# ARDEX DISTRIBUTION CENTRE

## MAMRE ROAD, KEMPS CREEK, NSW STATE SIGNIFICANT DEVELOPMENT APPLICATION

#### DRAWING LIST

DRAWING NO.

CO13362.05-SSDA10 DRAWING LIST & GENERAL NOTES EROSION AND SEDIMENT CONTROL PLAN CO13362.05-SSDA20 CO13362.05-SSDA25 EROSION AND SEDIMENT CONTROL DETAILS CO13362.05-SSDA30 BULK EARTHWORKS PLAN

DRAWING TITLE

CO13362.05-SSDA31 CUT/FILL PLAN CO13362.05-SSDA35 BULK EARTHWORKS SECTIONS

CO13362.05-SSDA40 STORMWATER DRAINAGE PLAN STORMWATER DRAINAGE DETAILS - SHEET 1 CO13362.05-SSDA45 CO13362.05-SSDA46 STORMWATER DRAINAGE DETAILS - SHEET 2

CO13362.05-SSDA50 FINISHED LEVELS PLAN

#### **GENERAL NOTES:**

- THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANT'S DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ANY DISCREPANCY SHALL BE REFERRED TO THE ENGINEER BEFORE PROCEEDING WITH THE
- ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE RELEVANT AND CURRENT STANDARDS AUSTRALIA CODES AND WITH THE BY-LAWS AND ORDINANCES OF THE RELEVANT BUILDING AUTHORITIES EXCEPT WHERE VARIED BY THE PROJECT SPECIFICATION.
- ALL DIMENSIONS SHOWN SHALL BE VERIFIED BY THE BUILDER ON SITE. ENGINEER'S DRAWINGS ISSUED IN ANY ELECTRONIC FORMAT MUST NOT BE USED FOR REFER TO THE ARCHITECT'S DRAWINGS FOR ALL DIMENSIONAL SETOUT INFORMATION.
- DURING CONSTRUCTION THE STRUCTURE SHALL BE MAINTAINED IN A STABLE CONDITION AND NO PART SHALL BE OVERSTRESSED. TEMPORARY BRACING SHALL BE PROVIDED BY THE BUILDER TO KEEP THE WORKS AND EXCAVATIONS STABLE AT ALL TIMES.
- UNLESS NOTED OTHERWISE ALL LEVELS ARE IN METRES AND ALL DIMENSIONS ARE IN MILLIMETRES.
- ALL WORKS SHALL BE UNDERTAKEN IN ACCORDANCE WITH ACCEPTABLE SAFETY STANDARDS & APPROPRIATE SAFETY SIGNS SHALL BE INSTALLED AT ALL TIMES DURING THE PROGRESS OF THE JOB.

#### **ELECTRONIC INFORMATION NOTES:**

- THE ISSUED DRAWINGS IN HARD COPY OR PDF FORMAT TAKE PRECEDENCE OVER ANY ELECTRONICALLY ISSUED INFORMATION, LAYOUTS OR DESIGN MODELS.
- THE CONTRACTOR'S DIRECT AMENDMENT OR MANIPULATION OF THE DATA OR INFORMATION THAT MIGHT BE CONTAINED WITHIN AN ENGINEER-SUPPLIED DIGITAL TERRAIN MODEL AND ITS SUBSEQUENT USE TO UNDERTAKE THE WORKS WILL BE SOLELY AT THE DISCRETION OF AND THE RISK OF THE CONTRACTOR.
- THE CONTRACTOR IS REQUIRED TO HIGHLIGHT ANY DISCREPANCIES BETWEEN THE DIGITAL TERRAIN MODEL AND INFORMATION PROVIDED IN THE CONTRACT AND/OR DRAWINGS AND IS REQUIRED TO SEEK CLARIFICATION FROM THE SUPERINTENDENT.
- THE ENGINEER WILL NOT BE LIABLE OR RESPONSIBLE FOR THE POSSIBLE ON-GOING NEED TO UPDATE THE DIGITAL TERRAIN MODEL, SHOULD THERE BE ANY AMENDMENTS OR CHANGES TO THE DRAWINGS OR CONTRACT INITIATED BY THE CONTRACTOR.

#### SITE PREPARATION NOTES:

- ALL EARTHWORKS SHALL BE COMPLETED UNDER LEVEL 1 SUPERVISION GENERALLY IN ACCORDANCE WITH THE GUIDELINES SPECIFIED BY THE GEOTECHNICAL ENGINEER PROVIDED BY PELLS SULLIVAN MEYNINK DATED 01/06/2020
- EXISTING LEVELS ARE BASED ON ESTATE DESIGN INFORMATION PROVIDED BY COSTIN ROE CONSULTING (DWG No. CO13362.02-EW301 TO EW309 )
- ON THE DRAWINGS WITHIN A TOLERANCE OF +0mm/-10mm THROUGH BUILDING PADS/PAVEMENTS AND +0mm/-20mm ELSEWHERE.
- PREPARE STEEP BATTERS TO RECEIVE FILL BY CONSTRUCTING BENCHING TO FACILITATE
- AREAS TO RECEIVE FILL (THAT ARE NOT ON BENCHED BATTERS) AND AREAS IN CUT SHALL BE BOXED OUT AND REMOVED PRIOR TO FILL PLACEMENT. PROOF ROLLING TO BE INSPECTED BY A GEOTECHNICAL ENGINEER OR THE EARTHWORKS DESIGNER.
- SITE WON FILL SHALL BE COMPACTED IN MAXIMUM 300mm LAYERS AND TO DRY OR HILF DENSITY RATIOS (STANDARD COMPACTION) OF BETWEEN 98% AND 103%. THE PLACEMENT MOISTURE VARIATION OR HILF MOISTURE VARIATION SHALL BE CONTROLLED TO BE BETWEEN 2% DRY AND 2% WET.
- IMPORTED FILL SHALL BE COMPACTED IN MAXIMUM 300mm LAYERS AND TO DRY OR HILF DENSITY RATIOS (STANDARD COMPACTION) OF BETWEEN 98% AND 103%. THE PLACEMENT MOISTURE VARIATION OR HILF MOISTURE VARIATION SHALL BE CONTROLLED TO BE BETWEEN 2% DRY AND 2% WET.
- ALL ENGINEERED FILL PARTICLES SHALL BE ABLE TO BE INCORPORATED WITHIN A SINGLE LAYER. FURTHER, LESS THAN 30% OF PARTICLES SHALL BE RETAINED ON THE 37.5 mm SIEVE. ENGINEERED FILL SHALL BE ABLE TO BE TESTED IN ACCORDANCE WITH THE STANDARD COMPACTION METHOD (AS1289.5.4.1) OR HILF TEST METHOD (AS1289.5.7.1). THESE METHODS REQUIRE LESS THAN 20% RETAINED ON THE 37.5 mm SIEVE. WHERE BETWEEN 20% AND 30% OF PARTICLES ARE RETAINED ON THE 37.5 mm SIEVE THE ABOVE TEST METHODS SHALL STILL BE ADOPTED AND TEST REPORTS ANNOTATED APPROPRIATELY. THESE REQUIREMENTS SHOULD BE MET BY THE MATERIAL AFTER PLACEMENT AND COMPACTION
- 10. PRIOR TO ANY EARTHWORKS, EROSION CONTROL AS OUTLINED IN THE EROSION AND SEDIMENTATION CONTROL PLAN SHALL BE COMPLETED.
- EXISTING ROCK, IF ANY, SHALL BE REMOVED BY HEAVY ROCK BREAKING OR RIPPING.
- MATCH EXISTING LEVELS AT BATTER INTERFACE. CONTRACTOR TO MATCH EXISTING LEVELS AT THE INTERFACE OF EARTHWORKS AND EXISTING SURFACE AT BATTER LOCATIONS OR WHERE NO RETAINING WALLS ARE PRESENT. ANY DISCREPANCY BETWEEN DESIGN AND EXISTING LEVELS TO BE REFERRED TO THE ENGINEER FOR DIRECTION OR ADJUSTMENTS TO DESIGN LEVELS.
- 14. DURING EARTHWORKS THE CONTRACTOR IS TO ENSURE ALL AREAS ARE FREE DRAINING & WILL NOT RETAIN WATER DURING RAINFALL. PROVIDE TEMPORARY MEASURES AS REQUIRED TO ENSURE FREE FLOWING RUNOFF THROUGH MANAGED DRAINAGE PATHS, DIVERSION DRAINS OR OTHER SUITABLE DISPOSAL METHOD AS AGREED DURING THE WORKS. REFER ANY CONCERNS TO THE ENGINEER. REFER TO EROSION AND SEDIMENT CONTROL DRAWINGS AND NOTES.





STATE SIGNIFICANT DEVELOPMENT APPLICATION













DRAWING LIST & GENERAL NOTES

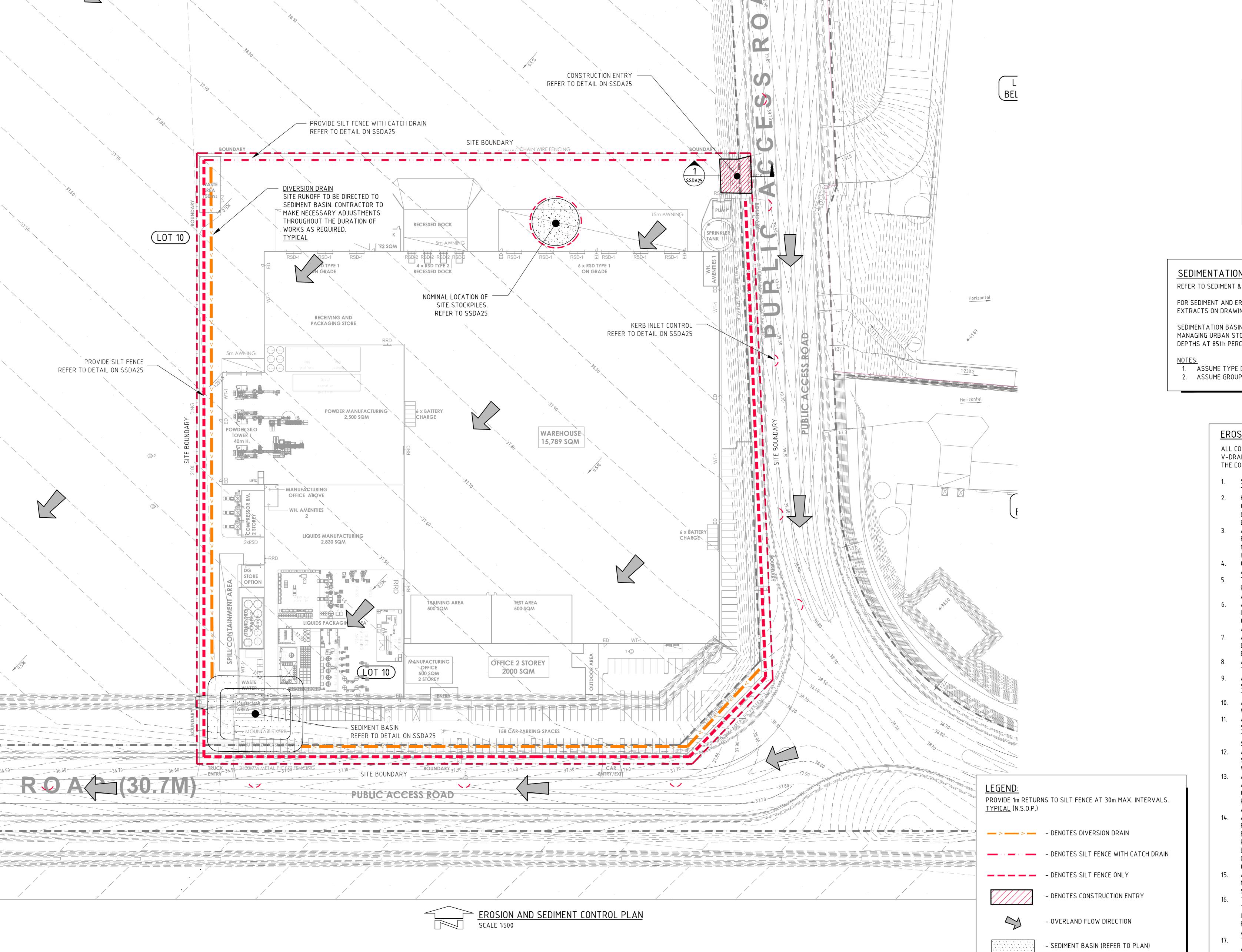
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DATE ISSUE AMENDMENTS

