CONCRETE:

- 1. ALL WORKMANSHIP AND MATERIAL SHALL BE IN ACCORDANCE WITH AS 3600 CURRENT EDITION WITH AMENDMENTS, EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.
- 2. READYMIX CONCRETE SUPPLY SHALL COMPLY WITH AS 1379.
- CONCRETE QUALITY
- ALL THE REQUIREMENTS OF THE ACSE SPECIFICATION DOCUMENT 1 (EDITION 6) SHALL APPLY TO THE FORMWORK, REINFORCEMENT AND CONCRETE UNLESS NOTED OTHERWISE.

ELEMENT	STRENGTH GRADE (MPa)	SLUMP	MAX AGG SIZE	CEMENT TYPE
OSD TANK ROOF	40	80	20	SL
OSD TANK BASE	32	80	20	SL
OSD TANK BASE	20	230	10	SL

- 4. PROJECT CONTROL TESTING SHALL BE CARRIED OUT IN ACCORDANCE AS
- 5. NO ADMIXTURES SHALL BE USED IN CONCRETE UNLESS APPROVED IN
- 6. CLEAR CONCRETE COVER TO ALL REINFORCEMENT FOR DURABILITY SHALL BE AS FOLLOWS UNLESS SHOWN OTHERWISE.

EXPOSURE CLASSIFICATION TO AS 3600:	CONCRETE GRADE:	CAST AGAINST GROUND:	CAST IN FORMS AND EXPOSED:	CAST IN FORMS NOT EXPOSED:
A1&A2	25	50mm	30mm	20mm(A1)
B1	32	60mm	40mm	-
B2	40	65mm	45mm	-

COVER REQUIREMENTS MAY NEED TO BE INCREASED TO SUIT FIRE RATING. EXPOSURE CLASSIFICATION SHALL BE AS INDICATED ON THE DRAWING.

DURABILITY REQUIREMENTS FOR CONCRETE.

EXPOSURE	MINIMUM	MAXIMUM
CLASSIFICATION	CEMENT	W/C
TO AS 3600:	CONTENT:	RATIO:
A1&A2	-	0.56
B1	320	0.56
B2	390	0.46
C	450	0.40

- 7. ALL REINFORCEMENT SHALL BE FIRMLY SUPPORTED ON MILD STEEL PLASTIC TIPPED CHAIRS. PLASTIC CHAIRS OR CONCRETE CHAIRS AT 1 METRE CENTRES MAXIMUM BOTH WAYS. BARS SHALL BE TIED AT ALTERNATE INTERSECTIONS. USE PLASTIC CHAIRS IN EXPOSURE CONDITION GREATER THAN B1.
- 8. CONCRETE SIZES DO NOT INCLUDE THICKNESSES OF APPLIED FINISHES.
- 9. DEPTHS OF BEAMS ARE GIVEN FIRST AND INCLUDE SLAB THICKNESS.
- 10. REFER TO ARCHITECT'S DETAILS, FOR CHAMFERS, DRIP GROOVES, REGLETS, ETC. MAINTAIN COVER TO REINFORCEMENT AT THESE DETAILS.
- 11. NO HOLES, CHASES OR EMBEDMENT OF PIPES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE MEMBERS WITHOUT THE PRIOR WRITTEN APPROVAL OF THE ENGINEER.
- 12. CONSTRUCTION JOINTS WHERE NOT SHOWN SHALL BE LOCATED TO THE APPROVAL OF THE ENGINEER.
- 13. ALL CONCRETE INCLUDING SLABS ON GROUND AND FOOTINGS SHALL BE COMPACTED WITH MECHANICAL VIBRATORS.
- 14. USE ALIPHATIC ALCOHOLS SPRAYED OVER THE SURFACE PRIOR TO AND AFTER FINISHING TO REDUCE RATE OF EVAPORATION FROM THE SURFACE AND HELP CONTROL PLASTIC SHRINKAGE CRACKING. NOTE THAT THE USE OF ALIPHATIC ALCOHOLS IS NOT A SUBSTITUTE FOR CURING.
- 15. COMMENCE CURING OPERATIONS PROMPTLY AFTER SURFACE FINISHING IS COMPLETE. CURING COMPOUNDS ARE TO BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS AND ARE TO BE CHECKED FOR COMPATIBILITY WITH PROPOSED FLOOR FINISHES. SOME COMPOUNDS MAY REQUIRE REMOVAL FOR GLUED DOWN FLOOR COVERINGS OR WET CURING AS DESCRIBED BELOW.

CONCRETE IS TO BE CURED BY KEEPING THE SURFACES CONTINUOUSLY WET FOR A PERIOD OF 3 DAYS, AND PREVENTING THE LOSS OF MOISTURE FOR A FURTHER 7 DAYS FOLLOWED BY A GRADUAL DRYING OUT.

