

# ESR HORSLEY LOGISTIC PARK

## 327-335 BURLEY ROAD, HORSLEY PARK

### LOT 204 CIVIL WORKS DRAWINGS FOR SSDA MOD

#### DRAWING LIST

DRAWING NO.	DRAWING TITLE
C012990.05-SSDAMOD10	DRAWING LIST & LOCALITY PLAN
C012990.05-SSDAMOD20	EROSION SEDIMENT CONTROL PLAN
C012990.05-SSDAMOD25	EROSION SEDIMENT CONTROL PLAN DETAILS
C012990.05-SSDAMOD30	LOT 204 BULK EARTHWORKS PLAN
C012990.05-SSDAMOD43	LOT 204 STORMWATER DRAINAGE PLAN
C012990.05-SSDAMOD45	STORMWATER DRAINAGE DETAILS - SHEET 1
C012990.05-SSDAMOD46	STORMWATER DRAINAGE DETAILS - SHEET 2
C012990.05-SSDAMOD47	STORMWATER DRAINAGE DETAILS - SHEET 3
C012990.05-SSDAMOD53	LOT 204 FINISHED LEVELS PLAN
C012990.05-SSDAMOD55	RETAINING WALL DETAILS AND TYPICAL SECTIONS

#### GENERAL NOTES:

1. 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 WORK.
2. 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.
3. ALL DIMENSIONS SHOWN SHALL BE VERIFIED BY THE BUILDER ON SITE. ENGINEER'S DRAWINGS SHALL NOT BE SCALED FOR DIMENSIONS. ENGINEER'S DRAWINGS ISSUED IN ANY ELECTRONIC FORMAT MUST NOT BE USED FOR DIMENSIONAL SETOUT. REFER TO THE ARCHITECT'S DRAWINGS FOR ALL DIMENSIONAL SETOUT INFORMATION.
4. 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.
5. UNLESS NOTED OTHERWISE ALL LEVELS ARE IN METRES AND ALL DIMENSIONS ARE IN MILLIMETRES.
6. 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:

1. THE ISSUED DRAWINGS IN HARD COPY OR PDF FORMAT TAKE PRECEDENCE OVER ANY ELECTRONICALLY ISSUED INFORMATION, LAYOUTS OR DESIGN MODELS.
2. 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.
3. 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.
4. 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.



 LOCALITY PLAN  
NTS

**FOR APPROVAL**

Costin Roe Consulting

PRECISION | COMMUNICATION | ACCOUNTABILITY

DRAWING TITLE  
DRAWING LIST & LOCALITY PLAN

DRAWING No. C012990.05-SSDAMOD10 ISSUE D

ISSUED FOR APPROVAL	DATE	ISSUE	AMENDMENTS	DATE	ISSUE	AMENDMENTS	DATE	ISSUE
ISSUED FOR APPROVAL	16.11.21	D						
ISSUED FOR INFORMATION ONLY	17.09.21	C						
ISSUED FOR PRELIMINARY ONLY	03.09.21	B						
ISSUED FOR PRELIMINARY ONLY	20.08.21	A						

