CAMP KURRAJONG SCOUT FACILITY

WAGGA WAGGA, NSW CIVIL WORKS



LOCALITY PLAN NOT TO SCALE

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CR232133-00-C041 CR232133-00-C042

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CIVIL WORKS CONCEPT EROSION AND SEDIMENT CONTROL DETAILS AND NOTES

NOT FOR CONSTRUCTION

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CIVIL WORKS CAMP KURRAJONG SCOUT FACILITY **WAGGA WAGGA NSW**

CIVIL WORKS COVER SHEET DRAWING SCHEDULE AND LOCALITY PLAN

CR232133-00

C000

ACCESS AND SAFETY

- THE CONTRACTOR SHALL COMPLY WITH ALL STATUTORY AND
- 3. THE CONTRACTOR SHALL ENSURE THAT AT ALL TIMES ACCESS TO
- WHERE NECESSARY THE CONTRACTOR SHALL PROVIDE SAF PASSAGE OF VEHICLES AND/OR PEDESTRIANS THROUGH OR BY THE
- THE CONTRACTOR SHALL ENSURE PUBLIC ACCESS EXTERNAL TO THE SITE IS IN ACCORDANCE WITH COUNCILS REQUIREMENTS.

TREE PROTECTION

- REFER TO LANDSCAPE / ARCHITECTS PLAN FOR TREES TO BE
- ANY EXISTING TREES WHICH FORM PART OF THE FINAL LANDSCAPING 2.1.
- ANY EXISTING TREES WHICH FORM PART OF THE FINAL LANDSCAPING PLAN SHALL BE PROTECTED FROM CONSTRUCTION ACTIVITIES BY;

 1. PROTECTING THEM WITH BARRIER FENCING OR SINLE, MATERIALS INSTALLED OUTSIDE THE DRIP LINE.

 2. ENSURING THAT NOTHING IS NAILED TO ANY PART OF THE TREE.

 3. CARE IS TAKEN NOT TO CUT ROOTS UNNECESSARILY, COUNCILS AND/OR INDEPENDENT ARRORISTS TO BE CONSULTED WHERE TREE ROOTS ARE TO BE REMOVED AND/OR CUT

SEDIMENT AND SOIL EROSION

- THE SEDIMENT & FROSION CONTROL PLAN PRESENTS CONCEPTS THE ESTABLISHMENT & MANAGEMENT OF A DETAILED SCHEME MEETING COUNCILS DESIGN OTHER REGULATORY AUTHORITY REQUIREMENTS AND MAKE GOOD PAYMENT OF ALL FEES
- 2 THE CONTRACTOR SHALL INSTIGATE ALL SEDIMENT AND EROSION REQUIREMENTS AND IN PARTICULAR THE 'BLUE BOOK' (MANAGING URBAN STORMWATER SOILS AND CONSTRUCTION), PRODUCED BY THE DEPARTMENT OF HOUSING AND COUNCILS POLICIES. THESE MEASURES ARE TO BE INSPECTED AND MAINTAINED ON A DAILY BASIS.
- THE SITE SUPERINTENDENT SHALL ENSURE THAT ALL SOIL AND DRAWINGS AND ADHERE TO ALL REGULATORY AUTHORITY
- THE CONTRACTOR SHALL INFORM ALL SUB CONTRACTORS OF THEIR RESPONSIBILITIES IN MINIMISING THE POTENTIAL FOR SOIL EROSION AND POLLUTION TO DOWNSLOPE LANDS AND WATERWAYS.
- WHERE PRACTICAL. THE SOIL EROSION HAZARD ON THE SITE SHALL
- WHERE PRACTICAL, THE SOIL EROSION HAZARD ON THE SITE SHALL BE KEPT AS LOW AS POSSIBLE TO THIS END, WORKS SHOULD BE UNDERTAKEN IN THE FOLLOWING SEQUENCE;

 5.1. CONSTRUCT TEMPORARY STABILISED SITE ACCESS INCLUSIVE OF SHAKE DOWN / WASH PAD.

 5.2. INSTALL ALL TEMPORARY SEDIMENT FENCES AND BARRIER FENCES, WHERE FENCES ADJACKINT EACH OTHER. THE SEDIMENT FENCE CAN BE INCORPORATED INTO THE BARRIER FENCE.

 5.3. INSTALL SEDIMENT CONTROL MEASURES AS OUTLINED ON THE APPROVED PLANS.
- UNDERTAKE SITE DEVELOPMENT WORKS SO THAT LAND DISTURBANCE IS CONFINED TO AREAS OF MINIMUM WORKABLE SIZE.
- AT ALL TIMES AND IN PARTICULAR DURING WINDY AND DRY WEATHER, LARGE UNPROTECTED AREAS WILL BE KEPT MOIST (NOT WET) BY SPRINKLING WITH WATER TO KEEP DUST UNDER CONTROL ENSURING CONFORMITY TO REGULATORY AUTHORITY REQUIREMENTS.
- ANY SAND USED IN THE CONCRETE CURING PROCESS (SPREAD OVER THE SURFACE) SHALL BE REMOVED AS SOON AS POSSIBLE AND WITHIN 10 WORKING DAYS FROM PLACEMENT.
- WATER SHALL BE PREVENTED FROM ENTERING THE PERMANENT DRAINAGE SYSTEM UNLESS THE CATCHMENT AREA HAS BEEN STABILISED AND/OR ANY LIKELY SEDIMENT BEEN FILTERED OUT
- TEMPORARY SOIL AND WATER MANAGEMENT STRUCTURES SHALL BE REMOVED ONLY AFTER THE LANDS THEY ARE PROTECTING ARE STABILISED / REHABILITATED.
- CHANNELS AND ROCK BATTERS DURING ALL PHASES OF
- EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED TO ENSURE THAT THEY OPERATE EFFECTIVELY. REPAIRS AND/OR MAINTENANCE SHALL BE UNDERTAKEN REGULARLY AND AS REQUIRED, PARTICULARLY FOLLOWING RAIN EVENTS.
- 13. RECEPTORS FOR CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHINGS, LIGHT-WEIGHT WASTE MATERIALS AND LITTER SHALL BE DISPOSED OF IN ACCORDANCE WITH REGULATORY AUTHORITY REQUIREMENTS, CONTRACTOR TO PAY ALL FEES AND PROVIDE EVIDENCE OF SAFE DISPOSAL.
- 14. IF A TEMPORARY SEDIMENT BASIN IS REQUIRED, ENSURE SAFE BATTER SLOPES IN ACCORDANCE WITH THE GEOTECHNICAL REPORT. MAINTAIN ADEQUATE STORAGE VOLUME IN ACCORDANCE WITH PLANS. TEMPORARY PUMP 'CLEAN FLOCCULATED' WATER TO COUNCILS STORMWATER SYSTEM. ENSURE WHOLE SITE RUN-OFF IS DIRECTED TO TEMPORARY SEDIMENT BASIN.

DESCRIPTION

DA SUBMISSION

EXISTING SERVICES

- ALL LITH ITY SERVICES INDICATED ON THE DRAWINGS ORIGINATE ALL UTLITY SERVICES INDICATED ON THE DRAWINGS ORIGINATE FROM SUPPLIED DATA OR DIAL BEFORE YOU DIG SEARCHES, THEREFORE THEIR ACCURACY AND COMPLETENESS IS NOT DUARANTEED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE AND CONFIRM THE LOCATION AND LEVEL OF ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY WORK ANY DISCREP ANCIES SHALL BE REPORTED TO THE SUPERINTENDENT. CLEARANCES SHALL BE OBTAINED FROM THE RELEVANT SERVICE AUTHORITY. NOTE SERVICE AUTHORITY. NOTE SERVICE AUTHORITY REQUIREMENTS FOR LOCATING OF SERVICES PRIOR TO COMMENCEMENT OF WORKS.
- CARE TO BE TAKEN WHEN EXCAVATING NEAR EXISTING SERVICES. NO MECHANICAL EXCAVATIONS AREA TO BE UNDERTAKEN OVER COMMUNICATION, GAS OR ELECTRICAL SERVICES. HAND EXCAVATION ONLY NOTIFICED ASSESSMENT.
- THE CONTRACTOR SHALL PROTECT AND MAINTAIN ALL EXISTING SERVICES THAT ARE TO BE RETAINED IN THE VICINITY OF THE PROPOSED WORKS. ANY AND ALL DAMAGE TO THESE SERVICES AS A RESULT OF THESE WORKS SHALL BE REPAIRED BY THE CONTRACTOR UNDER THE DIRECTION OF THE SUPERINTENDENT AT THE CONTRACTOR EXPONEY. CONTRACTORS EXPENSE.
- THE CONTRACTOR SHALL ALLOW IN THE PROGRAM FOR THE ADJUSTMENT (IF REQUIRED) OF EXISTING SERVICES IN AREAS AFFECTED BY WORKS.
- THE CONTRACTOR SHALL ALLOW IN THE PROGRAM FOR THE CAPPING OFF, EXCAVATION AND REMOVAL IIF REQUIRED) OF EXISTING SERVICES IN AREAS AFFECTED BY WORKS UNLESS DIRECTED OTHERWISE ON THE DRAWINGS OR BY THE SUPERINTENDENT.
- 6. THE CONTRACTOR SHALL ENSURE THAT AT ALL TIMES SERVICES TO ALL BUILDINGS NOT AFFECTED BY THE WORKS ARE NOT DISRUPTED AND MAINTAINED.
- PRIOR TO COMMENCEMENT OF ANY WORKS THE CONTRACTOR SHALL GAIN APPROVAL OF THE PROGRAM FOR THE RELOCATION AND/OR CONSTRUCTION OF TEMPORARY SERVICES AND FOR ANY ASSOCIATED INTERRUPTION OF SUPPLY.
- THE CONTRACTOR SHALL CONSTRUCT TEMPORARY SERVICES TO MAINTAIN EXISTING SUPPLY TO BUILDINGS REMAINING IN OPERATION DURING WORKS TO THE SATISFACTION AND APPROVAL OF THE SUPERINTENDENT. ONCE DIVERSION IS COMPLETE AND COMMISSIONED THE CONTRACTOR SHALL REMOVE ALL SUCH TEMPORARY SERVICES AND MAKE GOOD TO THE SATISFACTION OF THE SUPERINTENDENT.

EARTHWORKS

- AT THE COMMENCEMENT OF FILLING OPERATIONS FOR BULK EARTHWORKS A GEDTECHNICAL ENGINEER IS TO VISIT THE SITE & CONFIRM THE SUITABILITY OF THE METHODOLOGY OF ACHIEVING THE REQUIRED COMPACTION REQUIREMENTS.
- STRIP TOPSOIL, VEGETABLE MATTER AND RUBBLE TO EXPOSE NATURALLY OCCURRING MATERIAL AND STOCKPILE ON SITE AS DIRECTED BY THE SUPERINTENDENT. WHERE FILLING IS REQUIRED TO ACHIEVE DESIGN SUBGRADE. PROOF
- WHILE THE INCOME A RECORD TO ACTION TO A WHILE THE DESIGN SOCRADE, FROM PASSES OF A VIBRATING ROLLER (MINIMUM STATIC WEIGHT OF 10 TONNES) IN THE PRESENCE OF THE SUPERINTENDENT.
- THE CONTRACTOR IS TO ALLOW FOR A SUITABLY QUALIFIED GEOTECHNICAL ENGINEER TO PROVIDE ADVICE AND CERTIFICATION OF ANY WORKS ASSOCIATED WITH TREATING OR MANAGING UNSUITABLE GROUND CONDITIONS THROUGHOUT THE CONTRACT (e.g. UNSUITABLE GROUND CONDITIONS THROUGHOUT THE CONTRACT (e.g. STABILITY OF EXCAVATIONS, POOR SUBGRADE, etc).
- ALL SOFT, WET OR UNSUITABLE MATERIAL IS TO BE REMOVED AS DIRECTED BY THE SUPERINTENDENT AND REPLACED WITH APPROVED MATERIAL SATISFYING THE REQUIREMENTS BELOW.
- ALL FILL MATERIAL SHALL BE PLACED IN MAXIMUM 200mm THICK LAYERS (LOOSE) AND COMPACTED AT OPTIMUM MOISTURE CONTENT (+ OR 2%) TO ACHIEVE A DRY DENSITY DETERMINED IN ACCORDANCE WITH ASI289-21, ASI289-5.71 AND ASI289-5.88 OF NOT LESS THAN THE FOLLOWING STANDARD MINIMUM DRY DENSITY,

ROADS
COUNCIL SPECIFICATIONS)
PAVED AREAS
COUNCIL SPECIFICATIONS)

ISSUED VER'D APP'D DATE

COMPACTION REQUIREMENT 98% SMDD 100% SMDD (IN ACCORDANCE WITH

100% SMDD (IN ACCORDANCE WITH

- TESTING OF THE SUBGRADE FOR BUILDINGS SHALL BE CARRIED OUT BY AN APPROVED N.A.T.A. REGISTERED LABORATORY.
- ALLOW THE FOLLOWING COMPACTION TESTING BY N.A.T.A.
 REGISTERED LABORATORY FOR PLATFORMS AND FILL LAYERS IN
 ACCORDANCE WITH THE LATEST VERSION OF AS3798. HIMMINUM 3
 TESTS PER LAYER) OR 1 TEST PER MATERIAL TYPE PER 2500sq.m OR
- . WHERE TEST RESULTS ARE BELOW THE SPECIFIED COMPACTION, RECOMPACT AND RETEST UNTIL SPECIFIED COMPACTION STANDARDS ARE ACHIEVED, OTHERWISE SUBGRADE REPLACEMENT IS REQUIRED IF COMPACTION STANDARDS ARE NOT ACHIEVED
- 11. ALLOW FOR EXCAVATION IN ALL MATERIALS AS FOUND U.N.O. NO ADDITIONAL PAYMENTS WILL BE MADE FOR EXCAVATION IN WET OR HARD GROUND.
- 12. WHERE THERE IS INSUFFICIENT EXCAVATED MATERIAL SUITABLE FOR FILLING OR SUBGRADE REPLACEMENT, THE CONTRACTOR IS TO ALLOW TO IMPORT FILL. IMPORTED FILL SHALL COMPLY WITH THE FOLLOWING;
- RE OF VIRGIN EXCAVATED NATURAL MATERIAL OR 12.1. DE UP VIRGINI EXLAVATED NA TOKAL MATERIAL DK 12.2. CONTRACTOR TO PROVIDE EVIDENCE IMPORT IS SUITABLE USE 12.3. PLASTICITY INDEX BETWEEN 2-15% AND CBR - 8 12.4. FREE FROM ORGANIC AND PERISHABLE MATTER 12.5. MAXIMUM SIZE 50mm, PASSING 75 MICRON SIEVE (<25%)

EARTHWORKS (cont)

- 13 THE CONTRACTOR SHALL PROGRAM THE EARTHWORKS OPERATION THE LON HALL TOR SHALL PROUGKAM THE EARTHWORKS OPERATION SO THAT THE WORKING AREAS ARE ABEQUATELY DRAINED DURING THE PERIOD OF CONSTRUCTION. THE SURFACE SHALL BE GRADED AND SEALED OFF TO REMOVE DEPRESSIONS, ROLLERS MARKS AND SIMILAR WHICH WOULD ALLOW WATER TO POND AND PENETRATE THE UNDERLYING MATERIAL ANY DAMAGE RESULTING FROM THE CONTRACTOR NOT OBSERVING THESE REQUIREMENTS SHALL BE DESCRIBED.
- 14. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE AND THIS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE AND MAINTAIN THE INTEGRITY OF ALL SERVICES, CONDUITS AND PIPES DURING CONSTRUCTION, SPECIFICALLY DURING THE BACKFILLING AND COMPACTION PROCEDURE. ANY AND ALL DAMAGE TO NEW OR
- 15 TESTING OF THE SUBGRADE SHALL BE CARRIED OUT BY AN

- PRIOR TO THE COMMENCEMENT OF EXCAVATION WORKS GREATER
 THAN 15m IN DEPTH, THE CONTRACTOR SHALL OBTAIN THE SERVICES
 OF A SUITABLY QUALIFIED GOTECHNICAL ENGINEER TO DETERMINE
 THE STABILITY OF A NATURAL MATERIAL AND BENCHING
- THE CONTRACTOR MUST PROVIDE THE SUPERINTENDENT AND OR THE DESIGN ENGINEER WITH A COPY OF THE GEOTECHNICAL ENGINEERS REPORT.
- THE CONTRACTOR IS TO PROVIDE SAFETY BARRIERS / FENCING IN ACCORDANCE WITH OH&S AND REGULATORY AUTHORITY REQUIREMENTS.