30.07.21

27.07.21

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**SEDIMENT BASIN DIMENSIONS:** 

CATCHMENT AREA = 4.4Ha DISTURBED AREA = 4.4Ha REQUIRED BASIN VOLUME  $= 1001 \text{m}^3$ BASE DIMENSIONS (L X B) = 25m x 18m TOP DIMENSIONS (L X B)  $= 34m \times 27m$ MAX SIDE SLOPE = 1V:3H DEPTH = 1.5m PROVIDED BASIN VOLUME  $= 1005 \text{m}^3$ 

 $= 1.2 \text{m}^3/\text{s}$ 

#### 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 CO13362.05-SSDA25.

Q10 WEIR PEAK FLOW

SEDIMENTATION BASIN SIZING BASED ON RECOMMENDATIONS OF 'SOILS AND CONSTRUCTION, MANAGING URBAN STORMWAER-THE BLUE BOOK'. CAPACITY BASED ON 5-DAY RAINFALL DEPTHS AT 85th PERCENTILE INTENSITY (35mm) IN THE PENRITH CATCHMENT AREA.

- ASSUME TYPE D SOIL (CLAY/SILTY CLAY)
- 2. ASSUME GROUP D SOIL (HIGH PLASTICITY AND SHRINK/SWELL PROPERTIES)

#### **EROSION CONTROL NOTES:**

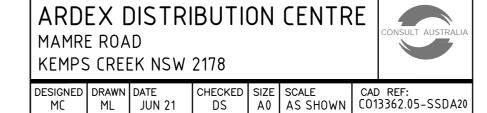
ALL CONTROL WORK INCLUDING DIVERSION BANKS AND CATCH DRAINS, V-DRAINS AND SILT FENCES SHALL BE COMPLETED DIRECTLY FOLLOWING THE COMPLETION OF THE EARTHWORKS.

- SILT FENCES AND SILT FENCE RETURNS SHALL BE ERECTED CONVEX TO THE CONTOUR TO POND WATER.
- HAY BALE BARRIERS AND GEOFABRIC FENCES ARE TO BE CONSTRUCTED TO TOE OF BATTER, PRIOR TO COMMENCEMENT OF EARTHWORKS, IMMEDIATELY AFTER CLEARING OF VEGETATION AND BEFORE REMOVAL OF TOP SOIL.
- ALL TEMPORARY EARTH BERMS, DIVERSION AND SILT DAM EMBANKMENTS ARE TO BE MACHINE COMPACTED, SEEDED AND MULCHED FOR TEMPORARY VEGETATION COVER AS SOON AS THEY HAVE BEEN FORMED.
- 4. CLEAR WATER IS TO BE DIVERTED AWAY FROM DISTURBED GROUND
- AND INTO THE DRAINAGE SYSTEM. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING AND PROVIDING ON GOING ADJUSTMENT TO EROSION CONTROL MEASURES
- AS REQUIRED DURING CONSTRUCTION. ALL SEDIMENT TRAPPING STRUCTURES AND DEVICES ARE TO BE INSPECTED AFTER STORMS FOR STRUCTURAL DAMAGE OR CLOGGING, TRAPPED MATERIAL IS TO BE REMOVED TO A SAFE,
- APPROVED LOCATION. ALL FINAL EROSION PREVENTION MEASURES INCLUDING THE ESTABLISHMENT OF GRASSING ARE TO BE MAINTAINED UNTIL THE
- END OF THE DEFECTS LIABILITY PERIOD.
- 8. ALL EARTHWORKS AREAS SHALL BE ROLLED ON A REGULAR BASIS TO SEAL THE EARTHWORKS.
- 9. ALL FILL AREAS ARE TO BE LEFT WITH A BUND AT THE TOP OF THE SLOPE AT THE END OF EACH DAYS EARTHWORKS. THE HEIGHT OF
- THE BUND SHALL BE A MINIMUM OF 200mm. 10. ALL CUT AND FILL SLOPES ARE TO BE SEEDED AND HYDROMULCHED WITHIN 10 DAYS OF COMPLETION OF FORMATION.
- AFTER REVEGETATION OF THE SITE IS COMPLETE AND THE SITE IS STABLE IN THE OPINION OF A SUITABLY QUALIFIED PERSON ALL TEMPORARY WORK SUCH AS SILT FENCE, DIVERSION DRAINS ETC
- SHALL BE REMOVED. ALL TOPSOIL STOCKPILES ARE TO BE SUITABLY COVERED TO THE SATISFACTION OF THE SITE MANAGER TO PREVENT WIND AND WATER EROSION.
- 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.
- 14. ALL STOCKPILE SITES SHALL BE SITUATED IN AREAS APPROVED FOR SUCH USE BY THE SITE MANAGER. A 6m BUFFER ZONE SHALL EXIST BETWEEN STOCKPILE SITES AND ANY STREAM OR FLOW PATH. ALL STOCKPILES SHALL BE ADEQUATELY PROTECTED FROM EROSION AND CONTAMINATION OF THE SURROUNDING AREA BY USE OF THE MEASURES APPROVED IN THE EROSION AND SEDIMENTATION CONTROL PLAN.
- ACCESS AND EXIT AREAS SHALL INCLUDE SHAKE-DOWN OR OTHER METHODS APPROVED BY THE SITE MANAGER FOR THE REMOVAL OF SOIL MATERIALS FORM MOTOR VEHICLES.
- 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 POLLUTANTS BEFORE IT IS EITHER DISPERSED TO STABLE
- AREAS OR DIRECTED TO NATURAL WATERCOURSES. 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.

SCALE 1:500 AT A0 SIZE SHEET

STATE SIGNIFICANT DEVELOPMENT APPLICATION





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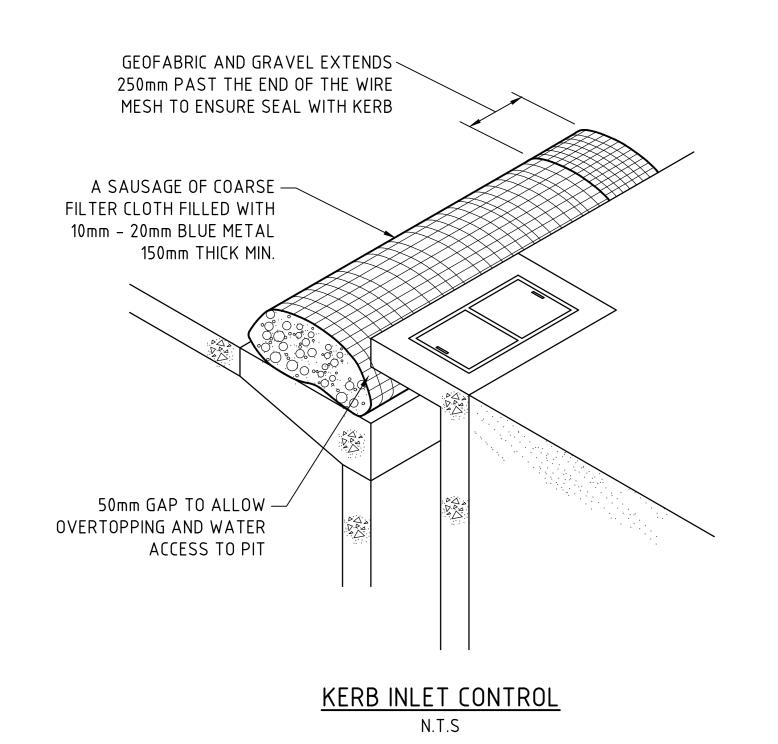


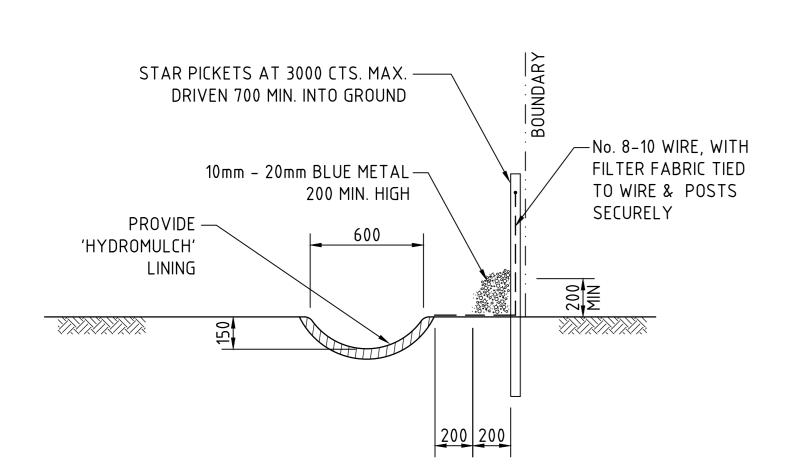
- KERB INLET CONTROL

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EROSION AND SEDIMENT CONTROL PLAN

