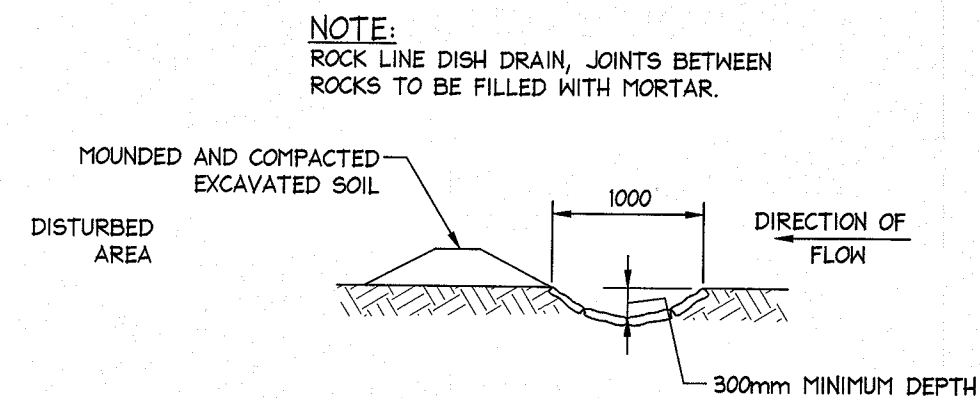
SANDBAG KERB INLET SEDIMENT TRAP

SCHEDULE OF WORKS:

1. SILT FENCE AND ASSOCIATED WORKS INCLUDING INTERCEPTOR DRAIN IS TO BE INSTALLED BEFORE THE COMMENCEMENT OF ANY EXCAVATION.
2. CUTS TO BE EXECUTED TO THE REQUIRED LEVEL USING CONVENTIONAL EXCAVATION MACHINERY. INITIALLY THE DEPTH OF FILL/CLAY IS TO BE ESTABLISHED TO ENSURE NEIGHBOURING PROPERTIES ARE NOT ADVERSELY AFFECTED. EARTH BATTERS TO BE A MAXIMUM SLOPE OF 1.0 m VERT. TO 1.7 m HORIZ. (AS PER GEOTECHNICAL REPORT). ANY BATTERS GREATER THAN 1.0 m VERT. TO 1.7 m HORIZ. ARE TO BE ADEQUATELY SHORED IN ACCORDANCE WITH THE ENGINEERS DETAILS AND INSTRUCTIONS.
3. ANY PERMANENT RETAINING STRUCTURE IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE ENGINEERS DETAILS AND INSTRUCTIONS.
4. ALL PERMANENT RETAINING STRUCTURES ARE TO BE COMPLETED WITH MINIMUM DELAY FOLLOWING EXCAVATION.

NOTES:

1. ALL EROSION AND SEDIMENT CONTROL MEASURES TO BE INSPECTED AND MAINTAINED DAILY BY SITE MANAGER.
2. MINIMISE DISTURBED AREAS.
3. ALL STOCKPILES TO BE CLEAR FROM DRAINS, GUTTERS AND FOOTPATHS.
4. DRAINAGE IS TO BE CONNECTED TO STORMWATER SYSTEM AS SOON AS POSSIBLE.
5. ROADS AND FOOTPATH TO BE SWEEPED DAILY.



CATCH DRAIN - ROCK LINED

NOT TO SCALE

NOTES:

1. ALL DIMENSIONS TO BE VERIFIED ON SITE BY BUILDER BEFORE COMMENCING WITH WORK.

GENERAL NOTES :