- SAWCUT EXISTING SURFACES PRIOR TO EXCAVATION. BACKFILL ALL TRENCHES UNDER EXISTING ROADS, PAVEMENTS AND PATHS WITH STABILISED SAND 5% CEMENT OR DGS40 MATERIAL (5% CEMENT) COMPACTED IN 200mm THICK LAYERS TO 98% MMDD TO UNDERSIDE OF PAVEMENT.
- BACKFILL ALL TRENCHES NOT UNDER ROADS, PAVEMENTS, PATHS AND BUILDINGS WITH APPROVED EXCAVATED OR IMPORTED MATERIAL COMPACTED TO 95% SMDD.

SITEWORKS

- ALL WORKS TO BE IN ACCORDANCE WITH RELEVANT LOCAL COUNCIL /
 REGULATORY AUTHORITIES REQUIREMENTS, ALL SPECIFICATIONS
 AND AUSTRALIAN STANDARDS. CONFLICTS BETWEEN SAID.
 DOCUMENTS SHALL BE REFERRED TO THE SUPERINTENDENT FOR
 DIFFECTION.
- THE CONTRACTOR IS TO DESIGN, OBTAIN APPROVALS AND CARRY OUT REQUIRED TEMPORARY TRAFFIC CONTROL PROCEDURES DURING CONSTRUCTION IN ACCORDANCE WITH ALL REGULATORY AUTHORITIES, INCLUSIVE OF LOCAL COUNCIL REGULATIONS AND REQUIREMENTS.
- THE CONTRACTOR IS TO OBTAIN ALL AUTHORITY APPROVALS AS REQUIRED PRIOR TO COMMENCEMENT OF WORKS.
- RESTORE ALL PAVED, COVERED, GRASSED AND LANDSCAPED AREAS TO THEIR ORIGINAL CONDITION <u>OR AS DIRECTED BY THE SITE SUPERINTENDEN</u> ON COMPLETION OF WORKS. WHERE PLANTING OF NEW GRASS IS NECESSARY REFER TO LANDSCAPE ARCHITECT AND / OR ARCHITECT DOCUMENTATION.
- ON COMPLETION OF ANY TRENCHING WORKS, ALL DISTURBED AREAS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION <u>OR AS DIRECTED</u> BY THE SITE SUPERINTENDENT, INCLUDING KERBS, FOOTATHS, CONCRETE AREAS, GRAVEL, GRASSED AREAS AND ROAD
- THE CONTRACTOR SHALL ARRANGE ALL SURVEY SETOUT TO BE CARRIED OUT BY A REGISTERED SURVEYOR <u>PRIOR TO COMMENCEMENT OF WORKS.</u>
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING LEVELS ONSITE PRIOR TO LODGMENT OF TENDER AND ONSITE WORKS. THE PRICE AS TENDERED SHALL BE INCLUSIVE OF ALL WORKS SHOWN ON THE TENDER PROJECT DRAWINGS. ADDITIONAL PAYMENTS FOR WORKS SHOWN ON THE TENDER PROJECT DRAWINGS WILL NOT BE
- DO NOT OBTAIN DIMENSIONS BY SCALING DRAWINGS
- IN CASE OF DOUBT OR DISCREPANCY REFER TO SUPERINTENDENT FOR CLARIFICATION OR CONFIRMATION PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
- WHERE NEW WORKS ABUT EXISTING THE CONTRACTOR SHALL ENSURE THAT A SMOOTH EVEN PROFILE, FREE FROM ABRUPT CHANGES IS OBTAINED, MAKE SMOOTH TRANSITION TO EXISTING FEATURES AND MAKE GOOD WHERE JOINED.
- TRENCHES THROUGH EXISTING ROAD AND CONCRETE PAVEMENTS SHALL BE SAWCUT TO FULL DEPTH OF CONCRETE AND A MIN 50mm IN BITUMINOUS PAVING.
- ALL CIVIL ENGINEERING DESIGN HAS BEEN DOCUMENTED UNDER THE ASSUMPTION THAT ALL NECESSARY SITE CONTAMINATION REMEDIATION WORKS HAVE BEEN SATISFACTORILY COMPLETED (IF APPLICABLE) AND THAT THE SITE IS NOT AFFECTED BY ANY SOIL STRATA OR GROUNDWATER TABLE CONTAMINATION.

STORMWATER DRAINAGE

- ALL PIPES SHALL BE CLASS 2 RUBBER-RING JOINTED RCP U.N.O. WHERE UPVE PIPES HAVE BEEN SPECIFIED, THE FOLLOWING CLASS PIPEWORK IS TO BE ADOPTED UND. #100mm OR LESS TO BE CLASS 'SN10' AND ABOVE #100mm TO BE CLASS 'SN8'.
- $\ensuremath{\mathsf{uPVC}}$ Stormwater lines passing under floor slabs to be concrete encased.
- FRC PIPES EQUAL TO THAT OF THE STEEL REINFORCED CONCRETE PIPE CLASS SPECIFIED ON THE DRAWINGS MAY BE USED SUBJECT TO APPROVAL FROM THE SUPERINTENDENT.
- 4. ALL PIPE ARE TO BE LAID AT 1.0% MIN GRADE U.N.O.

- COVERS
 1. USE HOT DIPPED GALVANISED COVERS AND GRATES COMPLYING WITH RELEVANT COUNCIL AND AUSTRALIAN STANDARDS.
 2. ALL COVERS AND GRATES TO BE POSITION IN A FRAME AND MANUFACTURED AS A UNIT.
- MANUFACTURED AS A UNIT.

 5.3. ALL COVERS AND GRATES TO BE FITTED WITH POSITIVE COVER LIFTING KEYS

 5. OBTAIN SUPERINTENDENTS APPROVAL FOR THE USE OF CAST IRON SOLID COVERS AND GRATES. CAST IRON SOLID COVERS (IF APPROVED) TO CONSIST OF CROSS-WEBBED, CELLULAR CONSTRUCTION WITH THE RIBS UPPERMOST TO ALLOW INFILLING WITH CONCRETE. INSTALL POSITIVE COVER LIFTING KEYS AND PLASTIC PLUGS.

 5.5. UNLESS DETAILED OR SPECIFIED OTHERWISE, COVERS AND GRATES TO BE CLASS "D" IN VEHICULAR PAVEMENTS AND CLASS "B" ELSEWHERE.

 5.6. ALL GRATED TRENCH DRAINS SHOULD BE "CLASS D" CAST IRON WITHIN VEHICULAR PAVEMENTS.

- ALL PIPE BENDS, JUNCTIONS, ETC ARE TO BE PROVIDED USING PURPOSE MADE FITTINGS OR STORMWATER PITS.
- ALL CONNECTIONS TO EXISTING DRAINAGE STRUCTURES SHALL BE MADE IN A TRADESMAN-LIKE MANNER AND CEMENT RENDERED TO ENSURE A SMOOTH FINISH.
- STORMWATER PIPEWORK TO FINISH FLUSH WITH INTERNAL PIT WALLS AND MUST NOT PROTRUDE. CONNECTION TO BE NEATLY RENDER AND MADE NEAT.
- THE CONTRACTOR SHALL SUPPLY AND INSTALL ALL FITTINGS AND SPECIALS INCLUDING VARIOUS PIPE ADAPTORS TO ENSURE PROPER CONNECTION BETWEEN DISSIMILAR PIPEWORK.
- U.N.O. MATERIAL USED FOR BEDDING OF PIPES SHALL BE APPROVED NON-COHESIVE GRANULAR MATERIAL HAVING HIGH PERMEABILITY AND HIGH STABILITY WHEN SATURATED AND FREE OF ORGANIC AND CLAY MATERIAL.
- WHERE TRENCHES ARE IN ROCK, THE PIPE SHALL BE BEDDED ON A MIN 50mm CONCRETE BED (OR 75mm THICK BED OF 12mm BLUE METAL) UNDER THE BARREL OF THE PIPE. THE PIPE COLLAR AT NO POINT SHALL BEAR ON THE ROCK.
- BEDDING SHALL BE U.N.O TYPE HS2 UNDER ROADS AND H2 UNDER GENERAL AREAS IN ACCORDANCE WITH CURRENT RELEVANT INDUSTRY STANDARDS AND GUIDELINES.
- THE CONTRACTOR SHALL ENSURE AND PROTECT THE INTEGRITY OF ALL STORMWATER PIPES DURING CONSTRUCTION. ANY AND ALL DAMAGE TO THESE PIPES AS A RESULT OF THESE WORKS SHALL BE REPAIRED BY THE CONTRACTOR UNDER THE DIRECTION OF THE SUPERINTENDENT AND AT NO EXTRA COST.
- NOTE THAT THE PIT COVER LEVEL NOMINATED IN GUTTERS ARE TO THE INVERT OF THE GUTTER WHICH ARE 40mm LOWER THAN THE PAVEMENT LEVEL AT LIP OF GUTTER. REFER KERB DETAILS FOR

SUBSOIL DRAINAGE

- 15. Ø100mm SUBSOIL DRAINAGE LINES WITH NON-WOVEN GEOTEXTILE FILTER SOCK SURROUND SHALL BE CONNECTED TO A STORMWATER DRAINAGE PIT (AT MIN 1% LONGITUDINAL GRADE) AND PROVIDED IN
- THE FOLLOWING LOCATIONS;

 15.1. THE HIGH SIDE OF PROPOSED TRAFFICKED PAVEMENT AREAS.

 15.2. ALL PLANTER AND TREE BEDS PROPOSED ADJACENT TO PAVEMENT
- 15.3. BEHIND RETAINING WALLS (IN ACCORDANCE WITH RETAINING WALL
- DETAILS). 15.4. ALL OTHER AREAS SHOWN ON DRAWINGS. 15.5. CONTRACTORIS TO MAKE ALLOWANCE IN BOTH TENDER AND CONSTRUCTION COSTING TO ALLOW FOR SUBSURFACE DRAINAGE BEHIND ALL RETAINING WALLS / ABOVE LOCATIONS AND TO MAKE CONNECTION TO STORMWATER SYSTEM.
- WHERE SUBSOIL DRAINAGE PASSES BENEATH BUILDINGS / PAVED AREAS AND/OR PAVEMENTS, CONTRACTOR TO ENSURE \$100mm CLASS 'SN10' uPVC DRAINAGE LINE IS USED AND THAT PROPRIETARY FITTINGS ARE USED TO RECONNECT SUBSOIL DRAINAGE LINE.
- THE CONTRACTOR SHALL INSTALL INSPECTION OPENINGS CLEAROUTS TO ALL SUBSOIL DRAINAGE LINES AND DOWNPIPE LINES AS SPECIFIED ON DRAWINGS AND IN ACCORDANCE WITH COUNCIL SPECIFICATIONS AT MAXIMUM 30m CENTRE AND AT ALL UPSTREAM
- PROVIDE 3.0m LENGTH OF Ø100 SUBSOIL DRAINAGE LINE WRAPPED IN NON-WOVEN GEOTEXTILE FILTER FABRIC TO THE UPSTREAM SIDE OF STORMWATER PITS, LAID IN STORMWATER PIPE TRENCHES AND CONNECTED TO DRAINAGE PIT.
- 19. IN AREAS WHERE DUMPED / HAND PLACED ROCK IS USED AS A MEANS OF SCOUR PROTECTION, CONTRACTOR IS TO EXCAVATE A
 MINIMUM OF 100mm FROM PROPOSED SURFACE, LEVEL AND COMPACT
 SUBGRADE AS SPECIFIED. ROCK TO THEN BE PLACED ON GEOTEXTILE

SIGNAGE AND LINEMARKING

- ALL SIGNAGE TO BE INSTALLED IN ACCORDANCE WITH AUSTRALIAN
- . LINE MARKING AND PAINT SHALL BE IN ACCORDANCE WITH AS1742.3 AND RMS STANDARDS.
- PAINT SHALL BE TYPE 3 CLASS 'A' AND THE COLOUR SHALL BE WHITE AND NOT SUBJECT TO DISCOLOURATION BY BITUMEN FROM ROAD SURFACE. ALL PAINT TO BE APPLIED BY MECHANICAL SPRAYER.
- 4. LINE MARKING SHALL BE SPOTTED OUT AND APPROVED PRIOR TO
- PAINT SHALL BE APPLIED AT A WET THICKNESS OF BETWEEN 0.35mm AND 0.40mm.
- 6 CARPARK LINEMARKING TO BE 80mm WIDE

LANDSCAPING

- REFER TO DRAWINGS BY OTHERS FOR DETAILS OF PROPOSED
- ALL DISTURBED SURFACE TO BE TEMPORARILY STABILISED WITH HYDROMULCH UPON COMPLETION OF WORKS. A 500mm STRIP OF TURF (CT2 COUCH) IS TO BE PLACED BEHIND ALL NEW KERB AND GUTTER /

PAVEMENTS

- ALL PAVEMENT MATERIALS SHALL COMPLY WITH CURRENT RMS SPECIFICATIONS. PROVIDE MECHANICAL ANALYSIS FOR EACH BATCH OF PAVEMENT MATERIAL TO ENSURE CONFORMITY.
- COMPACTION STANDARDS
 BASE 98% MODIFIED MAXIMUM DRY DENSITY
 SUBBASE 98% MODIFIED MAXIMUM DRY DENSITY
 SUBGRADE 100% STANDARD MAXIMUM DRY DENSITY
- THE CONTRACTOR SHALL CONFIRM THE DESIGN CBR WITH A MINIMUM OF 3 TESTS TAKEN AT SUBGRADE LEVEL. WHERE DISCREPANCY IS FOUND, CONTACT THE DESIGN ENGINEER.
- ALLOW FOR COMPACTION TESTING BY A N.A.T.A. REGISTERED LABORATORY FOR BASE LAYER, SUBBASE LAYER AND SUBGRADE LAYER IN ACCORDANCE WITH THE LATEST VERSION OF AS3798 FOR PAVEMENTS (MINIMMM) TESTS PER LAYER). ALLOW FOR AT LEAST TWO SUCCESSFUL COMPACTION TESTS IN EACH LAYER.
- MATCH NEW PAVEMENTS NEATLY AND FLUSH WITH EXISTING
- AFTER BASE IS APPROVED, SWEEP CLEAN AND PRIME AT NOMINAL RATE OF 1.0L PER 1.0 sq.m.

- 7. PAVEMENT HOLD POINTS
 7.1. SUB-GRADE PROOF ROLL PRIOR TO SET-UP AND FORM FOR CONCRETE POUR.
 7.2. INSPECTION OF FORMWORK / STEEL PRIOR TO CONCRETE POUR.
 7.3. SUBMISSION OF SUB-GRADE AND BASE DENSITY TESTS.

ASPHALTIC CONCRETE

L GENERAL

1.1. ALL ASPHALTIC CONCRETE (AC) WORK TO BE PREPARED AND CARRIED OUT IN ACCORDANCE WITH GOOD ASPHALTIC PAVING PRACTICE AS DESCRIBED IN AS2150-2005 "ASPHALT (HOT-MIXED) PAVING - GUIDE TO GOOD PRACTICE" AND CURRENT RMS SPECIFICATIONS.

- 2. PAVEMENT PREPARATION
 2.1. THE FINISHED PAVEMENT SURFACE TO BE SEALED SHALL BE
 WITHIN 4-2% OF THE OPTIMUM AND BROOMED BEFORE
 COMMENCEMENT OF WORK TO ENSURE COMPLETE REMOVAL OF
 ALL SUPERFICIAL FOREIGN MATTER.
 2.2. PRIME ALL SURFACES TO BE SEALED ALLOW PRIME TO SETTLE
 FOR A MINIMUM OF 3 DAYS BEFORE APPLYING TACK COAT AND
 ASPHALT.

