

SOIL AND WATER MANAGEMENT NOTES

1.

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE RELEVANT ENGINEERING DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE WORKS. ANY DISCREPANCIES, ERRORS OR OMISSIONS SHALL BE REPORTED TO THE DESIGN ENGINEER BEFORE PROCEEDING FURTHER.
2.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO IMPLEMENT ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO DISTURBANCE OF THE SITE IN ACCORDANCE WITH THE STANDARDS AS SET OUT IN THE NSW DEPARTMENT OF HOUSING "MANAGING URBAN STORMWATER, SOILS & CONSTRUCTION", AUGUST 1998 OR LATER EDITIONS.
3.

ALL SUB-CONTRACTORS SHALL BE MADE AWARE OF THEIR RESPONSIBILITIES AND OBLIGATIONS IN MINIMISING THE POTENTIAL FOR SOIL EROSION AND POLLUTION TO DOWNSTREAM AREAS.
4.

THE DISTURBANCE OF LAND SHALL BE LIMITED TO THAT NECESSARY FOR THE IMPLEMENTATION OF THE WORKS IN ACCORDANCE WITH THE DRAWINGS. BUFFER ZONES AND AREAS NOT TO BE DISTURBED SHALL BE CLEARLY MARKED WITH BARRIER FENCES AND RELEVANT SIGNS. "SILT" FENCES OR STRAW BALE SEDIMENT TRAPS SHALL BE PLACED AT REGULAR INTERVALS IMMEDIATELY DOWNSLOPE OF ALL UNPROTECTED DISTURBED AREAS.
5.

THE DISTURBANCE OF LAND FOR THE CONSTRUCTION OF ROADS OR INSTALLATION OF SERVICES SHALL BE LIMITED TO A WIDTH OF 5 METRES FROM THE EDGE OF THE CONSTRUCTION ZONE (ABSOLUTE WIDTH 2 METRES). ACCESS AREAS SHALL BE LIMITED TO A WIDTH OF 5 METRES (ABSOLUTE WIDTH 10 METRES). THE BOUNDARIES OF THESE ZONES SHALL BE CLEARLY MARKED. THEIR LOCATION SHALL BE DETERMINED ON SITE BY THE PROJECT MANAGER AND MAY VARY IN WIDTH AND LOCATION TO BEST PROTECT THE EXISTING VEGETATION AND PROTECT DOWNSTREAM AREAS WHILE TAKING INTO CONSIDERATION THE NEEDS OF THE WORK AREA AND CONSTRUCTION ACTIVITIES. ENTRY TO REMAINING LANDS SHALL BE PROHIBITED EXCEPT FOR ESSENTIAL MANAGEMENT OF THE WORKS.
6.

THE LOCATION OF "SILT" FENCES, BARRIER FENCES, SEDIMENT TRAPS, BASINS, AND OTHER DEVICES ARE INDICATIVE ONLY AND FINAL LOCATIONS ARE TO BE DECIDED ON SITE TO PROVIDE THE MOST EFFICIENT AND EFFECTIVE METHOD OF CONTAINMENT. IN THIS REGARD, VARIATIONS SHALL BE PERMITTED TO BEST SUIT THE SITE CONDITIONS AND CIRCUMSTANCES.
7.

CLEARED VEGETATION MUST BE DISPOSED OF BY EITHER:
(a) CHIPPING AND MULCHING FOR FUTURE LANDSCAPING USAGE; OR
(b) TRANSPORTED TO AN APPROVED LANDFILL FACILITY.
8.

TOPSOIL SHALL BE STRIPPED TO A MAXIMUM DEPTH OF 100mm FROM ALL DESIGNATED CONSTRUCTION AREAS AFTER CLEARING AND GRUBBING OF EXCESS VEGETATION. EXCAVATION NOT TO EXCEED 200mm BELOW NATURAL GROUND LEVEL.
9.

WHERE HAUL ROADS CROSS DRAINAGE LINES, TEMPORARY CULVERTS OR CAUSEWAYS SHALL BE INSTALLED. THESE ARE TO BE CONSTRUCTED ONLY IN AREAS OF MINIMAL EROSION POTENTIAL. SUCH AREAS SHALL BE DEFINED IN CONSULTATION WITH THE PROJECT MANAGER AND RELEVANT GOVERNMENT AUTHORITY (WHERE APPLICABLE).
10.