1. CONSTRUCTION VEHICLES ARE TO LEAVE AND ENTER THE SITE OVER AN ALL WEATHER SURFACE CONSISTING OF COURSE CRUSHED STONE OR BLUE METAL CONSTRUCTED WITHIN THE FRONT SETBACK AREA OPPOSITE THE EXISTING FOOTPATH CROSSING UNLESS NOTED OTHERWISE.
2. EXCAVATION MACHINERY ARE TO BE UNLOADED AND LOADED UPON THIS ALL WEATHER SURFACE. CONCRETE PUMPS AND TRUCKS WILL ALSO UTILISE THE ALL WEATHER SURFACE FOR THEIR OPERATIONS.
3. MATERIALS WILL BE UNLOADED UPON THE ALL WEATHER SURFACE WITHIN THE FRONT SETBACK AREA BY MEANS OF CRANES MOUNTED ON THE BACK OF DELIVERY TRUCKS OR UNLOADED BY HAND. IT IS NOT ENVISAGED THAT A MOBILE CRANE WILL BE REQUIRED DURING THE CONSTRUCTION PROCESS.
4. SOME STOCKPILING OF TOPSOIL REMOVED FROM THE BUILDING AREA MAY BE STORED ON THE SITE DURING THE CONSTRUCTION WITHIN THE PROPERTY IN AN AREA ENCLOSED WITHIN THE SEDIMENT CONTROL FENCING.
5. ALL EXCAVATED & CONSTRUCTION MATERIALS, SHED, SKIP BINS, TEMPORARY WATER CLOSETS, SPOIL AND EQUIPMENT, ETC SHALL BE KEPT WITHIN THE PROPERTY. NO VEHICLES OR MACHINES SHALL BE KEPT WITHIN THE PROPERTY. NO VEHICLES OR MACHINES SHALL STAND ON COUNCIL FOOTPATHS FOR LARGE LENGTHS OF TIME.
6. ALL RUBBISH & RECYCLABLE MATERIAL SHALL BE STOCKPILED IN WASTE BINS IN THE AREA NOTATED ON THE SITE PLAN WITHIN THE SITE BOUNDARY. PUBLIC PROPERTY SHALL BE KEPT FREE OF RUBBISH AND RECYCLABLES AT ALL TIMES ANY WASTE MATERIALS SHALL BE REGULARLY COLLECTED FROM THE SITE AND DISPOSED OF IN AN APPROPRIATE FASHION.
7. ANY BUILDING / DEMOLITION WORKS INVOLVING ASBESTOS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE RELEVANT STANDARDS.
8. VEHICLES LEAVING THE SITE WILL DO SO VIA THE ALL WEATHER BALLAST DRIVEWAY MADE OF COURSE AGGREGATE OR SIMILAR LOCATED WITHIN THE FRONT SETBACK AREA OF THE DEVELOPMENT. ANY DIRT OR MATERIAL DEPOSITED ON THE ROAD RESERVE OR ROADWAY IS TO BE PROMPTLY CLEANED.
9. ANY EXCAVATED AREA REQUIRED SUPPORT WILL BE UNDERTAKEN BY THE OWNER USING STRUCTURALLY APPROVED RETAINING STRUCTURES.
10. ADEQUATE SAFETY SIGNAGE MUST BE ERECTED IN A PROMINENT POSITION ON THE WORK SITE, WARNING OF UNAUTHORISED ENTRY TO WORK SITE AND INTENDING DANGERS.
11. SAFETY FENCES SHALL BE PROVIDED AROUND ALL BOUNDARIES UNLESS A CONTINUOUS STRUCTURALLY ADEQUATE FENCE PRESENTLY EXISTS. THE FENCING SHALL BE ADEQUATE TO RESTRICT PUBLIC ACCESS TO THE SITE WHEN BUILDING WORK IS NOT IN PROGRESS OR THE SITE IS UNOCCUPIED.
12. NOISE LEVELS SHALL NOT EXCEED COUNCIL REGULATION LEVELS. BUILDING AND DEMOLITION WORKS SHALL ONLY BE CARRIED OUT BETWEEN HOURS AND DAYS SPECIFIED BY COUNCIL.
13. GEOTEXTILE FABRIC SHALL BE PLACED ON THE INSIDE OF THE SITE FENCING PRIOR TO SITE DISTURBANCE TO PREVENT SEDIMENT WASHING FROM CLEARED AND DISTURBED AREAS OF THE SITE INTO THE STORMWATER SYSTEM DURING CONSTRUCTION UNCONTAMINATED RUNOFF FROM CLEARED OR DISTURBED AREAS IS TO BE DIRECTED TO A TEMPORARY SILT ARRESTOR PIT THAT SHALL BE PROVIDED WITHIN THE SITE AT THE STREET BOUNDARY PROCESSING SITE STORMWATER BEFORE IT IS DISCHARGED TO THE STREET DRAINAGE SYSTEM OR WATERCOURSE.
14. ALL TOP SOIL STRIPPED & STOCKPILED ON SITE IS TO BE PLACED IN NOMINATED AREAS ON PLAN. ALL DISTURBED AREAS ARE TO BE STABILISED UPON THE COMPLETION OF BUILDING WORKS.
15. ALL SEDIMENT CONTROL STRUCTURES ARE TO BE CONTINUALLY MAINTAINED DURING CONSTRUCTION AND INSPECTED FOR STRUCTURAL DAMAGE AFTER EACH RAINFALL EVENT, WITH TRAPPED SEDIMENT BEING REMOVED TO THE TOPSOIL STOCKPILE.
16. WHERE THERE IS THE POTENTIAL OF SITE EROSION TO PRODUCE EXCESSIVE SEDIMENT RUNOFF SUITABLE GEOTEXTILE BARRIERS SHALL BE PLACED TO ALLEVIATE THE RISK ACCORDINGLY. BARE SURFACES SHALL BE KEPT MOIST TO REDUCE DUST LEVELS. GEOTEXTILE FABRIC LOCATED ON THE INSIDE OF FENCES SHALL ALSO BE UTILISED FOR DUST CONTROL WHERE NECESSARY.