- 16. PROPPING WHICH SUPPORTS CONSTRUCTION OVER IS TO BE LEFT IN PLACE AS REQUIRED TO AVOID OVER STRESSING THE STRUCTURE DUE TO CONSTRUCTION LOADING
- 17. THE ENGINEER SHALL BE GIVEN 24 HOURS NOTICE FOR REINFORCEMENT INSPECTIONS AND CONCRETE SHALL NOT BE DELIVERED UNTIL ENGINEERS APPROVAL IS OBTAINED.
- 18. CONDUITS, PIPES ETC. SHALL ONLY BE LOCATED IN THE MIDDLE ONE THIRD OF SLAB DEPTH AND SPACED AT NOT LESS THAN 3 DIAMETERS OF THE CONDUIT, PIPES ETC. PIPES OR CONDUITS SHALL NOT BE PLACED WITHIN THE COVER TO REINFORCEMENT.
- 19. REINFORCEMENT SYMBOLS: N DENOTES DEFORMED GRADE 500 NORMAL DUCTILITY CLASS BARS TO AS R DENOTES PLAIN ROUND GRADE 250 NORMAL DUCTILITY CLASS BARS TO AS 4671
- SL DENOTES SQUARE MESH GRADE 500 LOW DUCTILITY CLASS TO AS 4671 TM DENOTES TRENCH MESH GRADE 500 LOW DUCTILITY CLASS TO AS 4671 THE MEMBER IMMEDIATELY FOLLOWING THE BAR GRADE SYMBOL REPRESENTS THE NOMINAL BAR DIAMETER IN MILLIMETERS. THE FIGURES

FOLLOWING THE FABRIC SYMBOL SL & RL IS THE REFERENCE NUMBER FOR

29.10.20

RL DENOTES RECTANGULAR MESH GRADE 500 LOW DUCTILITY CLASS TO AS

20. REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY AND NOT NECESSARILY IN TRUE PROJECTION.

ABRIC TO AS 4671.

ISSUED FOR CONSTRUCTION

CONCRETE (CONTINUED):

- 21. SLAB REINFORCEMENT SHALL EXTEND AT LEAST 65mm ONTO MASONRY SUPPORT WALLS AND 50 PERCENT OF THE BOTTOM REINFORCEMENT SHALL BE COGGED TO ACHIEVE ANCHORAGE AT SIMPLY SUPPORTED ENDS.
- 22. SPLICES IN REINFORCEMENT SHALL BE MADE ONLY IN POSITIONS SHOWN OR OTHERWISE APPROVED IN WRITING BY THE ENGINEER. LAPS SHALL BE IN ACCORDANCE WITH AS 3600 AND NOT LESS THAN THE DEVELOPMENT LENGTH FOR EACH BAR.
- 23. WHERE TRANSVERSE TIE BARS ARE NOT SHOWN PROVIDE N12-400 SPLICED WHERE NECESSARY AND LAPPED 500mm WITH MAIN BARS.
- 24. UPWARD CAMBER TO FORMWORK OF REINFORCED CONCRETE CANTILEVERS SHALL BE L/120, WHERE L IS THE PROJECTION BEYOND FACE OF COLUMN OR WALL. CAMBER TO SUSPENDED SLABS AND BEAMS SHALL BE 5 FOR EVERY 2500 OF SPAN. MAINTAIN THE SLAB AND BEAM DEPTHS SHOWN.
- 25. SLABS AND BEAMS SHALL BE CONSTRUCTED TO BEAR ONLY ON THE BEAMS, WALLS, COLUMNS, ETC SHOWN ON THE DRAWINGS, TOPS OF LOAD BEARING MASONRY WALLS ARE TO BE TROWELLED SMOOTH AND 2 LAYERS OF ALCOR PROVIDED BETWEEN WALL AND SLAB. ALL OTHER BUILDING ELEMENTS SHALL BE KEPT 15mm MINIMUM CLEAR FROM SOFFITS OF THE STRUCTURE.
- 26. FORMWORK STRIPPING TIMES: RECOMMENDED MINIMUM STRIPPING TIMES IN THE ABSENCE OF CALCULATION AND STRENGTH TESTING. SHALL BE:

MEMBER TYPE	MEMBER	× EFFECTIVE SPAN (m)	MINIMUM STRIPPING TIME (DAYS) FOR AVERAGE AIR TEMPERATURE DURING PERIOD PRIOR TO STRIPPING.			
			20° AND OVER	10° TO 20°	5° TO 10°	UNDER 5°
VERTICAL UNLOADED	WALL, COLUMN, BEAM SIDE.	0	2	3	5	7
VERTICAL LOADBEARING	WALL, COLUMN OR LOADBEARING STRUCTURE	0	5	6	7	9
		UNDER 3	7	10	14	21
HORIZONTAL	SLAB	3 - 6	10	14	21	28
		OVER 6	14	21	28	28
		UNDER 3	10	14	21	28
HORIZONTAL	BEAM	3 - 6	14	21	28	28
		OVER 6	21	28	28	28

