CONSTRUCTION EXIT - ROCK PAD MATERIALS:

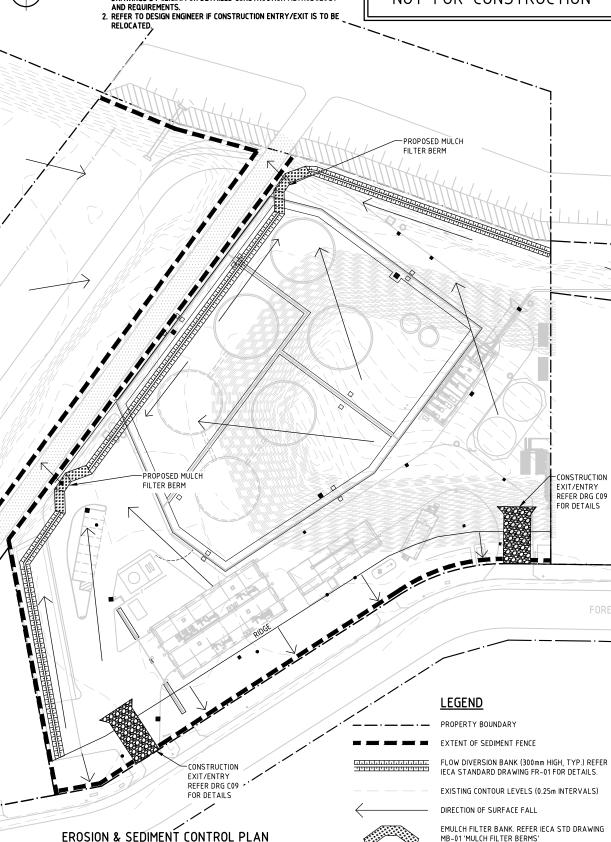
- ROCK: WELL GRADED, HARD, ANGULAR, EROSION RESISTANT ROCK, NOMINAL DIAMETER OF 50 TO 75mm (SMALL DISTURBANCES) OR 100 TO 150mm (LARGE DISTURBANCES). ALL REASONABLE MEASURES MUST BE TAKEN TO OBTAIN ROCK OF NEAR UNIFORM SIZE.
- FOOTPATH STABILISING AGGREGATE : 25 TO 50mm GRAVEL OR AGGREGATE.
 GEOTEXTILE FABRIC : HEAVY-DUTY, NEEDLE -PUNCHED, NON-WOVEN FILTER CLOTH ('BIDIM' A24 OR EQUIVALENT).

INSTALLATION:

- CLEAR THE LOCATION OF THE ROCK PAD, REMOVING STUMPS, ROOTS & OTHER VEGETATION TO PROVIDE A FIRM FOUNDATION SO THAT THE ROCK IS NOT PRESSED INTO SOFT GROUND. CLEAR SUFFICIENT WIDTH TO ALLOW PASSAGE OF LARGE VEHICLES, BUT CLEAR ONLY THAT NECESSARY FOR THE EXIT. DO NOT CLEAR ADJACENT AREAS UNTIL THE REQUIRED EROSION & SEDIMENT CONTROL DEVICES ARE IN PLACE.
- IF THE EXPOSED SOIL IS SOFT, PLASTIC OR CLAYEY, PLACE A SUB-BASE OF CRUSHED ROCK OR A LAYER OF HEAVY-DUTY FILTER CLOTH TO PROVIDE A
- PLACE THE ROCK PAD FORMING A MINIMUM 200mm THICK LAYER OF CLEAN.
- IF THE ASSOCIATED CONSTRUCTION SITE IS UP-SLOPE OF THE ROCKPAD, THUS CAUSING STORMWATER RUNOFF TO FLOW TOWARD THE ROCK PAD, THEN FORM A MINIMUM 300mm HIGH FLOW CONTROL BERM ACROSS THE ROCK PAD TO DIVERT SUCH RUNOFF TO A SUITABLE SEDIMENT TRAP.
- THE LENGTH OF THE ROCK PAD SHOULD BE AT LEAST 15m WHERE PRACTICABLE, & AS WIDE AS THE FULL WIDTH OF THE ENTRY OR EXIT & AT LEAST 3m. THE ROCK PAD SHOULD COMMENCE AT THE EDGE OF THE OFF-SITE SEALED ROAD OR PAVEMENT.
- FLARE THE END THE ROCK PAD WHERE IT MEETS THE PAVEMENT SO THAT THE WHEELS OF TURNING VEHICLES DO NOT TRAVEL OVER UNPROTECTED SOIL.
- IF THE FOOTPATH IS OPEN TO PEDESTRIAN MOVEMENT, THEN COVER THE COARSE ROCK WITH FINE AGGREGATE OR GRAVEL, OR OTHERWISE TAKE WHATEVER MEASURES ARE NEEDED TO MAKE THE AREA SAFE

1. EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE DESIGNED AND INSTALLED IN ACCORDANCE WITH THE INTERNATIONAL EROSION CONTROL ASSOCIATION AUSTRALASIA (I.E.C.A.) – "BEST PRACTICE FOR EROSION AND SEDIMENT CONTROL." REFER STANDARD DRAWINGS BY I.E.C.A. FOR DETAILED CONSTRUCTION METHODOLOGY

TENDER ONLY NOT FOR CONSTRUCTION



SEDIMENT AND EROSION CONTROL NOTES:

ALL THE SEDIMENT & EROSION CONTROL MEASURES TO BE IN ACCORDANCE WITH LOCAL COUNCIL'S GUIDE LINES.

PRIOR TO THE COMMENCEMENT OF CONSTRUCTION:

- AVOID STRIPPING & EXCAVATING UNTIL READY TO BUILD
- INSTALL SEDIMENT FENCES

SPECIFICATION:

- SILT FENCE SHALL NOT BE REMOVED UNTIL SITE HAS BEEN PAVED & SURFACED.
- 2. BUND WALLS SHALL BE LOCATED AROUND ALL PITS & MAINTAINED UNTIL THE CATCHMENT AREA HAS BEEN PAVED.
- KERB DRAIN EXCLUDER SHALL INCORPORATE TRAFFIC CONTROL BARRICADES IN ACCORDANCE WITH AS1742.3 - 1985, & SHALL NOT BE PLACED UNTIL WORKS ARE BEING CARRIED OUT ON THE
- FOOTPATH AREA, OR AS OTHERWISE DIRECTED BY COUNCIL.
 ALL SEDIMENT TRAPS, EXCLUDERS, BUND WALLS SHALL BE INSPECTED & CLEANED AFTER EACH STORM EVENT. DAMAGED OR CLOGGED BUNDING ARE TO BE REMOVED AND REPLACED.
- THE BUILDER SHALL CARRY OUT ANY ADDITIONAL WORKS DEEMED NECESSARY AND DIRECTED BY COUNCIL TO BE CARRIED OUT.
- THE SEDIMENT CONTROL PLAN SHALL BE IMPLEMENTED PRIOR TO ANY WORKS BEING CARRIED OUT ON SITE.

HOLD POINTS:

INSPECTION OF EROSION AND SEDIMENT CONTROL DEVICES MUST BE UNDERTAKEN BY THE SUPERVISING OR SUPERINTENDENT ENGINEER AT A MINIMUM AT THE FOLLOWING HOLD POINTS

- PRIOR TO COMMENCEMENT OF BULK EARTHWORKS PRIOR TO LIVE CONNECTION OF NEW STORMWATER DRAINAGE TO
- THE EXISTING SYSTEM. PRIOR TO ANY IN STREAM WORKS
- PRIOR TO ON MAINTENANCE OR OFF MAINTENANCE INSPECTION.
- AT INTERVALS NOT EXCEEDING ONE MONTH

COPIES OF INSPECTION REPORTS SHALL BE KEPT ON SITE.

SEDIMENT BARRIERS:

INSTALL SEDIMENT FENCE(S) ALONG THE LOW SIDE OF THE SITE AND IDEALLY ALONG A LINE OF CONSTANT LAND LEVEL TO PREVENT THE CONCENTRATION OF STORMWATER RUNDER IN AREAS WHERE IT IS EITHER UNDESIRABLE OR IMPRACTICAL TO BURY THE LOWER EDGE OF THE SEDIMENT FENCE, THE LOWER 200mm (MIN) PORTION OF THE FABRIC SHOULD BE PLACED 0 THE GROUND UP-SLOPE OF THE FENCE AND BURIED UNDER A 100mm (MIN)LAYER OF AGGREGATE.

SEDIMENT FENCES ON BUILDING SITES CAN BE STAPLED TO APPROXIMATELY 40mm SQUARE HARDWOOD POSTS OR WIRE TIED

FIFI D INLET GUILLIES

SEDIMENT CONTROLS FOR STORMWATER INLETS LOCATED WITHIN THE PROPERTY BOUNDARIES MAY CONSIST OF GEOTEXTILE FABRIC PLACED EITHER DIRECTLY OVER THE GRATED INLET OR AROUND THE INLET SUPPORT BY A TIMBER FRAME, FIELD INLET PROTECTION IS NECESSARY WHERE INLETS DRAIN AREAS OF BARE AND UNPROTECTED SOIL. DURING STORMS, PONDING SHOULD BE ALLOWED TO OCCUR AROUND THE STORMWATER INLET TO ASSIST IN THE SETTING OUT OF SEDIMENTS.