TEMPORARY CROSSBANKS (BUNDS CONSTRUCTED WITH EARTH, STRAW BALES OR SANDBAGS) SHALL BE CONSTRUCTED DURING ROADWORKS TO LIMIT SLOPE LENGTH, WHERE POSSIBLE TO 80 METRES. THESE SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO INCLEMENT WEATHER AND DURING TEMPORARY CLOSURE OF THE SITE, INCLUDING WEEKENDS.
11.

OUTLETS SHALL BE DISCHARGED TO STABLE DISPOSAL AREAS.
12.

EARTH BATTERS SHALL BE CONSTRUCTED WITH A MAXIMUM GRADIENT OF 2H:1V AND PROPERLY TOPSOILED, SEEDED AND MULCHED WITHIN 20 WORKING DAYS FROM COMPLETION OF WORKS. TOPSOIL SHALL BE APPLIED TO A DEPTH OF 20mm TO 40mm AFTER SCARIFYING THE GROUND SURFACE ALONG THE CONTOUR TO ENABLE THE BONDING OF MATERIALS.
13.

TEMPORARY REHABILITATION SHALL BE UNDERTAKEN ON DISTURBED AREAS WHERE WORKS HAVE STOPPED AND SOILS ARE EXPECTED TO REMAIN EXPOSED FOR MORE THAN 2 MONTHS BEFORE EITHER THE WORKS CONTINUE OR PERMANENT REHABILITATION IS UNDERTAKEN. DISTURBED AREAS SHALL BE REHABILITATED WITH INDIGENOUS PLANT SPECIES OR AS SPECIFIED BY THE RELEVANT GOVERNING AUTHORITY.
14.

ALL AREAS SHALL BE PROPERLY TOPSOILED, SEEDED AND MULCHED WITHIN 20 WORKING DAYS FROM COMPLETION OF WORKS. PRIOR TO THE ADDITION OF TOPSOIL, THE GROUND SURFACE SHALL BE TYED, CHAINED OR SIMILAR TO ENSURE EFFECTIVE BINDING OF MATERIALS.
15.

A STRAW MULCH SPRAYED WITH BITUMEN EMULSION SHALL BE APPLIED AFTER SEEDING/ PLANTING ON SLOPES STEEPER THAN 10%. ALL OTHER AREAS TO BE REVEGETATED WITH NATIVE GRASSES OR AS SPECIFIED BY THE RELEVANT GOVERNING AUTHORITY.
16.

REHABILITATE THE SITE AS SOON AS POSSIBLE AFTER THE COMPLETION OF CONSTRUCTION ACTIVITIES AND WITHIN 10 WORKING DAYS.

17.

TOPSOIL SHALL BE RE-SPREAD AND STABILISED AS SOON AS POSSIBLE. DISTURBED AREAS SHALL BE LEFT WITH A SCARIFIED SURFACE TO ENCOURAGE WATER INFILTRATION AND ASSIST BINDING OF THE SOIL.
18.

SEDIMENT BARRIERS (E.G. SANDBAGS OR STRAW BALES) SHOULD BE LOCATED UPSTREAM OF STORMWATER INLET PITS PRIOR TO THE ROAD SURFACE BEING PAVED AND SEALED AND LANDS UPSLOPE BEING REHABILITATED. THESE BARRIERS SHOULD BE REINSTALLED AFTER COMPLETION OF PAVING IF THERE ARE DISTURBED OR BARE AREAS NEARBY LIKELY TO CONTRIBUTE SEDIMENT TO THE ROAD SURFACE.
19.

AT THE CONCLUSION OF EACH DAY, SAND BAGS ARE TO BE PLACED AT THE END OF COMPLETED SECTIONS OF ROAD PAVEMENT TO PREVENT SCOURING.
20.

CLEARLY VISIBLE BARRIER FENCING SHALL BE INSTALLED AS SHOWN ON THE SOIL AND WATER MANAGEMENT PLAN AND ELSEWHERE AT THE INSTRUCTION OF THE SITE MANAGER TO ENSURE TRAFFIC CONTROL AND PROHIBIT UNNECESSARY SITE DISTURBANCE.
21.

ALL WATERWAYS, DRAINS, SPILLWAYS AND THEIR OUTLETS SHALL BE CONSTRUCTED STABLE IN AT LEAST THE 1 IN 2 YEAR ARI STORM EVENT.
22.

DIVERSION BANKS WHICH ARE TO REMAIN IN USE FOR MORE THAN 15 DAYS, SHALL BE REHABILITATED AS SOON AS POSSIBLE AND WITHIN 5 WORKING DAYS FROM THEIR FINAL SHAPING. PEDESTRIAN AND VEHICULAR TRAFFIC SHALL BE KEPT AWAY FROM THESE AREAS.
23.