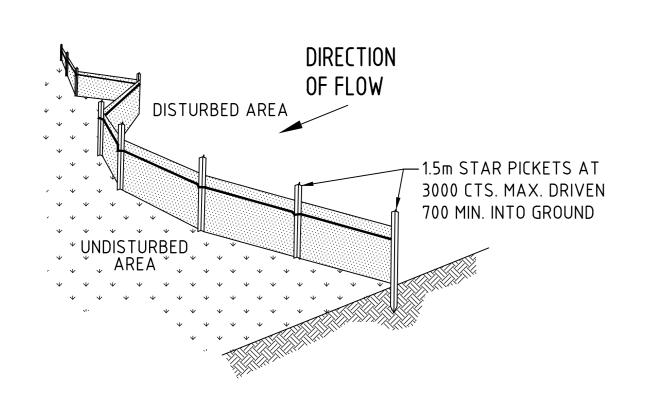
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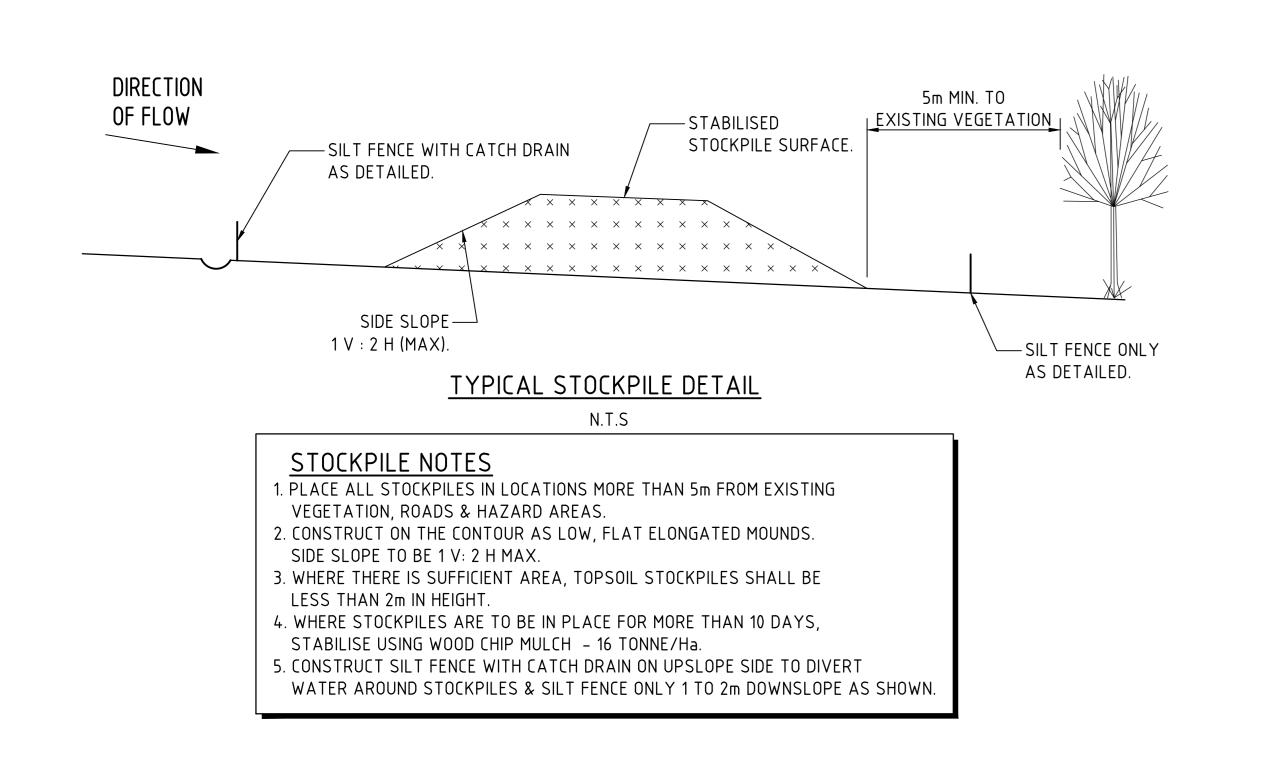


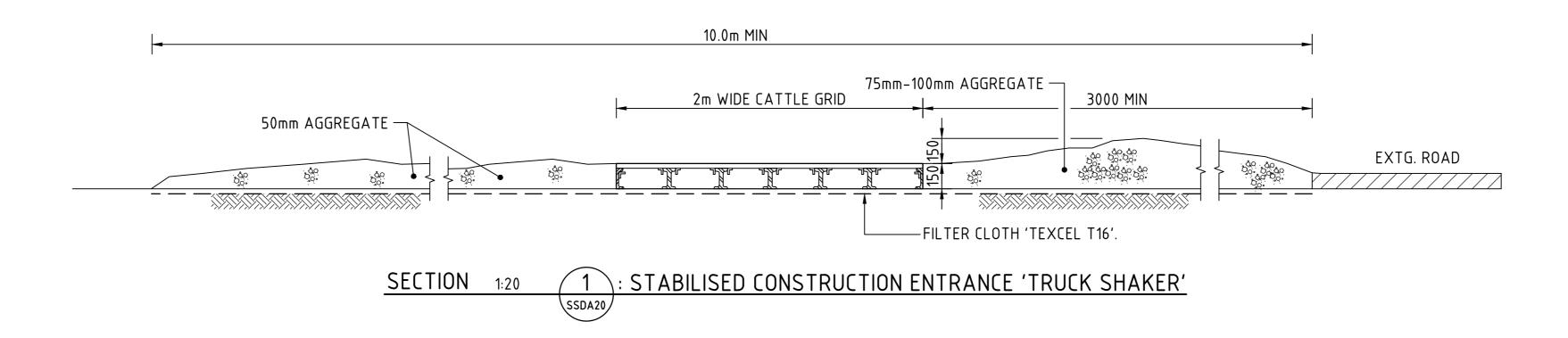
TYPICAL OPEN DRAIN & SILT FENCE

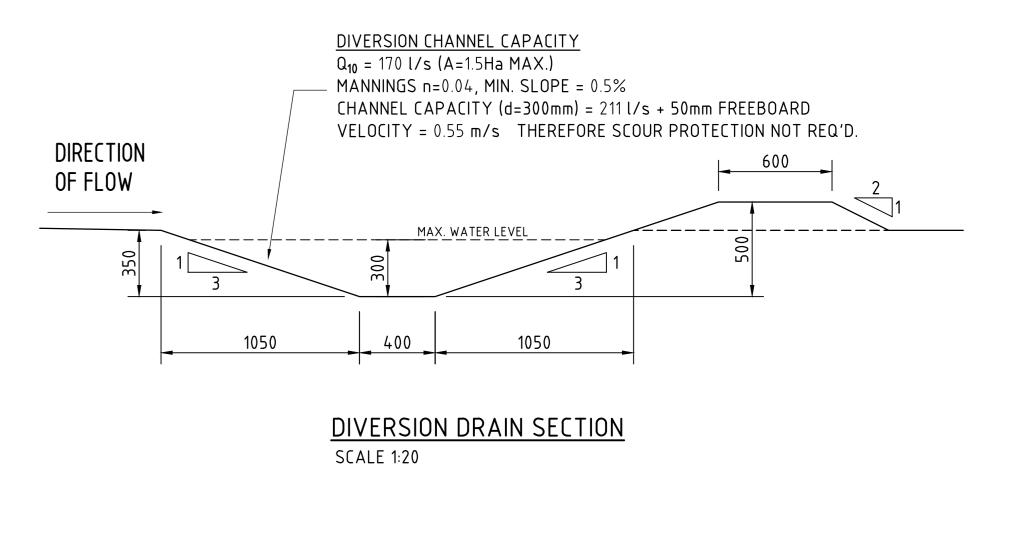
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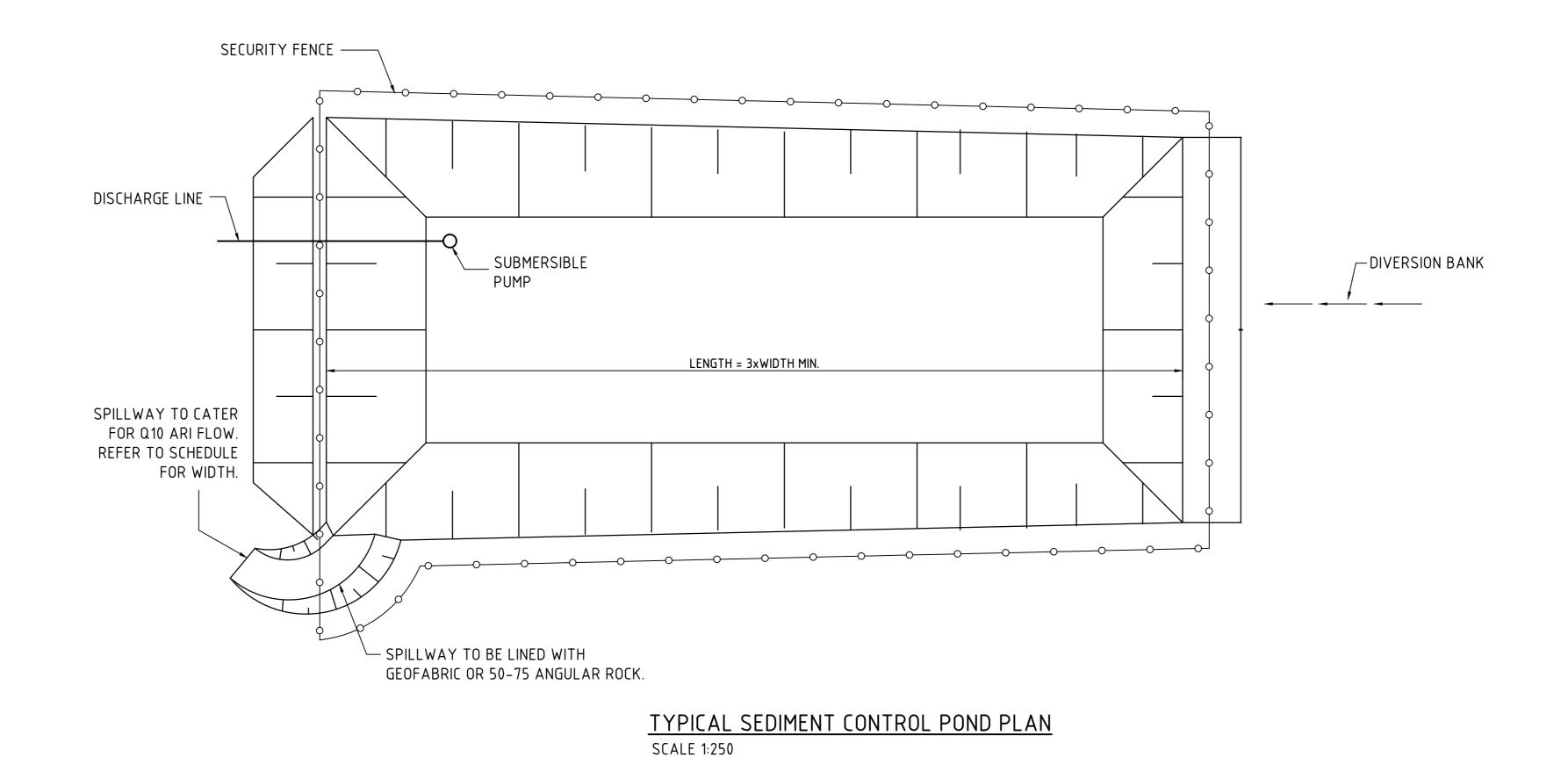