- ASPHALT.
 SWEEP PRIMED SURFACES BEFORE APPLYING TACK COAT.
 ALL DEPRESSIONS OR UNEVEN AREAS ARE TO BE TACK-COATED
 AND BROUGHT UP TO GENERAL LEVEL OF PAVEMENT WITH
 ASPHALTIC CONCRETE BEFORE LAYING OF MAIN COURSE.
 ALL DEFECTS IN THE BASE COURSE INCLUDING CRACKS,
 SURFACE DEFORMATION AND THE LIKE SHALL BE REPAIRED AS
 DIRECTED BY THE SUPERINTENDENT PRIOR TO PLACEMENT OF
 TACK COAT AND/OR AC COURSES.

3. PLACEMENTS
3.1. ALL ASPHALT SHALL BE PLACED UTILISING APPROVED MECHANICAL PAVING MACHINES. DO NOT HAND PLACE ASPHALT WITHOUT PRIOR APPROVAL FROM ENGINEER.

4. JOINTS
4.1. THE NUMBER OF JOINTS BOTH LONGITUDINAL AND TRANSVERSE SHALL BE KEPT TO A MINIMUM.
4.2. THE DENSITY AND SURFACE FINISH AT JOINTS SHALL BE SIMILAR TO THOSE OF THE REMAINDER OF THE LAYER.

- COMPACTION
 ALL COMPACTION SHALL BE UNDERTAKEN USING SELF PROPELLED ROLLERS.
 ALL COMPACTION SHALL BE COMPLETED BEFORE THE MIX TEMPERATURE FALLS BELOW 105°C USING A STEEL DRUM ROLLER HAVING A MINIMUM WEIGHT OF 8 TONNES AND A MAXIMUM UNIT LOAD ON THE REAR DRUM EQUIVALENT TO 55KN/m WIDTH OF DRUM.

 SECONDARY ROLLING SHALL BE COMPLETED BEFORE THE MIX TEMPERATURE FALLS BELOW 80°C USING A PREUMATIC TYRED ROLLER OF AT LEAST 10 TONNES MASS. A MINIMUM TYRED PRESSURE OF 550RPA AND A MINIMUM TOTAL LOAD OF 1 TONNE ON EACH TYRE.

 5.4. ROLLED SURFACES SHALL BE SMOOTH AND FREE OF UNDULATIONS BONY AND/OR UNEVEN SURFACES WILL BE REJECTED.
- REJECTED.
 PROVIDE 2 No. MINIMUM COMPACTION TESTS.

6.1.4.

- FINISHED SURFACE PROPERTIES
 FINISHED SURFACES SHALL BE SMOOTH, DENSE AND TRUE OF SHAPE AND SHALL NOT VARY MORE THAN;
 6.1.1. SIMP FROM THE SPECIFIED PLAN LEVEL AT ANY POINT.
 6.1.2. SIMP FROM THE BOTTOM OF A STRAIGHT EDGE LAID
- SIMIL FROM THE BOTTOM OF A STRAIGHT EDGE LAID TRANSVERSELY.

 SIMIL FROM THE BOTTOM OF A STRAIGHT EDGE LAID LONGITUDINALLY.

 MINUS 0 TO PLUS 2mm ADJACENT TO OTHER ELEMENTS SUCH AS KERBS AND THE LIKE TO AVOID POOLING OF SURFACE
- WATER.
 6.1.5. MINUS 0 FROM THE SPECIFIED THICKNESS.
- DO NOT STORE PLANT EQUIPMENT OR TRAFFIC NEWLY LAID ASPHALTIC CONCRETE PAVEMENTS WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

NOT FOR CONSTRUCTION

CR232133-00 **CIVIL WORKS** RAWING NUMBER

C001

REVISIO

2

Adapt PM PM D L = ARCHITECTURE INTERIORS MASTERPLANNING

IMENCING WORK.
ITHROP ACCEPTS NO RESPONSIBILITY FOR THE
ABILITY, COMPLETENESS OR SCALE OF DRAWIN
ASSESSED FOR FETRONICALLY.

Canberra Level 6, 224 Bunda Street (PO Box 213) Canberra ACT 2608 Ph (02) 6285 1822 Fax (02) 6285 1863

CIVIL WORKS

CAMP KURRAJONG SCOUT FACILITY WAGGA WAGGA NSW

STANDARD NOTES SHEET 1 OF 2

DRAWING SHEET S

ENGINEERING CERTIFICATION

- TO CERTIFY THE CONSTRUCTED CIVIL WORKS, A QUALIFIED EXPERIENCED ENGINEER IS TO VISIT THE SITE TO OBSERVE CONSTRUCTION TECHNIQUES AND VARIOUS ELEMENTS THAT MAY BE CONCEALED WHEN THE WORKS ARE COMPLETE.
- THIS SPECIFICATION ALLOWS FOR CERTIFICATION OF WORKS CONTROLLED BY A PRIVATE CERTIFIER FOR LAND DEVELOPMENT WORKS. THIS SPECIFICATION DOES NOT COVER CERTIFICATION REQUIREMENTS FOR AUTHORITIES SUCH AS COUNCIL, RMS OR OFFICE OF WATER. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE AND PROVIDE ALL PROJECT SPECIFIC CONSTRUCTION COMPLIANCE (WORKS AS EXECUTED) INFORMATION TO THE SATISFACTION OF THE STAKEHOLDER / AUTHORITY. DISCREPANCIES BETWEEN THIS SPECIFICATION AND SPECIFICATIONS OF OTHER EXTERNAL STAKEHOLDERS / AUTHORITIES IS TO BE REPORTED TO THE SUPERINTENDENT FOR CLARIFICATION.
- THE CONTRACTOR IS TO AGREE WITH THE ENGINEER AN APPROPRIATE SITE VISIT SCHEDULE AND FEE ARRANGEMENT PRIOR TO COMMENCEMENT OF THE WORKS. THE CONTRACTOR SHALL ENSURE THAT THE ENGINEER CAN SAFELY ACCESS ALL CIVIL ELEMENTS TO BE REVIEWED. SITE VISITS ARE CONDUCTED DURING NORMAL BUSINESS HOURS. WE REQUIRE TWO (2) WORKING DAY NOTICE FOR ANY SITE VISIT.
- 4. TO PROVIDE CERTIFICATION THE ENGINEER MUST VISIT THE SITE TO

4.1. 4.1.1.

- PAVEMENTS
 POOR SUBGRADE CONDITIONS
- PROOF ROLLING OF SUB-GRADE
- 4.1.3. PLACEMENT OF SUB-BASE COURSE, BASE COURSE AND WEARING COURSE.
- PLACEMENT OF STEEL REINFORCEMENT, DOWELS AND JOINT CRADLES PRIOR TO POURING OF CONCRETE 4.1.4.

EARTHWORKS

- TOPSOIL STRIP
- 422 EARTHWORKS BATTER
- FILLING

4.3. STORMWATER DRAINAGE

- DRAINAGE TRENCHES PRIOR TO BACKFILLING
- LEGAL POINT OF CONNECTION PRIOR TO BACKFILLING
 ANY OTHER DRAINAGE STRUCTURE THAT MAY BE
 CONCEALED DURING THE COURSE OF THE WORKS

CONCRETE STRUCTURES

- PLACEMENT OF ANY STEEL REINFORCEMENT PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL PROVIDE SURVEYED LEVELS, PREPARED BY A QUALIFIED SURVEYOR FOR SUBGRADE, SUB-BASE COURSE, BASE COURSE AND WEARING COURSE.
- THE CONTRACTOR SHALL PROVIDE WORKS AS EXECUTED (WAE) THE CONTRACTOR SHALL PROVIDE WORKS AS EXECUTED (WAE) DOCUMENTATION PREPARED BY A QUALIFIED PRACTICING SURVEYOR. THE WAE DRAWINGS SHALL CLEARLY SHOW, STORMWATER GRATE/COVER LEVELS, STORMWATER PIT INVERT LEVELS AND CORRESPONDING INVERT LEVELS OF ANY INCOMING OR OUTGOING PIPES, DIAMETER OF ALL PIPES, DIMENSIONS AND VOLUME OF ON-SITE DETENTION FACILITIES, INVERT LEVELS OF DRIFTIED FLORED FOR THE VALUE OF THE THE SIZE OR ALLIGHOW THE THE SIZE OR ALLIGHOWS THE OF CIVIL ENGINEERING ELEMENTS WHEN THEY DEVIATE FROM THE DESIGN DOCUMENTATION. DOCUMENTATION
- THE WAE DRAWINGS SHALL BE STAMPED WITH THE FOLLOWING STATEMENT "THESE WAE DRAWINGS HAVE BEEN PREPARED BY [COMPANY NAME] AND ARE A TRUE AND ACCURATE REPRESENTATION OF THE CONSTRUCTED WORKS". EACH DRAWING SHALL BE SIGNED AND DATED BY THE SURVEYOR WHO PREPARED THE DRAWING

ARE A TRUE AND ACCURATE REPRESENTATION OF THE CONSTRUCTED WORKS.

SIGNED	DATE
NAME	

POSITION..

- WAE SHALL BE PROVIDED IN BOTH AUTOCAD AND PDF FORMAT. NORTHROP CONSULTING ENGINEERS WILL PROVIDE ENGINEERING PLANS TO THE CONTRACTOR IN AUTOCAD FORMAT TO AID PREPARATION OF WAF DOCUMENTATION
- CONTRACTOR IS TO UNDERTAKE A CCTV INSPECTION OF ALL STORMWATER DRAINAGE PIPELINES AND PROVIDE TO THE ENGINEER FOR APPROVAL.
- THE CONTRACTOR SHALL PROVIDE ALL RELEVANT TEST THE CONTRACTOR SHALL PROVIDE ALL RELEVANT TEST CERTIFICATES PPOGRESSIVELY THROUGHOUT THE DURATION OF THE WORKS. ALL TEST CERTIFICATES SHALL BE PREPARED BY A NATA REGISTERED LABORATORY. TEST CERTIFICATES ARE REQUIRED FOR PROOF ROLLING, SUBGRADE COMPACTION, COMPACTION OF PAVEMENT LAYERS, COMPACTION OF FILLING OPERATIONS, CONCRETE SLUMP TEST, AND CONCRETE STRENGTH TESTS. THE CONTRACT SHALL PROVIDE ALL RELEVANT VALIDATIONS BY A GEOTECHNICAL ENGINEER FOR ALL IMPORTED FILL
- EACH TEST CERTIFICATE WILL NOMINATE THE DATE AND TIME OF THE TEST AND PROVIDE A LOCATION OF WHERE THE TEST SAMPLE WAS
- 12. THE CONTRACTOR SHALL ARRANGE FOR THE ENGINEER TO CONDUCT A FINAL VISIT TO REVIEW OF THE CONSTRUCTED WORKS. THIS WILL REVIEW WILL NOT TAKE PLACE UNTIL THE WAE DOCUMENTATION AND RELEVANT TEST CERTIFICATES HAVE BEEN RECEIVED.
- IF DEFECTIVE OR INCOMPLETE WORK IS FOUND DURING THE FINAL INSPECTION ANOTHER INSPECTION MAY BE REQUIRED AT THE CONTRACTORS EXPENSE TO VERIFY THE RECTIFICATION WORKS HAVE BEEN COMPLETED.

BITUMEN SEALING

- I. <u>PAVEMENT PREPARATION</u> 11. THE SURFACE TO BE SEALED SHALL BE DRY AND BROOMED.
- THE SURFACE TO BE SEALED SHALL BE DIST AND DROUTED BEFORE COMMENCEMENT OF WORK TO ENSURE COMPLETE REMOVAL OF ALL SUPERFICIAL, FOREIGN OR LOOSE MATTER. IF APPROVED BY THE MANAGING CONTRACTOR, ALL DEPRESSIONS GENERAL LEVEL OF PAVEMENT WITH ASPHALT CONCRETE BEFORE

- 2. MATERIALS
 2.1. BINDER SHALL BE CLASS 170 TO AS 2008 OR APPROVED PROPRIETARY MATERIAL FOR PRIMING AND PRIME SEALING.
 2.2. AGGREGATE SHAPE, DURABILITY AND WET TO DRY STRENGTH ASSENT AGGREGATES, A 2008 AND ASSENT AGGREGATES. A 2008 AND ASSENT AG AUGREGATE SHAPE, DURABILITY AND WET TO DRY STRENGTH SHALL COMPLY TO AS2758 FOR CLASS 'N' AGGREGATES. A 20kg SAMPLE TO BE APPROVED BY THE MANAGING CONTRACTOR PRIOF TO USE.
- AGGREGATES SHALL BE DELIVERED UNIFORMLY PRECOATED
- EXCESSIVE PRECOATING WILL RESULT IN AGGREGATES BEING REJECTED.
 FOR TWO COAT FLUSH SEALS, THE SIZE OF THE AGGREGATE FOR THE SECOND COAT, WHILE NORMALLY HALF THAT OF THE FIRST COAT, SHALL BE DIMENSIONALLY COMPATIBLE WITH THAT OF THE FIRST COAT.
- PRECOATING AGENTS SHALL BE COMPATIBLE WITH THE AGGREGATES AND BINDER TO BE USED.

- 3. DESIGN
 3.1. DESIGN OF SPRAYED BITUMINOUS SEALS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE AUSTROADS (INAASRA) PUBLICATION "PRINCIPLES AND PRACTICE OF BITUMINOUS SURFACING, VOLUME 1 SPRAYED WORK".

 3.2. WHERE NOT INDICATED ON THE DRAWINGS, PRIMES AND PRIMER SEALS SHALL BE DESIGNED TO REMAIN INTACT UNTIL FINAL SEALING TAKES PLACE, HAVING REGARD FOR THE TRAFFIC AND CLIMATIC CONDITIONS.

 3.3. UNILESS OTHERWISE SPECIFIED, BINDER APPLICATION RATES SHALL BE SELECTED TO FILL 85% OF THE THEORETICAL VOIDS OF THE MAT.

- 4. BITUMEN FLUSH SEALING
 4.1. BITUMEN FLUSH SEALS SHALL BE EITHER SINGLE OR DOUBLE COAT AS SHOWN ON THE DRAWINGS. eg 14/7 INDICATES A DOUBLE COAT FLUSH SEAL USING TWO APPLICATIONS OF BITUMEN AND AGGREGATE. THE FIRST AGGREGATE LAYER BEING OF 14mm NOMINAL SIZE, THE SECOND 7mm.
 4.2. COVER AGGREGATE SHALL BE SPREAD IMMEDIATELY AFTER SPRAYING OF BINDER. IN NO CASE SHALL SPREADING BE DELAYED MORE THAN 8 MINUTES.

- 5. <u>RECORDS</u>
 5.1. ALL SPRAY RECORDS AND AGGREGATE SUPPLY TONNAGE
 RECEIPTS SHALL BE RETAINED AND PASSED ON TO THE
 CONSULTING ENGINEER AS PART OF QUALITY ASSURANCE
 PROFESSIONER
- PROCEDURES. GENERALLY FLUSH SEALING SHALL BE CARRIED OUT COMPLETE AND IN ACCORDANCE WITH THE RELEVANT RMS STANDARD.

CONCRETE SEALING

- THE CURING PROCESS FOR NEW CONCRETE IS TO INCORPORATE THE FOLLOWING ASPECTS, GENERALLY AS ORDERED;

 1. SPARY CURING COMPOUND

 1. SAWCUT JOINTS AS LOCATED AND SPECIFIED AS SOON AS CURING
- PERMITS.
 COVER NEW PAVING WITH HESSIAN AND BLACK PLASTIC SHEETS
 TAPED AT JOINTS ON COMPLETION OF SAWCUTTING NOTE
 COVERING IS TO EXTENT MIN SM BEYOND PAVEMENT BEING CURED,
 OVER ADJOINING (EXISTING) PAVEMENT AREAS, MAINTAIN CURING

CONCRETE PAVEMENTS

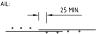
- THIS SECTION REFERS TO CIVIL CONCRETE WORKS AND DOES NOT INCLUDE STRUCTURAL ELEMENTS SUCH AS BUILDINGS, BELOW GROUND
- ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH

CONCRETE QUALITY AND REINFORCING COVER
ALL REQUIREMENTS OF THE CURRENT ACSE CONCRETE SPECIFICATION
DOCUMENT 1 SHALL APPLY TO THE FORMWORK, REINFORCEMENT AND
CONCRETE UNLESS NOTED OTHERWISE.

