PROPOSED INDUSTRIAL BUILDING

295 Cormorant Road, Kooragang

CONCEPT STORMWATER / CIVIL WORKS

GENERAL NOTES

G1. THE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL DRAWINGS AND SPECIFICATIONS AND OTHER WRITTEN INSTRUCTIONS THAT MAY BE ISSUED.
G2. DIMENSIONS SHALL NOT BE OBTAINED BY SCALING FROM THE DRAWINGS. REFER ARCHITECTS DRAWINGS FOR ALL DIMENSIONS.
G3. REFER ANY DISCREPANCY TO THE ENGINEER/ARCHITECT.
G4. MATERIALS AND WORKMANSHIP SHALL COMPLY WITH THE APPROPRIATE SAA SPECIFICATIONS OR CODE AND WITH THE REQUIREMENTS OF THE RELEVANT LOCAL AUTHORITY.
G5. THE ALIGNMENT AND LEVEL OF ALL SERVICES SHOWN ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL CONFIRM THE POSITION AND LEVEL OF ALL SERVICES PRIOR TO COMMENCEMENT OF CONSTRUCTION. ANY DAMAGE TO SERVICES SHALL BE RECTIFIED AT THE CONTRACTORS EXPENSE.
G6. NO WORKS ARE TO COMMENCE UNTIL THE REQUIRED TREE REMOVAL PERMITS HAVE BEEN GRANTED BY RELEVANT LOCAL AUTHORITY, AND THE APPROPRIATE NOTICE OF INTENTION TO COMMENCE GIVEN.
G7. ALL SERVICES, OR CONDUITS FOR SERVICING SHALL BE INSTALLED PRIOR TO COMMENCEMENT OF PAVEMENT CONSTRUCTION.
G8. SUBSOIL DRAINAGE, COMPRISING 100 AGRICULTURE PIPE IN GEO-STOCKING TO BE PLACED AS SHOWN AND AS MAY BE DIRECTED BY THE SUPERINTENDENT. SUBSOIL DRAINAGE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE RELEVANT LOCAL AUTHORITY CONSTRUCTION SPECIFICATION.
G9. NO WORK IS PERMITTED WITHIN ADJOINING PROPERTIES WITHOUT WRITTEN PERMISSION FROM THE OWNERS OR RESPONSIBLE AUTHORITY.

DRAINAGE NOTES

D1. ALL DRAINAGE OUTLET LEVELS SHALL BE CONFIRMED ON SITE, PRIOR TO CONSTRUCTION COMMENCING.
D2. ALL PIPES WITHIN THE PROPERTY TO BE MIN. 100 DIA UPVC @ 1% MIN. GRADE, UNO.
D3. ALL PITS WITHIN THE PROPERTY ARE TO BE FITTED WITH "WELDLOK" OR APPROVED EQUIVALENT GRATES:
- LIGHT DUTY FOR LANDSCAPED AREAS
- HEAVY DUTY WHERE SUBJECTED TO VEHICULAR TRAFFIC
D4. PITS WITHIN THE PROPERTY MAY BE CONSTRUCTED AS:
1) PRECAST STORMWATER PITS
2) CAST INSITU MASS CONCRETE
3) CEMENT RENDERED 230mm BRICKWORK
SUBJECT TO THE RELEVANT LOCAL AUTHORITY CONSTRUCTION SPECIFICATION.
D5. ENSURE ALL GRATES TO PITS ARE SET BELOW FINISHED SURFACE LEVEL WITHIN THE PROPERTY. TOP OF PIT RL'S ARE APPROXIMATE ONLY AND MAY BE VARIED SUBJECT TO APPROVAL OF THE ENGINEER. ALL INVERT LEVELS ARE TO BE ACHIEVED.
D6. ANY PIPES BENEATH RELEVANT LOCAL AUTHORITY ROAD TO BE RUBBER RING JOINTED RCP, UNO.
D7. ALL PITS IN ROADWAYS ARE TO BE FITTED WITH HEAVY DUTY GRATES WITH LOCKING BOLTS AND CONTINUOUS HINGE.
D8. PROVIDE STEP IRONS TO STORMWATER PITS GREATER THAN 1200 IN DEPTH.
D9. TRENCH BACK FILL IN ROADWAYS SHALL COMPRISE SHARP, CLEAN GRANULAR BACK FILL IN ACCORDANCE WITH THE RELEVANT LOCAL AUTHORITY SPECIFICATION TO NON-TRAFFICABLE AREAS TO BE COMPACTED BY RODDING AND TAMPING USING A FLAT PLATE VIBRATOR.
D10. WHERE A HIGH EARLY DISCHARGE (HED) PIT IS PROVIDED ALL PIPES ARE TO BE CONNECTED TO THE HED PIT, UNO.
D11. DOWN PIPES SHALL BE A MINIMUM OF DN100 SW GRADE UPVC OR 100X100 COLORBOND/ZINCALUME STEEL, UNO.
D12. COLORBOND OR ZINCALUME STEEL BOX GUTTERS SHALL BE A MINIMUM OF 450 WIDE X 150 DEEP.
D13. EAVES GUTTERS SHALL BE A MINIMUM OF 125 WIDE X 100 DEEP (OR OF EQUIVALENT AREA) COLORBOND OR ZINCALUME STEEL, UNO.
D14. SUBSOIL DRAINAGE SHALL BE PROVIDED TO ALL RETAINING WALLS & EMBANKMENTS, WITH THE LINES FEEDING INTO THE STORMWATER DRAINAGE SYSTEM, UNO.