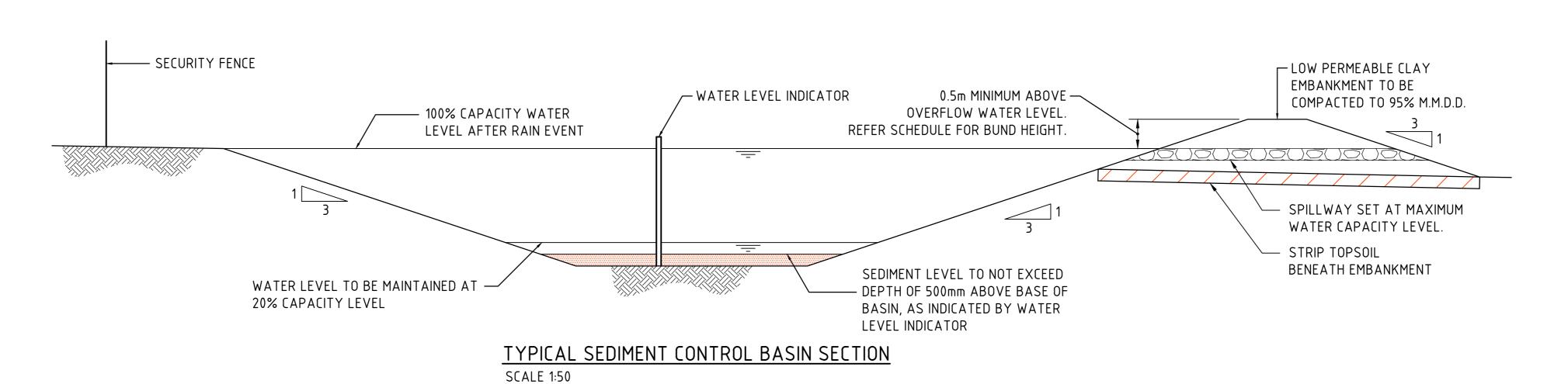
TYPICAL SILT FENCE DETAIL NOTE: PROVIDE 1m RETURNS AT 30m INTERVALS. TYPICAL

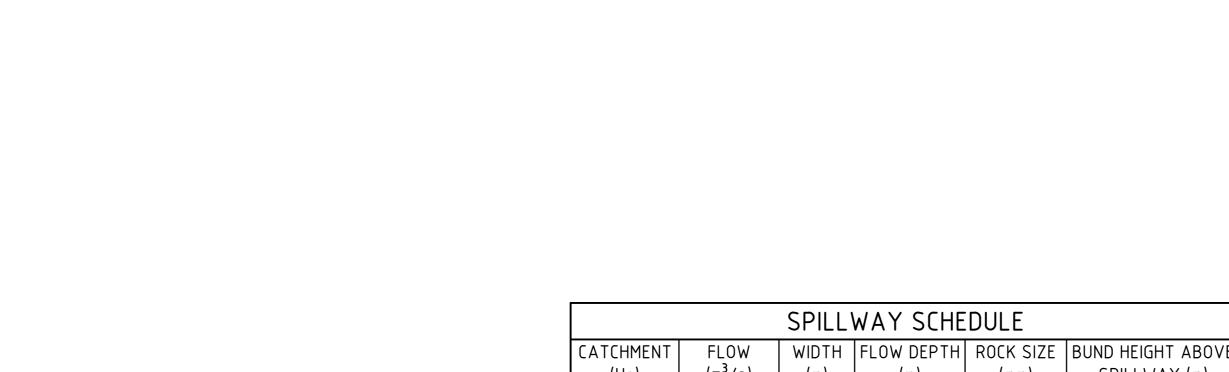




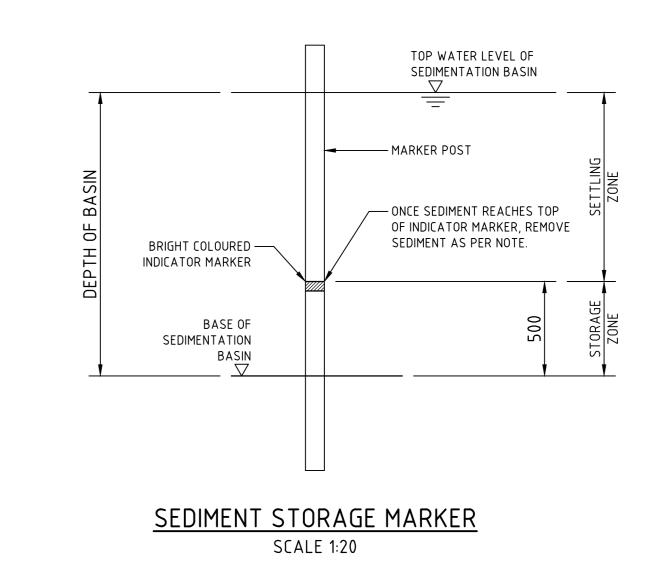








SPILLWAY SCHEDULE									
CATCHMENT	FLOW	WIDTH	FLOW DEPTH	ROCK SIZE	BUND HEIGHT ABOVE				
(Ha)	$(m^3/s)$	(m)	(m)	(mm)	SPILLWAY (m)				
1	0.3	2	0.20	200	0.70				
2	0.6	4	0.20	200	0.70				
5	1.4	5	0.30	200	0.80				
10	2.8	8	0.35	200	0.85				
20	5.5	14	0.40	250	0.90				
40	11.0	20	0.50	250	1.00				

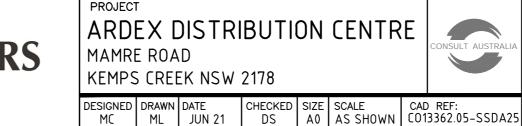


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### STATE SIGNIFICANT DEVELOPMENT APPLICATION







Costin Roe Consulting Pty 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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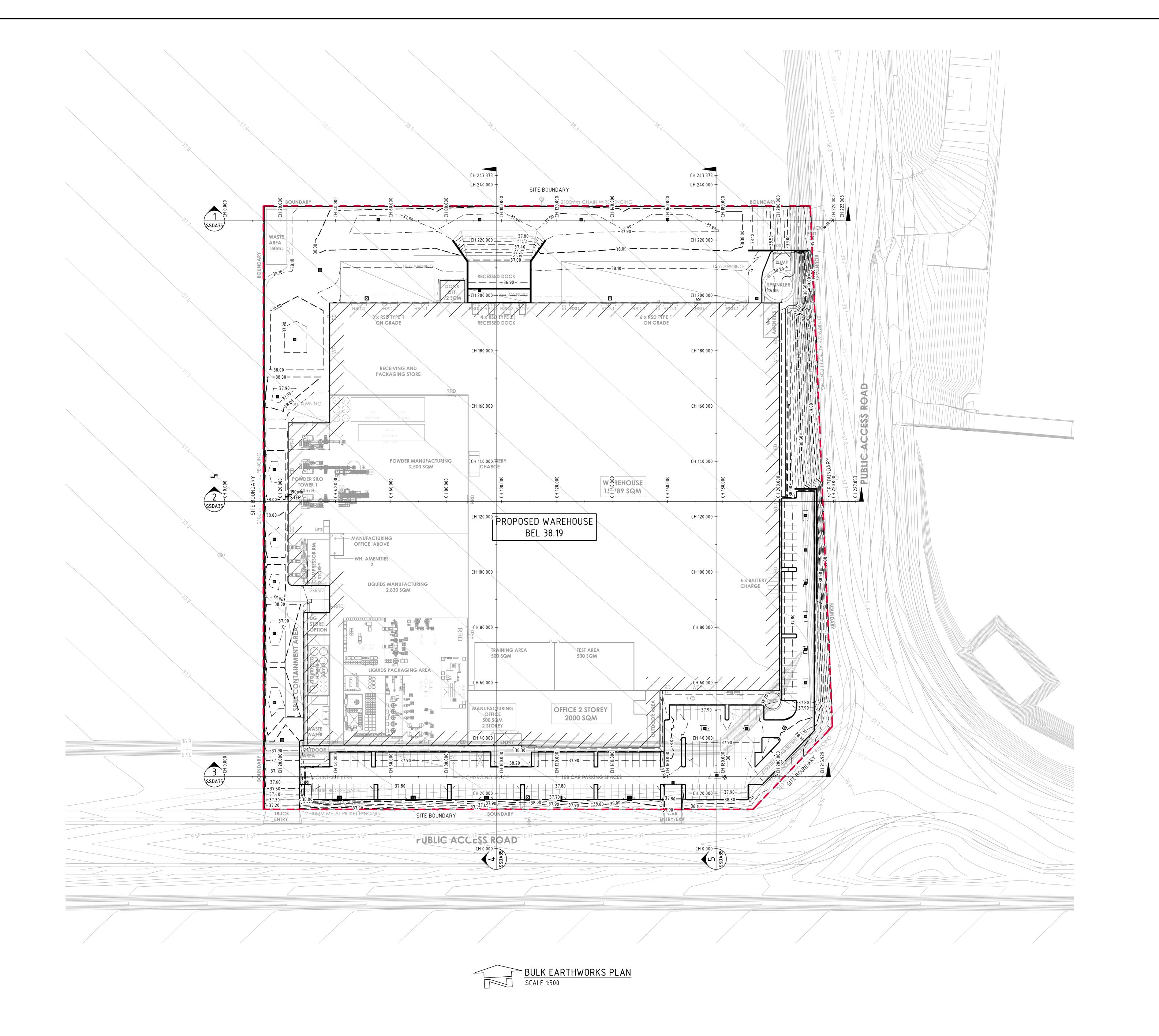
EROSION & SEDIMENT CONTROL

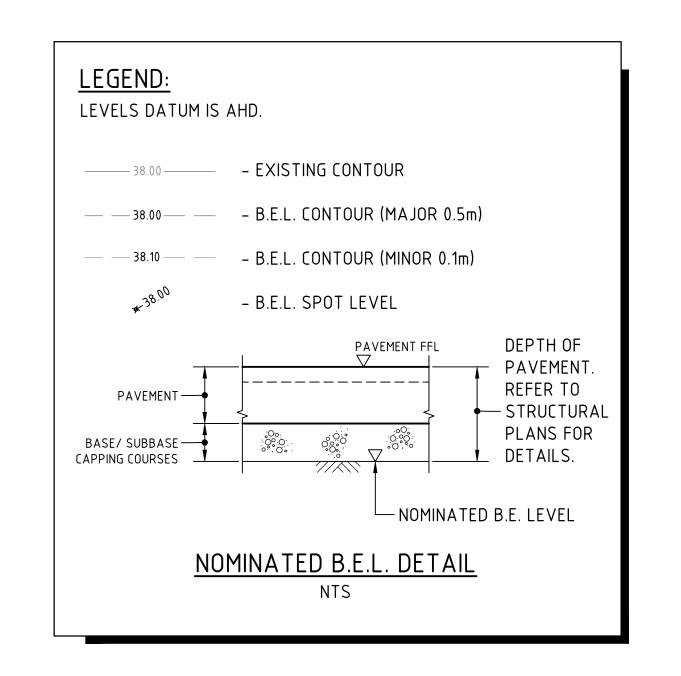
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FRASERS
PROPERTY

DETAILS

PRECISION | COMMUNICATION | ACCOUNTABILITY CO13362.05-SSDA25





PAVEMENT DEPTHS WAREHOUSE SLAB 310mm HARDSTAND PAVEMENT 275mm CARPARK PAVEMENT 320mm PEDESTRIAN PAVEMENT 175mm 100mm LANDSCAPED AREAS SPRINKLER TANK SLAB

SITE AREA = 4.4 Ha $= -1,600 \text{m}^3$ = +16,570m³ DETAILED EXCAVATION  $(1,200 \text{m}^3/\text{Ha}) = -5,300 \text{m}^3$ = +9,670m<sup>3</sup> (i.e. IMPORT) BALANCE EARTHWORK VOLUMES ARE APPROXIMATE ONLY. NO ALLOWANCE HAS BEEN MADE FOR DELETERIOUS MATERIAL, EROSION AND SEDIMENT CONTROL, BULKING OR COMPACTION OF FILLED SOILS. THE EXISTING SURFACE IS BASED ON ESTATE DESIGN BY COSTIN ROE CONSULTING

EARTHWORKS VOLUME ESTIMATE

(DWG No. CO13362.02-EW301 TO EW309). THIS SURFACE USED IS THE MOST CURRENT AVAILABLE INFORMATION HOWEVER IT MAY NOT ACCURATELY REFLECT ACTUAL GROUND LEVELS OR STOCKPILES ETC ON SITE. IT IS THE CONTRACTORS RESPONSIBILITY TO CONFIRM VOLUMES AND ALLOWANCES FOR EARTHWORKS.