ARCHITECT	CLIENT	PROJECT
	ESR	ESR HORSLEY LOGISTICS PARK LOT 204 327-335 BURLEY ROAD, HORSLEY PARK, 2175

DESIGNED	DRAWN	DATE	CHECKED	SIZE	SCALE	CAD REF.
TF	JB	MAR 19	XC	A0	AS SHOWN	C012990.05-SSDAMOD10

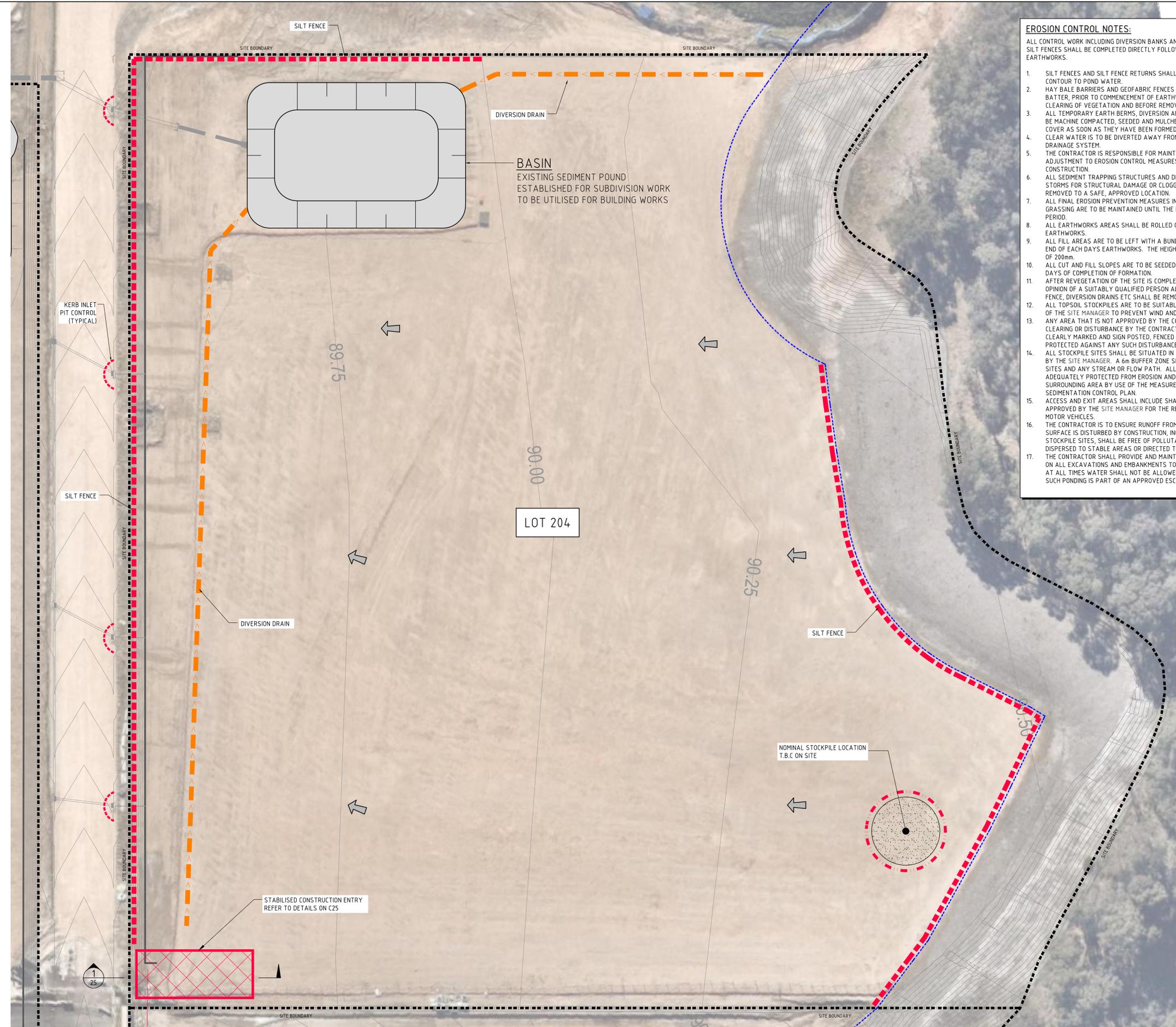
PROJECT	CLIENT
ESR HORSLEY LOGISTICS PARK LOT 204 327-335 BURLEY ROAD, HORSLEY PARK, 2175	ESR

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- EROSION CONTROL NOTES:**
1. ALL CONTROL WORK INCLUDING DIVERSION BANKS AND CATCH DRAINS, V-DRAINS AND SILT FENCES SHALL BE COMPLETED DIRECTLY FOLLOWING THE COMPLETION OF THE EARTHWORKS.
  1. SILT FENCES AND SILT FENCE RETURNS SHALL BE ERECTED CONVEX TO THE CONTOUR TO POND WATER.
  2. HAY BALE BARRIERS AND GEOTEXTILE 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.
  3. 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.
  5. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING AND PROVIDING ON GOING ADJUSTMENT TO EROSION CONTROL MEASURES AS REQUIRED DURING CONSTRUCTION.
  6. 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.
  7. 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.
  11. 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.
  12. ALL TOPSOIL STOCKPILES ARE TO BE SUITABLY COVERED TO THE SATISFACTION OF THE SITE MANAGER TO PREVENT WIND AND WATER EROSION.
  13. 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.
  15. ACCESS AND EXIT AREAS SHALL INCLUDE SHAKE-DOWN OR OTHER METHODS APPROVED BY THE SITE MANAGER FOR THE REMOVAL OF SOIL MATERIALS FROM MOTOR VEHICLES.
  16. 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.
  17. 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.

**SEDIMENTATION BASIN NOTE:**

FOR SEDIMENT & EROSION CONTROL DETAILS REFER TO DRAWING C012990.05-SSDAMOD25.

SEDIMENTATION BASIN SIZING BASED ON RECOMMENDATIONS OF 'SOILS AND CONSTRUCTION, MANAGING URBAN STORMWATER-THE BLUE BOOK'. CAPACITY BASED UPON 5 DAY RAINFALL DEPTH AT 85th PERCENTILE INTENSITY FOR FAIRFIELD (315mm).