LANDS RECENTLY ESTABLISHED WITH GRASS SPECIES SHALL BE WATERED REGULARLY UNTIL AN EFFECTIVE COVER HAS PROPERLY ESTABLISHED AND PLANTS ARE GROWING VIGOROUSLY, AND MOWED WHEN REQUIRED. THE CONTRACTOR SHALL MAINTAIN GRASS COVER UNTIL ALL WORKS HAVE BEEN COMPLETED, INCLUDING THE MAINTENANCE PERIOD.
24.

THE CONTRACTOR SHALL INSPECT THE SITE AT LEAST WEEKLY PROVIDING THE PARTICULAR ATTENTION TO THE FOLLOWING MATTERS:
(a) ENSURE THAT THE DRAINS OPERATE EFFECTIVELY AND CARRY OUT REPAIRS AS NECESSARY.
(b) REMOVE SPILLED SAND (OR OTHER MATERIALS) FROM HAZARD AREAS, INCLUDING LANDS CLOSER THAN 5 METRES FROM LIKELY AREAS OF CONCENTRATED OR HIGH VELOCITY FLOWS SUCH AS WATERWAYS AND PAVED SURFACES.
(c) REMOVE TRAPPED SEDIMENT WHENEVER LESS THAN DESIGN CAPACITY REMAINS.
(d) ENSURE REHABILITATED LANDS HAVE EFFECTIVELY REDUCED THE EROSION HAZARD AND INITIATE UPGRADING OR REPAIR AS REQUIRED.
(e) CONSTRUCT ADDITIONAL EROSION AND/OR SEDIMENT CONTROL MEASURES AS MAY BE NECESSARY TO ENSURE THE REQUIRED PROTECTION TO DOWNSLOPE AREAS AND WATERWAYS. THAT IS, MAKE POSITIVE CHANGES TO THE PLAN.
(f) MAINTAIN EROSION AND SEDIMENT CONTROL MEASURES IN A FUNCTIONING CONDITION UNTIL ALL EARTHWORK ACTIVITIES ARE COMPLETE AND SITE REHABILITATED.
(g) REMOVE TEMPORARY SOIL CONSERVATION STRUCTURES AS A FINAL ACTIVITY IN THE REHABILITATION PROCESS.
25.

THE CONTRACTOR WILL KEEP A LOG BOOK, MAKING ENTRIES AT LEAST WEEKLY AND IMMEDIATELY PRIOR TO FORECAST OF INCLEMENT WEATHER AND/OR SITE CLOSURE. THE FOLLOWING TO BE RECORDED:
(i) THE VOLUME OF ANY RAINFALL EVENT;
(ii) THE CONDITION OF ANY SOIL AND WATER MANAGEMENT WORKS;
(iii) APPLICATIONS OF FLOCCULATING AGENTS TO SEDIMENT RETENTION SYSTEMS;
(iv) VOLUMES OF WATER DISCHARGED FROM SEDIMENT RETENTION SYSTEMS; AND
(v) REMEDIAL WORKS.
THE BOOK WILL BE KEPT ON SITE AND MADE AVAILABLE TO ANY AUTHORISED PERSON ON REQUEST. IT WILL BE GIVEN TO THE PROJECT MANAGER AT THE CONCLUSION OF WORKS. COPIES OF MONTHLY ENTRIES ARE TO BE PROVIDED WITH PROGRESS CLAIMS.
26.

UTILISE A SINGLE ACCESS ONLY TO THE STOCK PILE SITES.
27.

DO NOT TAINT CLEAN CATCHMENT WATER WITH SILT FROM THE WORKS.
28.

DROP INLETS WHICH DO NOT HAVE AN OUTLET TO SILT TRAPS SHALL BE BLOCKED UNTIL ALL WORKS ARE COMPLETED.
29.

TOPSOIL AND SPOIL SHALL BE STOCKPILED IN NON-HAZARD AREAS AND PROTECTED FROM SURFACE RUNOFF BY PLACING IT ON A PLASTIC TARPAILIN. (HDPE OR SIMILAR) STOCKPILED SHALL ALSO BE COVERED WITH A PLASTIC TARPAILIN TO PREVENT RUNOFF. STOCKPILES MATERIAL SHALL BE PLACED BACK INTO THE EXCAVATED PIT AS SOON AS PRACTICAL. STOCKPILING PERIOD SHALL NOT EXCEED 5 DAYS
30.