#### SITE PREPARATION NOTES:

- 1. ALL EARTHWORKS SHALL BE COMPLETED UNDER LEVEL 1 SUPERVISION GENERALLY IN ACCORDANCE WITH THE GUIDELINES SPECIFIED BY THE GEOTECHNICAL ENGINEER
- PROVIDED BY PELLS SULLIVAN MEYNINK DATED 01/06/2020 EXISTING LEVELS ARE BASED ON ESTATE DESIGN INFORMATION PROVIDED BY COSTIN ROE CONSULTING (DWG No. 13362.02-EW301 TO EW309)
- 3. STRIP ANY TOP SOIL OR DELETERIOUS MATERIAL AND DISPOSE OF FROM SITE OR STORE AS DIRECTED.
- 4. COMPLETE CUT TO FILL EARTHWORKS TO ACHIEVE THE REQUIRED LEVELS AS INDICATED ON THE DRAWINGS WITHIN A TOLERANCE OF +0mm/-10mm THROUGH BUILDING
- PADS/PAVEMENTS AND +0mm/-20mm ELSEWHERE. 5. PREPARE STEEP BATTERS TO RECEIVE FILL BY CONSTRUCTING BENCHING TO FACILITATE FILL PLACEMENT AND COMPACTION.
- 6. AREAS TO RECEIVE FILL (THAT ARE NOT ON BENCHED BATTERS) AND AREAS IN CUT SHALL BE PROOF ROLLED TO IDENTIFY ANY SOFT HEAVING MATERIAL. SOFT MATERIAL SHALL BE BOXED OUT AND REMOVED PRIOR TO FILL PLACEMENT. PROOF ROLLING TO BE
- INSPECTED BY A GEOTECHNICAL ENGINEER OR THE EARTHWORKS DESIGNER. SITE WON FILL SHALL BE COMPACTED IN MAXIMUM 300mm LAYERS AND TO DRY OR HILF DENSITY RATIOS (STANDARD COMPACTION) OF BETWEEN 98% AND 103%. THE PLACEMENT MOISTURE VARIATION OR HILF MOISTURE VARIATION SHALL BE CONTROLLED
- TO BE BETWEEN 2% DRY AND 2% WET. 8. IMPORTED FILL SHALL BE COMPACTED IN MAXIMUM 300mm LAYERS AND TO DRY OR HILF DENSITY RATIOS (STANDARD COMPACTION) OF BETWEEN 98% AND 103%. THE PLACEMENT MOISTURE VARIATION OR HILF MOISTURE VARIATION SHALL BE CONTROLLED
- TO BE BETWEEN 2% DRY AND 2% WET. 9. ALL ENGINEERED FILL PARTICLES SHALL BE ABLE TO BE INCORPORATED WITHIN A SINGLE LAYER. FURTHER, LESS THAN 30% OF PARTICLES SHALL BE RETAINED ON THE 37.5 mm SIEVE. ENGINEERED FILL SHALL BE ABLE TO BE TESTED IN ACCORDANCE WITH THE STANDARD COMPACTION METHOD (AS1289.5.4.1) OR HILF TEST METHOD (AS1289.5.7.1). THESE METHODS REQUIRE LESS THAN 20% RETAINED ON THE 37.5 mm SIEVE. WHERE BETWEEN 20% AND 30% OF PARTICLES ARE RETAINED ON THE 37.5 mm SIEVE THE ABOVE TEST METHODS SHALL STILL BE ADOPTED AND TEST REPORTS ANNOTATED APPROPRIATELY. THESE REQUIREMENTS SHOULD BE MET BY THE MATERIAL AFTER
- PLACEMENT AND COMPACTION 10. PRIOR TO ANY EARTHWORKS, EROSION CONTROL AS OUTLINED IN THE EROSION AND SEDIMENTATION CONTROL PLAN SHALL BE COMPLETED.
- 11. EXISTING ROCK, IF ANY, SHALL BE REMOVED BY HEAVY ROCK BREAKING OR RIPPING. 12. MATCH EXISTING LEVELS AT BATTER INTERFACE.
- 13. CONTRACTOR TO MATCH EXISTING LEVELS AT THE INTERFACE OF EARTHWORKS AND EXISTING SURFACE AT BATTER LOCATIONS OR WHERE NO RETAINING WALLS ARE PRESENT. ANY DISCREPANCY BETWEEN DESIGN AND EXISTING LEVELS TO BE REFERRED TO THE ENGINEER FOR DIRECTION OR ADJUSTMENTS TO DESIGN LEVELS.
- 14. DURING EARTHWORKS THE CONTRACTOR IS TO ENSURE ALL AREAS ARE FREE DRAINING & WILL NOT RETAIN WATER DURING RAINFALL. PROVIDE TEMPORARY MEASURES AS REQUIRED TO ENSURE FREE FLOWING RUNOFF THROUGH MANAGED DRAINAGE PATHS DIVERSION DRAINS OR OTHER SUITABLE DISPOSAL METHOD AS AGREED DURING THE WORKS. REFER ANY CONCERNS TO THE ENGINEER. REFER TO EROSION AND SEDIMENT CONTROL DRAWINGS AND NOTES.