SEDIMENTATION BASIN:  
 CATCHMENT AREA = 4.03ha  
 REQUIRED BASIN VOLUME = 1,270m<sup>3</sup>  
 BASE DIMENSION (LxB) = 20.0m x 36.0m  
 TOP DIMENSION (LxB) = 32.0m x 4.8.0m  
 MAX SIDE SLOPE = 1V:3H  
 DEPTH = 2.0m  
 PROVIDED BASIN VOLUME = 2,205m<sup>3</sup>

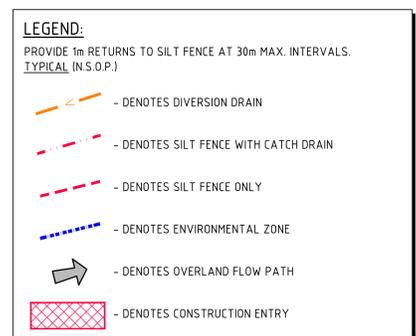
SEDIMENTATION BASINS TO COLLECT RUN-OFF IN EXTREME RAINFALL EVENTS. COLLECTED RUN-OFF TO BE ASSESSED BY A QUALIFIED LABORATORY FOR DOUSING RATES OF ALUM OR GYPSUM TO ENSURE COAGULATION OF SEDIMENTS PRIOR TO WATER BEING DISCHARGED TO COUNCIL STORMWATER SYSTEM.

EACH BASIN IS TO HAVE A MARKER PLACED AS PER THE DETAIL TO INDICATE WHEN SEDIMENT IS TO BE REMOVED. REMOVED SEDIMENT IS TO BE CLASSED AND DEWATERED PRIOR TO REMOVAL FROM SITE.

ALLOWANCE TO BE MADE DURING BENCHING OF SITE TO ENSURE RUN-OFF IS DIRECTED TO SEDIMENTATION BASINS.

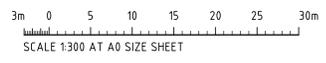
- NOTES:**
1. ASSUME TYPE D SOIL (CLAY/SILTY CLAY)
  2. ASSUME GROUP D SOIL (HIGH PLASTICITY AND SHRINK/SWELL PROPERTIES)
  3. C<sub>v</sub> = 0.5 & LENGTH TO WIDTH RATIO OF 2 (MIN)
- SOIL TYPE TO BE ASSESSED BY A GEOTECHNICAL ENGINEER

- POND DEWATERING NOTES:**
1. DRAIN PONDS OF WATER & DISCHARGE CLEAN WATER TO STORMWATER DRAINAGE SYSTEM (AS PER NOTES 2 & 3) - REFER TO STORMWATER PLAN FOR LOCATIONS.
  2. DEWATERING TO BE PERFORMED IN SUCH A MANNER AS TO REMOVE CLEAN WATER WITHOUT REMOVING OR DISTURBING SILT, SEDIMENT OR OTHER ORGANIC MATERIAL FROM THE BASE OF THE PONDS.
  3. DISCHARGE OF WATER FROM PONDS TO HAVE A PH RANGE OF 6.5-8.5 AND TSS < 50mg/L. PONDS TO BE DOSED WITH GYPSUM (APPROX. 30mg PER CUBIC METRE) TO ACCELERATE SETTLEMENT OF SUSPENDED SOLIDS.
  4. REMOVE ALL SILT, ORGANIC AND WATER LOGGED MATERIAL FROM BASE OF POND (NOM. DEPTH 0.5-1.0m) AND DISPOSE OF IN ACCORDANCE WITH THE ACCEPTABLE PRACTICE.
  5. EXPOSE NATURAL SITE SOILS AND COMPACT SUBGRADE IN ACCORDANCE WITH THE SITE PREPARATION NOTES (REFER DRG. SSDA10) REMOVING ANY SOFT ZONES AS REQ'D.
  6. PLACE AND COMPACT FILL AS PER SITE PREPARATION NOTES ON DRAWING SSDA10.
  7. INFORMATION PROVIDED ON THIS DRAWING SHALL BE USED TO GUIDE THE DEVELOPMENT OF THE CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN THAT SHALL BE IMPLEMENTED DURING CONSTRUCTION.



**EROSION SEDIMENT CONTROL PLAN**  
SCALE 1:300

**FOR APPROVAL**



ISSUED FOR APPROVAL	16.11.21	D
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AMENDMENTS	DATE	ISSUE

ARCHITECT	CLIENT	PROJECT
	ESR	ESR HORSLEY LOGISTICS PARK LOT 204
		327-335 BURLEY ROAD, HORSLEY PARK, 2175
		DESIGNED: TF DRAWN: JB DATE: MAR 19 CHECKED: XC SIZE: A0 SCALE: AS SHOWN CAD REF: C012990.05-SSDAMOD25

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		327-335 BURLEY ROAD, HORSLEY PARK, 2175
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CLIENT: **ESR**