27. STANDARD LAP AND COG LENGTHS UNLESS NOTED OTHERWISE ON DRAWINGS.

BAR DIAMETER	MIN LAP LENGTH (mm)	MIN COG LENGTH (mm)
N12	500	180
N16	750	210
N20	1000	260
N24	1375	310
N28	1560	360
N32	1810	400

28. MINIMUM MESH LAPS

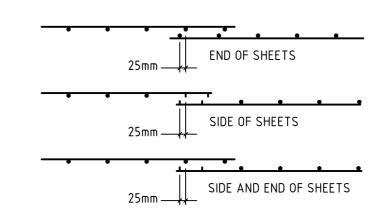


TABLE				TION
DURING CONSTRUCTION – TEMPORARY STABILISATION (DURING PERIODS OF INACTIVITY OR WHEN WORKS ARE ON HOLD)				
LANDS	STABILISATION REQUIREMENT	TIMEFRAMES	TREATMENT METHODS - PRODUCTS	REMARKS
ALL LANDS	C-FACTOR = 0.15 (50% EQUIVALENT GROUND COVER ^[1]	APPLIES AFTER 20 WORKING DAYS OF INACTIVITY (EVEN THOUGH WORKS MIGHT CONTINUE LATER)	SOIL BINDER (I.E VITAL P47/STONEWALL OR EQUIVALENT ^[1])	- SPRAY ALL SURFACES WITH VITAL P47/STONEWALL OR EQUIVALENT ⁽¹⁾ VITAL DILUTION RATE = 1:10(VITAL:WATER)RE-APPLY/MAINTAIN AS NECESSARY (APPROX. EVERY 3-6 MONTHS WITHOUT SUITABLE VEGETATION COVER) TO ENSURE THE REQUIRED COVER IS PROVIDED COVER ALL EXPOSED SOILS.
			MATTING, BLACK PLASTIC OR EQUIVALENT ^[1]	- RE-APPLY/MAINTAIN AS NECESSARY TO ENSURE THE REQUIRED COVER IS PROVIDED.
			LINING/	CIFICATIONS DETAILED ON THE PLAN FOR SPECIFIC STABILISATION REQUIREMENTS. ATMENT METHODS ARE SHOWN BELOW.
			TEMPORARY LINING – GEOTEXTILE (I.E. BIDIM A24 OR EQUIVALENT ⁽¹⁾)	- COMPLETE ANY SUBSOIL TREATMENT BEFORE LAYING THE MATTING INSTALL MATTING IN ACCORDANCE WITH SD 5-7 RE-APPLY/MAINTAIN AS NECESSARY TO ENSURE THE REQUIRED COVER IS PROVIDED.
WATERWAYS, DRAINAGE LINES AND CONCENTRATED FLOW AREAS C-FACTOR = 0.05 (70% GRASS COVER OR EQUIVALENT GROUND COVER ⁽¹⁾	APPLIES AFTER 10 WORKING DAYS FROM COMPLETION OF FORMATION AND BEFORE THEY ARE ALLOWED TO CARRY CONCENTRATED FLOWS.	1	- COMPLETE SUBSOIL TREATMENT (I.E. GYPSUM LIGHTLY RIPPED INTO SUBGRADE AT A RATE OF 5 TONNES/Ha) PLACE TOPSOIL TO A DEPTH OF AT LEAST 75mm COMPLETE ANY FERTILISATION AND SEEDING BEFORE LAYING THE MATTING INSTALL MATTING IN ACCORDANCE WITH SD 5-7 SPRAY ALL SURFACES WITH VITAL P47/STONEWALL OR EQUIVALENT ^[1] VITAL DILUTION RATE = 1L / m ² OF DILUTED VITAL MIXTURE RE-APPLY/MAINTAIN AS NECESSARY TO ENSURE THE REQUIRED COVER IS PERMANENTLY MAINTAINED.	
		JUTE MATTING (~350gsm) AND SEEDING OR EQUIVALENT ^[1]) - LOW FLOWS TO MODERATE	- COMPLETE SUBSOIL TREATMENT (I.E. GYPSUM LIGHTLY RIPPED INTO SUBGRADE AT A RATE OF STONNES/Ha) PLACE TOPSOIL TO A DEPTH OF AT LEAST 75mm COMPLETE ANY FERTILISATION AND SEEDING BEFORE LAYING THE MATTING INSTALL MATTING IN ACCORDANCE WITH SD 5-7 RE-APPLY/MAINTAIN AS NECESSARY TO ENSURE THE REQUIRED COVER IS PERMANENTLY MAINTAINED COMPLETE SUBSOIL TREATMENT (I.E. GYPSUM LIGHTLY RIPPED INTO SUBGRADE AT A RATE OF	