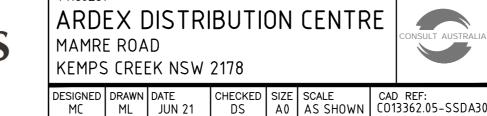
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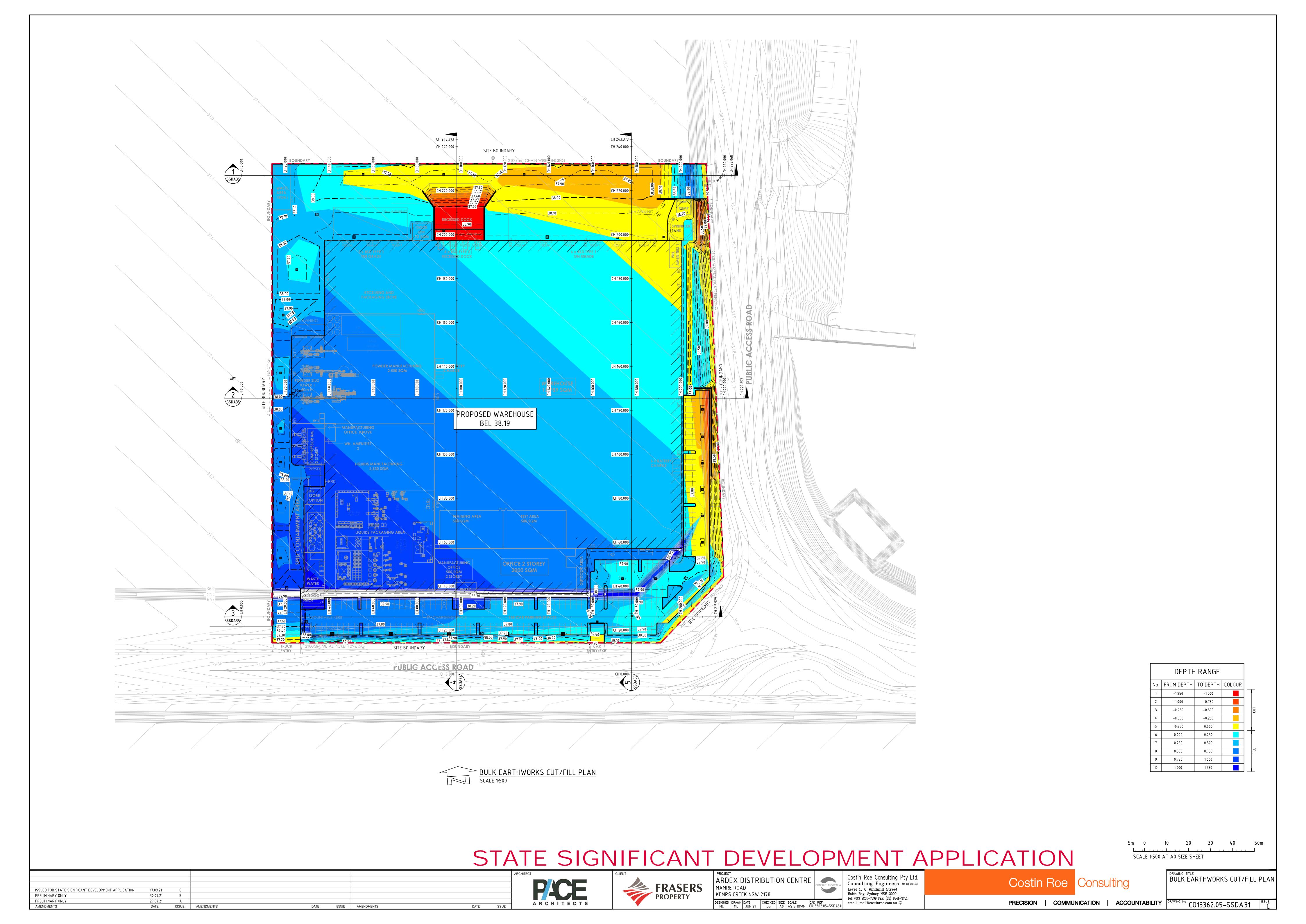
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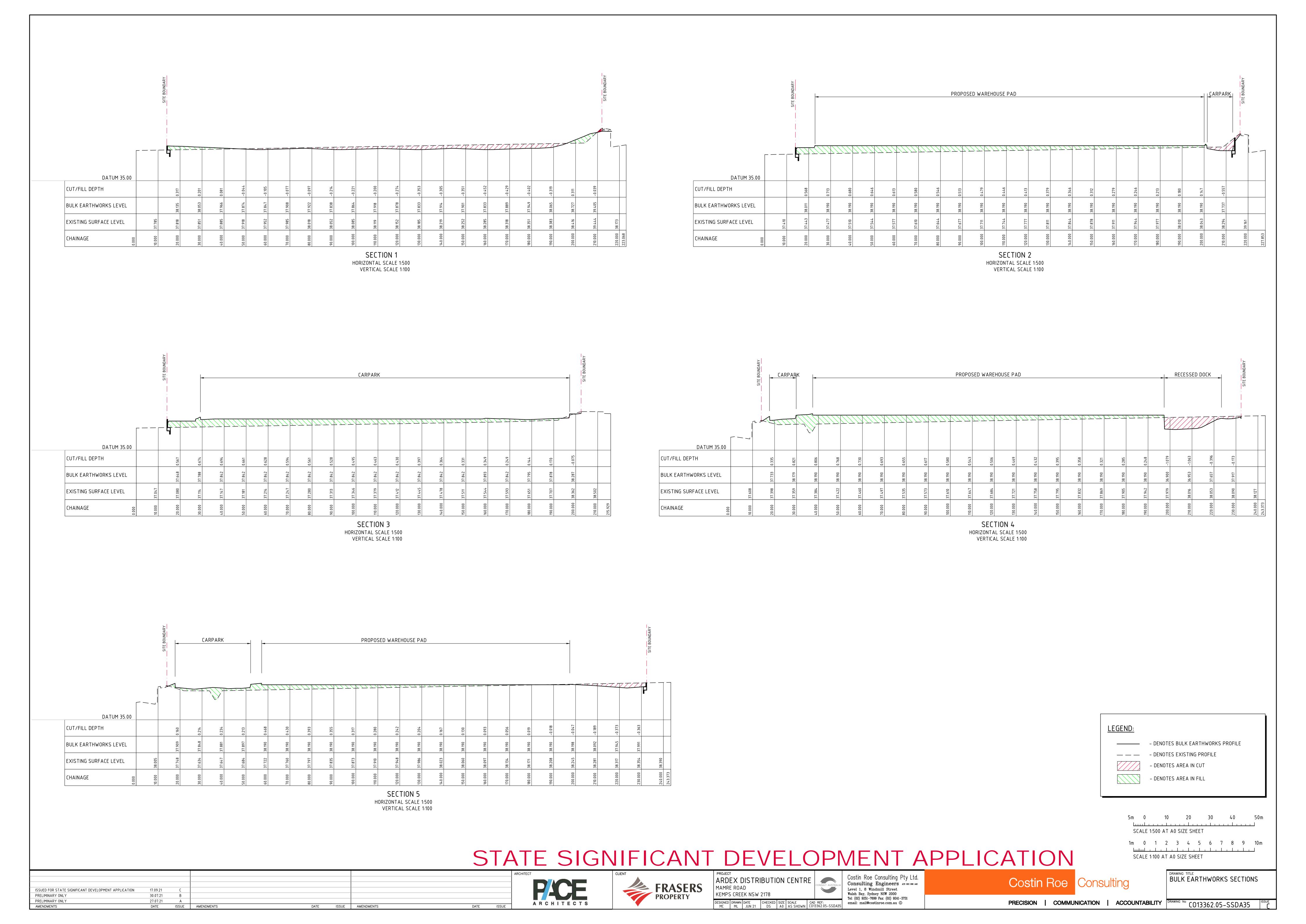
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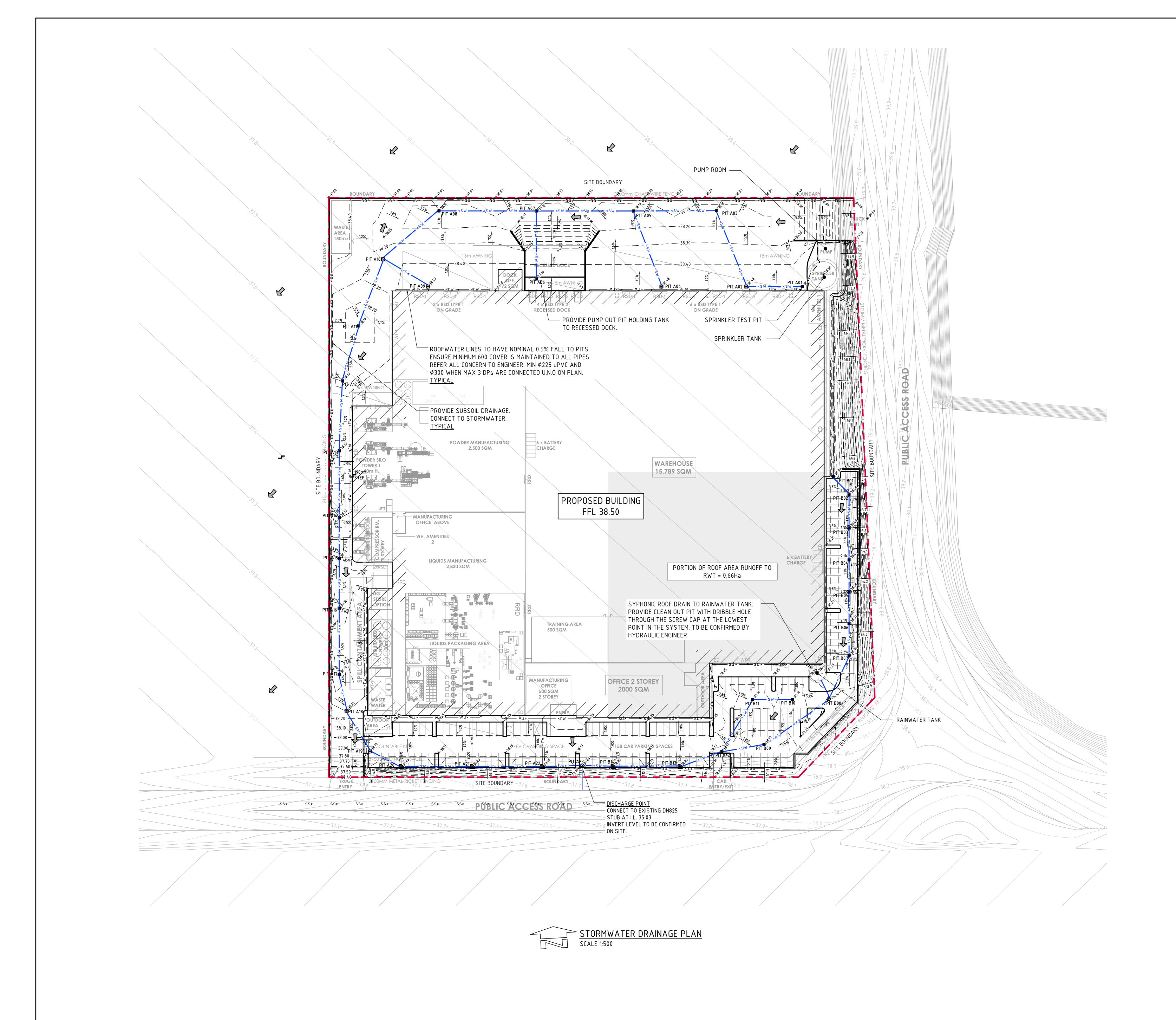


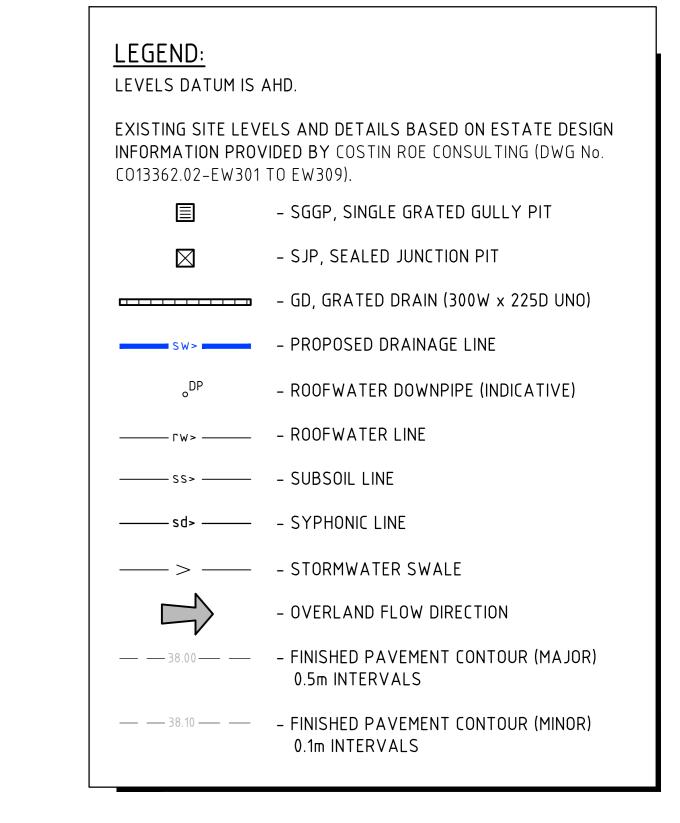


BULK EARTHWORKS PLAN









#### STORMWATER DRAINAGE NOTES:

- 1. ALL STORMWATER WORKS TO BE COMPLETED IN ACCORDANCE WITH AUSTRALIAN STANDARD
- AS3500.3:2018 PLUMBING AND DRAINAGE, PART 3: STORMWATER DRAINAGE.
- 2. THE MINOR (PIPED) SYSTEM HAS BEEN DESIGNED FOR THE 1 IN 20 YEAR ARI STORM EVENT AND THE MAJOR (OVERLAND) SYSTEM HAS BEEN DESIGNED FOR THE 1 IN 100 YEAR ARI STORM EVENT.
- 3. ALL FINISHED PAVEMENT LEVELS SHALL BE AS INDICATED ON FINISHED LEVELS PLANS CO13362.05-C50.
- 4. PIT SIZES SHALL BE AS INDICATED IN THE SCHEDULE WHILE PIPE SIZES AND DETAILS ARE PROVIDED
- 5. EXISTING STORMWATER PIT LOCATIONS AND INVERT LEVELS TO BE CONFIRMED BY SURVEY PRIOR TO
- 6. ALL STORMWATER PIPES  $\phi$ 375 OR GREATER SHALL BE CLASS 2 (WITH HS2 SUPPORT) REINFORCED CONCRETE WITH RUBBER RING JOINTS UNLESS NOTED OTHERWISE.
- 7. ALL PIPES UP TO AND INCLUDING  $\phi 300$  TO BE uPVC GRADE SN8 UNO.
- 8. PIPE CLASS NOMINATED ARE FOR IN-SERVICE LOADING CONDITIONS ONLY. CONTRACTOR IS TO MAKE ANY NECESSARY ADJUSTMENTS REQUIRED FOR CONSTRUCTION CONDITIONS.
- 9. ALL CONCRETE PITS GREATER THAN 1000mm DEEP SHALL BE REINFORCED USING N12-200 EACH WAY CENTERED IN WALL AND BASE. LAP MINIMUM 300mm WHERE REQUIRED. ALL CONCRETE FOR PITS SHALL
- BE F'c=25 MPa. PRECAST PITS MAY BE USED WITH THE APPROVAL OF THE ENGINEER.
- 10. IN ADDITION TO ITEM 6 ABOVE, ALL CONCRETE PITS GREATER THAN 3000mm DEEP SHALL HAVE WALLS AND BASE THICKNESS INCREASED TO 200mm.
- 11. PIPES SHALL BE LAID AS PER PIPE LAYING DETAILS. PARTICULAR CARE SHALL BE TAKEN TO ENSURE THAT THE PIPE IS FULLY AND EVENLY SUPPORTED. RAM AND PACK FILLING AROUND AND UNDER BACK OF PIPES AND PIPE FAUCETS, WITH NARROW EDGED RAMMERS OR OTHER SUITABLE TAMPING DETAILS.
- 12. CONCRETE PIPES UNDER, OR WITHIN THE ZONE OF INFLUENCE OF PAVED AREAS SHALL BE LAID USING HS2 TYPE SUPPORT, AS A MINIMUM, IN ACCORDANCE WITH AS 3725. AGGREGATE BACKFILL SHALL NOT
- BE USED FOR PIPE BEDDING AND OR HAUNCH/SIDE SUPPORT. 13. WHERE PIPE LINES ENTER PITS, PROVIDE 2m LENGTH OF STOCKING WRAPPED SLOTTED Ø100 uPVC TO
- EACH SIDE OF PIPE. 14. ALL SUBSOIL DRAINAGE LINES SHALL BE  $\phi$ 100 SLOTTED uPVC WITH APPROVED FILTER WRAP LAID IN 300mm WIDE GRANULAR FILTER UNLESS NOTED OTHERWISE. LAY SUBSOIL LINES TO MATCH FALLS OF LAND AND/OR 1 IN 200 MINIMUM. PROVIDE CAPPED CLEANING EYE (RODDING POINT) AT UPSTREAM END OF LINE AND AT 30m MAX. CTS. PROVIDE SUBSOIL LINES TO ALL PAVEMENT/ LANDSCAPED
- INTERFACES, TO REAR OF RETAINING WALLS (AS NOMINATED BY STRUCTURAL ENGINEER) AND AS SHOWN ON PLAN.
- 15. ALL PIPE GRADES 1 IN 200 MINIMUM UNO.
- 16. PROVIDE STEP IRONS IN PITS DEEPER THAN 1000mm. 17. MIN. 600 COVER TO PIPE OBVERT BENEATH ROADS & MIN. 400 COVER BENEATH LANDSCAPED AND
- PEDESTRIAN AREAS. 18. PIT COVERS IN TRAFFICABLE PAVEMENT SHALL BE CLASS D 'HEAVY DUTY', THOSE LOCATED IN
- NON-TRAFFICABLE AREAS SHALL BE CLASS B 'MEDIUM DUTY' U.N.O.
- 19. PROVIDE CLEANING EYES (RODDING POINTS) TO PIPES AT ALL CORNERS AND T-JUNCTIONS WHERE NO PITS ARE PRESENT.
- 20. DOWN PIPES (DP) TO BE AS PER HYDRAULIC ENGINEERS DETAILS WITH CONNECTOR TO MATCH DP SIZE U.N.O. ON PLAN. PROVIDE CLEANING EYE AT GROUND LEVEL.
- PIPE LENGTHS NOMINATED ON PLAN OR LONGSECTIONS ARE MEASURED FROM CENTER OF PITS TO THE NEAREST 0.5m AND DO NOT REPRESENT ACTUAL LENGTH. THE CONTRACTOR IS TO ALLOW FOR THIS.
- WHERE CONNECTION TO EXISTING INGROUND DRAINAGE SYSTEMS, OPEN SWALES, CHANNELS OR ANY OTHER EXISTING SYSTEM, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION AND INVERT ON SITE AT THE BEGINNING OF THE CONSTRUCTION PERIOD. REFER ANY VARIANCE FROM DOCUMENTATION OR SURVEYS TO THE ENGINEER FOR CLARIFICATION.