PROJECT: **ESR HORSLEY LOGISTICS PARK LOT 204**

327-335 BURLEY ROAD, HORSLEY PARK, 2175

CONSULTANT AUSTRALIA

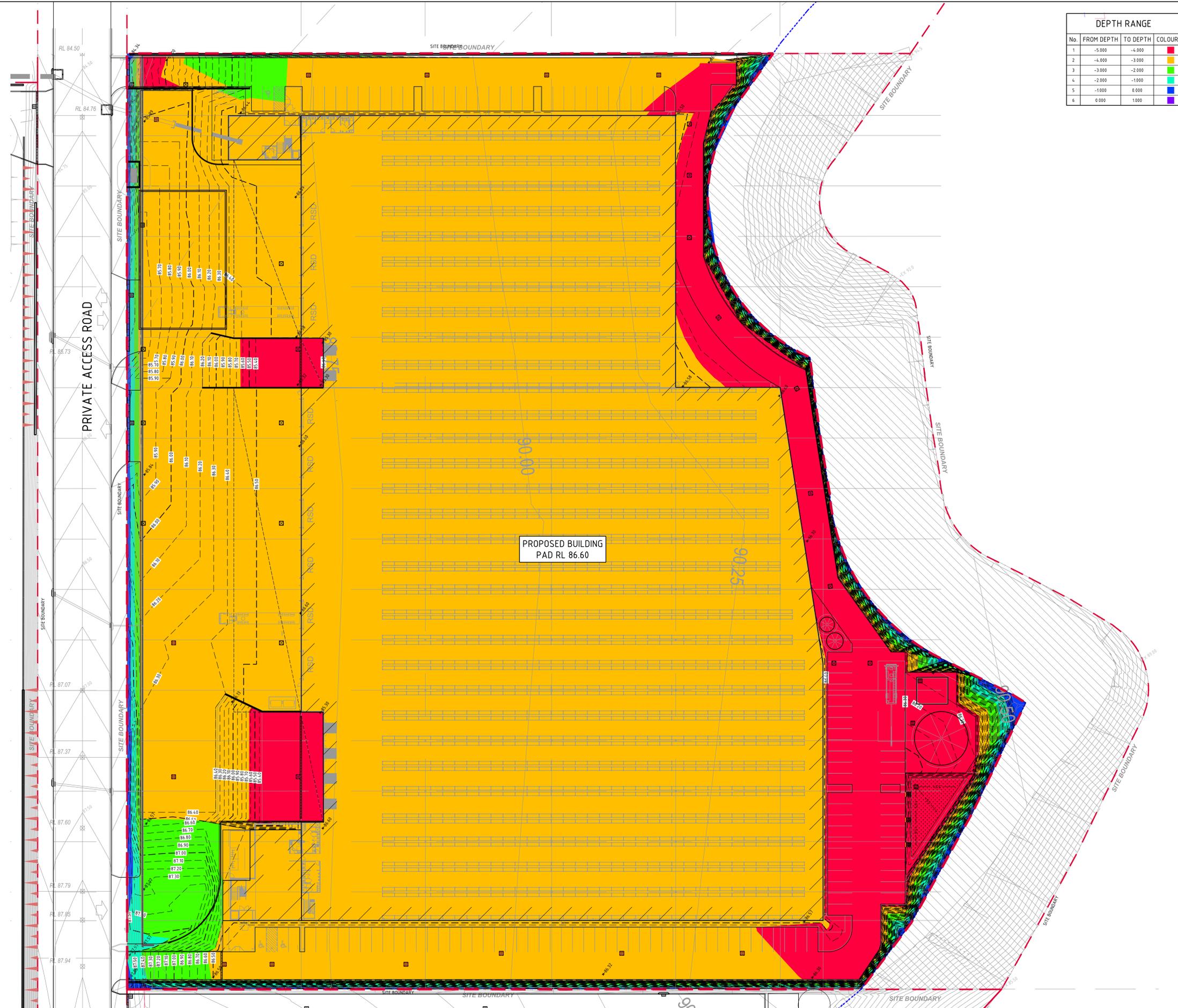
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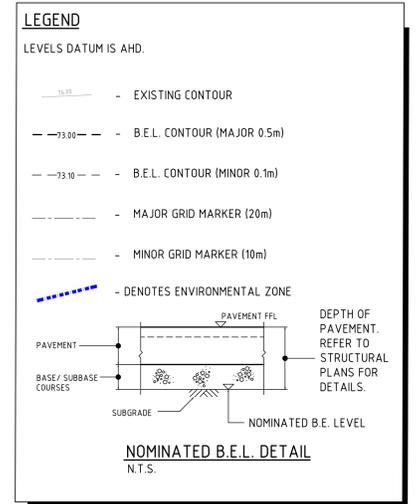
DRAWING TITLE: **EROSION SEDIMENT CONTROL PLAN**

DRAWING No: **C012990.05-SSDAMOD25**



DEPTH RANGE			
No.	FROM DEPTH	TO DEPTH	COLOUR
1	-5.000	-4.000	Red
2	-4.000	-3.000	Orange
3	-3.000	-2.000	Yellow
4	-2.000	-1.000	Green
5	-1.000	0.000	Blue
6	0.000	1.000	Purple