ELEMENT	CONCRETE STRENGTH f'c (MPa)	SPECIFIED SLUMP	NOMINAL AGGREGATE SIZE	MAX. 56 DAY DRYING SHRINKAGE	COVER (mm)
KERBS AND PATHS	25	60	20	650microns	TOP 40
PITS AND VEHICULAR PAVEMENTS	32	80	20	650microns	TOP 40

- CONCRETE PROPERTIES SHALL BE VARIED FROM NORMAL CLASS AS
- MINIMUM CEMENT CONTENT 250 kg/m³

 MAXIMUM 56 DAY SHRINKAGE STRAIN = AS NOMINATED ABOVE PRIOR TO COMMENCEMENT CONCRETE SUPPLIER TO PROVIDE DRYING
 SHRINKAGE TEST RESULTS FROM PRODUCTION ASSESSMENT AS
 EVIDENCE THAT SPECIFIED DRYING SHRINKAGE LIMITS CAN BE ACHIEVED USING NORMAL MIX DESIGN
- ALL REINFORCEMENT SHALL BE FIRMLY SUPPORTED ON MILD STEEL ALL REINFORCEMENT SHALL BE FIRMLY SUPPORTED ON MILD STEEL PLASTIC TIPPED CHAIRS. PLASTIC CHAIRS OR CONCRETE CHAIRS AT NOT GREATER THAN 1m CENTRES BOTH WAYS. BARS SHALL BE TIED AT ALTERNATE INTERSECTIONS.
- 5. CEMENT TYPE SHALL BE (ACSE SPECIFICATION) TYPE SL
- PROJECT CONTROL TESTING SHALL BE CARRIED OUT IN ACCORDANCE WITH AS 1379. TEST CYLINDERS ARE TO BE KEPT ON SITE.
- ALL COMPRESSIVE STRENGTH TEST REPORTS SHALL BE SUBMITTED TO THE CIVIL ENGINEER FOR REVIEW.
- ALL CONCRETE IS TO BE CONTINUOUSLY CURED FOR A MINIMUM PERIOD OF 10 DAYS AFTER PLACING. CURING TO COMMENCE IMMEDIATELY AFTER FINISHING. SPRAY ON CURING COMPOUNDS TO COMPLY WITH AS3799.
- 10. PLACE CONCRETE CONTINUOUSLY BETWEEN CONSTRUCTION JOINTS SHOWN ON PLAN. DO NOT BREAK OR INTERRUPT SUCCESSIVE POURS SUCH THAT COLD JOINTS OCCUR. ANY REVISIONS OR ADDITIONS TO CONSTRUCTION JOINTS SHOWN ON PLAN REQUIRE APPROVAL FROM THE
- FALLS IN SLAB AS SHOWN ON PLAN MAINTAIN MINIMUM SLAB
- NO ADMIXTURES SHALL BE USED IN CONCRETE UNLESS APPROVED IN WRITING BY THE DESIGN ENGINEER.
- 13. THE FINISHED CONCRETE SHALL BE A DENSE HOMOGENOUS MASS. COMPLETELY FILLING THE FORMWORK. THOROUGHLY EMBEDDING THE REINFORCEMENT AND FREE OF STONE POCKETS.
- 14. FABRIC SHALL BE LAPPED IN ACCORDANCE WITH THE FOLLOWING



- FOLLOWING THE FABRIC SYMBOL SL IS THE REFERENCE NUMBER FOR
- 15. POLYETHYLENE SHEET SHALL BE PLACED BELOW ALL CONCRETE
- ALL PENETRATIONS TO HAVE 2/N12 TRIMMER BARS TOP AND BOTTOM TO EACH FACE U.N.O. EXTEND TRIMMERS 700 BEYOND PENETRATION. MAINTAIN 40mm COVER TOP AND BOTTOM.
- 17. FORMWORK CLASS SHALL BE IN ACCORDANCE WITH AS3600

18. SURFACE FINISHES:

ELEMENT STORMWATER PIT PAVEMENTS

FORMWORK CLASS OFF FORM

- REINFORCEMENT SYMBOLS:
 N DENOTES GRADE 450 N BARS TO AS1302 GRADE N
 R DENOTES 230 R HOT ROLLED PLAIN BARS TO AS1302
 SL DENOTES HARD-DRAWN WIRE REINFORCING FABRIC TO AS1304

17 N 20 250

SCOUR PROTECTION ROCK

- ROCK USED IN THE SCOUR PROTECTION SHALL CONSIST OF MATERIAL WHICH COMPLIES WITH THESE NOTES AND THE DRAWINGS. THIS REQUIREMENT APPLIES TO BOTH IMPORTED ROCK AND IN-SITU ROCK
- INDIVIDUAL ROCKS SHALL BE FREE FROM CRACKS, CLEAVAGE PLANES, SEAMS AND DEFECTS WHICH WOULD RESULT IN THE BREAKDOWN OF THE ROCK IN SERVICE.
- ROCK UNITS SHALL BE EITHER SEDIMENTARY RACK ONLY OR IGNEOUS ROCK ONLY AND AS A MINIMUM, SHALL SATISFY THE FOLLOWING CRITERIA:
- ROCK SHALL BE ROUGH AND ANGULAR
- ROCK SHALL HAVE A MINIMUM DRY DENSITY OF 2200 kg/m
- IGNEOUS ROCK SHALL HAVE NO MORE THAN 10% (BY VOLUME)
 OLIVINE MATERIAL AND SHALL EXHIBIT NO ZONES OF SECONDARY
 ALTERATION SUCH AS CHLORITISATION. SEDIMENTARY ROCK
 SHALL HAVE A MIMIMUN SODIUM SULPHATE SOUNDNESS WEIGHT
 LOSS NOT EXCEEDING 25%
- ROCK SHALL HAVE A SATURATED POINT LOAD STRENGTH INDEX (1550) NO LESS THAN 5.0 MPa FOR IGNEOUS ROCK AND 1.5 MPa FOR SEDIMENTARY ROCK
- THE RATIO OF THE MAXIMUM DIMENSION TO THE MINIMUM DIMENSION, MEASURED AT RIGHT ANGLES TO THE MAXIMUM DIMENSION SHALL NOT EXCEED 2.5
- THE ROCK UNITS SHALL BE PLACED SUCH THAT THE SPECIFIED REQUIREMENTS FOR SIZE, FINISHED SIDE SLOPES, TOP AND TOE LEVELS AND DENSITY REQUIREMENTS, ARE SATISFIED. IN ADDITION, ROCKS SHALL BE WEDGED AND LOCKED TOGETHER SUCH THAT THEY ARE NOT FREE TO MOVE ROCK UNITS SHALL NOT BE ROLLED OR DROPPED INTO POSITION, THEY SHALL BE PLACED.
- THE METHOD OF ROCK PLACEMENT SHALL BE SUCH AS TO MINIMISE
- A NON-WOVEN GEOTEXTILE (BIDIM A64 OR EQUIVALENT) SHALL BE PLACED UNDERNEATH AND BEHIND ALL ROCK ARMOUR AND EXTEND 0.5m ABOVE THE EXTENT OF THE WORKS OR AS OTHERWISE SHOWN ON THE DRAWINGS. THE GEOTEXTILE IS TO BE LAID ON A NEATLY TRIMMED BATTER THAT IS FREE OF HOLLOWS OR SHARP OBJECTS.
- GEOTEXTILE LAYERS SHALL EITHER OVERLAP ON ANOTHER BY 1000mm OR BE SEWN TOGETHER (WITH A NON-BIODEGRADABLE THREAD) WITH AN OVERLAP OF 100mm.
- ROCK SUB-ARMOUR SHALL BE PLACED UPON THE GEOTEXTILE IN A LAYER NO LESS THAN 150mm THICK UNLESS NOTED OTHERWISE ON
- ROCK ARMOUR SHALL BE SELECTIVELY HAND PLACED UPON THE SUB-ARMOUR TO ENSURE A SNUG FIT SUCH THAT INDIVIDUAL ROCKS
 ARE NOT TO MOVE. THE PLACING OF ANY ARMOUR ROCK SHALL BE
 COMPLETED IN SUCH A MANNER TO MINIMISE THE DISTURBANCE OR
 DISLODGEMENT OF THE SUB-ARMOUR.
- 10. THE ROCK ARMOUR SHALL BE NO LESS THAN 375mm THICK UNLESS NOTED OTHERWISE ON THE DRAWINGS
- THE ARMOUR ROCK AND SUB-ARMOUR ROCK SHALL BE PLACED TO THE CONSTRUCTION TOLERANCES SHOWN ON THE DRAWINGS.
- 12. AT LEAST FOURTEEN (14) DAYS PRIOR TO THE SUPPLY OF ANY ROCK, THE CONTRACTOR SHALL PROVIDE DOCUMENTATION TO DEMONSTRATE THAT THE ROCK TO BE SUPPLIED COMPLIES WITH THE REQUIREMENTS OF THE SPECIFICATION.

3D INFORMATION DISCLAIMER

THE 12D DESIGN FILE SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO

HARDCOPY/PDF PLANS AND DOCUMENTS TAKE PRECEDENCE OVER THE SUPPLIED ELECTRONIC INFORMATION AND ANY INCONSISTENCIES SHOULD IMMEDIATELY BE REPORTED TO NORTHROP CONSULTING ENGINEERS FOR VERIFICATION PRIOR TO USE BY THE CONTRACTOR.

NORTHROP CONSULTING ENGINEERS TAKES NO RESPONSIBILITY FOR USE

THE USE OF THE 3D MODEL INFORMATION SHALL CONSTITUTE ACKNOWLEDGMENT AND ACCEPTANCE OF THE ABOVE STATEMENTS BY

NOT FOR CONSTRUCTION

CIVIL WORKS STANDARD NOTES SHEET 2 OF 2

CR232133-00 RAWING NUMBER 2

C002 DRAWING SHEET S

REVISION	DESCRIPTION	ISSUED	VER'D	APP'D	DATE	CLIE
1	DA SUBMISSION	LMR		JW	29.09.2023	
2	DA SUBMISSION	LMR		JW	19.10.2023	Ι.
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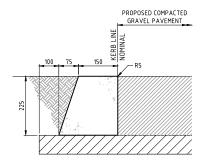




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ABILITY, COMPLETENESS OR SCALE OF DRAWIN
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Canberra Level 6, 224 Bunda Street (PO Box 213) Canberra ACT 2608 Ph (02) 6285 1822 Fax (02) 6285 1863

CIVIL WORKS CAMP KURRAJONG SCOUT FACILITY WAGGA WAGGA NSW



- N32 CONCRETE KERB
 MIN 100mm DGB20 BASE
 WEAKENED PLANE JOINTS @ 3.0m CTRS
 EXPANSION JOINTS @ 12m CTRS

FLUSH KERB (FK) NTS

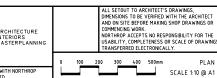
FORM CLEAN EDGE AT JUNCTION _ WITH AC BASECOURSE EXISTING PAVEMENT

SAWCUT & MATCH SMOOTHLY — WITH EXISTING PAVEMENT (SEAL JOINT WITH BITUMEN EMULSION) REMOVE EXISTING AC, BROOM AWAY — DEBRIS, APPLY TACK COAT AND CONSTRUCT AC SURFACE COURSE - EDGE OF EXISTING PAVEMENT WEARING COURSE 30mm FGGA 10 80 320 150 120mm DGS20 200mm SELECT CBR>8 PAVEMENT TIE IN DETAIL SCALE 1:10 @ A1

DA SUBMISSION JW 19.10.202 DA SUBMISSION

Adapt PM PM DL = ARCHITECTURE INTERIORS WASTERPLANNING DRAWING NOT TO BE USED FOR CONSTRUCTION UNLESS VERIFICATION SIGNATURE HAS BEEN ADDED







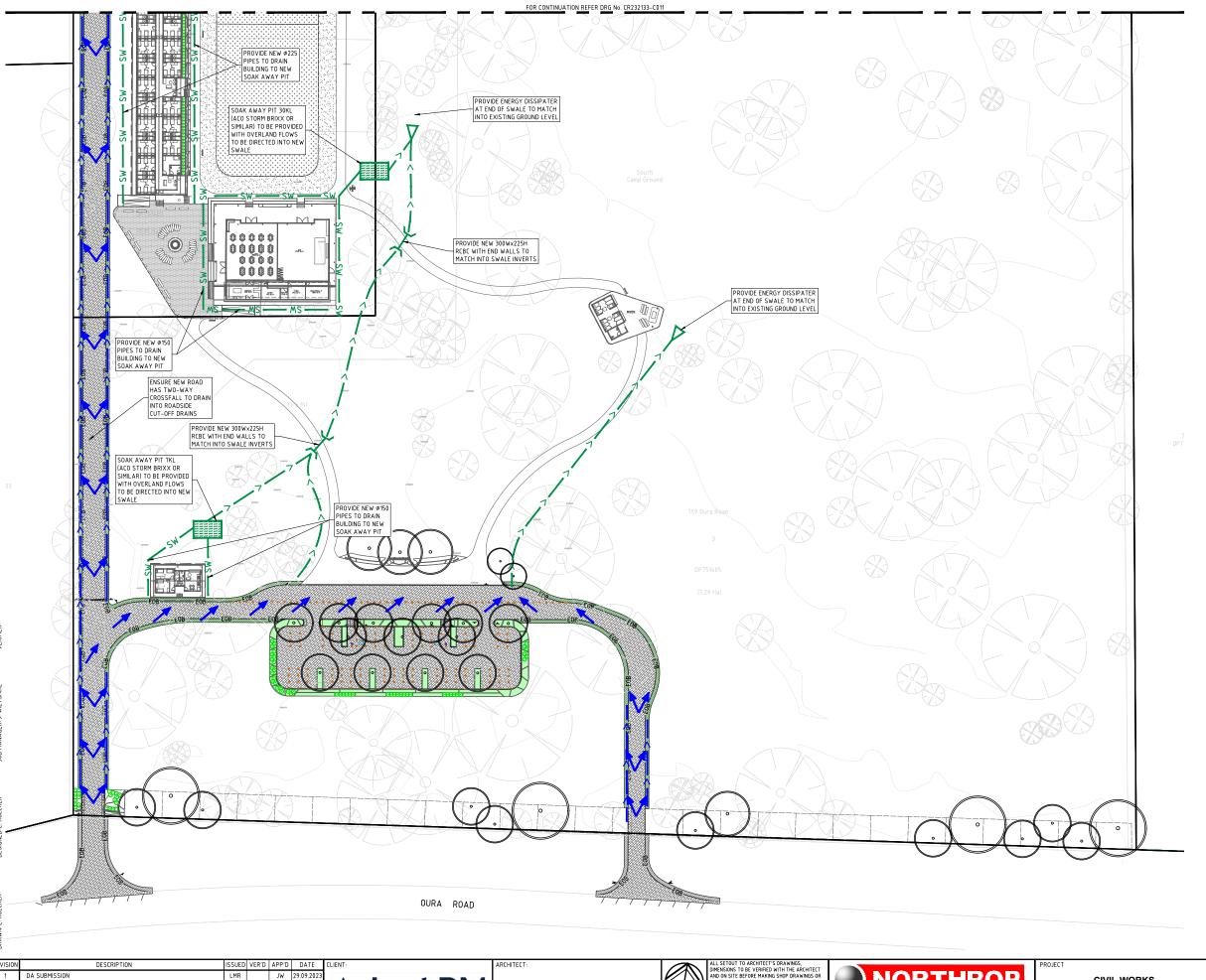
CIVIL WORKS **CAMP KURRAJONG** SCOUT FACILITY **WAGGA WAGGA NSW**

CIVIL WORKS STANDARD DETAILS

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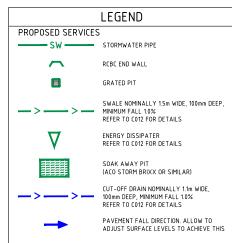
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DRAWING SHEET SIZE = A1 LASSES & NEW: 19/10/2023 4:00:15 PM By: LEON RUECKER



PMDL ARCHITECTURE INTERIORS MASTERPLANNI

GHT OF THIS DRAWING REMAINS WIT CONSULTING ENGINEERS PTY LTD.