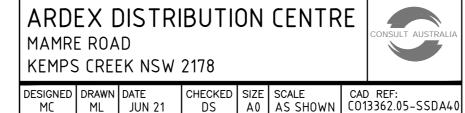
STATE SIGNIFICANT DEVELOPMENT APPLICATION

SCALE 1:500 AT A0 SIZE SHEET

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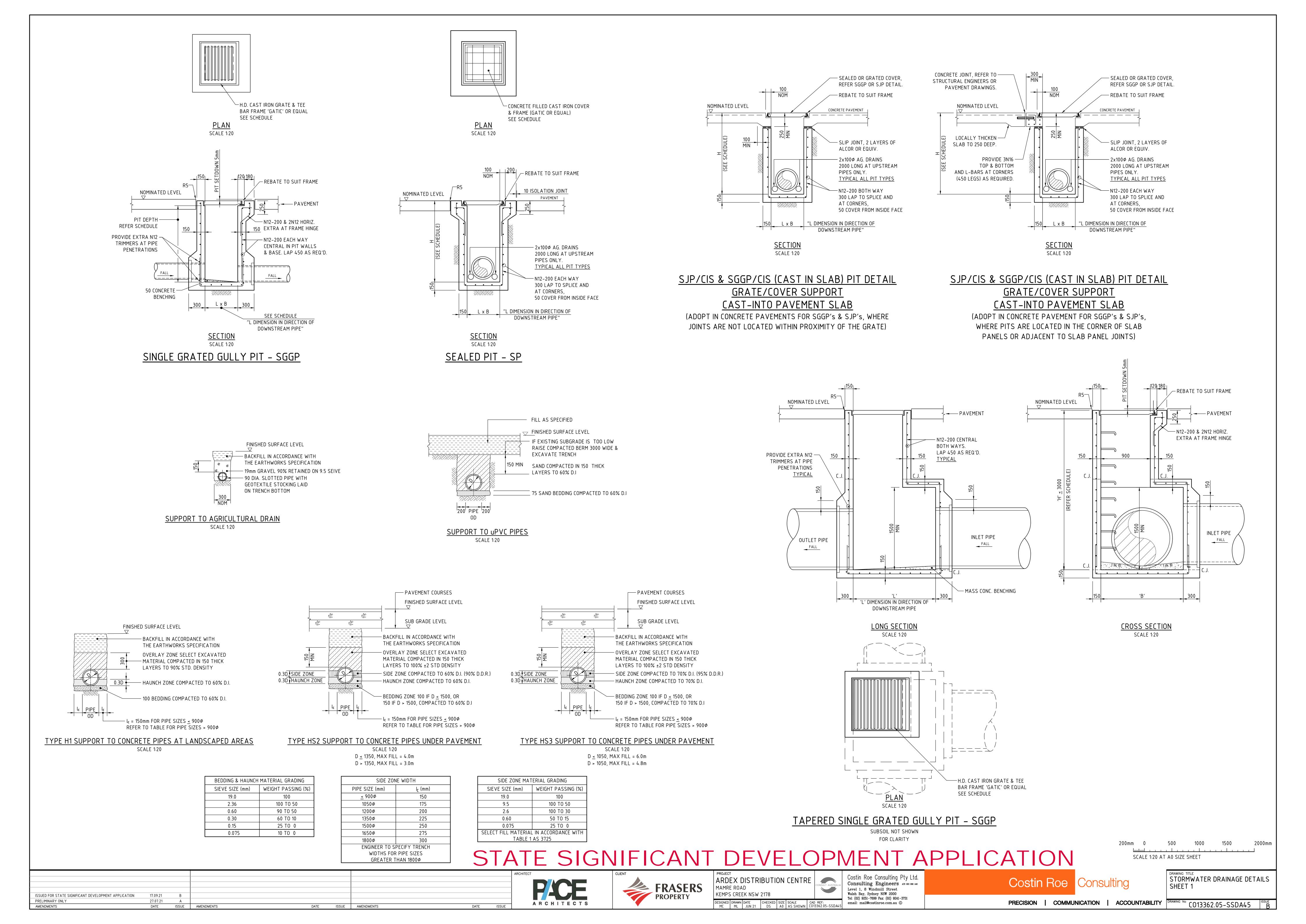
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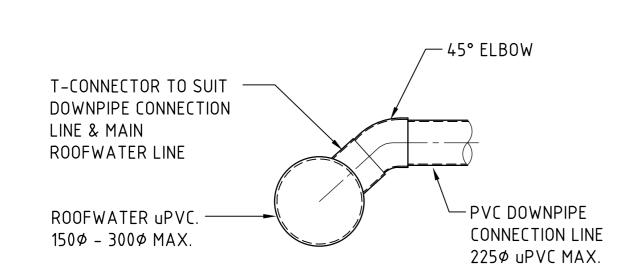
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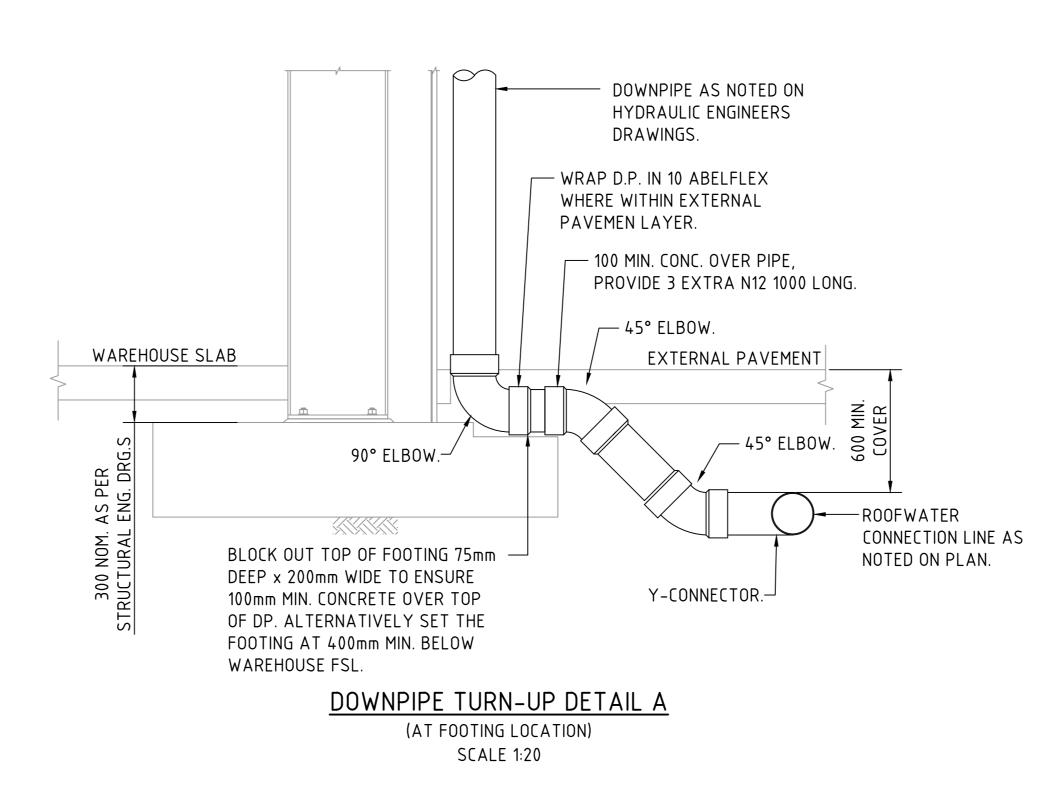
STORMWATER DRAINAGE PLAN

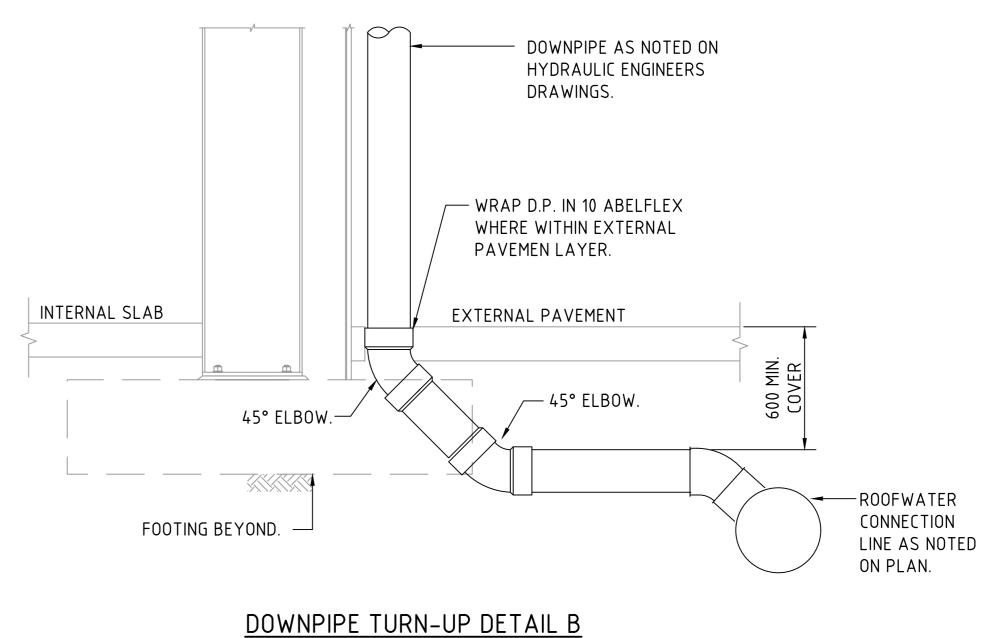




#### DOWN PIPE CONNECTION TO uPVC PIPE

- 1. PROPRIETARY T-PIECE CONNECTORS SHALL BE USED TO WHERE DIRECT CONNECTIONS ARE REQUIRED TO uPVC PIPES.
- 2. ALL JOINTS TO BE SEALED WITH SOLVENT WELDED JOINTS. 3. THE PVC PIPE SHALL NOT PROTUDE BEYOND THE INNER SURFACE OF THE STORMWATER PIPE.