- SITE PREPARATION NOTES:**
- ALL EARTHWORKS SHALL BE COMPLETED GENERALLY IN ACCORDANCE WITH THE GUIDELINES SPECIFIED BY THE GEOTECHNICAL REPORT UNDER LEVEL 1 SUPERVISION.
  - EXISTING LEVELS ARE BASED ON INFORMATION PROVIDED BY CALIBRE GROUP TITLED SITE REGRADING PLAN- CSR HORSLEY PARK-STAGE 2A&2B SUBDIVISION DESIGN DATED 24.07.15
  - STRIP ANY TOP SOIL OR DELETERIOUS MATERIAL AND DISPOSE OF FROM SITE OR STORE AS DIRECTED.
  - 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. PREPARE STEEP BATTERS TO RECEIVE FILL BY CONSTRUCTING BENCHING TO FACILITATE FILL PLACEMENT AND COMPACTION.
  - 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 HLF DENSITY RATIOS (STANDARD COMPACTION) OF BETWEEN 98% AND 103%. THE PLACEMENT MOISTURE VARIATION OR HLF 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 HLF DENSITY RATIOS (STANDARD COMPACTION) OF BETWEEN 98% AND 103%. THE PLACEMENT MOISTURE VARIATION OR HLF 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 HLF 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.
  - ALL THE EARTHWORKS UNDERTAKEN AND THE SUBGRADE CONDITION IN THE CUT AREAS (IN THE STATED PERIOD) ARE DOCUMENTED IN THE REPORTS AND HAVE BEEN UNDERTAKEN IN ACCORDANCE WITH THE SPECIFICATION.
  - 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. 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.



**EARTHWORKS VOLUMES**

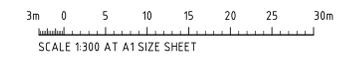
VOLUMES:

CUT	= - 115,600m <sup>3</sup>
FILL	= + 0 m <sup>3</sup>
FUTURE DETAILED EXCAVATION (1250m <sup>2</sup> /Ha over 3.38Ha)	= - 4,230m <sup>3</sup>
FUTURE OSD TANK BALANCE	= -1,160m <sup>3</sup> = -120,990m <sup>3</sup> (CUT OVER FILL)

EARTHWORKS VOLUMES ARE APPROXIMATE ONLY. THE VOLUMES ABOVE REPRESENT THE COMPARISON BETWEEN THE DESIGN BULK EARTHWORKS SURFACE AND THE EXISTING PAD ACROSS THE SITE.

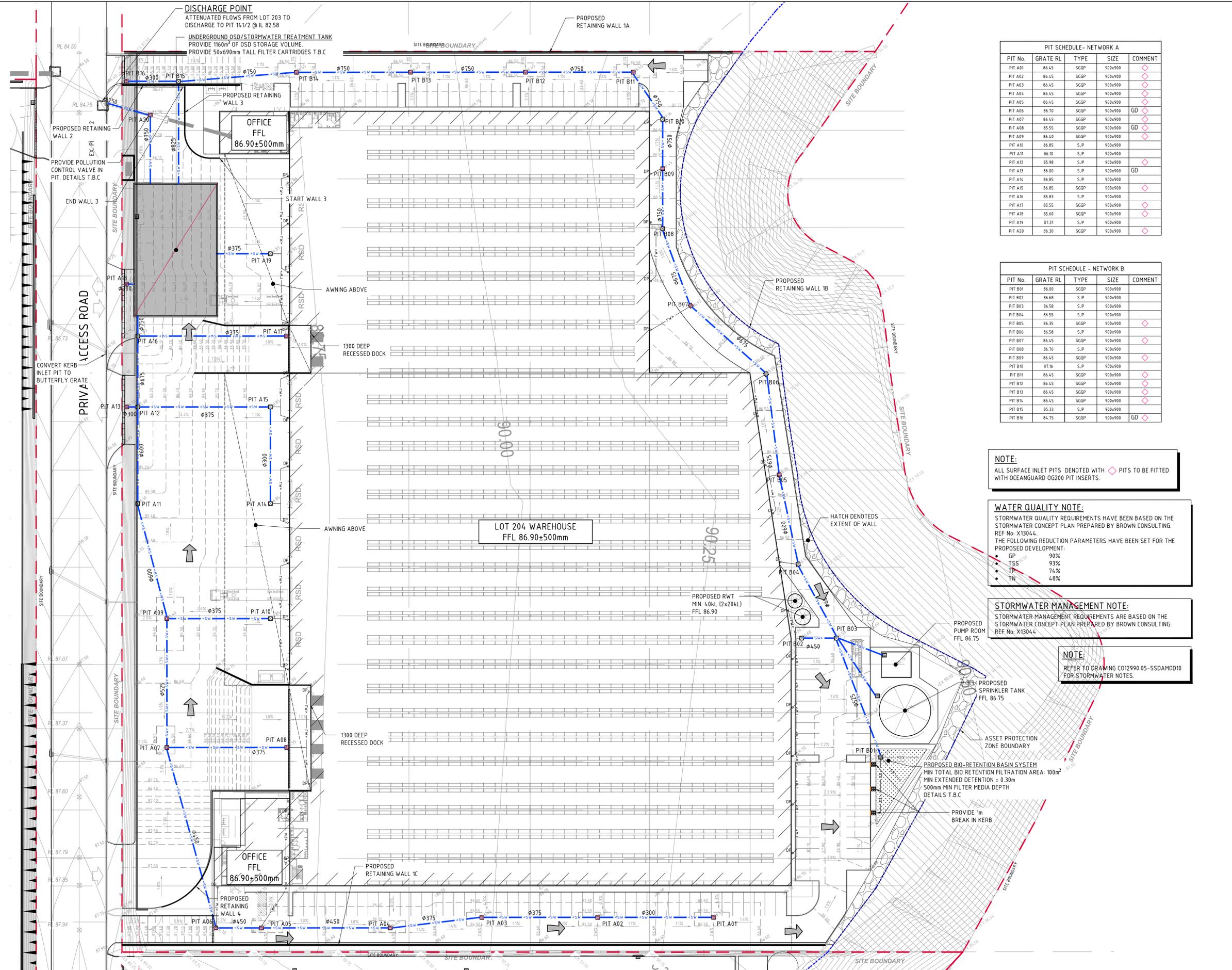
EARTHWORKS WITHIN THE PROPOSED SITE AREA ARE BASED ON THE PROPOSED FINISHED FLOOR LEVELS MINUS A PAVEMENT ALLOWANCE OF 300mm UNLESS NOTED OTHERWISE. FINAL DETAILED BULK EARTHWORKS LEVELS ARE TO BE CONFIRMED DURING FUTURE DETAILED DESIGN.