EARTHWORKS NOTES

E1. THE EARTHWORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE PROJECT GEOTECHNICAL REPORT.
E2. THE SITE OF THE WORKS SHALL BE PREPARED BY STRIPPING ALL EXISTING TOPSOIL, FILL AND VEGETATION.
E3. SUBGRADE SHALL BE COMPACTED UNTIL A DRY DENSITY HAS BEEN ACHIEVED OF NOT LESS THAN 100% OF THE STANDARD MAXIMUM DRY DENSITY WHEN TESTED IN ACCORDANCE WITH AS 1289 TESTS E.1.1. OR E.1.2.
E4. THE EXPOSED SUBGRADE SHOULD BE PROOF ROLLED TO DETECT ANY SOFT OR WET AREAS WHICH SHOULD BE LOCALLY EXCAVATED AND BACK FILLED WITH SELECTED MATERIAL.
E5. THE BACK FILLING MATERIAL SHALL BE IMPORTED GRANULAR FILL OF LOW PLASTICITY, PREFERABLY CRUSHED SANDSTONE, AND TO BE PLACED IN LAYERS NOT EXCEEDING 150 LOOSE THICKNESS AND COMPACTED TO 98% OF STANDARD DRY DENSITY AT A MOISTURE CONTENT WITHIN 2% OF OPTIMUM.
E6. SITE WORKS ARE TO BE BATTERED TO ADJACENT PROPERTY LEVELS.
E7. STORMWATER MUST NOT BE CONCENTRATED ON TO AN ADJACENT PROPERTY.
E8. AT NO TIME DURING OR AFTER CONSTRUCTION IS STORMWATER TO BE PONDED ON ADJOINING PROPERTIES.
E9. THE SITE SHALL BE GRADED AND DRAINED SO THAT STORMWATER WILL BE DIRECTED AWAY FROM THE BUILDING PLATFORM.
E10. STORMWATER DRAINAGE SHALL BE PROVIDED AND MAINTAINED THROUGHOUT THE COURSE OF CONSTRUCTION. ALL STORMWATER RUNOFF SHALL BE GRADED AWAY FROM THE SITE WORKS AND DISPOSED OF VIA SURFACE CATCHDRAINS AND STORMWATER COLLECTION PITS.
E11. ALL SURFACE CATCH DRAINS SHALL BE GRADED AT 1% (1 IN 100) MINIMUM. THE GROUND SHALL GRADE AWAY FROM ANY DWELLING AT 5% (1 IN 20) FOR THE FIRST METRE THEN AT 2.5% (1 IN 40).
E12. WHERE A CUT FILL PLATFORM IS USED THERE SHALL BE A MINIMUM BERM 1000 WIDE TO THE PERIMETER OF THE SITE WORKS WHICH SHALL BE SUPPORTED BY BATTERS OF 3:1 IN FILL.
E13. ANY VERTICAL OR NEAR VERTICAL PERMANENT EXCAVATION (CUT) DEEPER THAN 600 IN MATERIAL OTHER THAN ROCK SHALL BE ADEQUATELY RETAINED OR BATTERED AT A MINIMUM OF 3:1.
E14. WHERE BATTERS CANNOT BE PROVIDED TO SUPPORT THE CUT OR FILL, THEY SHALL BE ADEQUATELY RETAINED.
E15. RETAINING WALLS ARE TO BE CONSTRUCTED WITH ADEQUATE SUBSOIL DRAINAGE.

CONCRETE PAVEMENT

C1. SUBGRADE SHALL BE PREPARED AS OUTLINED IN EARTHWORKS.
C2. PROVIDE JOINTING AT MINIMUM 6000 MAX. INTERVALS OR AS OTHERWISE SPECIFIED IN THE DRAWINGS.
C3. CONCRETE SHALL COMPRISE A MIN. COMPRESSIVE STRENGTH OF 32MPa AT 28 DAYS IN ACCORDANCE WITH THE RELEVANT LOCAL AUTHORITY SPECIFICATION, UNO.
C4. ANY SUB-BASE MATERIAL SHALL BE COMPACTED AS OUTLINED IN EARTHWORKS.
C5. CONCRETE KERB AND GUTTER SHALL COMPRISE A MINIMUM COMPRESSIVE STRENGTH OF 25MPa, UNO.
C6. CONCRETE WORKS ARE TO BE CURED BY ONE OF THE FOLLOWING MEANS:
i) WETTING TWICE DAILY FOR THE FIRST THREE DAYS;
ii) USING AN APPROVED CURING COMPOUNDED FOR A MINIMUM OF 7 DAYS COMMENCING IMMEDIATELY AFTER POURING.

FLEXIBLE PAVEMENT NOTES

F1. SUBGRADE SHALL BE PREPARED AS OUTLINED IN EARTHWORKS.
F2. PAVEMENT MATERIAL SHALL CONSIST OF APPROVED OR RIPPED SANDSTONE, NATURAL GRAVEL OR FINE CRUSH ROCK AS PER THE RELEVANT COUNCIL AUTHORITY SPECIFICATION.
F3. PAVEMENT MATERIALS SHALL BE SPREAD IN LAYERS NOT EXCEEDING 150 AND NOT LESS 75 COMPACTED THICKNESS.
F4. PAVEMENT MATERIALS SHALL BE SIZED AND OF A STANDARD OUTLINED IN AS1141.
F5. CRUSHED OR RIPPED SANDSTONE SHALL BE MINUS 75 NOMINAL SIZE DERIVED FROM SOUND, CLEAN SANDSTONE FREE FROM OVERBURDEN, CLAY SEAMS, SHALE AND OTHER DELETERIOUS MATERIAL.
F6. PAVEMENT MATERIALS SHALL BE COMPACTED BY SUITABLE MEANS TO SATISFY THE FOLLOWING MINIMUM SPECIFICATIONS (AS PER AS1289.2)

DESCRIPTION	MEDIUM DENSITY RATIO
SUB-BASE	98% MOD
BASE COURSE	98% MOD
ASPHALTIC CONCRETE	97% MOD

AND SUBJECT TO THE RELEVANT LOCAL AUTHORITY CONSTRUCTION SPECIFICATION.

F7. TESTING FOR EACH LAYER SHALL BE UNDERTAKEN BY A N.A.T.A. REGISTERED LABORATORY IN ACCORDANCE WITH AS1289, AT NOT MORE THAN 50m INTERVALS AND A MINIMUM OF TWO PER LAYER. FURTHER FREQUENCY OF TESTING SHALL BE NO LESS THAN THAT REQUIRED BY AS3978.

PAVED AREAS NOTES

A1. SUBGRADE SHALL BE PREPARED AS OUTLINED IN EARTHWORKS.
A2. ALL PAVERS ARE TO BE PLACED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATION.
A3. TRAFFICABLE AREAS:
SUB-BASE TO BE 150 COMPACTED THICKNESS DGS75.
SUB-BASE TO BE SUITABLY COMPACTED TO MEDIUM DENSITY 98% MOD.
SUB-BASE TO EXTEND AT LEAST 200 BEYOND PAVED SURFACE.
PAVERS TO BE 80 THICK INTERLOCKING PAVERS ON 50 SAND BEDDING.
A4. NON TRAFFICABLE AREAS:
SUB BASE AS PER TRAFFICABLE AREAS
PAVERS TO BE 60 INTERLOCKING PAVERS ON 50 SAND BEDDING (UNO).