STORMWATER NOTES

- FLEXIBLE JOINTS, BEDDING AND BACKFILL SHALL BE IN ACCORDANCE WITH STANDARD DETAILS.
- ALL PIPES SHALL BE RUBBER RING JOINTED, EXCEPT FOR 100mm UPVC PIPES WHICH SHALL BE SOLVENT WELDED.
- 3. ALL SUMPS AND MAINTENANCE HOLES OF GREATER DEPTH THAN 900mm SHALL BE FITTED WITH GALVANISED STEP IRONS.
- 4. ALL STORMWATER PIPES DIAMETER AS SHOWN AND LAID AT 1% GRADE U.N.O.
- 5. MATERIALS: STORMWATER PIPES EQUAL TO AND GREATER THAN Ø225 RCP STORMWATER PIPES LESS THAN Ø225 PVC.
- 6 MINIMUM STORMWATER PIPE COVERS:

- INNITION STORMWATER FIFE COVERS: 300mm IN AREAS NOT SUBJECT TO VEHICULAR LOADING. 450mm IN PAVED AREAS SUBJECT TO VEHICULAR LOADING. 750mm IN UNPAVED AREAS SUBJECT TO VEHICULAR LOADING.
- ANY DAMAGE CAUSED TO INSTALLED OR EXISTING PIPES SHALL BE MADE GOOD AT THE CONTRACTORS EXPENSE.

NOT FOR CONSTRUCTION

CIVIL WORKS CAMP KURRAJONG SCOUT FACILITY

WAGGA WAGGA NSW

Canberra
Level 6, 224 Bunda Street (PO Box 213) Canberra ACT 2608
Ph (02) 6285 1822 Fax (02) 6285 1863

Email canberra@northrop.com.au ABN 81 094 433 100

20 25m PLAN SCALE 1:500 @ A1

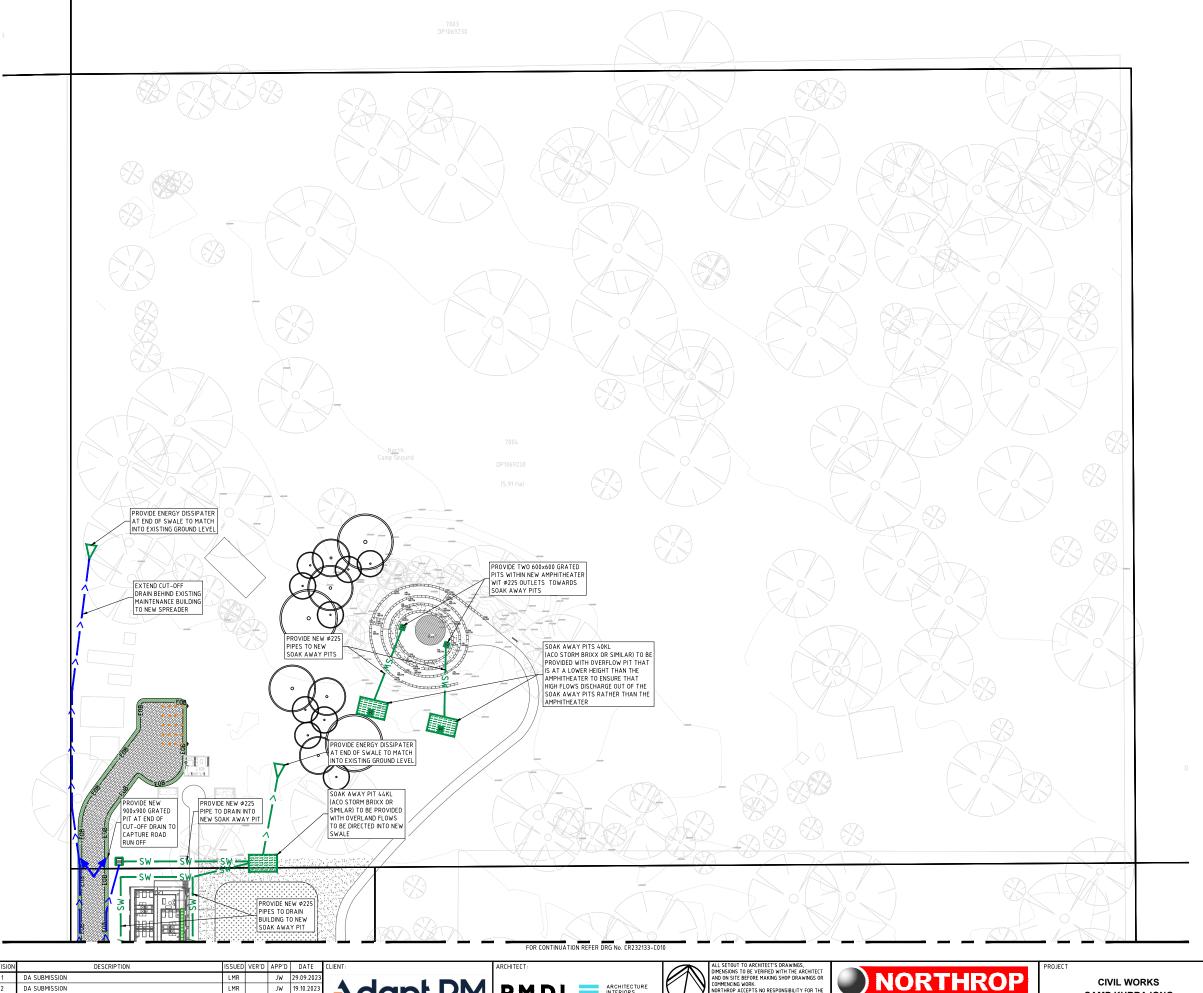
CIVIL WORKS CONCEPT STORMWATER DRAINAGE PLAN SHEET 1 OF 2

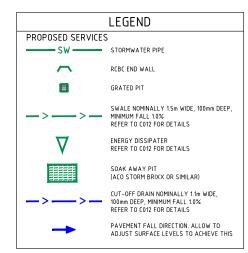
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2 C010 DRAWING SHEET SI

JW 19.10.202

DA SUBMISSION





STORMWATER NOTES

- FLEXIBLE JOINTS, BEDDING AND BACKFILL SHALL BE IN ACCORDANCE WITH STANDARD DETAILS.
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NOT FOR CONSTRUCTION

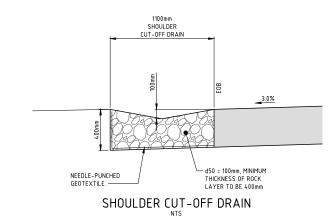
PMDL ARCHITECTURE INTERIORS MASTERPLANNIN Canberra
Level 6, 224 Bunda Street (PO Box 213) Canberra ACT 2608
Ph (02) 6285 1822 Fax (02) 6285 1863
Email canberra@northrop.com.au ABN 81 094 433 100 20 25m PLAN
SCALE 1:500 @ A1

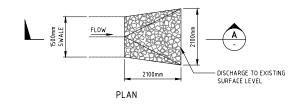
CAMP KURRAJONG SCOUT FACILITY **WAGGA WAGGA NSW**

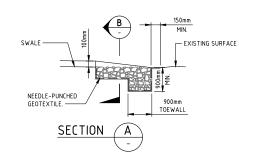
CIVIL WORKS CONCEPT STORMWATER DRAINAGE PLAN SHEET 2 OF 2

CR232133-00

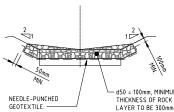
C011 DRAWING SHEET SI







- CONSTRUCTION NOTES
 1. COMPACT THE SUBGRADE FILL TO THE DENSITY OF THE SURROUNDING UNDISTURBED MATERIAL.
- PREPARE A SMOOTH, EVEN FOUNDATION FOR THE STRUCTURE THAT WILL ENSURE THAT THE NEEDLE-PUNCHED GEOTEXTILE DOES NOT SUSTAIN SERIOUS DAMAGE WHEN COVERED WITH ROCK.
- SERIOUS DAIRAGE WHEN COVERED WITH ROCK
 SHOULD ANY MINOR DAMAGE TO THE GEOTEXTILE
 OCCUR, REPAIR IT BEFORE SPREADING ANY
 AGGREGATE. FOR REPAIRS, PATCH ONE PIECE OF
 FABRIC OVER THE DAMAGE, MAKING SURE THAT ALL
 JOINTS AND PATCHES OVERLAP MORE THAN 300mm.
- LAY ROCK FOLLOWING THE DRAWING, ACCORDING TO TABLE 5.2 OF LANDCOM (2004) AND WITH A MINIMUM DIAMETER OF 75mm.
- S. ENSURE THAT ANY CONCRETE OR RIPRAP USED FOR THE ENERGY DISSIPATER OR THE DUTLET PROTECTION CONFORMS TO THE GRADING LIMITS SPECIFIED ON THE SWMP.



SECTION

ENERGY DISSIPATER

NTS

DA SUBMISSION DA SUBMISSION JW 19.10.202





LL SETOUT TO ARCHITECT'S DRAWINGS,
IMENSIONS TO BE VERIFIED WITH THE ARCHITECT
NO ON SITE BEFORE MAKING SHOP DRAWINGS OR
OMMENION WORD PACEPTS NO RESPONSIBILITY FOR THE
SABILITY, COMPLETENESS OR SCALE OF DRAWING
RANSFERRED ELECTRONICALLY.