NO ALLOWANCE HAS BEEN MADE IN THE ABOVE VOLUMES FOR EROSION & SEDIMENT CONTROL BACKFILLING, BULKING OR COMPACTION OF FILLED SOILS, THE REMOVAL OF UNCONTROLLED OR CONTAMINATED MATERIAL, TEMPORARY DRAINAGE SWALES WITHIN BUILDING PADS, OR ANY OTHER UNSPECIFIED EXCAVATION RELATED TO FUTURE WAREHOUSE CONSTRUCTION. CONTRACTOR TO MAKE ALLOWANCE FOR FUTURE WAREHOUSE DETAILED EXCAVATION.



**LOT 204 BULK EARTHWORKS PLAN**  
SCALE 1:300

**FOR APPROVAL**



PIT SCHEDULE - NETWORK A				
PIT No.	GRATE RL	TYPE	SIZE	COMMENT
PIT A01	86.45	SGGP	900x900	
PIT A02	86.45	SGGP	900x900	
PIT A03	86.45	SGGP	900x900	
PIT A04	86.45	SGGP	900x900	
PIT A05	86.45	SGGP	900x900	
PIT A06	86.70	SGGP	900x900	GD
PIT A07	86.45	SGGP	900x900	
PIT A08	85.55	SGGP	900x900	GD
PIT A09	86.40	SGGP	900x900	
PIT A10	86.85	SJP	900x900	
PIT A11	86.10	SJP	900x900	
PIT A12	85.98	SJP	900x900	
PIT A13	86.00	SJP	900x900	GD
PIT A14	86.85	SJP	900x900	
PIT A15	86.85	SGGP	900x900	
PIT A16	85.83	SJP	900x900	
PIT A17	85.55	SGGP	900x900	
PIT A18	85.60	SGGP	900x900	
PIT A19	87.31	SJP	900x900	
PIT A20	86.30	SGGP	900x900	

PIT SCHEDULE - NETWORK B				
PIT No.	GRATE RL	TYPE	SIZE	COMMENT
PIT B01	86.00	SGGP	900x900	
PIT B02	86.68	SJP	900x900	
PIT B03	86.58	SJP	900x900	
PIT B04	86.55	SJP	900x900	
PIT B05	86.35	SGGP	900x900	
PIT B06	86.58	SJP	900x900	
PIT B07	86.45	SGGP	900x900	
PIT B08	86.70	SJP	900x900	
PIT B09	86.45	SGGP	900x900	
PIT B10	87.16	SJP	900x900	
PIT B11	86.45	SJP	900x900	
PIT B12	86.45	SGGP	900x900	
PIT B13	86.45	SGGP	900x900	
PIT B14	86.45	SGGP	900x900	
PIT B15	85.33	SJP	900x900	
PIT B16	84.75	SGGP	900x900	GD

- 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 CO12990.05-SSDAMOD03.
  4. PIT SIZES SHALL BE AS INDICATED IN THE SCHEDULE WHILE PIPE SIZES AND DETAILS ARE PROVIDED ON PLAN.
  5. EXISTING STORMWATER PIT LOCATIONS AND INVERT LEVELS TO BE CONFIRMED BY SURVEY PRIOR TO COMMENCING WORKS ON SITE.
  6. ALL STORMWATER PIPES Ø375 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 Ø300 TO BE uPVC GRADE S8 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<sub>c</sub> = 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 Ø100 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' UNO.
  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 UNO. ON PLAN. PROVIDE CLEANING EYE AT GROUND LEVEL.
  21. 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.
  22. 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.