THE CONTRACTOR SHALL PROVIDE A TURF STRIP BEHIND ALL KERB AND GUTTER AT COMPLETION OF ANY FOOTPATH FORMATION.
31.

THE CONTRACTOR SHALL MAINTAIN GRASS COVER UNTIL ALL WORKS HAVE BEEN COMPLETED, INCLUDING THE MAINTENANCE PERIOD, BY FREQUENT WATERING AND MOWING WHERE REQUIRED.

32.

FACILITIES AND/OR EQUIPMENT MUST BE PROVIDED FOR THE APPLICATION OF WATER TO DISTURBED AREAS TO MINIMISE THE GENERATION OF AIR-BORNE DUST FROM ANY AREA DISTURBED BY CONSTRUCTION ACTIVITIES.
33.

MATERIAL REMOVED FROM SEDIMENT CONTROL DEVICES MUST BE DISPOSED OF IN A WAY THAT DOES NOT POLLUTE WATERS OR BUSHLAND.
34.

DUST CONTROL MEASURES SHALL BE IMPLEMENTED CONTINUOUSLY DURING CONSTRUCTION WORKS TO THE SATISFACTION OF THE PROJECT MANAGER AND THE RELEVANT AUTHORITY.
35.

RUNOFF FROM VEHICLE OR CONSTRUCTION PLANT MAINTENANCE AND CLEANING AREAS SHALL BE COLLECTED AND DISPOSED OF IN A MANNER THAT DOES NOT POLLUTE.
36.

MATERIAL REMOVED FROM SEDIMENT CONTROL STRUCTURES MUST BE DISPOSED OF IN A MANNER THAT DOES NOT POLLUTE THE WATERS OR BUSHLAND.
37.

CONFORMITY WITH THIS PLAN SHALL IN NO WAY REDUCE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT AGAINST DAMAGE TO THE ENVIRONMENT DURING THE COURSE OF THE CONTRACT.
38.

THE DETAILS OF ANY DEVICES AND STRUCTURES ARE APPROXIMATE ONLY AND SHALL BE LOCATED ON SITE IN LIAISON WITH THE SITE MANAGER.

CONSTRUCTION SEQUENCE

- WORKS WILL BE UNDERTAKEN IN THE FOLLOWING SEQUENCE:
- (a)

PREPARATORY WORKS
- (i)

CATCH DRAINS/DIVERSION BANKS ARE TO BE INSTALLED BEFORE ANY OTHER WORKS TO DIRECT CLEAN WATER AWAY FROM THE SITE.
- (ii)

CONSTRUCT "SHAKE DOWN" FACILITY AT THE ENTRANCE TO THE SITE.
- (iii)

CONSTRUCT SILT FENCING BELOW ALL AREAS TO BE DISTURBED, INCLUDING STOCKPILE LOCATIONS AND AS SHOWN ON THE PLAN.
- (iv)

INSTALL BARRIER FENCING AS INDICATED ON THE PLAN.
- (v)

CONSTRUCT SEDIMENT RETARDING BASINS AND SILT TRAPS.
- (vi)

CONSTRUCT TEMPORARY DIVERSION DRAINS, ENSURING THAT SEDIMENT LADEN WATERS ARE DIVERTED INTO THE SEDIMENT RETARDING BASINS.
- (b)

CONSTRUCTION ACTIVITIES - TO COMMENCE ONLY AFTER ALL WORKS IN (a) HAVE BEEN COMPLETED, UNLESS NECESSARY FOR THE COMPLETION OF (a):
- (i)

STRIP AND STOCKPILE TOPSOIL TO A MAXIMUM DEPTH OF 100mm FROM ALL AREAS TO BE EXPOSED DURING CONSTRUCTION ACTIVITIES. EXCAVATION DEPTH IS NOT TO EXCEED 200mm WITHOUT PRIOR APPROVAL FROM THE CONTAMINATION CONSULTANT.
- (ii)