NOT TO SCALE



CAMP KURRAJONG SCOUT FACILITY **WAGGA WAGGA NSW**

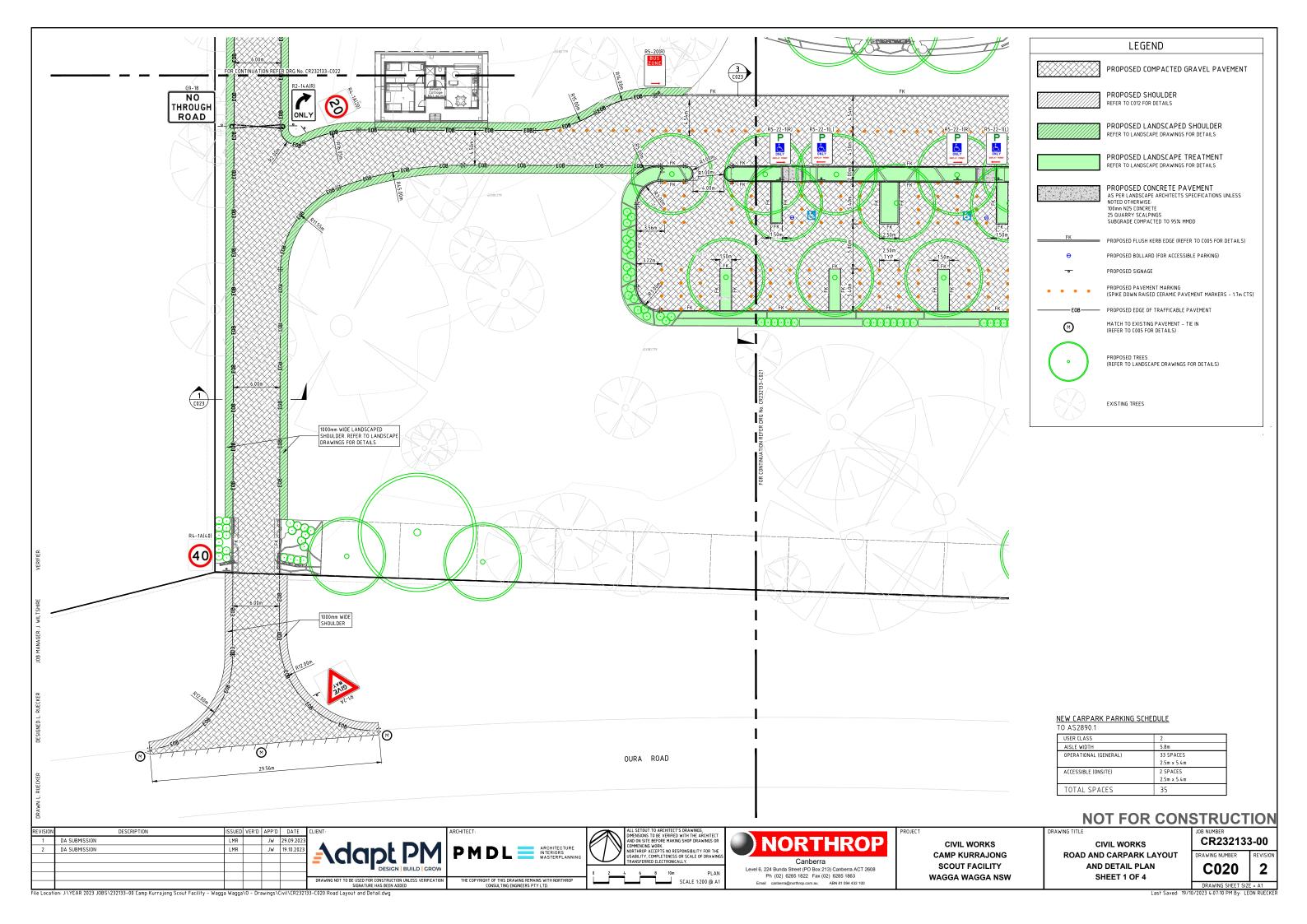
CIVIL WORKS

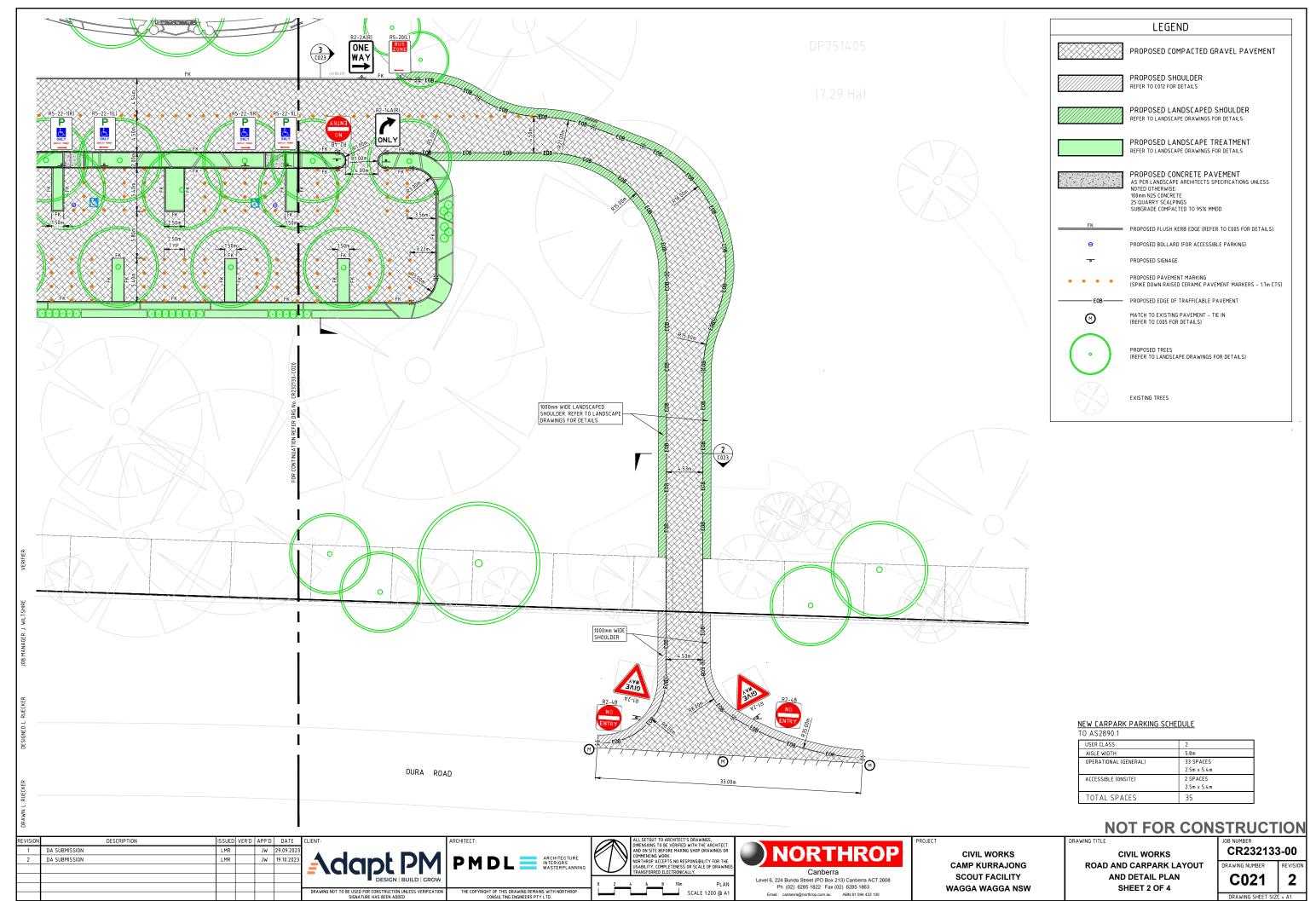
CIVIL WORKS CONCEPT STORMWATER DRAINAGE DETAILS

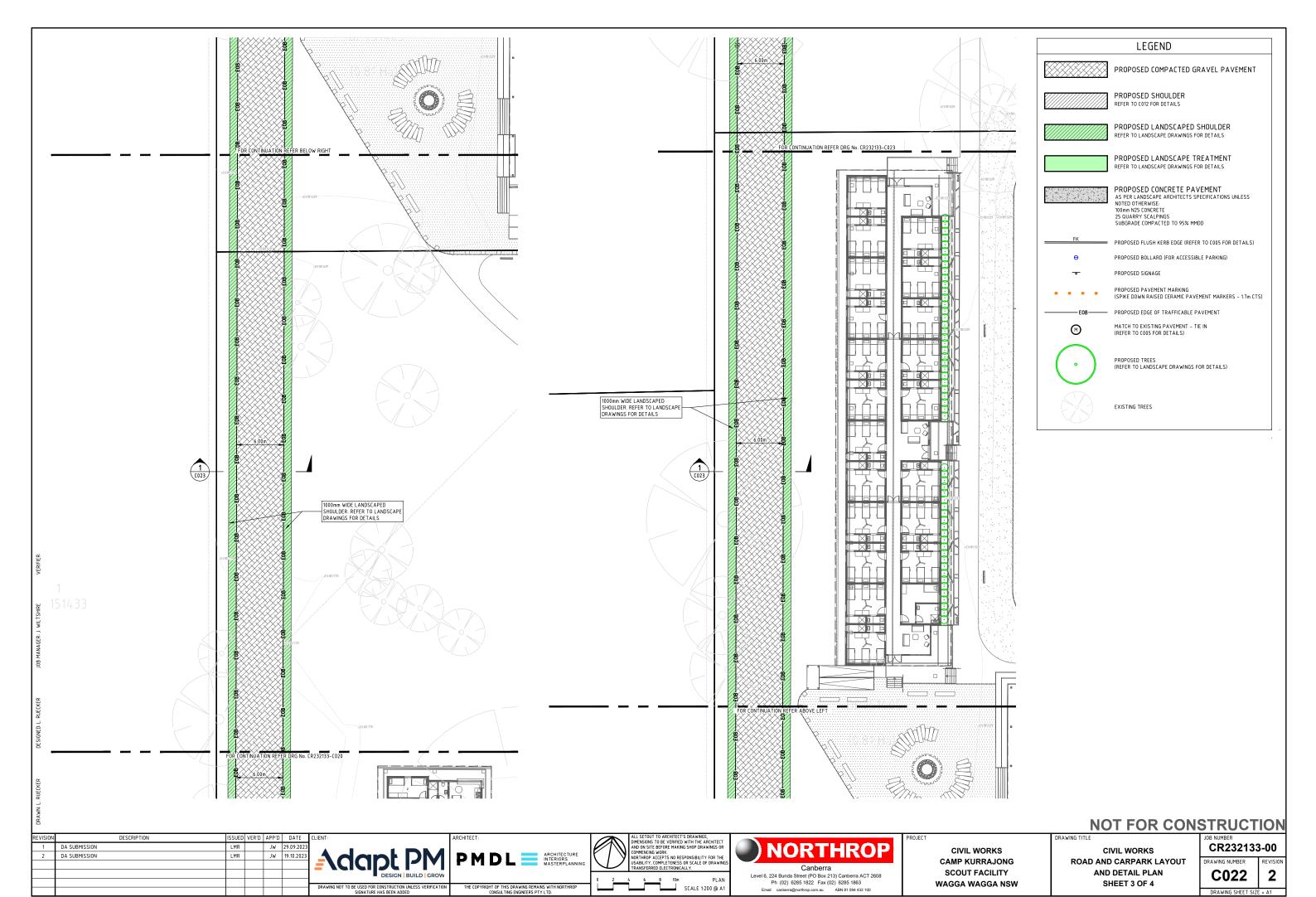
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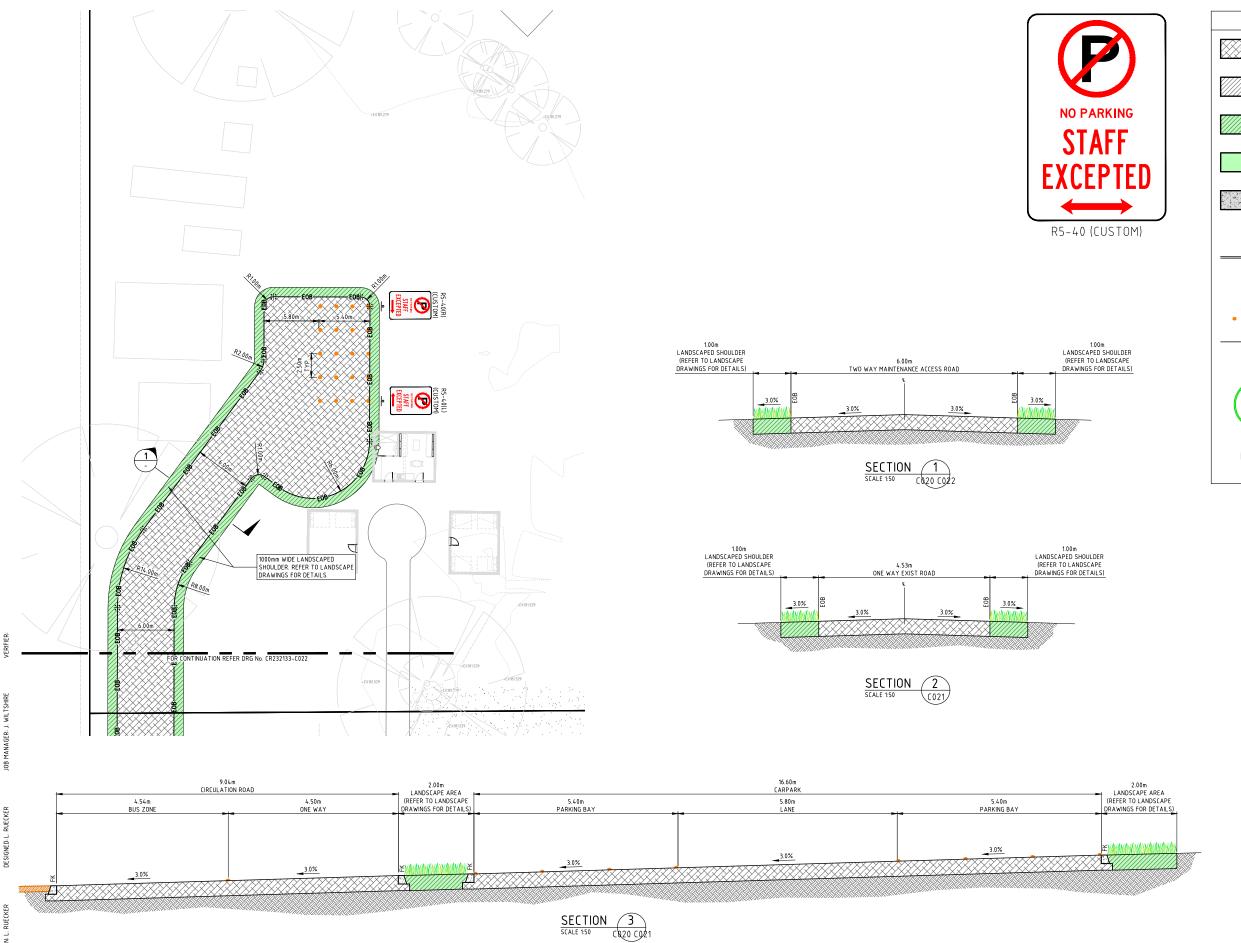
> C012 2 DRAWING SHEET SIZ

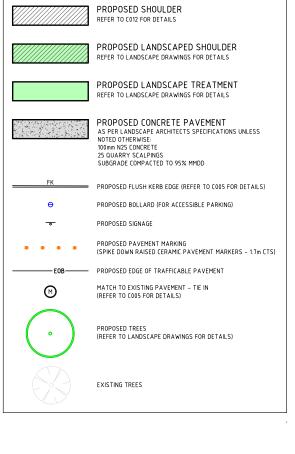
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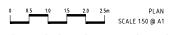


LEGEND

PROPOSED COMPACTED GRAVEL PAVEMENT

NEW CARPARK PARKING SCHEDULE TO AS2890.1

10 A32070.1	
USER CLASS	2
AISLE WIDTH	5.8m MINIMUM
OPERATIONAL (STAFF PARKING)	4 SPACES
	2.5m x 5.4m
TOTAL SPACES	4

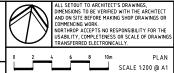


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ISSUED VER'D APP'D DATE







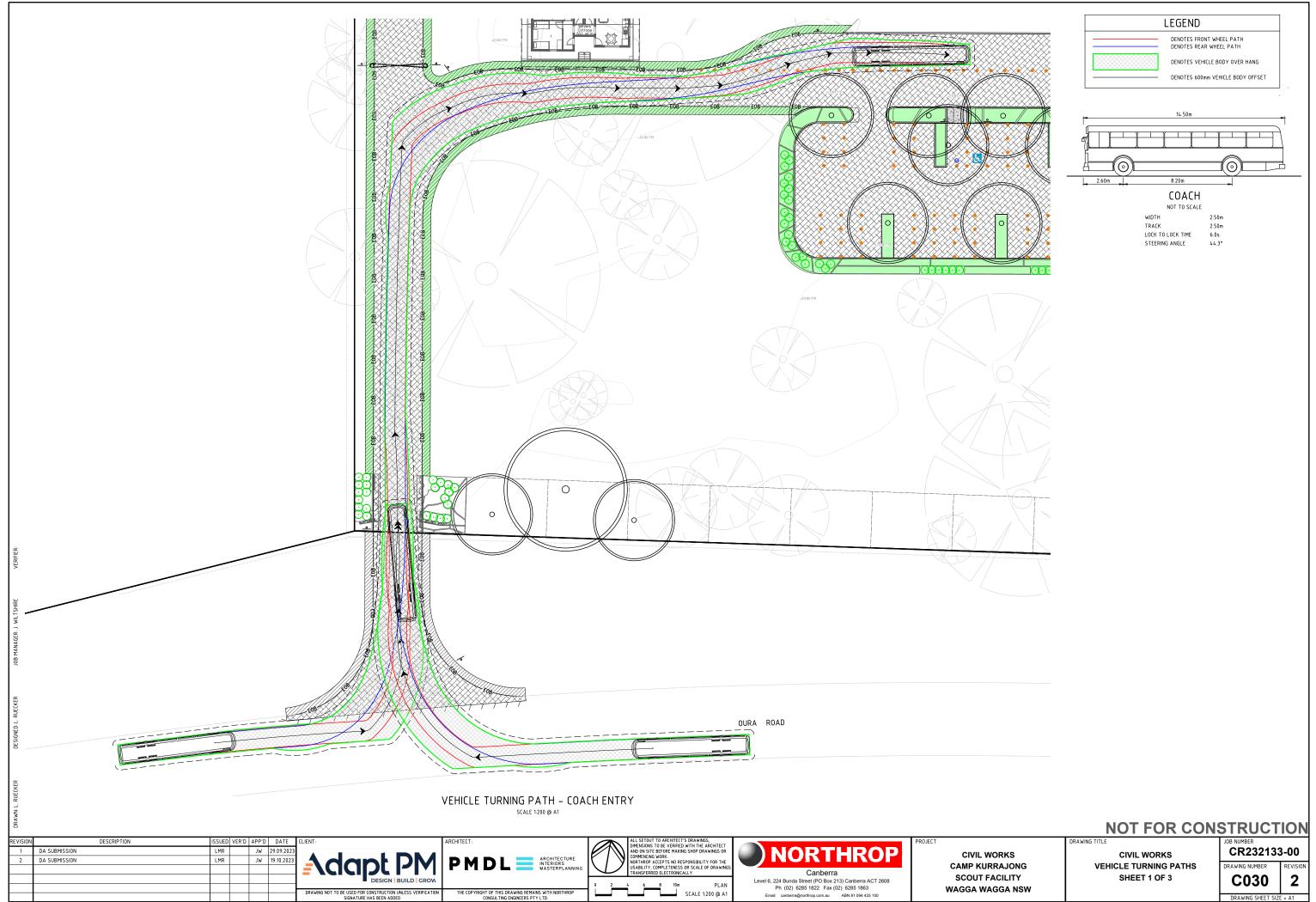
CAMP KURRAJONG SCOUT FACILITY **WAGGA WAGGA NSW**

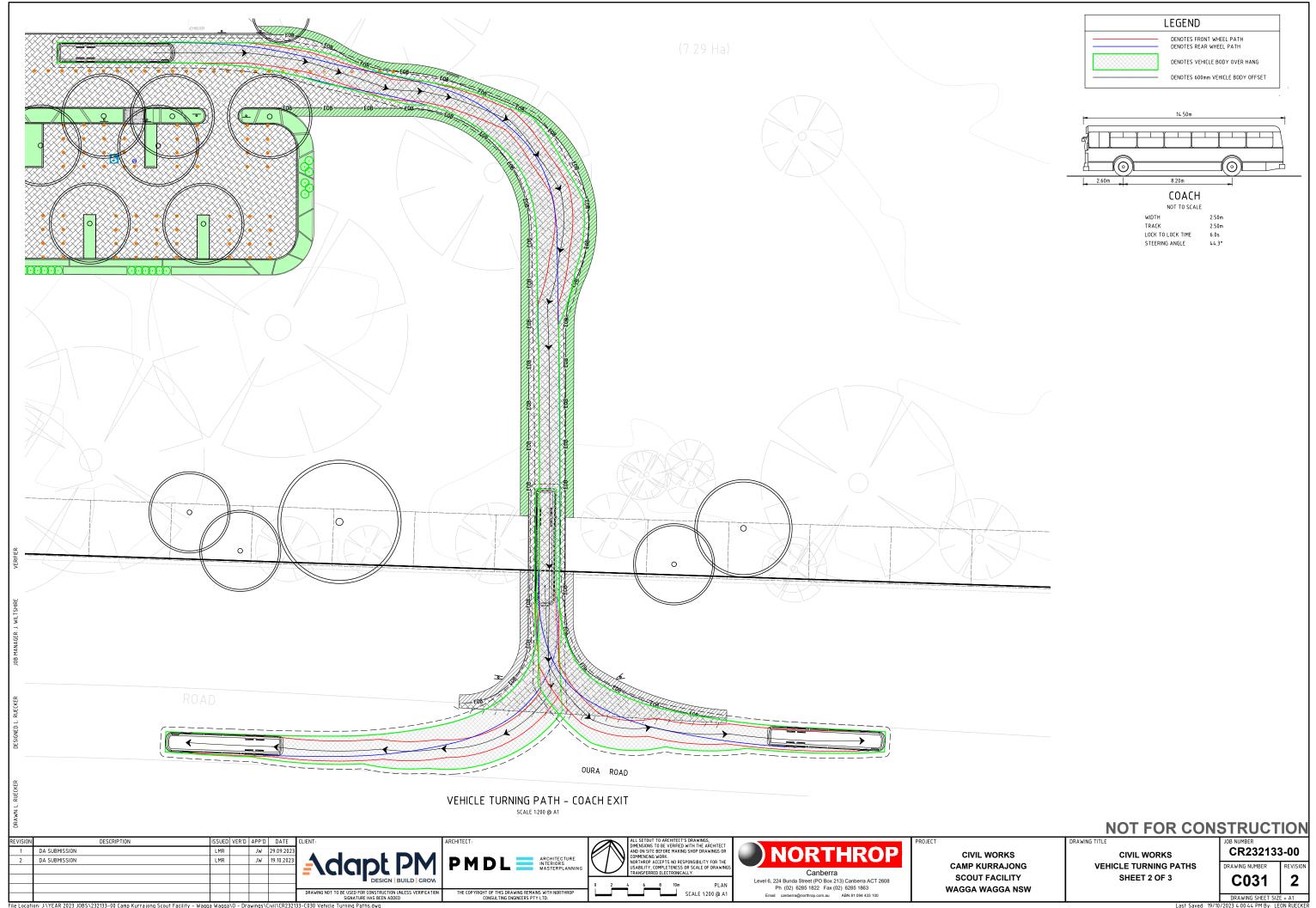
CIVIL WORKS

CIVIL WORKS ROAD AND CARPARK LAYOUT AND DETAIL PLAN SHEET 4 OF 4

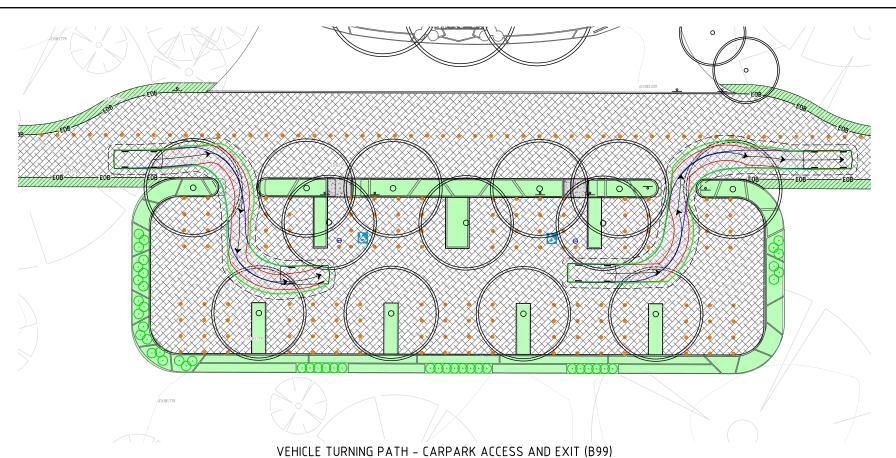
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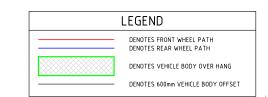
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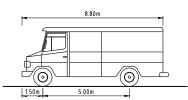