			TURF REINFORCEMENT MATTING (TRM) (E.G. TERRAMAT OR EQUIVALENT ^[1]) - MODERATE FLOWS	5TONNES/Ha). - PLACE TOPSOIL TO A DEPTH OF AT LEAST 75mm. - COMPLETE ANY FERTILISATION AND SEEDING BEFORE LAYING THE MATTING. - INSTALL MATTING IN ACCORDANCE WITH SD 5-7. - RE-APPLY/MAINTAIN AS NECESSARY TO ENSURE THE REQUIRED COVER IS PERMANENTLY MAINTAINED.
			ROCK LINING - HIGH FLOWS	- COMPLETE SUBSOIL TREATMENT (I.E. GYPSUM LIGHTLY RIPPED INTO SUBGRADE AT A RATE OF STONNES/Ha) INSTALL GEOTEXTILE UNDERLAY (IF SPECIFIED) IN ACCORDANCE WITH SD 5-7 INSTALL ROCK ARMOURING (TO THE DEPTH AND SIZE AS SPECIFIED ON THE PLAN).
STOCKPILES	C-FACTOR = 0.10 (60% GRASS COVER OR EQUIVALENT GROUND COVER ^[1]	APPLIES AFTER 10 WORKING DAYS FROM COMPLETION OF FORMATION	(I.E. VITAL P47/STONEWALL	- APPLY SEED TO ALL STOCKPILE SURFACES (NOTE: SEEDING MAY NOT BE REQUIRED IF EXISTING SEEDBED IS PRESENT)SPRAY ALL STOCKPILE SURFACES WITH VITAL P47/STONEWALL OR EQUIVALENT ^[1] VITAL DILUTION RATE = 1:10 (VITAL:WATER) APPLICATION RATE = 1L / m2 OF DILUTED VITAL MIXTURE RE-APPLY/MAINTAIN AS NECESSARY TO ENSURE THE REQUIRED COVER IS PERMANENTLY MAINTAINED COVER ALL EXPOSED SOILS RE-APPLY/MAINTAIN AS NECESSARY TO
GENERAL SURFACES GENERAL SURFACES C-FACTOR = 0.10 / 0.05 (60% / 70% GRASS COVER OR EQUIVALENT GROUND COVER ^[1]		C-FACTOR = 0.1 APPLIES AFTER 10 WORKING DAYS FROM COMPLETION OF FORMATION AND C-FACTOR = 0.05 APPLIES WITHIN A	OR EQUIVALENT ^[1]	ENSURE THE REQUIRED COVER IS PROVIDED. - REFER TO SD 7-1 - COMPLETE SUBSOIL TREATMENT (I.E. GYPSUM LIGHTLY RIPPED INTO SUBGRADE AT A RATE OF STONNES/Ha).
	(60% / 70% GRASS COVER OR EQUIVALENT		TOPSOIL, SEEDING AND SOIL BINDER (I.E. VITAL P47/STONEWALL OR EQUIVALENT ^[1])	- PLACE GYPSUM TREATED TOPSOIL TO A DEPTH OF AT LEAST 75mm APPLY ANY FERTILISERS REQUIRED APPLY SEED TO ALL SURFACES SPRAY ALL SURFACES WITH VITAL P47/STONEWALL OR EQUIVALENT[1] VITAL DILUTION RATE = 1:10 (VITAL:WATER) APPLICATION RATE = 1L / m2 OF DILUTED VITAL MIXTURE RE-APPLY/MAINTAIN AS NECESSARY TO ENSURE THE REQUIRED COVER IS PERMANENTLY MAINTAINED.
	FURTHER 60 DAYS	HYDROMULCH OR EQUIVALENT ^[1]	- REFER TO SD 7-1 - COMPLETE SUBSOIL TREATMENT (I.E. GYPSUM LIGHTLY RIPPED INTO SUBGRADE AT A RATE OF STONNES/Ha) PLACE GYPSUM TREATED TOPSOIL TO A DEPTH OF AT LEAST 75mm APPLY HYDROMULCH WITH APPROVED SEED MIX TO SOIL SURFACE RE-APPLY/MAINTAIN AS NECESSARY TO ENSURE THE REQUIRED COVER IS PERMANENTLY	
[1] _ FO	<u> </u> UIVALFNT (OVFR/PR	L RODUCT MUST ACHIEV	<u>I</u> E THE FQUIVAI FNT (MAINTAINED. -FACTOR WITH PROVEN