PAVEMENT INLET GULLY

A ROADSIDE INLET BARRIER IS TO BE INSTALLED, SO THAT IT SHOULD NOT BE ALLOWED TO FULLY BLOCK THE INLET STRUCTURE ON A HILLSIDE, SEDIMENT BARRIERS MAY CONSIST OF A TEMPORARY DAM CONSTRUCTED FROM SAND AND GRAVEL BAGS AT LEAST 4 METRES UP SLOPE FROM THE GULLY INLET.

BUILDING OPERATIONS:

- ERODABLE MATERIAL MISTAKENLY PLACED WITHIN THE ROAD RESERVE (INCLUDING ACCIDENTAL SPILL AGE AND TRACKING DE SUCH MATERIALS ONTO THE ROAD) THAT CAN NOT BE PREVENTED THROUGH REASONABLE MEANS, MUST BE:
 (a) REMOVED IMMEDIATELY IF RAINFALL IS IMMINENT OR OCCURRING. (b) REMOVED PRIOR TO THE END OF THE DAY'S WORK IF RAINFALL NOT EXPECTED. MATERIALS SHOULD BE SWEPT FROM THE ROAD, NOT WASHED DOWN THE GUTTER.
- ALL SOLID WASTE SHOULD BE STORED ON SITE IN SUCH A MANNER THAT IT IS PREVENTED FROM LEAVING THE SITE EITHER BY THE ACTION OF WIND OR WATER
- SMALLER MATERIALS, SUCH AS LITTER, SHOULD BE CONTAINED IN COVERED BINS OR LITTER TRAPS FORMED ON THREE SIDES BY A GEOTEXTILE WIND BREAK.
- CONCRETE WASTE WASTED FROM TRUCKS AND MIXERS UNITS SHALL BE CONTAINED ON SITE AND SHALL NOT BE PLACED IN A POSITION WHERE IT COULD REASONABLY BE EXPECTED TO WASH FROM THE SITE AND HARM THE ENVIRONMENT.
- DUST SUPPRESSION OPERATIONS SHALL BE UNDERTAKEN TO MINIMISE THE RISK OF DUST RISE, INCLUDING WATER TRUCKS. MULCHING, EROSION CONTROL BLANKETS, SOIL BINDERS, VEHICLE SPEED LIMITS & STOCKPILE STABILISATION.

BULK EARTHWORKS:

- AVOID STRIPPING & EXCAVATING UNTIL READY TO BUILD.
- CONSTRUCTION OF AN ENTRY/EXIT POINT TO THE SITE SHOULD BE MANAGED SO THAT SEDIMENT IS NOT TRACKED OFF THE SITE.
- TOP SOIL SHOULD BE STOCKPILED ON SITE FOR LATER USE.
 WHERE PRACTICABLE MAINTAIN KERB VEGETATION IN A HEALTHY STATE DURING THE CONSTRUCTION PROGRESS.
 WHEN UP SLOPE WATER IS DIVERTED AROUND A WORK SITE IT IDEALLY
- SHOULD BE DISCHARGED AS SHEET FLOW THROUGH AN UNDISTURBED AREA BESIDE THE WORKS.

STOCKPILES:

- STOCKPILES ARE NOT TO BE STORED ON THE FOOTPATH OR THE ROAD
- WHERE NECESSARY STOCKPILE LOSSES CAN BE MINIMISED WITH THE USE OF
- ALL STOCKPILES AND BUILDING MATERIAL SHOULD BE LOCATED WITHIN SEDIMENT CONTROL ZONE.
- TO MINIMISE EROSION AND THE LOSS OF SAND AND SOIL STOCKPILES SHOULD BE NOT LOCATED WITHIN AN OVERLAND FLOW PATH. IF IT IS IMPRACTICAL TO AVOID STORMWATER RUNOFF BEING DIRECTED. TO A STOCKPILE, THEN A PERIMETER BANK SHALL BE CONSTRUCTED UP SLOPE OF THE STOCKPILE TO DIRECT RUNOFF IN A CONTROLLED MANNER AROUND

GENERAL MAINTENANCE:

- SEDIMENT FENCES SHOULD BE REPLACED IF THE FABRIC IS RIPPED OR OTHERWISE DAMAGED. THE MAINTENANCE OF THE SEDIMENT FENCES INCLUDES THE REMOVAL OF SEDIMENT DEPOSITED UP SLOPE OF THE FENCE AND RETRENCHING THE FABRIC WHEN THE FENCE IS 25% FULL. FOLLOWING STORM EVENTS, THE ROAD RESERVE AND ALL SEDIMENT
- BARRIERS SHOULD BE INSPECTED AND ANY EXCESSIVE RESIDUE SHOULD BE APPROPRIATELY REMOVED.