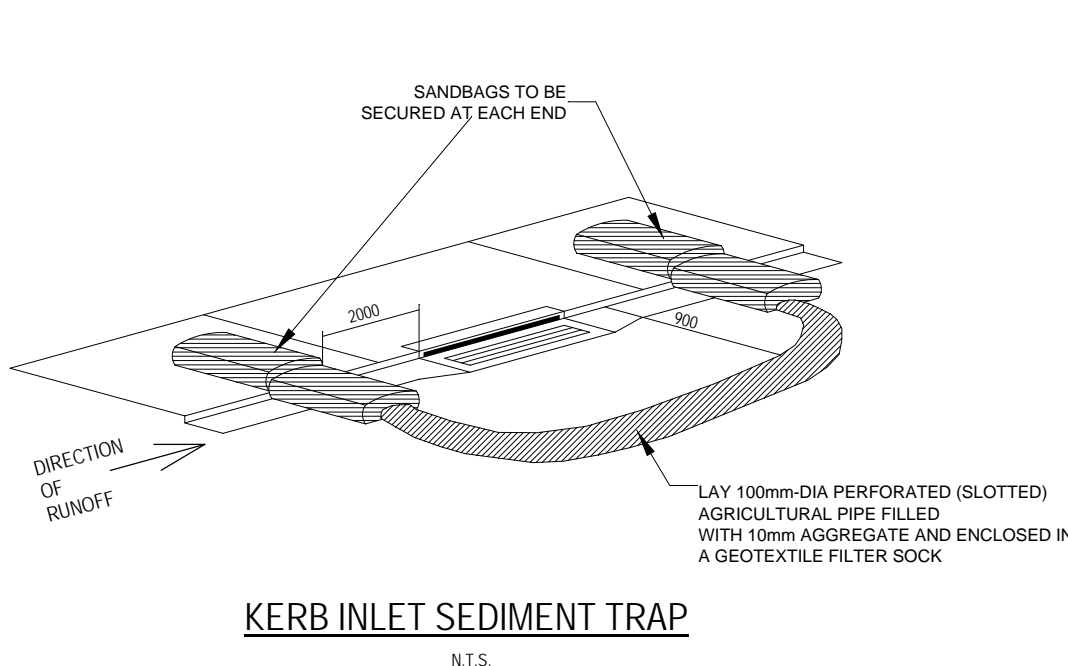
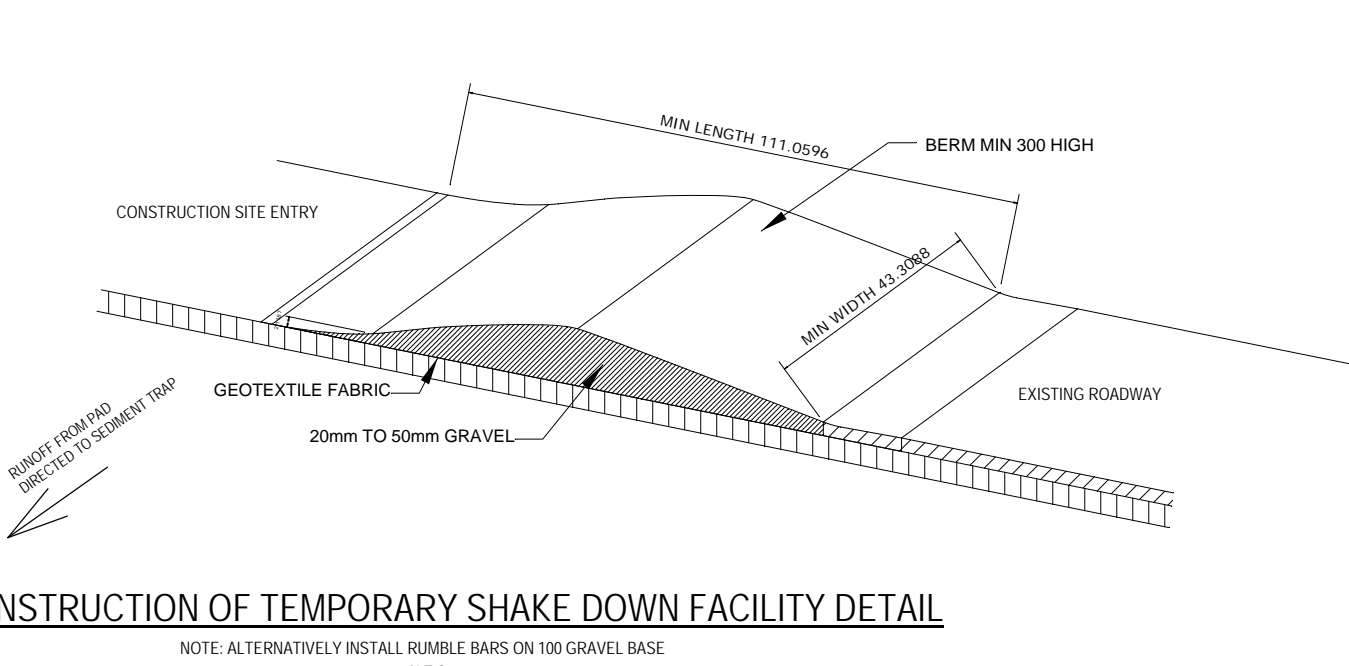
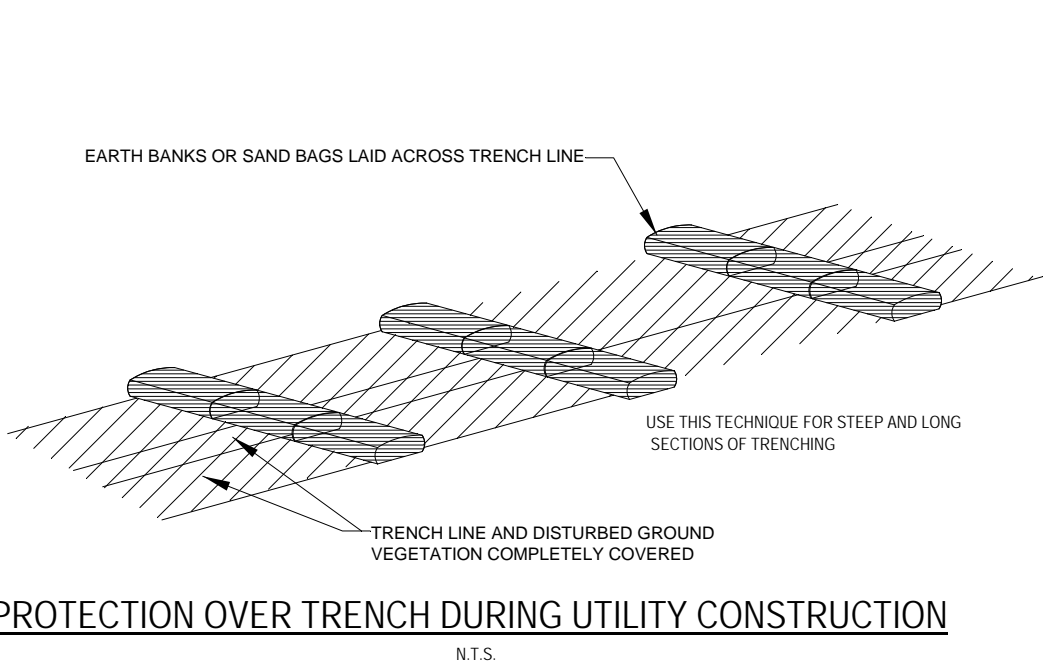
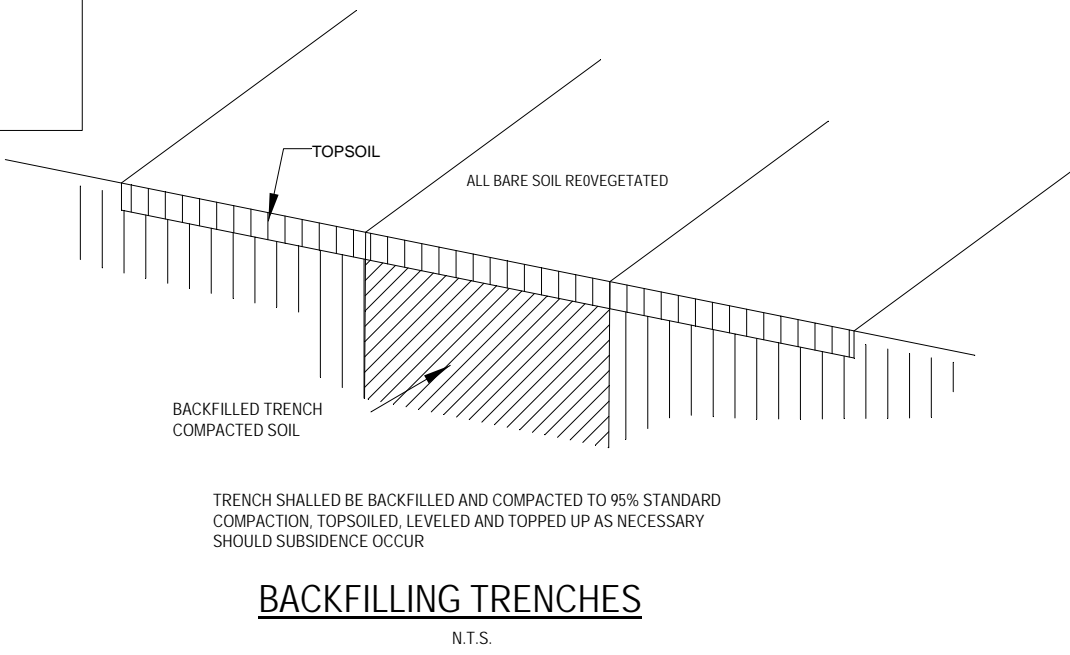
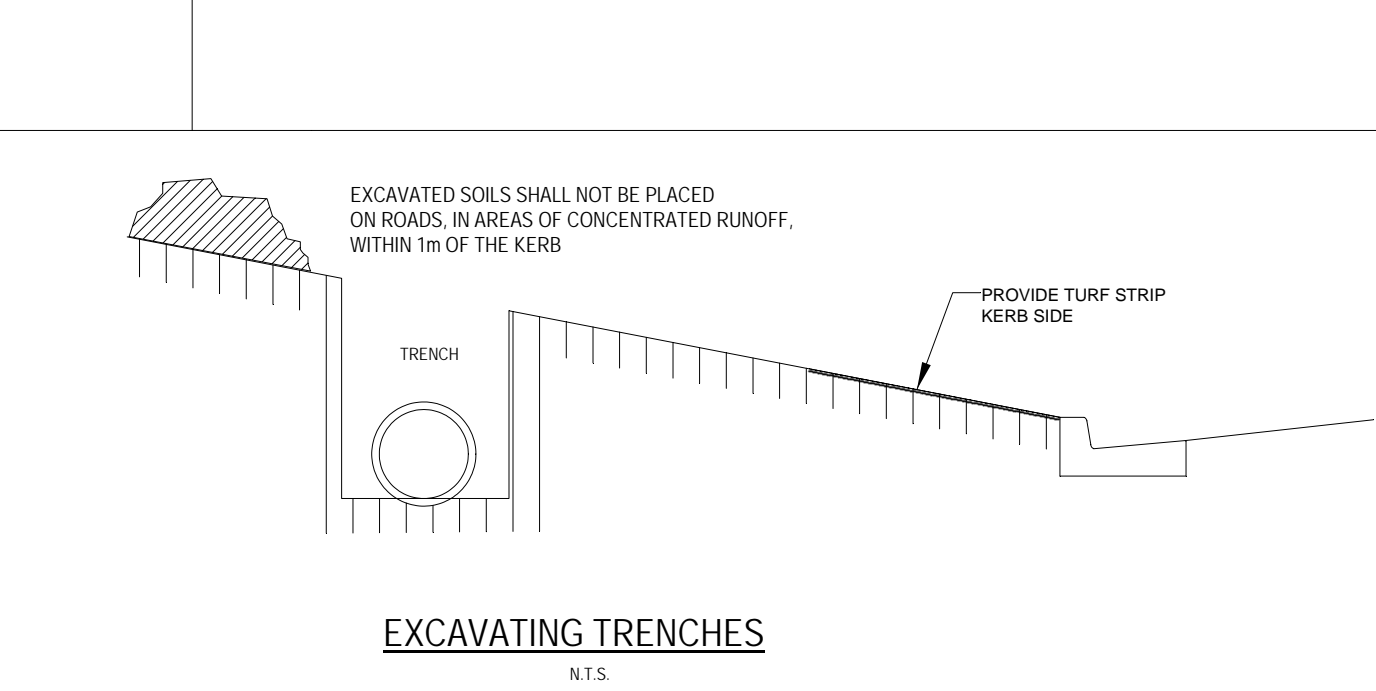