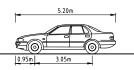






AS2890.2 - MEDIUM RIGID VEHICLE

NOT TO SCALE
WIDTH 2.50m
TRACK 2.50m
LOCK TO LOCK TIME 6.0s
STEERING ANGLE 26.2°



AS2890.1 - B99 CAR

WIDTH 1.94m
TRACK 1.84m
LOCK TO LOCK TIME 6.0s
STEERING ANGLE 33.9°

NOT FOR CONSTRUCTION

| South | Sout

PMDL ARCHITECT

PMDL ARCHITECT

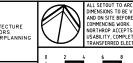
AND ARCHITECT

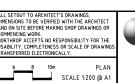
AND ARCHITECT

MASTER

TON UNIESS VERIFICATION
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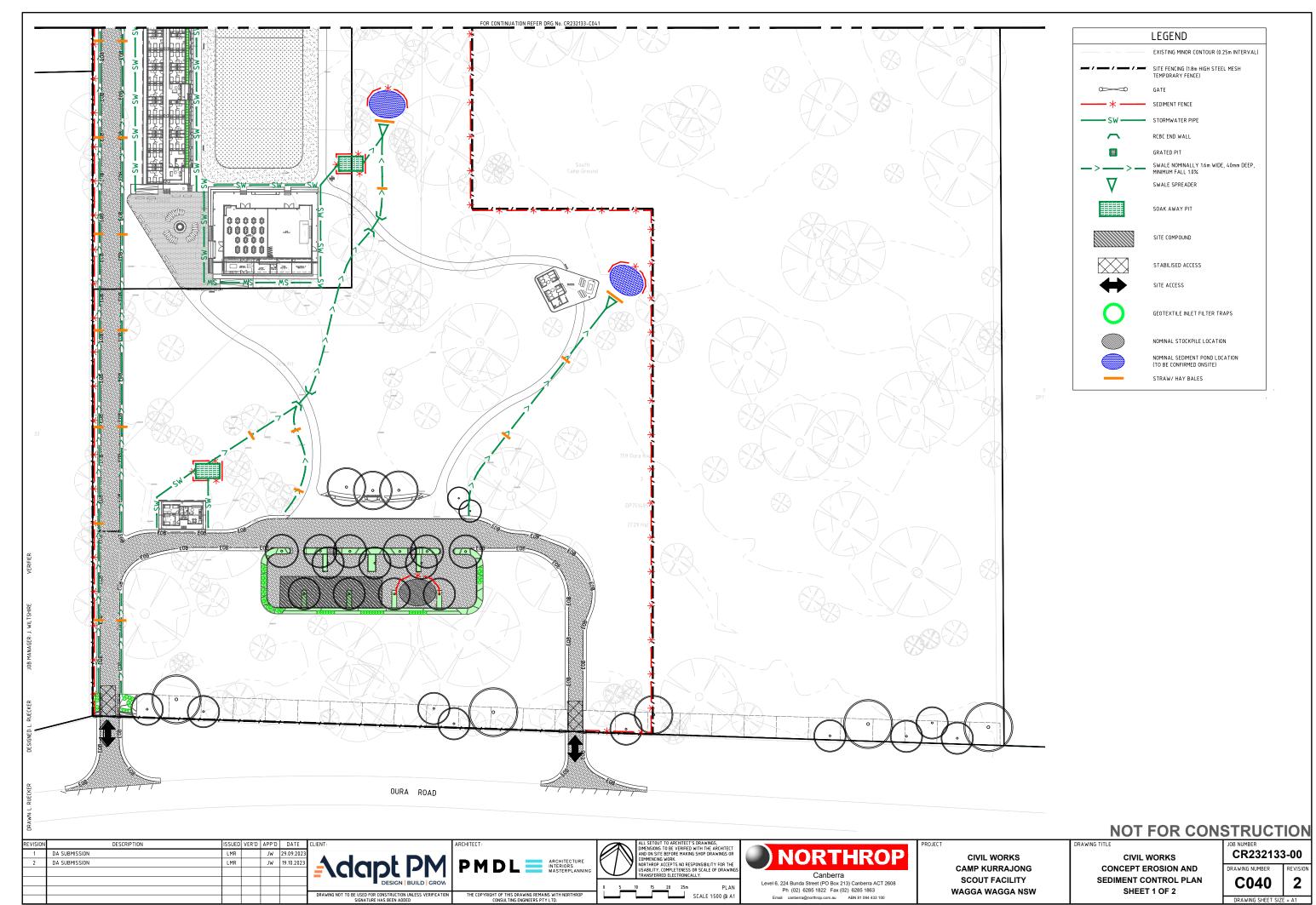
CAMP KURRAJONG
SCOUT FACILITY
S225 1863
WAGGA WAGGA NSW

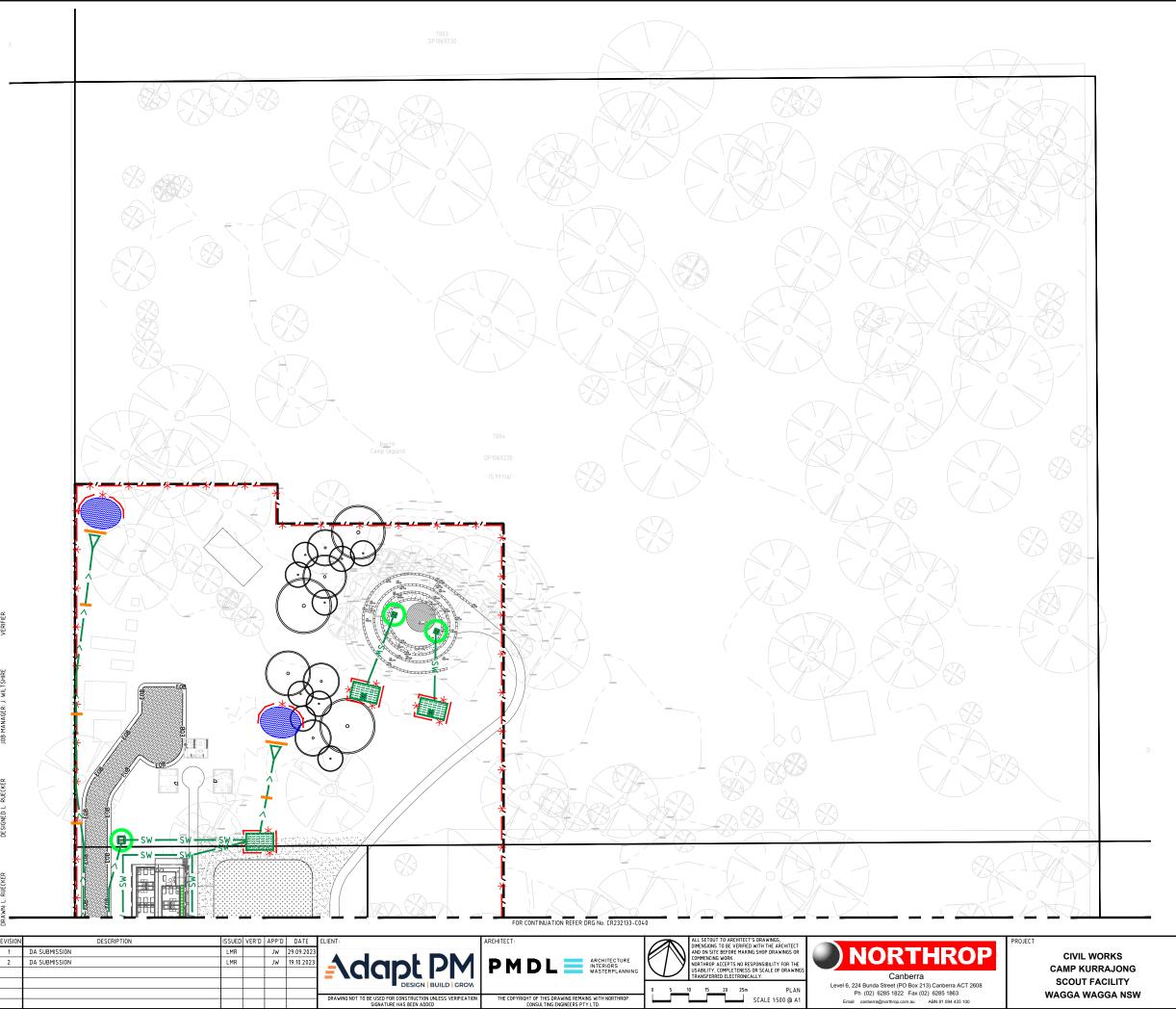
CIVIL WORKS

CIVIL WORKS
VEHICLE TURNING PATHS
SHEET 3 OF 3

TITLE CIVIL WORKS CR232133-00

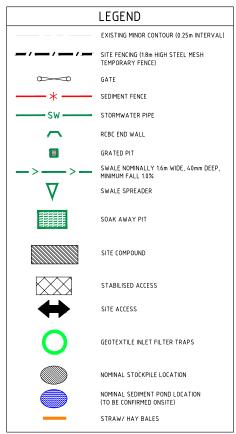
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20 25m PLAN SCALE 1:500 @ A1



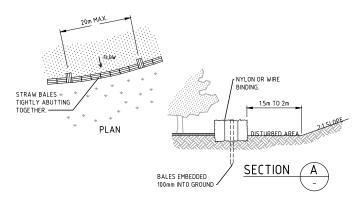
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CAMP KURRAJONG SCOUT FACILITY **WAGGA WAGGA NSW**

CIVIL WORKS CONCEPT EROSION AND SEDIMENT CONTROL PLAN SHEET 2 OF 2

CR232133-00

C041 DRAWING SHEET SIZ

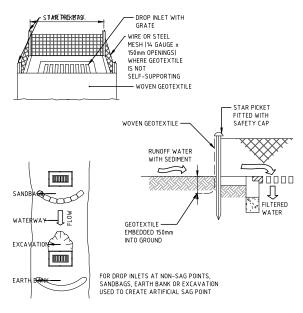


CONSTRUCTION NOTES

1. CONSTRUCT THE STRAW BALE FILTER AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE.

- PLACE BALES LENGTHWISE IN A ROW WITH ENDS TIGHTLY ABUTTING. USE STRAW TO FILL ANY GAPS BETWEEN BALES. STRAWS ARE TO BE PLACED PARALLEL TO GROUND.
- 3. ENSURE THAT THE MAXIMUM HEIGHT OF THE FILTER IS ONE BALE
- 4. EMBED EACH BALE IN THE GROUND 75mm TO 100mm AND ANCHOR WITH TWO 12 METRE STAR PICKETS OR STAKES, ANGLE THE FIRST STAR PICKET OR STAKE IN EACH BALE TOWARDS THE PREVIOUSLY LAID BALE. DRIVE THEM 600mm INTO THE GROUND AND, IF POSSIBLE, FLUSH WITH THE TOP OF THE BALES. WHERE STAR PICKETS ARE USED AND THEY PROTRUDE ABOVE THE BALES, ENSURE THEY ARE FITTED WITH SAFETY CAPS.
- WHERE A STRAW BALE FILTER IS CONSTRUCTED DOWNSLOPE FROM A DISTURBED BATTER, ENSURE THE BALES ARE PLACED 1 TO 2 METRES DOWNSLOPE FROM THE TOE.
- 6. ESTABLISH A MAINTENANCE PROGRAM THAT ENSURES THE INTEGRITY OF THE BALES IS RETAINED THEY COULD REQUIRE REPLACEMENT EACH TWO TO FOUR MONTHS

STRAW BALE FILTER



DA SURMISSION

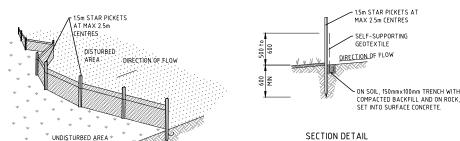
DA SUBMISSION

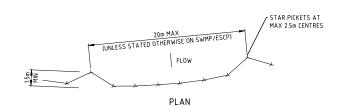
- <u>CONSTRUCTION NOTES</u>

 1. FABRICATE A SEDIMENT BARRIER MADE FROM GEOTEXTILE OR STRAW BALES.
- FOLLOW STANDARD DRAWING 6-7 AND STANDARD DRAWING 6-8 FOR INSTALLATION PROCEDURES FOR THE STRAW BALES OR GEOFABRIC. REDUCE THE PICKET SPACING TO 1 METRE CENTRES.
- 3. IN WATERWAYS, ARTIFICIAL SAG POINTS CAN BE CREATED WITH SANDBAGS OR EARTH BANKS AS SHOWN IN
- DD NOT COVER THE INLET WITH GEOTEXTILE UNLESS THE DESIGN IS ADEQUATE TO ALLOW FOR ALL WATERS TO BYPASS IT.

GEOTEXTILE INLET FILTER TRAPS

JW 19 10 203



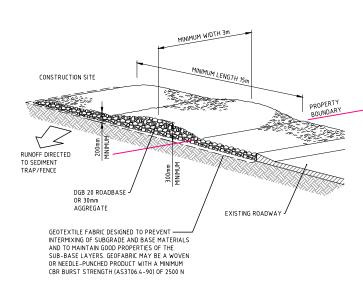


CONSTRUCTION NOTES

- CONSTRUCT SEDIMENT FERKES AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE, BUT WITH SMALL RETURNS AS SHOWN IN THE DRAWING TO LIMIT THE CATCHMENT AREA OF ANY ONE SECTION. THE CATCHMENT AREA SHOULD BE SMALL REDUGHT TO LIMIT WATER FLOW IF CONCENTRATED AT ONE POINT TO 50 LITRES PER SECOND IN THE DESIGN STORM EVENT, USUALLY THE 10-YEAR EVENT.
- CUT A 150mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE
- 3 DRIVE 15 METRE LONG STAR PICKETS INTO GROUND AT 25 METRE INTERVALS (MAX) AT THE DOWNSLOPE FOGE OF THE TRENCH. ENSURE ANY STAR PICKETS ARE FITTED WITH SAFETY CAPS.