TABLE 1 – STABILISATION REQUIREMENTS AND TREATMENT METHODS

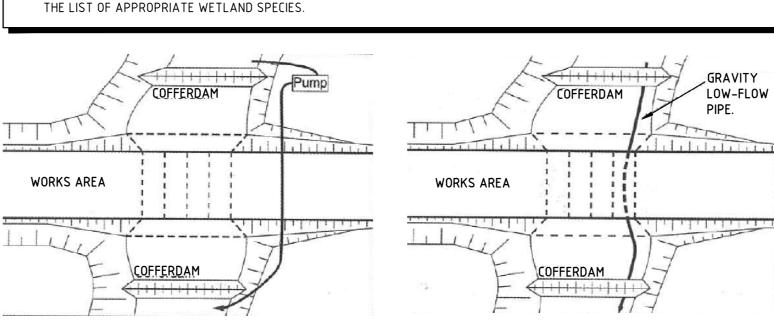
[1] - EQUIVALENT COVER/PRODUCT MUST ACHIEVE THE EQUIVALENT C-FACTOR WITH PROVEN RESEARCH/DOCUMENTATION TO VERIFY THIS. TANDARD DRAWINGS REFERENCED CAN BE LOCATED IN THE 'SOILS & CONSTRUCTION, MANAGING URBAN STORMWATER

- VOLUME 1' BOOK BY LANDCOM. ALTERNATIVE DETAILS MAY BE SOUGHT IN CONSULTATION WITH THE ENGINEER

TABLE 2 - LIMITATIONS TO ACCESS DURING CONSTRUCTION			
LAND USE	LIMITATION	REMARKS	
CONSTRUCTION AREAS	LIMITED TO 5 (PREFERABLE 2) METRES FROM THE EDGE OF ANY ESSENTIAL CONSTRUCTION ACTIVITY AS SHOWN ON ENGINEERING PLANS.	ALL SITE WORKERS SHOULD CLEARLY RECOGNISE THESE AREAS THAT, WHERE APPROPRIATE, ARE IDENTIFIED WITH BARRIER FENCING (UPSLOPE) AND SEDIMENT FENCE (DOWNSLOPE) OR SIMILAR MATERIALS.	
ACCESS CORRIDORS	LIMITED TO A MAXIMUM WIDTH OF 7 METERS	THE SITE MANAGER WILL DETERMINE AND MARK THE LOCATION OF THESE ZONES ON SITE, THEY CAN VARY IN POSITION SO AS TO BEST CONSERVE EXISTING VEGETATION AND PROTECT DOWNSTREAM AREAS WHILE BEING CONSIDERATE OF THE NEEDS EFFICIENT WORKS ACTIVITIES. ALL SITE WORKERS WILL CLEARLY RECOGNISE THESE BOUNDARIES.	
REMAINING LANDS, INCLUDING REVEGETATION AREA	ENTRY PROHIBITED EXCEPT FOR ESSENTIAL MANAGEMENT WORKS	THINNING OF GROWTH MIGHT BE NECESSARY, FOR EXAMPLE, FOR FIRE REDUCTION OR WEED REMOVAL.	

INSTREAM WORKS:

- SEDIMENT FENCES AND SEDIMENT FENCE RETURNS TO BE ERECTED PRIOR TO THE COMMENCEMENT OF ANY WORK. SEDIMENT FENCES TO REMAIN UNTIL COMPLETION OF INSTREAM WORK IN THESE LOCATION TO PROTECT EXISTING DOWNSTREAM PROPERTIES AND ROAD PAVEMENT. (REFER TO DRG-0250 FOR DETAILS).
- UNDERTAKE WORK DURING A PERIOD OF DRY FORECASTED WEATHER.
- PROTECT DISTURBED AREA WITH COFFERDAMS AS REQUIRED. TEMPORARY LOW FLOW DIVERSION PIPE OR PUMPED SYSTEM MAY BE INSTALLED AT THE BASE OF CHANNEL TO DIVERT CLEAN
- WATER FROM UPSTREAM BASEFLOW. UNDERTAKE ALL INSTREAM WORK IN THE SPECIFIED SECTION OF THE CHANNEL IN ACCORDANCE WITH APPROVED PLANS AND
- IMMEDIATELY PLANT TO STABLISE THE WORKS. PLANT WITH APPROPRIATE SPECIES, AT A DENSITY THAT WOULD NATURALLY OCCUR. REFER TO DURS-COS-CV-DWG-0040 FOR