NOTE:

NO INVESTIGATION OF UNDERGROUND SERVICES HAS BEEN MADE. ALL RELEVANT AUTHORITIES SHOULD BE NOTIFIED PRIOR TO ANY EXCAVATION ON OR NEAR THE SITE.

DEVELOPERS & EXCAVATORS MAY BE HELD FINANCIALLY RESPONSIBLE BY THE ASSET OWNER SHOULD THEY DAMAGE UNDERGROUND NETWORKS.

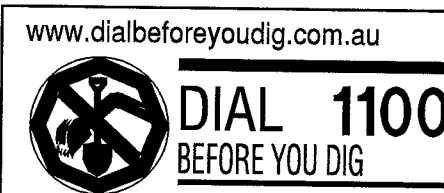
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- CAUSE DEATH OR SERIOUS INJURY TO WORKERS AND THE GENERAL PUBLIC
- INCONVENIENCE USERS OF ELECTRICITY, GAS, WATER AND COMMUNICATIONS
- LEAD TO CRIMINAL PROSECUTION AND DAMAGES CLAIMS
- CAUSE EXPENSIVE FINANCIAL LOSSES TO BUSINESS
- CUT OFF EMERGENCY SERVICES
- DELAY PROJECT COMPLETION TIMES WHILE THE DAMAGE IS REPAIRED

MINIMISE YOUR RISK AND DIAL BEFORE YOU DIG. - TEL. 1100

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Date: 4/12/18				STRUCTURAL - CIVIL - STORMWATER - REMEDIAL				Mark Hurcum Design Practice Pty Ltd				96-104 Cabarita Road Avalon Beach N.S.W. 2107				Nov 2018				C.F.				Paul R Bruce			
By: P.R.B.				Sydney: Ph: (02) 9984 7000 Fax: (02) 9984 7444				Client:				Drawing Title:				Job No:				Drawing No:				Issue:			
Date: 04.12.2018				Suite 207, 30 Fisher Road Dee Why N.S.W. 2099				Meraki Developments Pty Ltd				SOIL AND WATER				180411				D08				A			
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