EROSION AND SEDIMENT NOTES

B1. THIS PLAN TO BE READ IN CONJUNCTION WITH EROSION AND SEDIMENT CONTROL DETAILS AS ATTACHED.
B2. THE CONTRACTOR SHALL IMPLEMENT ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES AS NECESSARY AND TO THE SATISFACTION OF THE RELEVANT LOCAL AUTHORITY PRIOR TO THE COMMENCEMENT OF AND DURING CONSTRUCTION. NO DISTURBANCE TO THE SITE SHALL BE PERMITTED OTHER THAN IN THE IMMEDIATE AREA OF THE WORKS AND NO MATERIAL SHALL BE REMOVED FROM THE SITE WITHOUT THE RELEVANT LOCAL AUTHORITY APPROVAL. ALL EROSION AND SEDIMENT CONTROL DEVICES TO BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH STANDARDS OUTLINED IN NSW DEPARTMENT OF HOUSING'S "MANAGING URBAN STORMWATER - SOILS AND CONSTRUCTIONS".
B3. TOPSOIL SHALL BE STRIPPED AND STOCKPILED OUTSIDE HAZARD AREAS SUCH AS DRAINAGE LINES. THIS TOPSOIL SHALL BE RESPREAD LATER ON AREAS TO BE REVEGETATED AND STABILISED ONLY, (I.E. ALL FOOTPATHS, BATTERS, SITE REGARDING AREAS, BASINS AND CATCHDRAINS). TOPSOIL SHALL NOT BE RESPREAD ON ANY OTHER AREAS UNLESS SPECIFICALLY INSTRUCTED BY THE SUPERINTENDENT. IF THEY ARE TO REMAIN FOR LONGER THAN ONE MONTH STOCKPILES SHALL BE PROTECTED FROM EROSION BY COVERING THEM WITH A MULCH AND HYDROSEEDING AND, IF NECESSARY, BY LOCATING BANKS OR DRAINS DOWNSTREAM OF A STOCKPILE TO RETARD SILT LADEN RUNOFF.
B4. THE CONTRACTOR SHALL REGULARLY MAINTAIN ALL EROSION AND SEDIMENT CONTROL DEVICES AND REMOVE ACCUMULATED SILT FROM SUCH DEVICES SUCH THAT MORE THAN 60% OF THEIR CAPACITY IS LOST. ALL THE SILT IS TO BE PLACED OUTSIDE THE LIMIT OF WORKS. THE PERIOD FOR MAINTAINING THESE DEVICES SHALL BE AT LEAST UNTIL ALL DISTURBED AREAS ARE REVEGETATED AND FURTHER AS MAY BE DIRECTED BY THE SUPERINTENDENT OR COUNCIL.
B5. LAY TURF STRIP (MIN 300 WIDE) ON 100 TOPSOIL BEHIND ALL KERB WITH 1000 LONG RETURNS EVERY 6000 AND AROUND STRUCTURES IMMEDIATELY AFTER BACKFILLING AS PER THE RELEVANT LOCAL AUTHORITY SPECIFICATION.
B6. THE CONTRACTOR SHALL GRASS SEED ALL DISTURBED AREAS WITH AN APPROVED MIX AS SOON AS PRACTICABLE AFTER COMPLETION OF EARTHWORKS AND REGRADING.
B7. VEHICULAR TRAFFIC SHALL BE CONTROLLED DURING CONSTRUCTION CONFINING ACCESS WHERE POSSIBLE TO NOMINATED STABILISED ACCESS POINTS.
B8. WHEN ANY DEVICES ARE TO BE HANDED OVER TO COUNCIL THEY SHALL BE IN CLEAN AND STABLE CONDITION.
B9. THE CONTRACTOR SHALL IMPLEMENT DUST CONTROL BY REGULAR WETTING DOWN (BUT NOT SATURATING) DISTURBED AREA.
B10. PROVIDE AND MAINTAIN SILT TRAPS AROUND ALL SURFACE INLET PITS UNTIL CATCHMENT IS REVEGETATED OR PAVED.
B11. REVEGETATE ALL TRENCHES IMMEDIATELY UPON COMPLETION OF BACKFILLING.
B12. ALL DRAINAGE PIPE INLETS TO BE CAPPED UNTIL:
- DOWNPIPES CONNECTED
- PITS CONSTRUCTED AND PROTECTED WITH SILT BARRIER

CONCRETE STRUCTURES NOTES

S1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS3600 CURRENT EDITION WITH AMENDMENTS, EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.
S2. CONCRETE COMPONENTS AND QUALITY SHALL BE AS FOLLOWS, UNO:

ELEMENT	SLUMP mm	MAX. SIZE AGG. mm	CEMENT TYPE	*fc* AT 28 DAYS - MPa	ADMIXTURE
FOOTINGS	80	20	A	25	-
PIERS & CAPS	80	20	A	25	-
SLABS ON GROUND	80	20	A	32	-
SUSPENDED SLABS	80	20	A	32	-
PITS	80	20	A	25	-

S3. MINIMUM CLEAR CONCRETE COVER TO REINFORCEMENT INCLUDING TIES AND STIRRUPS SHALL BE AS FOLLOWS UNO.

EXPOSURE CLASSIFICATION	MINIMUM COVER (mm)				
	CONCRETE STRENGTH (f'c)				
	20 MPa	25 MPa	32 MPa	40 MPa	>50 MPa
A1	20	20	20	20	20
A2	(50)	30	25	20	20
B1	-	(60)	40	30	25
B2	-	-	(65)	45	35
C	-	-	-	(70)	50

FOR BRACKETED FIGURES REFER TO AS 3600 CURRENT EDITION TABLE 4.10.3.2

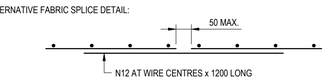
S4. MINIMUM COVER FOR FIRE RESISTANCE LEVEL (FRL) SHALL BE AS FOLLOWS;

MINIMUM ELEMENT WIDTH OR THICKNESS / MIN COVER (mm)				
FRL	BEAM	SLAB	COLUMN	WALL
60	125 / 30	80 / 20	200 / 20	80 / 20
90	150 / 45	100 / 25	250 / 35	100 / 35
120	200 / 55	120 / 30	300 / 45	120 / 40
180	240 / 70	150 / 45	400 / 60	150 / 45
240	270 / 80	170 / 55	450 / 70	170 / 50

NOTE : 1. REFER TO AS 3600 CURRENT EDITION FOR REDUCED COVERS IF GREATER ELEMENT THICKNESSES ARE ADOPTED FOR BEAMS & COLUMNS.
2. COVER IS MEASURED TO THE MAIN REINFORCEMENT

S5. COVER TO REINFORCEMENT SHALL BE OBTAINED BY THE USE OF APPROVED BAR CHAIRS. ALL CHAIRS SHALL BE SPACED AT 1000 CTS MAXIMUM.
S6. ALL CONCRETE SHALL BE MECHANICALLY VIBRATED. VIBRATORS SHALL NOT BE USED TO SPREAD CONCRETE.
S7. SIZES OF CONCRETE ELEMENTS DO NOT INCLUDE THICKNESS OF APPLIED FINISHES.
S8. NO HOLES OR CHASES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE MEMBERS WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.
S9. CONSTRUCTION JOINTS WHERE NOT SHOWN SHALL BE LOCATED TO APPROVAL OF THE ENGINEER. ALL CONSTRUCTION JOINTS SHALL BE SCABBLED OVER THE WHOLE FACE AND ANY UNSOUND MATERIAL REMOVED.
S10. REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY; IT IS NOT NECESSARILY SHOWN IN TRUE PROJECTION.
S11. SPLICES IN REINFORCEMENT SHALL BE MADE ONLY IN THE POSITIONS SHOWN OR AS APPROVED BY THE ENGINEER. WHERE THE LAP LENGTH IS NOT SHOWN IT SHALL BE SUFFICIENT TO DEVELOP THE FULL STRENGTH OF THE REINFORCEMENT AS SPECIFIED IN AS3600. COGS AND HOOKS SHALL BE STANDARD UNLESS SHOWN OTHERWISE.
S12. WELDING OF REINFORCEMENT WILL NOT BE PERMITTED UNLESS SHOWN ON THE STRUCTURAL DRAWINGS OR APPROVED BY THE ENGINEER.
S13. PIPES OR CONDUITS SHALL NOT BE PLACED WITHIN THE CONCRETE COVER TO REINFORCEMENT WITHOUT THE APPROVAL OF THE ENGINEER.
S14. REINFORCEMENT SYMBOLS:
N - DENOTES DEFORMED GRADE 500 NORMAL DUCTILITY REINFORCING BARS TO AS/NZS 4671.
R - DENOTES PLAIN ROUND GRADE 250 NORMAL DUCTILITY REINFORCING BARS TO AS/NZS 4671.
SL - DENOTES DEFORMED GRADE 500 LOW DUCTILITY REINFORCING MESH TO AS/NZS 4671.
RL - DENOTES DEFORMED GRADE 500 LOW DUCTILITY REINFORCING MESH TO AS/NZS 4671.
L--TM - DENOTES DEFORMED GRADE 500 LOW DUCTILITY TRENCH MESH TO AS/NZS 4671.
S15. ALL REINFORCING FABRIC SHALL COMPLY WITH AS1303 AND AS1304 AND SHALL BE SUPPLIED IN FLAT SHEETS.
S16. SPLICES IN FABRIC: THE OUTERMOST TRANSVERSE WIRES SHALL BE OVERLAPPED BY AT LEAST THE SPACING OF THESE TRANSVERSE WIRES PLUS 25 mm.