GRAVITY PIPE OPTION INSTREAM WORKS COFFERDAM ARRANGEMENT

& PROJECT MANAGERS

DUST CONTROL NOTES

- 1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE DUST CONTROL MEASURES ARE APPLIED AND MAINTAINED IN ACCORDANCE WITH THE GOVERNING AUTHORITIES REQUIREMENTS.
- 2. THE APPLICATION OF LIQUID BASED DUST SUPPRESSION MEASURES MUST BE SUCH THAT SEDIMENT LADEN RUNOFF RESULTING FROM SUCH MEASURES DOES NOT CREATE A TRAFFIC OR ENVIRONMENTAL HAZARD. (EG UTILISING SEDIMENT CONTROLS)
- 3. DUST GENERATION ASSOCIATED WITH WIND EROSION TO BE CONTROLLED USING WATER TRUCKS, DUST SUPPRESSING FOG, MIST GENERATORS, SEALANT PLACED OVER THE SOIL, SURFACE ROUGHENING OR RE-VEGETATION.
- 4. THE FOLLOWING ACTIVITIES SHALL BE ADOPTED, IF NECESSARY, TO MANAGE DUST CONTROL ON SITE:
- · LIMITING THE AREA OF SOIL DISTURBANCE AT ANY GIVEN TIME - REPLACING TOPSOIL AFTER COMPLETION OF EARTHWORKS.
- · PROGRAMMING WORK TO MINIMISE THE LIFE OF STOCKPILES.
- TEMPORARILY STABILISING LONG-TERM STOCKPILES. · GRAVELLING UNSEALED ACCESS AND HAUL ROADS. · MINIMISING TRAFFIC MOVEMENT ON EXPOSED SURFACES
- · LIMITING VEHICULAR TRAFFIC TO 15km/h.
- · RETAINING EXISTING VEGETATION AS WIND BREAKS · UTILISING A WATER CART WITH POTABLE WATER ONLY
- 5. OIL, LANDFILL GAS CONDENSATE OR ANY CONTAMINATED LEACHATE IS NOT TO BE USED FOR DUST SUPPRESSION.

EROSION CONTROL NOTES

ALL SEDIMENT CONTROL WORK INCLUDING DIVERSION BANKS, CATCH DRAINS, V-DRAINS AND SEDIMENT FENCES SHALL BE COMPLETED IN ACCORDANCE WITH THE STAGED PLANS PRESENTED AND SHALL FACILITATE A STAGED CONSTRUCTION METHODOLOGY.

- 1. ALL EROSION & SEDIMENT CONTROLS SHALL BE COMPLETED IN ACCORDANCE WITH THE <u>'SOILS AND CONSTRUCTION, MANAGING URBAN STORMWATER - THE BLUE BOOK' BY</u>
- SEDIMENT FENCES AND SEDIMENT FENCE RETURNS SHALL BE ERECTED CONVEX TO THE CONTOUR TO POND WATER.
- STRAW BALE BARRIERS & GEOFABRIC FENCES OR SEDIMENT FANCNES ARE TO BE CONSTRUCTED TO TOE OF BATTER, PRIOR 1 COMMENCEMENT OF EARTHWORKS, IMMEDIATELY AFTER CLEARING OF VEGETATION AND BEFORE REMOVAL OF TOP SOIL. 4. ALL TEMPORARY EARTH BERMS, DIVERSION AND SEDIMENT BASIN EMBANKMENTS ARE TO BE MACHINE COMPACTED, SEEDED AND MULCHED FOR TEMPORARY VEGETATION COVER AS SOON AS THEY HAVE BEEN FORMED. REFER TO TABLE 1 FOR
- APPROVED STABILISATION METHODS. 5. CLEAN OR NON-SITE WATER IS TO BE DIVERTED AWAY FROM DISTURBED GROUND AND INTO THE DRAINAGE SYSTEM OVER
- STABLE SURFACES. 6. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING AND PROVIDING ON GOING ADJUSTMENT TO EROSION CONTROL MEASURE: AS REQUIRED DURING CONSTRUCTION. ALL SEDIMENT TRAPPING STRUCTURES AND DEVICES ARE TO BE INSPECTED AFTER STORMS OF 5mm OR GREATER WITHIN A 24 HOUR PERIOD FOR STRUCTURAL DAMAGE OR CLOGGING, TRAPPED MATERIAL IS TO BE REMOVED TO A SAFE, APPROVED
- 8. THE SITE IS TO BE INSPECTED FOLLOWING A RAINFALL EVENT OF 5mm OR GREATER WITHIN A 24 HOUR PERIOD FOR EVIDENCE OF EROSION AND RESPOND WITH INCREASED CONTROL IF REQUIRED.
- 9. ALL FINAL EROSION PREVENTION MEASURES INCLUDING THE ESTABLISHMENT OF GRASSING ARE TO BE MAINTAINED UNTIL THE END OF THE DEFECTS LIABILITY PERIOD. 10. ALL EARTHWORKS AREAS SHALL BE ROLLED ON A REGULAR BASIS TO SEAL THE EARTHWORKS.
- 11. ALL FILL AREAS ARE TO BE LEFT WITH A BUND AT THE TOP OF THE SLOPE AT THE END OF EACH DAY'S EARTHWORKS TO DIRECT WATER TO A STABLE OUTLET OVER THE BATTER OR INTERNALLY TOWARDS SEDIMENT CONTROL. THE HEIGHT OF THE BUND SHALL BE A MINIMUM OF 200mm.
- 12. ALL CUT AND FILL SLOPES ARE TO BE SEEDED AND HYDROMULCHED WITHIN 10 DAYS OF COMPLETION OF FORMATION.
- 13. AFTER PERMANENT STABILISATION OF THE SITE IS COMPLETE (I.E. BY TOPSOILING, PAVING ETC.) AND THE SITE IS DEEMED TO BE STABLE IN THE OPINION OF A SUITABLY QUALIFIED PERSON ALL TEMPORARY WORK SUCH AS SEDIMENT FENCE, DIVERSION
- DRAINS ETC SHALL BE REMOVED. 14. ALL STOCKPILES ARE TO BE SUITABLY COVERED AND STABILIZED TO THE SATISFACTION OF THE SITE MANAGER TO PREVENT WIND AND WATER EROSION.
- 15. ANY AREA THAT IS NOT APPROVED BY THE CONTRACT ADMINISTRATOR FOR CLEARING OR DISTURBANCE BY THE CONTRACTOR'S ACTIVITIES SHALL BE CLEARLY MARKED AND SIGN POSTED, FENCED OFF OR OTHERWISE APPROPRIATELY PROTECTED AGAINST ANY SUCH DISTURBANCE.
- 16. ALL STOCKPILE SITES SHALL BE SITUATED IN AREAS INDICATED ON THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN OR APPROVED FOR SUCH USE BY THE SITE MANAGER. A 6m BUFFER ZONE SHALL EXIST BETWEEN STOCKPILE SITES AN ANY STREAM OR FLOW PATH. ALL STOCKPILES SHALL BE ADEQUATELY PROTECTED FROM EROSION AND CONTAMINATION OF THE SURROUNDING AREA BY USE OF THE MEASURES IN THE APPROVED ESCP.
- 7. ACCESS AND EXIT AREAS SHALL INCLUDE TRUCK SHAKER GRID OR OTHER METHODS APPROVED BY THE SITE MANAGER FOR THE REMOVAL OF SOIL MATERIALS FORM MOTOR VEHICLES.
- 18. THE CONTRACTOR IS TO ENSURE RUNOFF FROM ALL AREAS WHERE THE NATURAL SURFACE IS DISTURBED BY CONSTRUCTION INCLUDING ACCESS ROADS, DEPOT AND STOCKPILE SITES, SHALL BE FREE OF SEDIMENTS BEFORE IT IS EITHER DISPERSED T STABLE AREAS OR DIRECTED TO NATURAL WATERCOURSES.
- 19. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN SLOPES, CROWNS AND DRAINS ON ALL EXCAVATIONS AND EMBANKMENTS TO ENSURE SATISFACTORY DRAINAGE AT ALL TIMES WATER SHALL NOT BE ALLOWED TO POND ON THE WORKS UNLESS SUCH PONDING IS PART OF AN APPROVED ESCP / SWMP.