SITE REHABILITATION:

ALL GROUND DISTURBED BY THE CONSTRUCTION ACTIVITY SHOULD BE PROMPTLY AND PROGRESSIVELY STABILISED SO IT CAN NO LONGER ACT AS A SOURCE OF SEDIMENT.

SERVICES TRENCHES:

TO AVOID UNNECESSARY SOIL EROSION, SERVICE TRENCHES SHOULD BE BACK FILLED, CAPPED AND COMPACTED TO A LEVEL AT LEAST 75-100mm ABOVE THE ADJOINING GROUND LEVEL.

OPERATION & MAINTENANCE

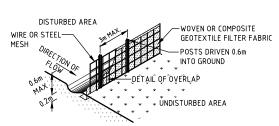
- EROSION & SEDIMENT CONTROL MEASURES SHALL BE INSPECTED: A. DAILY (WHEN WORK IS OCCURRING ON SITE) OR WEEKLY (WHEN WORK IS NOT OCCURRING ON SITE)
- B. WITHIN 24 HOURS OF EXPECTED RAIN
- WITHIN 18 HOURS OF A RAINFALL EVENT (ie AN EVENT OF SUFFICIENT INTENSITY AND DURATION TO CAUSE RUNOFF).
- EROSION & SEDIMENT CONTROL MAINTENANCE MEASURES SHALL BI TRIGGERED WHEN THE CAPACITY OF THE MEASURE FALLS BELOW 75%. THE MAINTENANCE SHALL BE PERFORMED BY THE END OF THE DAY
- PRIOR TO LONG PERIODS OF SHUT DOWN (GREATER THAN 5 DAYS) THE SITE SHALL EITHER TO BE PROVIDED WITH TEMPORARY GROUND COVER (AT LEAST 70% EFFECTIVE COVER) OR HAVE ALL EROSION AND SEDIMENT CONTROL MEASURES TO BE CONTINUALLY OPERATED DURING THE SHUTDOWN, INCLUDING ONGOING MONITORING AND SEDIMENT BASIN CLEANOUTS.
- SHUTDOWN PERIODS IN EXCESS OF 3 MONTHS ARE TO HAVE 100% LONG TERM SITE COVERAGE SUCH AS HYDROMULCH OR GEOFABRIC.
- ALL RELEASES OF STORMWATER CAPTURED ON-SITE, UNLESS OTHERWISE NOTED MUST NOT EXCEED THE FOLLOWING LIMITS:
- A. 50mg/L OF TOTAL SUSPENDED SOLIDS (TSS) AS A MAXIMUM
- CONCENTRATION.
- B. TURBIDITY (NTU) VALUE LESS THAN 10% ABOVE BACKGROUND
 C. pH VALUE MUST BE IN THE RANGE 6.5 TO 8.5 EXCEPT WHERE, AND TO THE EXTENT THAT, THE NATURAL RECEIVING WATERS LIE OUTSIDE THIS RANGE WEATHER FORECASTS SHALL BE MONITORED AND IN THE EVENT OF HEAVY
- RAIN FORECAST ALL MAINTENANCE AND PREVENTION METHODS SHALL BE IMPLEMENTED

STOCKPILE MANAGEMENT

SAND MATERIAL

- A. NO COVER REQUIRED WHEN WIND EROSION AND DUST CONTROL IS NOT AN
- B. SYNTHETIC COVER IS REQUIRED WHEN THE CONTROL OF WIND EROSION IS REQUIRED FOR SAFETY, TO BE INSTALLED BY THE END OF THE DAY.
- A. NO COVER REQUIRED WHEN WIND EROSION AND DUST CONTROL IS NOT AN
- B. MULCHING, CHEMICAL STABILISERS, SOIL BINDERS, IMPERVIOUS BLANKETS
- OR VEGETATIVE COVER IS REQUIRED WHEN:
- >28 DAY STOCKPILING OF DISPERSIVE SOILS
 >28 DAY STOCKPILING OF CLAYEY SOILS WHERE TURBIDITY CONTROL IS DESIRABLE
- >5/10 DAY STOCKPILING OF SOILS DURING MONTHS OF EXTREME/HIGH EROSION RISK (JAN, FEB, MAR, APR, NOV, DEC)
- ALL STOCKPILES OF CLAYEY SOILS WHEN TURBIDITY CONTROL IS







RUNOFF FROM PAD DIRECTED

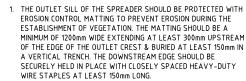
TO SEDIMENT TRAP.