ALTERNATIVE FABRIC SPLICE DETAIL:



S17. EXPOSED CORNERS SHALL BE 20 mm CHAMFERED UNO.
S18. ALL REINFORCEMENT SHALL BE INSPECTED BY THE SUPERINTENDENT OR ENGINEER PRIOR TO PLACING CONCRETE.
S19. ALL SLAB CONCRETE TO BE CURED IN AN APPROVED MANNER FOR A MINIMUM OF 7 DAYS.
S20. ALL FORMWORK AND PROPS FOR SLABS AND BEAMS SHALL BE REMOVED BEFORE CONSTRUCTION OF ANY MASONRY WALLS OR PARTITIONS ON THE FLOOR.
S21. ALL ABBREVIATIONS ARE IN ACCORDANCE WITH AS1100.
S22. FORMWORK SHALL NOT BE STRIPPED UNTIL CONCRETE HAS ACHIEVED A MINIMUM STRENGTH OF 20 MPa. THE CONCRETE SLAB AND BEAMS SHALL BE TEMPORARLIY BACK PROPPED UNTIL THE CONCRETE HAS ACHIEVED 28 DAY STRENGTH AND ANY PROPPING TO HIGHER LEVEL FORMS HAVE BEEN REMOVED.
S23. WHERE A SUSPENDED SLAB IS TO BE SUPPORTED OFF A SUSPENDED SLAB BELOW, WRITTEN APPROVAL SHALL BE OBTAINED FROM THE ENGINEER PRIOR TO ANY SITE WORKS.

MASONRY

M1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 3700.

M2. THE DESIGN STRENGTH OF MASONRY SHALL BE AS FOLLOWS U.N.O. :

EXPOSURE CLASSIFICATION TO AS 3600	MASONRY COMPRESSIVE STRENGTH MPa (f'm)	MASONRY SALT RESISTANCE GRADE	DURABILITY CLASSIFICATION OF BUILT IN COMPONENTS	MORTAR MIX	
				GP PORTLAND CEMENT : LIME : SAND	f'c MPa
A1 / A2	> 6.3	General Purpose	R3 (Galvanised)	1.0 : 1.0 : 6.0	2.8
B1	> 6.3	General Purpose	R3 (Galvanised)	1.0 : 1.0 : 6.0	2.8
B2	> 6.7	Exposure	R4 (Stainless)	1.0 : 0.5 : 4.5	2.8

M3. ALL MASONRY WALLS SUPPORTING SLABS AND BEAMS SHALL HAVE A PRE-GREASED TWO LAYER GALVANISED STEEL SLIP JOINT BETWEEN CONCRETE AND MASONRY.
M4. ALL MASONRY WALLS SUPPORTING OR SUPPORTED BY CONCRETE FLOORS SHALL BE PROVIDED WITH VERTICAL JOINTS TO MATCH ANY CONTROL JOINTS IN THE CONCRETE.
M5. NON LOAD BEARING WALLS SHALL BE SEPARATED FROM CONCRETE ABOVE BY 20 mm THICK CLOSED CELL POLYETHYLENE STRIP.
M6. MASONRY SHALL BE ARTICULATED IN ACCORDANCE WITH TECHNICAL NOTE 61 FROM THE CEMENT AND CONCRETE ASSOCIATION OF AUSTRALIA. VERTICAL CONTROL JOINTS SHALL NOT EXCEED 5 METRES MAXIMUM CENTRES, AND 4 METRES MAXIMUM FROM CORNERS IN MASONRY WALLS, AND BETWEEN NEW & EXISTING BRICKWORK.
M7. MASONRY RETAINING WALLS ARE TO BE BACKFILLED WITH EITHER OF THE FOLLOWING MATERIAL:
- COARSE GRAINED SOIL WITH LOW SILT CONTENT
- RESIDUAL SOIL CONTAINING STONES
- FINE SILTY SAND
- GRANULAR MATERIALS WITH LOW CLAY CONTENT

BLOCKWORK

B1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS3700.
B2. REINFORCED CONCRETE BLOCKWORK SHALL COMPLY WITH THE FOLLOWING, UNO:
- BLOCKS : GRADE 15 CONFORMING TO AS1500.
- MORTAR : 1 CEMENT / 0.25 LIME / 3 SAND.
- PROVIDE CLEANOUT HOLES AT BASE OF WALL & ROD CORE HOLES TO REMOVE PROTRUDING MORTAR FINS.
- CORE FILLING : f'c = 20 MPa, 10 AGG, 230 SLUMP +/- 30 mm.
- COVER : 55 mm MIN. FROM OUTSIDE OF BLOCKWORK.
B3. BACKFILL TO RETAINING WALLS TO BE FREE DRAINING GRANULAR MATERIAL, UNO. PROVIDE SUBSOIL DRAIN BEHIND WALL AND AT WEEP HOLES.
B4. VERTICAL CONTROL JOINTS SHALL BE PROVIDED AT 10 m MAX. CENTRES.
B5. NO ADMIXTURES SHALL BE USED WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER.