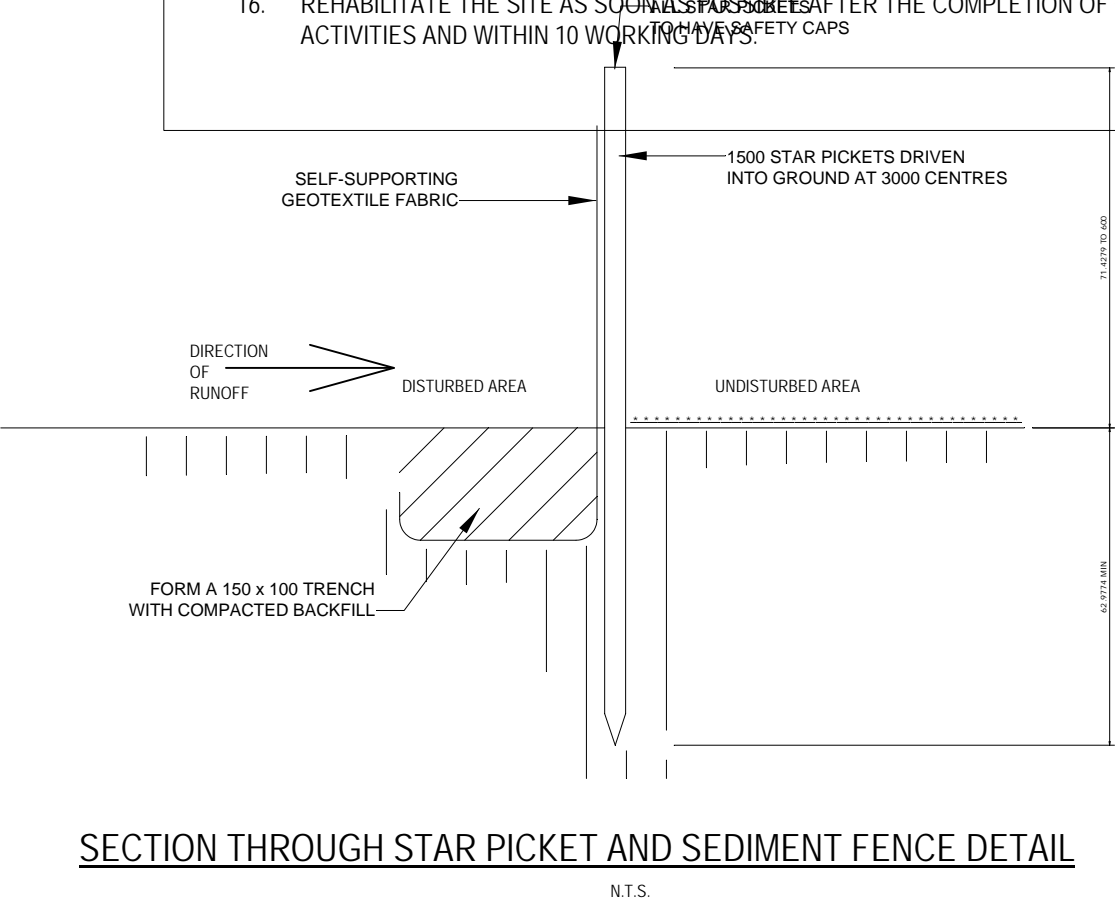
UNDERTAKE SITE DEVELOPMENT WORKS IN ACCORDANCE WITH THE DESIGN PLANS ENSURING THAT AFTER BULK EARTHWORKS ACTIVITIES (I.E. SITE REGRADING, FILLING) HAVE BEEN COMPLETED AND ADEQUATE GROUND COVER HAS BEEN ESTABLISHED (E.G. GRASS SEEDING AND MULCHING), AFFECTED AREAS ARE TO BE SEALED OFF VIA THE INSTALLATION OF SILT FENCES AND BARRIERS BEFORE CONTINUING WITH THE SEQUENCE OF WORKS.
- (c)