FIG. 2. - CONSTRUCTION EXIT/ENTRY

- MAINTENANCE: THE ENTRANCE SHOULD BE MAINTAINED SO THAT IT PREVENTS TYRES FROM TRACKING.
 DRESSING WITH ADDITIONAL AGGREGATE IF REQUIRED.
- 3. REGULARLY REMOVE SEDIMENT FROM ROADWAY.

MIN LENGTH 15m BERM (0.3m MIN. HIGH) CONSTRUCTION SITE —EXISTING ROADWAY





WRAP FILTER CLOTH

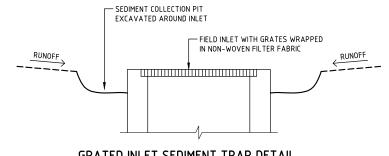
100¢ AG. PIPE WRAPPED IN FILTER CLOTH PLACED TO COVER THE

EXTENTS OF LINTEL OR BACKSTONE & FILLED WITH 20mm GRAVEL.

KERB INLET PROTECTION DETAIL

OVER GRATE.

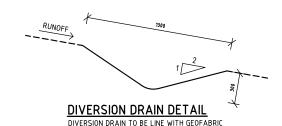
- 2. ENSURE THAT THE OUTLET SILL (CREST) IS LEVEL FOR THE
- 3. IMMEDIATELY AFTER CONSTRUCTION, TURF, OR SEED & MULCH



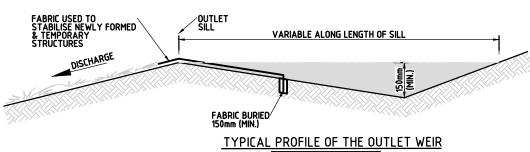




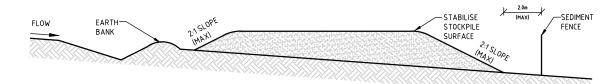
CATCH DRAIN DETAIL CATCH DRAINS TO BE RUN AT MAX. 0.5% GRADE

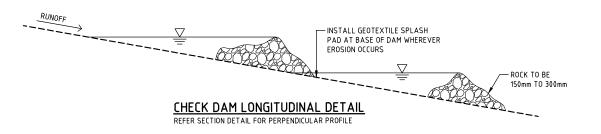


- SPECIFIED LENGTH.
- WHERE APPROPRIATE, THE LEVEL SPREADER.



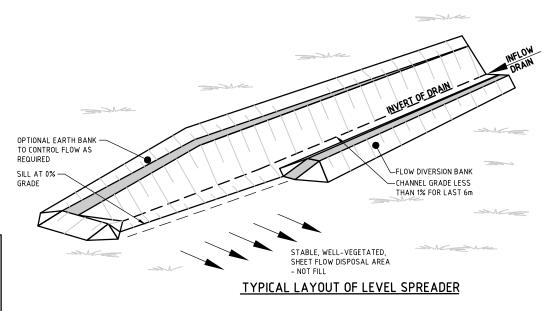
LEVEL SPREADER

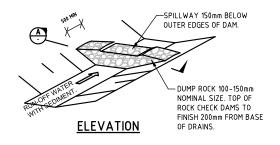


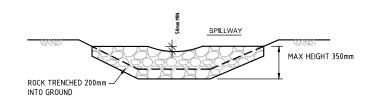






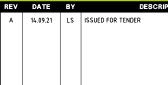














PROJECT DETAILS MANILDRA GROUP PORT KEMBLA BULK LIQUIDS FACILITY FORESHORE ROAD PORT KEMBLA, NSW

EROSION & SEDIMENT CONTROL PLAN CONSTRUCTION DETAILS

STATUS		
TENDER		
DATE CREATED	ORIGINAL SCALE	SHEET
14.09.2021	AS SHOWN	A3
DO NOT SCALE THIS DRAWING. CONFIRM ALL DIMENSIONS ON SIT		
DRAWING NO		REV
20399-C09		Α