STANDARD LINE TYPES AND SYMBOLS:

PROPOSED KERB & GUTTER
EXISTING KERB & GUTTER
PROPOSED BELOW GROUND PIPELINE
PROPOSED SUSPENDED PIPELINE
EXISTING PIPELINE
SUBSOIL DRAINAGE LINE
PROPOSED KERB INLET PIT
EXISTING KERB INLET PIT
PROPOSED JUNCTION OR INLET PIT
EXISTING JUNCTION OR INLET PIT
DESIGN CENTRELINE
EXISTING EDGE OF BITUMEN
TELECOMUNICATION CONDUIT
GAS MAIN
WATER MAIN
SEWER MAIN
UNDERGROUND ELECTRICITY CABLES
PERMANENT MARK & S.S.M.
BENCH MARK, SURVEY STATION

LOCATION PLAN

SCHEDULE OF DRAWINGS

FOR APPROVAL

A1 ORIGINAL SIZE

REVISION	DATE	AMENDMENT DESCRIPTION
B	18.04.24	ISSUED FOR APPROVAL
A	18.01.24	ISSUED FOR APPROVAL

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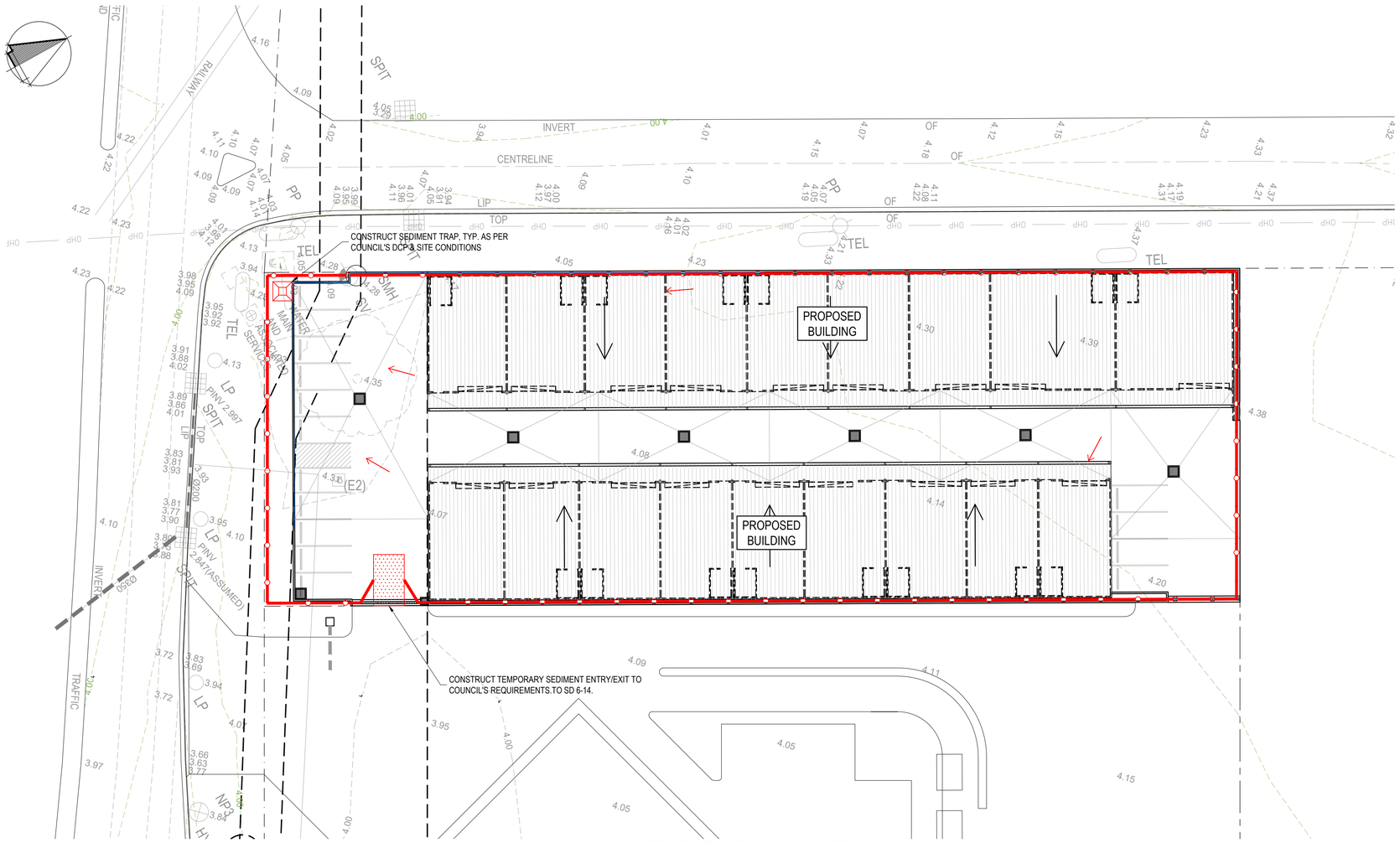
PROPOSED INDUSTRIAL BUILDING
295 Cormorant Road, Kooragang
For Brown Commercial Building

GENERAL NOTES

DESIGN	DRAWN	DATE	PROJECT No.
SWH	RCL	JAN 2024	10747
CHECKED	APPROVED	SCALE -	DRG No. C01 - B



SEDIMENT & EROSION CONTROL PLAN

1:250

- DENOTES SEDIMENT FENCE
- DENOTES SURFACE WATER FLOW

SEDIMENT AND EROSION CONTROL NOTES

SEDIMENT AND EROSION CONTROL SHALL BE EFFECTIVELY MAINTAINED AT ALL TIMES DURING THE COURSE OF CONSTRUCTION AND SHALL NOT BE REMOVED UNTIL THE SITE HAS BEEN STABILISED OR LANDSCAPED TO THE SUPERINTENDENT'S SATISFACTION.

A SINGLE ALL WEATHER ACCESS WAY WILL BE PROVIDED AT THE FRONT OF THE PROPERTY CONSISTING OF 50-75 AGGREGATE OR SIMILAR MATERIAL AT A MINIMUM THICKNESS OF 150 LAID OVER NEEDLE-PUNCHED GEOTEXTILE FABRIC AND CONSTRUCTED PRIOR TO COMMENCEMENT OF WORKS.

THE CONTRACTOR SHALL ENSURE THAT NO SPOIL OR FILL ENCROACHES UPON ADJACENT AREAS FOR THE DURATION OF WORKS.

THE CONTRACTOR SHALL ENSURE THAT KERB INLETS AND DRAINS RECEIVING STORMWATER SHALL BE PROTECTED AT ALL TIMES DURING DEVELOPMENT. KERB INLET SEDIMENT TRAPS SHALL BE INSTALLED ALONG THE IMMEDIATE VICINITY ALONG THE STREET FRONTAGE.

ALL TOPSOIL STRIPPED FROM THE SITE AND STOCKPILED DOES NOT INTERFERE WITH DRAINAGE LINES AND STORMWATER INLETS AND WILL BE SUITABLY COVERED WITH AN IMPERVIOUS MEMBRANE MATERIAL AND SCREENED BY SEDIMENT FENCING.

SOIL CONSERVATION NOTE:

PRIOR TO COMMENCEMENT OF CONSTRUCTION PROVIDE 'SEDIMENT FENCE,' 'SEDIMENT TRAP' AND WASHOUT AREA TO ENSURE THE CAPTURE OF WATER BORNE MATERIAL GENERATED FROM THE SITE.