 4. FIX SELF-SUPPORTING GEOTEXTILE TO THE UPSLOPE SIDE OF THE POSTS ENSURING IT GOES TO THE BASE OF
- THE TRENCH. FIX THE GEOTEXTILE WITH WIRE TIES OR AS RECOMMENDED BY THE MANUFACTURER. ONLY USE GEOTEXTILE SPECIFICALLY PRODUCED FOR SEDIMENT FENCING. THE USE OF SHADE CLOTH FOR THIS PURPOSE IS
- JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150mm OVERLAP.
- 6. BACKFILL THE TRENCH OVER THE BASE OF THE FABRIC AND COMPACT IT THOROUGHLY OVER THE GEOTEXTILE.

SEDIMENT FENCE



PMDL ARCHITECTURE INTERIORS MASTERPLANNI

GHT OF THIS DRAWING REMAINS WIT CONSULTING ENGINEERS PTY LTD.

- STRIP THE TOPSOIL LEVEL THE SITE AND COMPACT THE SUBGRADE
- COVER THE AREA WITH NEEDLE-PUNCHED GEOTEXTILE.
- CONSTRUCT A 200mm THICK PAD OVER THE GEOTEXTILE USING ROAD BASE OR 30mm AGGREGATE.
- ENSURE THE STRUCTURE IS AT LEAST 15 METRES LONG OR TO BUILDING ALIGNMENT AND AT LEAST 3 METRES
- WHERE A SEDIMENT FENCE JOINS ONTO THE STABILISED ACCESS, CONSTRUCT A HUMP IN THE STABILISED ACCESS

MENCING WORK. THROP ACCEPTS NO RESPONSIBILITY FOR THE BILITY, COMPLETENESS OR SCALE OF DRAWIN NSFERRED ELECTRONICALLY.

NOT TO SCALE

STABILISED SITE ACCESS

CONSTRUCTION SEQUENCE

- INSTALL STORMWATER FILTER SOCKS
- CONSTRUCT STABILISED SITE ACCESS
- INSTALL SEDIMENT FENCING CONSTRUCT STRAW/ HAY BALF CONTROLS
- CONSTRUCT STRAW THAT BALE CONTROLS
 CONSTRUCT SEDIMENT BASINS
 INSTALL DIVERSION DRAINS AND OTHER REQUIRED MEASURES
 TO DIRECT FLOW TO BASINS OR TO BYPASS SITE.
- UNDERTAKE BULK EARTHWORKS
- INSTALL SEDIMENT CONTROLS AS REQUIRED AROUND NEW
- STORMWATER INFRASTRUCTURE PROGRESSIVELY REHABILITATE SITE
- REMOVE SEDIMENT CONTROLS ONCE SITE IS STABILISED

SEDIMENT BASIN NOTES

- PRIOR TO ANY FORECAST WEATHER EVENT, LIKELY TO RESULT IN SEDIMENT LADEN RUNOFF ON THE SITE, ANY EXISTING DETENTION BASINS/TRAPS SHALL BE DEWATERED TO PROVIDE SUFFICIENT CAPACITY TO CAPTURE SEDIMENT LADEN FROM THE SITE.
- ANY SEDIMENT LADEN WATER CAPTURED ON-SITE MUST BE TREATED TO ENSURE IT WILL ACHIEVE NSW EPS WATER QUALITY OBJECTIVE PRIOR TO ITS RELEASE FROM SITE. A SAMPLE OF THE RELEASED TREATED WATER MUST BE KEPT ON-SITE IN A CLEAR
- NO ALUMINUM BASED PRODUCTS MAY BE USED TO TREAT TURBID WATER (FLOCCULATING/COAGULANTS) ON-SITE WITHOUT THE PRIOR WRITTEN APPROVAL FROM THE APPROPRIATE SNOWY VALLEY'S COUNCIL PERSONNEL
- THE CHEMICAL/AGENT (FLOCCULATING/COAGULANTS) USED IN TYPE D AND TYPE F BASINS TO TREAT TURBID WATER CAPTURED IN THE BASIN MUST BE APPLIED IN CONCENTRATIONS SUFFICIENT OF ACHIEVE SNOWY VALLEY'S COUNCIL WATER QUALITY OBJECTIVES (TSS < 50mg/L TURBIDITY < 60 NTU, 6.5 <ph < 8.5) WITHIN THE 5 DAY RAINFALL DEPTH USED TO CALCULATE THE CAPACITY OF THE BASIN, AFTER A RAINFALL EVENT.
- ALL MANUFACTURERS INSTRUCTIONS MUST BE FOLLOWED FOR THE ALL PIANOTAL IONERS INSTITUTIONS PIGST BE FOLLOWED FOR T USES OF ANY CHEMICALS/AGENTS USED ON-SITE, EXCEPT WHERE APPROVED BY THE RESPONSIBLE PERSON OR AN APPROPRIATE COUNCIL OFFICER.
- SUFFICIENT QUANTITIES OF CHEMICALS/AGENTS TO TREAT TURBID WATER (FLOCCULATING/COAGULANTS) MUST BE PLACED SUCH THAT WATER ENTERING THE BASIN/SEDIMENT TRAP MIXES WITH THE CHEMICAL S/AGENTS AND IS CARRIED INTO THE BASIN/TRAP
- ANY BASIN MUST BE DEWATERED AS SOON AS PRACTICAL, ONCE WATER CAPTURED IN THE BASIN ACHIEVES SNOWY VALLEY'S COUNCIL WATER QUALITY OBJECTIVES.
- INSPECT THE SEDIMENT BASINS AFTER EACH RAINFALL EVENT AND/OR WEEKLY. ENSURE THAT ALL SEDIMENT IS REMOVED ONCE THE SEDIMENT STORAGE. ZONE IS FULL. ENSURE THAT OUTLET AND EMERGENCY SPILLWAY WORKS ARE MAINTAINED IN A FULLY OPERATIONAL CONDITION AT ALL TIMES

POLLUTION, EROSION & SEDIMENT CONTROL

INSPECTIONS AND MAINTENANCE SCHEDULE RECORD MAINTENANCE ACTIVITIES AND DETAILS TO PROVIDE TO THE SNOWY VALLEYS COUNCIL

- CHUTES BARRELS WHEELBARROWS AND OTHER EQUIPMENT TO

- CHUTES, BARRELS, WHEELBARROWS AND OTHER EQUIPMENT TO BE RINSED IN THE SITE WASH-DOWN AREA. REMOVE ANY SEDIMENT FROM PUBLIC ROADS ADJACENT TO THE WORK AREA. DO NOT WASH INTO THE STORMWAITER SYSTEM. SUPPRESS DUST BY REQUIAE SPRAYING OF WATER AND COVERING AND SECURING VEHICLE LOADS ENTERING/EXITING
- MAINTAIN AND INSPECT POLLUTION CONTROL MEASURES DURING CONSTRUCTION AND UNTIL FULL STABILISATION: REPAIR AND REINSTATE WORKS AS NEEDED.

MAINTAIN AND INSPECT STABILISED SITE ACCESS POINTS.
MAINTAIN AND INSPECT HAY BALES, REPLACE AS REQUIRED IF DEGRADED OR DAMAGED.

AIR QUALITY

- SUPPRESS DUST BY THE INCLUDING FOLLOWING METHODS WHERE APPLICABLE:

 STAGE WORKS TO LIMIT THE EXTENT OF EXPOSED AND

- STADE WORKS TO LIMIT THE EXTENT OF EXPOSED AND UNPROTECTED AREAS.
 REGULAR SPRAYING OF WATER
 COVER AND SECURE VEHICLE LOADS ENTERING/EXITING SITE
 USE AN ENVIRONMENTALLY FRIENDLY CHEMICAL SPRAY TO BIND
 SOIL TOGETHER THUS STABILISING UNUSED SOIL
 RESTRICT SPEED OF VEHICLES ONSITE
 COVER STOCKPILES TO PROTECT FROM THE WIND

- IMPLEMENT MEASURES TO LIMIT AIR POLLUTION BY VEHICLES AND PLANT WORKING ON OR PASSING THROUGH THE SITE.
- MAINTAIN POLLUTION CONTROL MEASURES DURING CONSTRUCTION AND UNTIL FULL STABILISATION. ROUTINELY INSPECT EACH WEEK AND AFTER SIGNIFICANT RAINFALL EVENTS. REPAIR AND REINSTATE WORKS AS NEEDED TO MAINTAIN PROTECTION. RECORD

MAINTENANCE ACTIVITIES AND DETAILS AND PROVIDE TO EPA FOR INSPECTION WHEN REQUESTED.

NORTHROP

Canberra

Level 6, 224 Bunda Street (PO Box 213) Canberra ACT 2608

Ph (02) 6285 1822 Fax (02) 6285 1863

Email canberra@northrop.com.au ABN 81 094 433 100

BURNING OF WASTE MATERIALS MUST NOT BE UNDERTAKEN.

FIRE MAY BE PERMITTED FOR GENERAL HEATING PURPOSES IF IN A BRAZIER OR CONSTRUCTED FIREPLACE, USING SEASONED, UNTREATED TIMBER.

CIVIL WORKS

CAMP KURRAJONG

SCOUT FACILITY

WAGGA WAGGA NSW

NOTES

- ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH RELEVANT ORDINANCES AND REGULATIONS: NOTE IN PARTICULAR THE REQUIREMENTS OF LANDCOMS MANAGING URBAN STORMWATER SOILS AND CONSTRUCTION (THE 'BLUE BOOK').
- INSTALL SEDIMENT PROTECTION FILTERS ON ALL NEW AND EXISTING STORMWATER INLET PITS IN ACCORDANCE WITH EITHER THE MESH AND GRAVEL INLET FILTER DETAIL SD6-11 OR THE GEOTEXTILE INLET FILTER DETAIL SD6-12 OF THE 'BLUE BOOK
- ESTABLISH ALL REQUIRED SEDIMENT FENCES IN ACCORDANCE WITH DETAIL SD6-8 OF THE 'BLUE BOOK
- INSTALL SEDIMENT FENCING AROUND INDIVIDUAL BUILDING ZONE/AREAS AS REQUIRED AND AS DIRECTED BY THE SUPERINTENDENT.
- ALL TRENCHES INCLUDING ALL SERVICE TRENCHES AND SWALE EXCAVATION SHALL BE SIDE-CAST TO THE HIGH SIDE AND CLOSED AT THE END OF EACH DAY WORK
- THE CONTRACTOR SHALL ENSURE THAT ALL VEGETATION (TREE, SHRUB AND GROUND COVER) WHICH IS TO BE RETAINED SHALL BE PROTECTED DURING THE DURATION OF CONSTRUCTION. REFER ARCHITECTS PLANS FOR TREES TO BE KEPT.
- ALL VEGETATION TO BE REMOVED SHALL BE MULCHED ONSITE AND SPREAD/STOCKPILED AS DIRECTED BY THE SUPERINTENDENT.
- STRIP TOPSOIL IN AREAS DESIGNATED FOR STRIPPING AND STOCKPILE FOR RE-USE AS REQUIRED. ANY SURPLUS MATERIAL SHALL BE REMOVED FROM SITE AND DISPOSED OF IN ACCORDANCE WITH RELEVANT AUTHORITY GUIDELINES.
- CONSTRUCT AND MAINTAIN ALL MATERIAL STOCKPILES IN ACCORDANCE WITH DETAIL SD4-1 OF THE 'BLUE BOOK' (INCLUDING CUT-OFF SWALES TO THE HIGH SIDE AND SEDIMENT FENCES TO THE
- ENSURE STOCKPILES DO NOT EXCEED 2.0m HIGH. PROVIDE WIND AND RAIN EROSION PROTECTION AS REQUIRED IN ACCORDANCE WITH THE 'BLUE BOOK'.
- PROVIDE WATER TRUCKS OR SPRINKLER DEVICES DURING CONSTRUCTION AS REQUIRED TO SUPPRESS DUST
- 12 ONCE CUT/FILL OPERATIONS HAVE BEEN FINALISED ALL DISTURBED AREAS THAT ARE NOT BEING WORKED ON SHALL BE RE-VEGETATED
- 13. SITE WON TOPSOIL SHALL BE PLACED ON ALL PERMANENT BATTER SLOPES AND GRASS SEEDED OR PLANTED AND MULCHED TO LANDSCAPE ARCHITECTS REQUIREMENTS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING A DETAILED THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING A DETAILED WRITTEN RECORD OF ALL EROSION AND SEDIMENT CONTROLS ON-SITE DURING THE CONSTRUCTION PERIOD. THIS RECORD SHALL BE UPDATED ON A DAILY BASIS AND SHALL CONTROL DETAILS ON THE CONDITION OF CONTROLS AND ANY/ALL MAINTENANCE, CLEANING AND BREACHES. THIS RECORD SHALL BE KEPT ON-SITE AT ALL TIMES. AND SHALL BE MADE AVAILABLE FOR INSPECTION BY THE PRINCIPAL CERTIFYING AUTHORITY AND THE SUPERINTENDENT DURING NORMAL WORKING HOURS
- AT THE END OF EACH DAYS WORK. THE CONTRACTOR SHALL TAKE AT THE END UP EART DAYS WORK, THE CONTRACTOR SHALL TAKE
 THE APPROPRIATE MEASURES TO STABILISE THE EXPOSED
 EARTHWORKS, SUCH AS:
 CLOSING ALL TERCHES
 INSTALLING TEMPORARY DIVERSION MULCH BUNDS TO THE HIGH
- SIDE OF EXPOSED WORKS
- INSTALLING TEMPORARY SILT FENCES AND/OR STAKED BALES TO DOWN HILL SIDE OF EXPOSED WORKS.

NOT FOR CONSTRUCTION

CIVIL WORKS CONCEPT EROSION AND SEDIMENT CONTROL **DETAILS AND NOTES**

CR232133-00 RAWING NUMBER

2 C042 DRAWING SHEET



TRANSMITTAL - CIVIL

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Job No:	Job Name:									-
CR232133-00	CAMP KURRAJONG SCOUT FACILITY - W	'AGG	4 W	AGGA	'SN	W				
Description:		Date	e:							
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Doc No.	Document Title	Rev	ision					I.		
C000	CIVIL WORKS COVER SHEET DRAWING SCHEDULE AND LOCALITY PLAN		2	1	2					
C001	CIVIL WORKS STANDARD NOTES SHEET 1 OF 2		2	1	2					
C002	CIVIL WORKS STANDARD NOTES SHEET 2 OF 2		2	1	2					
C005	CIVIL WORKS STANDARD DETAILS		2	1	2					
C010	CIVIL WORKS CONCEPT STORMWATER DRAINAGE PLAN SHEET 1 OF 2		2	1	2					
C011	CIVIL WORKS CONCEPT STORMWATER DRAINAGE PLAN SHEET 2 OF 2		2	1	2					
C012	CIVIL WORKS CONCEPT STORMWATER DRAINAGE DETAILS		2	1	2					
C020	CIVIL WORKS ROAD AND CARPARK LAYOUT AND DETAIL PLAN SHEET 1 OF 4		2	1	2					
C021	CIVIL WORKS ROAD AND CARPARK LAYOUT		2	1	2					
C022	CIVIL WORKS ROAD AND CARPARK LAYOUT AND DETAIL PLAN SHEET 3 OF 4	rision	2	1	2					
C023	CIVIL WORKS ROAD AND CARPARK LAYOUT AND DETAIL PLAN SHEET 4 OF 4	nt Rev	2	1	2					
C030	CIVIL WORKS VEHICLE TURNING PATHS SHEET 1 OF 3	Current Revision	2	1	2					
C031	CIVIL WORKS VEHICLE TURNING PATHS SHEET 2 OF 3		2	1	2					
C032	CIVIL WORKS VEHICLE TURNING PATHS SHEET 3 OF 3		2	1	2					
C040	CIVIL WORKS CONCEPT EROSION AND SEDIMENT CONTROL PLAN SHEET 1 OF 2		2	1	2					
C041	CIVIL WORKS CONCEPT EROSION AND SEDIMENT CONTROL PLAN SHEET 2 OF 2		2	1	2					
C042	CIVIL WORKS CONCEPT EROSION AND SEDIMENT CONTROL DETAILS AND NOTES	_	2	1	2					
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Size:	A0/A1/A2/A3/A4/B1	А3	А3				
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