(CLEAR OF FOOTING) SCALE 1:20

STATE SIGNIFICANT DEVELOPMENT APPLICATION

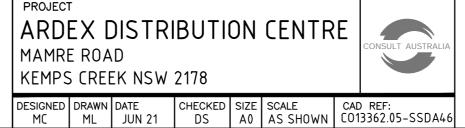
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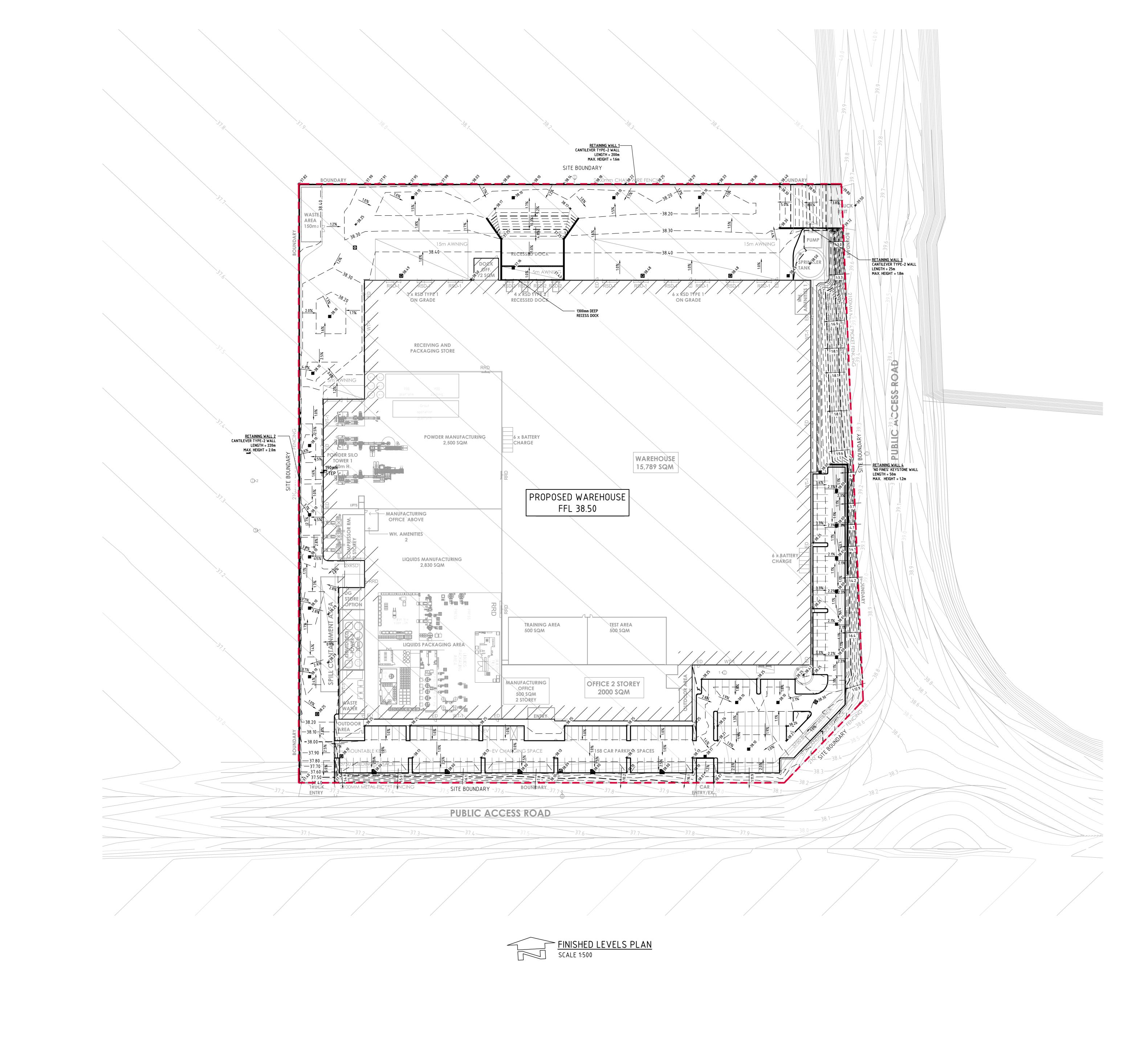


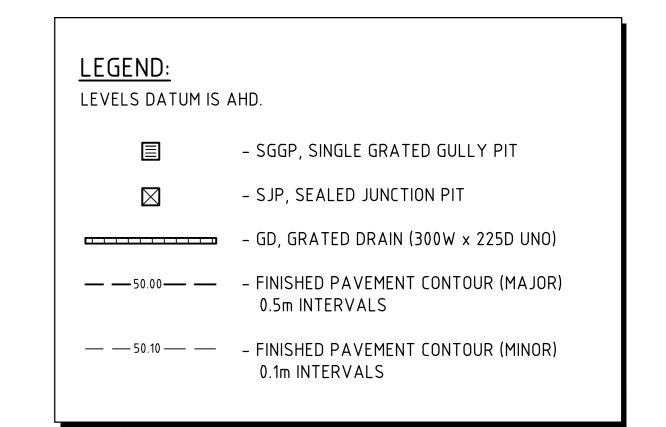


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STORMWATER DRAINAGE DETAILS
SHEET 2





#### FINISHED LEVELS PLAN NOTES:

- LEVELS DATUM IS AUSTRALIAN HEIGHT DATUM (A.H.D.).
  - GRADING REQUIREMENTS TO BE COMPLETED IN ACCORDANCE WITH AUSTRALIAN STANDARD AS2890.1, AS2890.2 AND AS2890.6.
- ALL CONTOUR LINES & SPOT LEVELS INDICATE FINISHED PAVEMENT LEVELS U.N.O. ON PLAN.
- 4. CONTOUR INTERVALS
- THE MINOR CONTOUR INTERVAL IS 0.1m.
- THE MAJOR CONTOUR INTERVAL IS 0.5m.
- HARDSTAND GRADING MINIMUM PAVEMENT GRADE IS TO BE 1:100 (1%).
- GRADING OF ON-GRADE DOCKS TO BE 1:100 (1%) FALL AWAY FROM THE DOCK FACE FOR A LENGTH OF 15m U.N.O.
- GRADING OF TRUCK CIRCULATION ZONES TO BE MINIMUM AS NOTED ABOVE, 3-4%
- NOMINAL AND MAX. 5%. 6. CAR PARKING AREA GRADES
  - MINIMUM PAVEMENT GRADE IS TO BE 1:100 (1%), DESIRABLE MINIMUM GRADE 1:50 (2%). • MAXIMUM PAVEMENT GRADE IS TO BE 1:20 (5%) N CARPARKING AREAS AND 1:25 (4%)
  - ELSEWHERE. DISABLED ACCESS PARKING ZONES AND SHARED SPACE TO BE MAXIMUM OF 1:33 (3%)
  - IN ASPHALT PAVEMENT AND MAXIMUM OF 1:40 (2.5%) IN CONCRETE PAVEMENT.
  - CARPARK RAMP GRADES TO BE MAX 1:5 WITH 2.5m SMOOTH TRANSITION AT TOP
- AND BOTTOM U.N.O. 7. TRUCK RAMP GRADES
  - MAXIMUM B-DOUBLE OR 19.0m AV RAMP GRADES ARE TO BE 1:8.3 (12%) U.N.O. ON
  - PROVIDE MINIMUM 4.0m LONG TRANSITION WHERE CHANGES OF GRADE EXCEED 1:20 (5%) AT A CREST U.N.O.
  - PROVIDE MINIMUM 3.0m LONG TRANSITION WHERE CHANGE OF GRADE EXCEED 1:20 (5%) AT A SAG U.N.O.
  - TRANSITIONS ARE TO PROVIDE A SMOOTH CONTINOUS CIRCULAR AND TANGENTIAL
  - CHANGE IN GRADE TO ENSURE NO SHARP OR ACUTE CHANGES IN GRADE ARE PRESENT.
- 8. WHERE FIRE BRIGADE ACCESS IS REQUIRED, MAXIMUM RAMP GRADIENTS ARE TO BE 1:6 (16.6%), DESIRABLE RAMP GRADIENTS ARE TO BE 1:8 (12.5%) WITH 7m TRANSITION TOP AND
- BOTTOM U.N.O. ON PLAN. PERMANENT BATTER SLOPES ARE TO HAVE A MAXIMUM GRADE OF 1V:3H U.N.O. BASED ON GEOTECHNICAL ASSESSMENT. PROVIDE MINIMUM 0.5m BERM BETWEEN THE BACK OF KERB OR
- PAVEMENT EDGES AND THE TOP OR TOE OF A BATTER. 10. ALL BATTER SLOPE WITH GRADES AT OR EXCEEDING 1V:6H ARE TO BE TURFED IMMEDIATELY OR APPROPRIATE EROSION CONTROL IS TO BE PROVIDED TO THE
- SATISFACTION OF THE ENGINEER. ALL FOOTPATHS ARE TO FALL AWAY FROM THE BUILDING AT 2.5% NOMINAL. GRADE. ALL PAVEMENTS ARE TO BE SET AT 30mm BELOW THE FINISHED FLOOR LEVEL OF THE
- WAREHOUSE AND OFFICE AREAS UNO ON PLAN. PROVIDE LOCAL FEATHERING AT DOORWAYS OR ROLLER SHUTTERS TO PROVIDE FLUSH FINISH AS REQUIRED.
- 13. WHERE NEW AND EXISTING INTERFACING IS REQUIRED, MATCH EXISTING LEVELS AND PROVIDE SMOOTH INTERFACE BETWEEN NEW AND EXISTING GRADIENTS. REFER ANY CONCERNS TO THE ENGINEER.

STATE SIGNIFICANT DEVELOPMENT APPLICATION

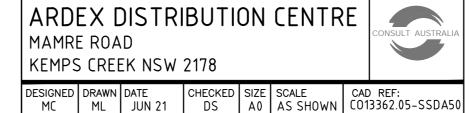
FINISHED LEVELS PLAN

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