SEDIMENT CONTROL BASIN NOTES

- TYPE D BASIN IS REQUIRED. VOLUME OF THE BASINS SHALL BE AS NOMINATED ON DRAWING. NOMINAL POND LOCATIONS AND NOMINAL DIMENSIONS
- SEDIMENT BUILD UP TO NOT EXCEED 33% TOTAL CAPACITY OF BASIN. 4. DEWATERING OF BASIN TO BE PERFORMED TO THE BOTTOM OF THE SEDIMENT SETTLING ZONE FOLLOWING ACHIEVEMENT OF
- WQO's. MANAGEMENT OF DOSAGE AND DISCHARGE TO BE ACHIEVED WITHIN 5 DAYS OF THE INITIAL RAINFALL EVENT. FOLLOWING DEWATERING PER NOTE 4, WATER LEVEL TO BE MAINTAINED AT 20% CAPACITY AFTER A FOUR DAY SETTLING PERIOD FOLLOWING A STORM EVENT SUCH THAT THE BASIN HAS SUFFICIENT CAPACITY TO CONTAIN RUNOFF AND SEDIMENT
- FROM SUBSEQUENT RAINFALL EVENTS. 6. WATER TO BE DOSED WITH GYPSUM TO ACCELERATE SETTLEMENT OF SUSPENDED SOLIDS AS REQUIRED.
- . GYPSUM DOSAGE RATE TO BE APPLIED AT APPROX. 32kg PER 100 CUBIC METRE OF COLLECTED RUNOFF. 8. THE USE OF ALUM (OR ANY OTHER ALTERNATIVE) AS A FLOCCULANT IS NOT RECOMMENDED. ALUM OR ANY OTHER
- FLOCCULANT IS TO BE USED ONLY FOLLOWING CONSULTATION WITH AND ACCEPTANCE FROM COUNCIL ESC OFFICERS. 9. DISCHARGE FROM POND IS PERMISSIBLE WHEN THE WATER PH IS 6.5-8.5 AND IS CLARIFIED TO AT OR BELOW A TSS OF 50mg/ CLARIFICATION WOULD GENERALLY BE ACHIEVED IN 36-72 HOURS WITH THE USE OF GYPSUM PLUS NO VISIBLE OIL OR GREAS
- CORRELATION TESTS MUST BE UNDERTAKEN ON SITE TO ENSURE THIS IS ACHIEVED. 10. DEWATERING SHALL BE DONE IN SUCH A MANNER AS TO REMOVE THE CLEAN WATER (BEING WATER WITHIN THE ADOPTED CRITERIA) WITHOUT REMOVING OR DISTURBING THE SEDIMENT THAT HAS SETTLED. THE PUMP INTAKE PIPE IS NOT TO REST
- THE SETTLED SEDIMENT LAYER. 11. IF WATER EXCEEDS TSS OF 50mg/L DURING DEWATERING, PUMPING IS TO CEASE. RECORDS ARE TO BE KEPT (ON-SITE AT AL TIMES) OF ALL MEASUREMENT PRIOR TO, DURING AND AFTER DISCHARGE. RECORDS TO BE MADE AVAILABLE TO COUNCIL OFFICERS UPON REQUEST.
- PROVIDE SECURITY FENCE TO BASIN FOR SAFETY