SITE REHABILITATION
- (i)

REHABILITATE THE SITE AS SOON AS PRACTICABLE AFTER THE COMPLETED CONSTRUCTION ACTIVITIES AND WITHIN 20 WORKING DAYS; AND
- (ii)

REMOVE ANY TEMPORARY SOIL AND WATER MANAGEMENT WORKS.

THE SITE WILL ONLY BE CONSIDERED STABLE WHEN A MINIMUM OF 70% GROUND COVER AT LEAST 100mm HIGH IS ACHIEVED OVER ALL DISTURBED AREAS. ALL SEEDED AREAS WHICH DO NOT GERMINATE AND/OR WHERE GERMINATION HAS BEEN SPARSE, SUCH AREAS MUST BE RESEEDD WITHIN 28 DAYS OF THE ORIGINAL SEEDING PROGRAM.



AMENDMENTS		
No	Date	Description

Design		P. Chrysostomou	
		No 12 Tallawalla street	
Client		Beverly Hills 2209	
		N.S.W.	
Job		Tel (02) 9554-9374	
		Mr & Mrs Sotirios & Maria Panagakis	
Drawn		at	
		No 87 Oak Drive	
Design		Georges Hall NSW 2198	
		Proposed Alterations & Additions	
Checked		at	
		No 87 Oak Drive	
Date		Georges Hall NSW 2198	
		December 2021	
Scale		as shown	
SEDIMENT AND EROSION DETAILS & NOTES			