MAINTAIN THE ABOVE DURING THE COURSE OF CONSTRUCTION, AND CLEAR THE 'SEDIMENT TRAP AFTER EACH STORM.

SEDIMENT TRAP

1000 x 1000 WIDE 500 DEEP PIT, LOCATED AT THE LOWEST POINT TO THE TRAP SEDIMENT AND IN ACCORDANCE WITH LOCAL COUNCIL'S DCP AND SITE CONDITIONS.

SEDIMENT FENCE

PROVIDE 'SEDIMENT FENCE ON DOWN SLOPE BOUNDARY AS SHOWN ON PLAN. FABRIC TO BE BURIED BELOW GROUND AT LOWER EDGE.
REFER TO SD 6-8

BUILDING MATERIAL STOCKPILES

ALL STOCKPILES OF BUILDING MATERIAL SUCH AS SAND AND SOIL MUST BE PROTECTED TO PREVENT SCOUR AND EROSION.

THEY SHOULD NEVER BE PLACED IN THE STREET GUTTER WHERE THEY WILL WASH AWAY WITH THE FIRST RAINSTORM.
REFER TO SD 4-1

GENERAL NOTES

THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH OTHER CONSULTANTS' DRAWINGS AND SPECIFICATIONS AND WITH OTHER SUCH 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.

ALL DIMENSIONS ARE IN MILLIMETRES & ALL LEVELS ARE IN METRES, UNO (UNLESS NOTED OTHERWISE).

NO DIMENSION SHALL BE OBTAINED BY SCALING THE DRAWINGS.

ALL LEVELS AND SETTING OUT DIMENSIONS SHOWN ON THE DRAWINGS SHALL BE CHECKED ON SITE PRIOR TO THE COMMENCEMENT OF THE WORK.

DURING EXCAVATION WORK THE STRUCTURE SHALL BE MAINTAINED IN A STABLE AND NO PART SHALL BE OVERSTRESSED.

ALL WORK IS TO BE UNDERTAKEN IN ACCORDANCE WITH THE DETAILS SHOWN ON THE DRAWINGS & THE SPECIFICATION.

EXISTING SERVICES WHERE SHOWN HAVE BEEN PLOTTED FROM SUPPLIED DATA AND SUCH THEIR ACCURACY CAN NOT BE GUARANTEED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH THE LEVEL OF ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF WORK.

ALL SERVICE TRENCHES UNDER VEHICULAR PAVEMENTS SHALL BE BACK FILLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL COUNCIL.

ALL TRENCH BACK FILL MATERIAL SHALL BE COMPACTED TO THE SAME DENSITY AS THE ADJACENT MATERIAL.

ON COMPLETION OF STORMWATER INSTALLATION, ALL DISTURBED AREAS MUST BE RESTORED TO ORIGINAL CONDITION, INCLUDING KERBS, FOOTPATHS, CONCRETE AREAS, GRAVEL AND GRASSED AREAS AND ROAD PAVEMENTS, UNLESS DIRECTED OTHERWISE.

CONTRACTOR TO OBTAIN ALL AUTHORITY APPROVALS UNLESS DIRECTED OTHERWISE.

STORMWATER DRAINAGE

THE STORMWATER DRAINAGE DESIGN HAS BEEN CARRIED OUT IN ACCORDANCE WITH AS/NZS 3500.3 - 1990 "STORMWATER DRAINAGE" & AS/NZS 3500.3.2-1998 "STORMWATER DRAINAGE - ACCEPTABLE SOLUTIONS".

ANY VARIATIONS TO THE NOMINATED LEVELS SHALL BE REFERRED TO ENGINEER IMMEDIATELY.

ANY VARIATIONS TO SPECIFIED PRODUCTS OR DETAILS SHALL BE REFERRED TO THE ENGINEER FOR APPROVAL.

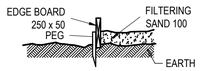
DOWN PIPES SHALL BE A MINIMUM OF DN100 SW GRADE UPVC OR 100X100 COLORBOND/ZINCALUME STEEL, UNO.

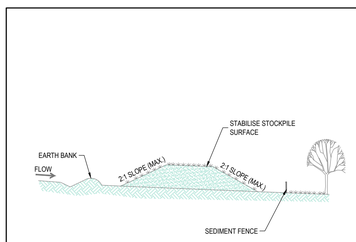
BOX COLORBOND OR ZINCALUME STEEL. GUTTERS SHALL BE A MINIMUM OF 450 WIDE X 150 DEEP.

EAVES GUTTERS SHALL BE A MINIMUM OF 125 WIDE X 100 DEEP (OR OF EQUIVALENT AREA) COLORBOND OR ZINCALUME STEEL.

SUBSOIL DRAINAGE SHALL BE PROVIDED TO ALL RETAINING WALLS & EMBANKMENTS, WITH THE LINES FEEDING INTO THE STORMWATER DRAINAGE SYSTEM.

WASHOUT AREA
TO BE 1800 x 1800 ALLOCATED FOR THE WASHING OF TOOL & EQUIPMENT.

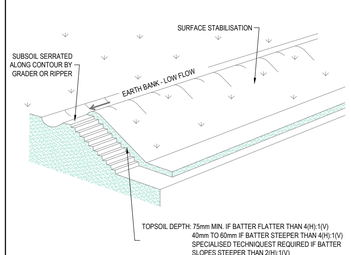




CONSTRUCTION NOTES

1. PLACE STOCKPILES MORE THAN 2 (PREFERABLY 5) METRES FROM EXISTING VEGETATION, CONCENTRATED WATER FLOW, ROADS AND HAZARD AREAS.
2. CONSTRUCT ON THE CONTOUR AS LOW, FLAT, ELONGATED MOUNDS.
3. WHERE THERE IS SUFFICIENT AREA, TOPSOIL STOCKPILES SHALL BE LESS THAN 2 METRES IN HEIGHT.
4. WHERE THEY ARE TO BE IN PLACE FOR MORE THAN 10 DAYS, STABILISE FOLLOWING THE APPROVED ESCP OR SWMP TO REDUCE THE C-FACTOR TO LESS THAN 0.10.
5. CONSTRUCT EARTH BANKS (STANDARD DRAWING 5-5) ON THE UPSLOPE SIDE TO DIVERT WATER AROUND STOCKPILES AND SEDIMENT FENCES (STANDARD DRAWING 6-8) 1 TO 2 METRES DOWNSLOPE.