**NOTE:**  
ALL SURFACE INLET PITS DENOTED WITH ◊ PITS TO BE FITTED WITH OCEANGUARD OG200 PIT INSERTS.

**WATER QUALITY NOTE:**  
STORMWATER QUALITY REQUIREMENTS HAVE BEEN BASED ON THE STORMWATER CONCEPT PLAN PREPARED BY BROWN CONSULTING. REF No: X13044.  
THE FOLLOWING REDUCTION PARAMETERS HAVE BEEN SET FOR THE PROPOSED DEVELOPMENT:

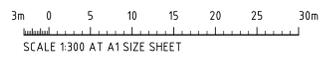
- GP 90%
- TSS 93%
- TP 74%
- TN 48%

**STORMWATER MANAGEMENT NOTE:**  
STORMWATER MANAGEMENT REQUIREMENTS ARE BASED ON THE STORMWATER CONCEPT PLAN PREPARED BY BROWN CONSULTING. REF No: X13044.

**NOTE:**  
REFER TO DRAWING CO12990.05-SSDAMOD10 FOR STORMWATER NOTES.

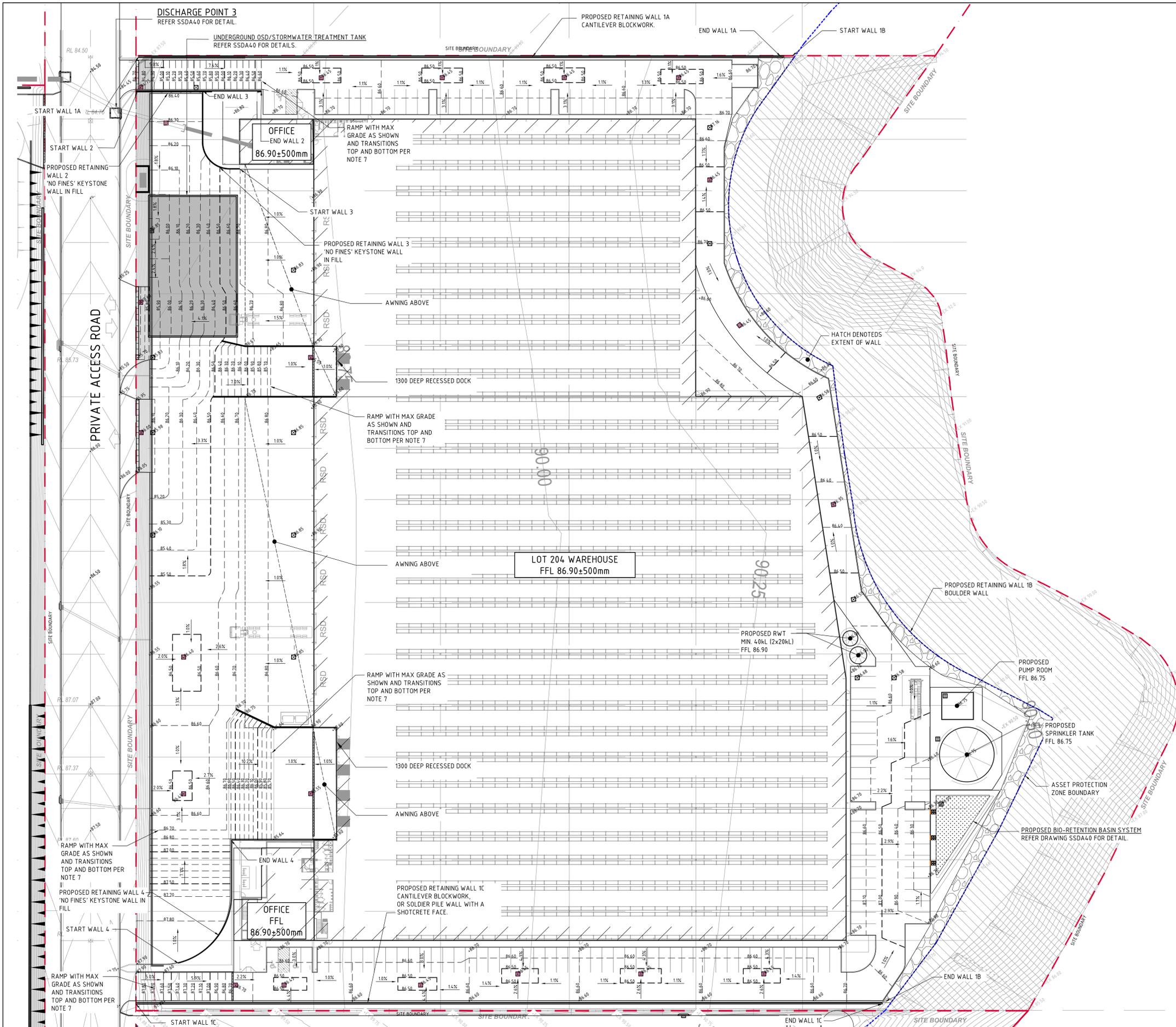
- LEGEND:**  
LEVELS DATUM IS AHD.
- EXISTING SITE LEVELS AND DETAILS BASED ON SURVEY INFORMATION PROVIDED BY CALIBRE CONSULTING DATED 10.11.17.
- ◊ - SGGP, SINGLE GRATED GULLY PIT
  - ⊠ - SJP, SEALED JUNCTION PIT
  - ⊞ - KIP, KERB INLET PIT
  - GD, GRATED DRAIN (300W x 225D UNO)
  - PROPOSED DRAINAGE LINE
  - EXISTING DRAINAGE LINE
  - DP - ROOFWATER DOWNPIPE (INDICATIVE)
  - FW - ROOFWATER LINE
  - SS - SUBSOIL LINE
  - - OVERLAND FLOW DIRECTION
  - 50.00 - FINISHED PAVEMENT CONTOUR (MAJOR) 0.5m INTERVALS
  - 50.10 - FINISHED PAVEMENT CONTOUR (MINOR) 0.1m INTERVALS
  - ASSET PROTECTION ZONE BOUNDARY