INSPECTION & MAINTENANCE NOTES

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE ADEQUATE INSPECTIONS AND MAINTENANCE ARE CARRIED OUT DURING SITE WORKS. DAILY AND WEEKLY INSPECTION CHECKLISTS HAVE BEEN PROVIDED IN THE COSTIN ROE SOIL AND WATER MANAGEMEN' PLAN (SWMP) Co13455.07-03.rpt DATED NOVEMBER 2019.

AS NOTED, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE ADEQUATE MAINTENANCE OF EROSION & SEDIMENT CONTROL MEASURES ARE UNDERTAKEN DURING THE WORKS PERIOD. DAMAGED, DISLODGED OR FAULTY ESC MEASURES ARE TO BE IMMEDIATED RECTIFIED AND THE SURROUNDING AREA IS TO BE REMEDIATED AS PER NOTES ON THIS DRAWING, THE SWMP AND THE LANDCOM 'BLU

SITE STABILITY NOTE

LAND DISTURBANCE & LAND FILLING ACTIVITIES MUST BE UNDERTAKEN IN A PHASED MANNER, IMPACTING A MAXIMUM AREA OF 65Ha AT ANY ONE TIME PER CONDITION B41(a). DISTURBED AREAS MUST BE STABILISED TO A C-FACTOR OF 0.05 PRIOR TO THE COMPLETION OF ANY OTHER WORKS PER CONDITION B41(b). REFER TO TABLE 1 ABOVE FOR APPROVED STABILISATION METHODS

SOIL & WATER MANAGEMENT PLAN NOTE

ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE SOIL AND WATER MANAGEMENT PLAN BY COSTIN ROE CONSULTING, REF 13455.07-03.rpt & CONDITIONS OF CONSEN B29-B35

SEDIMENTATION BASIN NOTE REFER TO SEDIMENT & EROSION CONTROL NOTES.

FOR SEDIMENT AND EROSION CONTROL DETAILS, REFER TO THE LANDCOM 'BLUE BOOK' AND EXTRACTS ON DRAWING PIWW-COS-CV-DWG-0250.

SEDIMENTATION BASIN SIZING BASED ON RECOMMENDATION OF 'SOILS AND CONSTRUCTION, MANAGING URBAN STORMWAER-THE BLUE BOOK'. CAPACITY BASED ON 5-DAY RAINFALL DEPTHS AT 85th PERCENTILE INTENSITY (32.2mm

ASSUME TYPE D SOIL (CLAY/SILTY CLAY)

IN THE LIVERPOOL CATCHMENT AREA.

2. ASSUME GROUP D SOIL (HIGH PLASTICITY AND SHRINK/SWELL PROPERTIES) REFER TO DRAWING PIWW-COS-CV-DWG-0200 FOR

SEDIMENTATION BASIN CALCULATIONS

PUMPED SYSTEM OPTION

CONSULTING CIVIL INFRASTRUCTURE ENGINEERS

J. WYNDHAM PRINCE



DESIGNED DRAWN DATE CHECKED SIZE SCALE CAD REF:
D.S. D.S. AUG 19 M.W. A0 AS SHOWN LPWPIW-COS-CV-DWG-01

Costin Roe Consulting Ptv Ltd. Consulting Engineers ACN 003 696 446 Level 1, 8 Windmill Street Walsh Bay, Sydney NSW 2000 Tel: (02) 9251-7699 Fax: (02) 9241-3731 email: mail@costinroe.com.au ©





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MPW INFRASTRUCTURE GENERAL NOTES SHEET 2

° L̈́PWPIW−COS−CV−DWG−0112

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