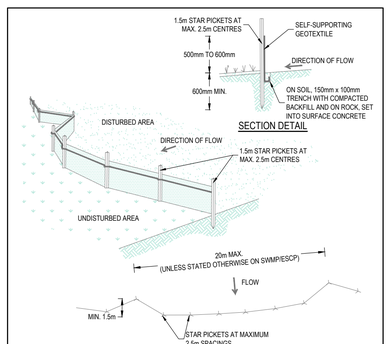
STOCKPILES — SD 4-1



CONSTRUCTION NOTES

1. SCARIFY THE GROUND SURFACE ALONG THE LINE OF THE CONTOUR TO A DEPTH OF 50mm TO 100mm TO BREAK UP ANY HARDSETTING SURFACES AND TO PROVIDE A GOOD BOND BETWEEN THE RESPREAD MATERIAL AND SUBSOIL.
2. ADD SOIL AMELIORANTS AS REQUIRED BY THE ESCP OR SWMP.
3. RIP TO A DEPTH OF 300mm IF COMPACTED LAYERS OCCUR.
4. WHERE POSSIBLE, REPLACE TOPSOIL TO A DEPTH OF 40 TO 60mm ON LANDS WHERE THE SLOPE EXCEEDS 4(H):1(V) AND TO AT LEAST 75mm ON LOWER GRADIENTS.

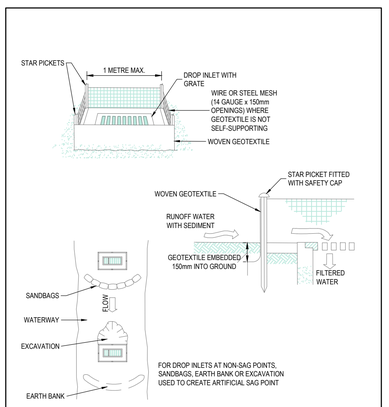
REPLACING TOPSOIL — SD 4-2



CONSTRUCTION NOTES

1. CONSTRUCT SEDIMENT FENCES 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 ENOUGH TO LIMIT WATER FLOW IF CONCENTRATED AT ONE POINT TO 50 LITRES PER SECOND IN THE DESIGN STORM EVENT, USUALLY 10-YEAR EVENT.
2. CUT A 150mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.
3. DRIVE 1.5 METRE LONG STAR PICKETS INTO GROUND AT 2.5 METRE INTERVALS (MAX.) AT THE DOWNSLOPE EDGE 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 NOT SATISFACTORY.
5. 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.

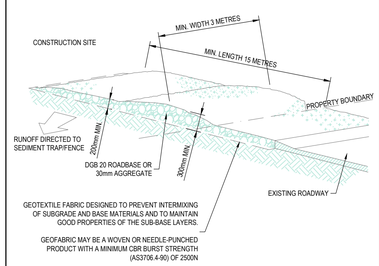
SEDIMENT FENCE — SD 6-8



CONSTRUCTION NOTES

1. FABRICATE A SEDIMENT BARRIER MADE FROM GEOTEXTILE OR STRAW BALES.
2. 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 THE DRAWING.
4. DO NOT COVER THE INLET WITH GEOTEXTILE UNLESS THE DESIGN IS ADEQUATE TO ALLOW FOR ALL WATERS TO BYPASS IT.

GEOTEXTILE INLET FILTER — SD 6-12



CONSTRUCTION NOTES

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

STABILISED SITE ACCESS — SD 6-14

FOR APPROVAL

A1 ORIGINAL SIZE

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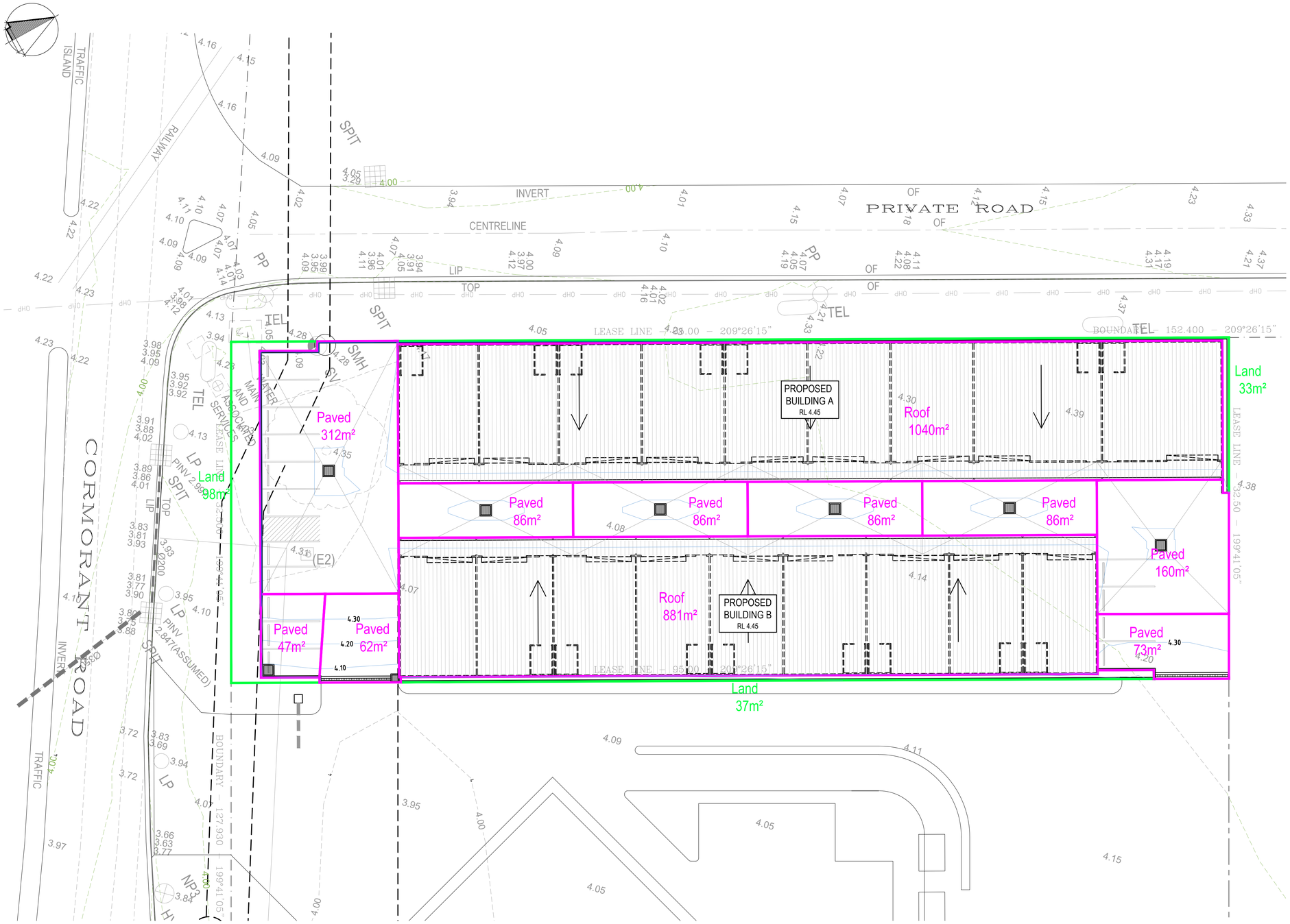
PROPOSED INDUSTRIAL BUILDING