**LEVELS NOTE:**  
LEVELS SHOWN TO BE ±500mm FROM THOSE SHOWN. FINAL LEVELS SUBJECT TO FINAL GEOTECHNICAL INVESTIGATIONS, ARCHITECTURAL LAYOUT AND ACHIEVING A CUT TO FILL EARTHWORKS BALANCE OVER THE PROPERTY AND LAND AND ENVIRONMENT COURT ASSESSMENT.



**LOT 204 STORMWATER DRAINAGE PLAN**  
SCALE 1:300

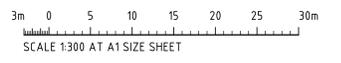
**FOR APPROVAL**



- 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.
  - 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%.
  - 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%) IN 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.
  - TRUCK RAMP GRADES
    - MAXIMUM B-DOUBLE OR 19.0m AV RAMP GRADES ARE TO BE 1:8.3 (12%) U.N.O. ON PLAN.
    - 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 CONTINUOUS CIRCULAR AND TANGENTIAL CHANGE IN GRADE TO ENSURE NO SHARP OR ACUTE CHANGES IN GRADE ARE PRESENT.
  - 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.
  - 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. PROVIDE LOCAL FEATHERING AT DOORWAYS OR ROLLER SHUTTERS TO PROVIDE FLUSH FINISH AS REQUIRED.
  - 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.

- LEGEND:**  
LEVELS DATUM IS AHD.
- SGGP, SINGLE GRATED GULLY PIT
  - SJP, SEALED JUNCTION PIT
  - KIP, KERB INLET PIT
  - 50.00 - FINISHED PAVEMENT CONTOUR (MAJOR) 0.5m INTERVALS
  - 50.10 - FINISHED PAVEMENT CONTOUR (MINOR) 0.1m INTERVALS
  - GD, GRATED DRAIN (300W x 225D U.N.O)
  - PROPOSED RETAINING WALL
  - ASSET PROTECTION ZONE BOUNDARY

**LEVELS NOTE:**  
LEVELS SHOWN TO BE ±500mm FROM THOSE SHOWN. FINAL LEVELS SUBJECT TO FINAL GEOTECHNICAL INVESTIGATIONS, ARCHITECTURAL LAYOUT AND ACHIEVING A CUT TO FILL EARTHWORKS BALANCE OVER THE PROPERTY AND LAND AND ENVIRONMENT COURT ASSESSMENT.



**LOT 204 FINISHED LEVELS PLAN**  
SCALE 1:300

**FOR APPROVAL**

ISSUED FOR APPROVAL	DATE	ISSUE	AMENDMENTS
ISSUED FOR APPROVAL	16.11.21	E	
ISSUED FOR INFORMATION ONLY	17.09.21	D	
ISSUED FOR PRELIMINARY ONLY	03.09.21	C	
ISSUED FOR PRELIMINARY ONLY	20.08.21	B	
ISSUED FOR PRELIMINARY ONLY	04.08.21	A	

ARCHITECT  
**ESR**

CLIENT  
**ESR**

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**Costin Roe Consulting**  
PRECISION | COMMUNICATION | ACCOUNTABILITY

DRAWING TITLE  
**LOT 204 FINISHED LEVELS PLAN**  
DRAWING No. **Co12990.05-SSDAM053**