295 Cormorant Road, Kooragang
For Brown Commercial Building

SEDIMENT AND EROSION CONTROL PLAN

DESIGN	DRAWN	DATE	PROJECT No.
SWH	RCL	JAN 2024	10747
CHECKED	APPROVED	SCALE	DRG No.
		1:250	C02 - B



STORMWATER DRAINAGE STRATEGY

- ALL GUTTERS & DOWNPIPES ARE DESIGNED TO ACCEPT A 1:20 YEAR ARI STORM EVENT
- BOX GUTTERS & DOWNPIPES ARE DESIGNED TO ACCEPT A 1:100 YEAR ARI STORM EVENT
- ALL PITS & PIPES ARE DESIGNED TO ACCEPT A 1:20 YEAR ARI STORM EVENT
- DESIGN RAINFALL INTENSITIES:
  1:20 YEAR, 5 MIN = 179 mm/hr
  1:100 YEAR, 5 MIN = 232 mm/hr
- ALL PIPES MUST HAVE A MIN. 1.0% FALL, UNLESS SPECIFIED OTHERWISE
- ALL STORMWATER RUNOFF IS DIRECTED TO A SQID PRIOR TO EXITING THE SITE
- ON-SITE DETENTION HAS BEEN PROVIDED FOR THE DEVELOPMENT AS PER NEW CASTLE CITY COUNCIL'S REQUIREMENTS
- STORMWATER QUALITY TREATMENT SYSTEM IS NOT REQUIRED FOR THE PROPOSED DEVELOPMENT AS IT HAVE BEEN CATERED FOR AT DOWNSTREAM DURING THE DESIGN AND CONSTRUCTION OF THE DOWNSTREAM DEVELOPMENT AS PER R.J. SINCLAIR PTY LTD BUILDING DESIGN CIVIL DRAWINGS.
- THE STORMWATER QUALITY TREATMENT SYSTEM (HUMECEPTOR AND HUMES JELLYFISH FILTER SYSTEM) HAVE BEEN INSTALLED AND CONSTRUCTED IN ACCORDANCE WITH R.J. SINCLAIR PTY LTD BUILDING DESIGN CIVIL DRAWINGS.
- SQID'S USED ON THIS SITE INCLUDE:
  - BELOW GROUND OSD TANK

STORMWATER CATCHMENT AREA PLAN

1:200

- DENOTES STORMWATER CATCHMENT AREA BOUNDARY (IMPERVIOUS)
- DENOTES STORMWATER CATCHMENT AREA BOUNDARY (PERVIOUS)

TOTAL SITE CATCHMENT AREA	= 3,087 m²
ROOF AREA	= 1,921 m²
PAVEMENT AREA	= 998 m²
LANDSCAPE AREA	= 168 m²

- DENOTES EXISTING SURVEY CONTOUR
- DENOTES NEW SURFACE LEVEL CONTOUR (MAJOR)
- DENOTES NEW SURFACE LEVEL CONTOUR (MINOR)

FOR APPROVAL

A1 ORIGINAL SIZE

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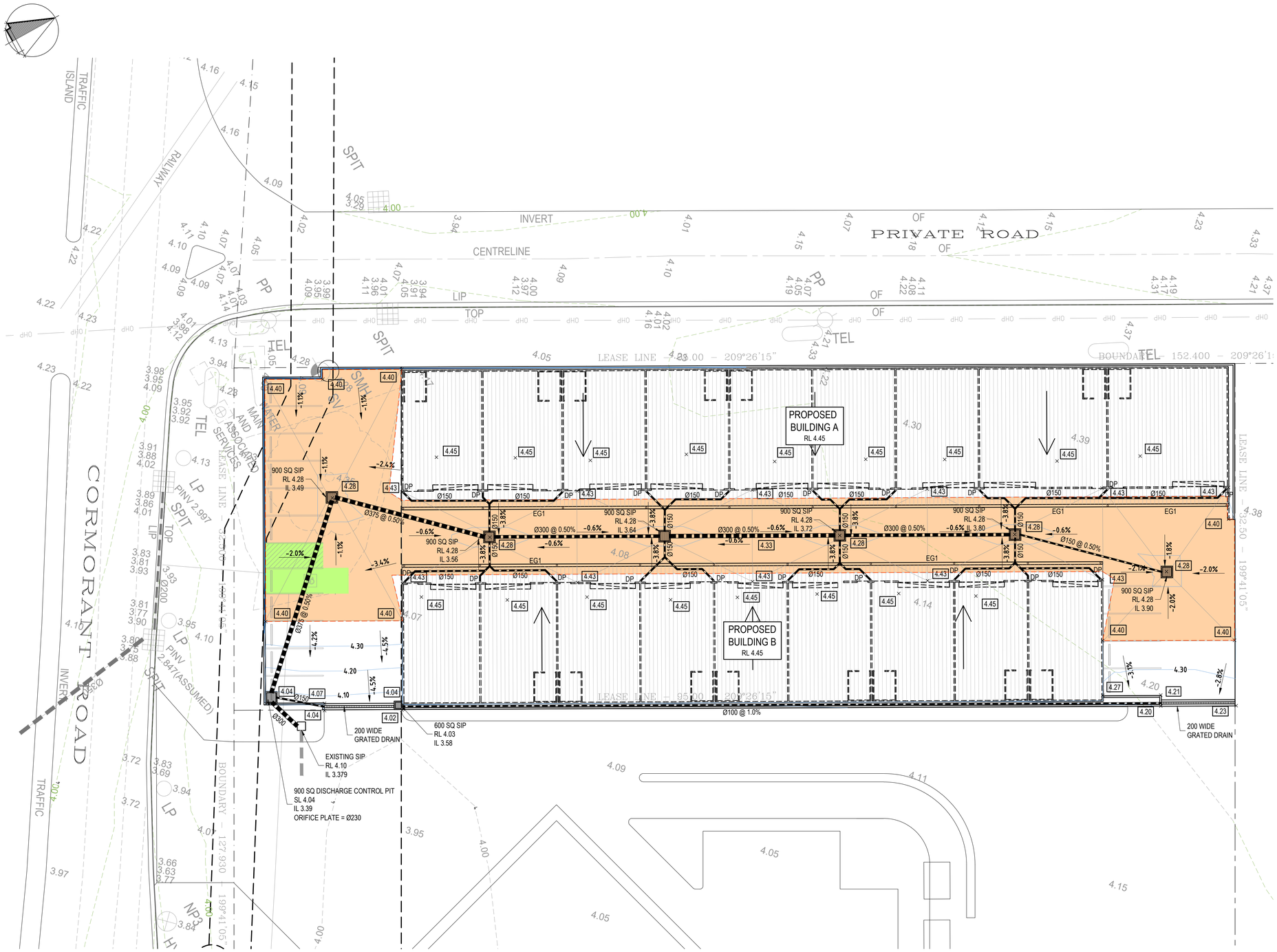
For Brown Commercial Building

STORMWATER CATCHMENT AREA PLAN

DESIGN	DRAWN	DATE	PROJECT No.
SWH	RCL	JAN 2024	10747
CHECKED	APPROVED	SCALE	DRG No.
		1:200	C03 - B



STORMWATER DRAINAGE PLAN

1:200

ALL DRAINAGE LINES SHALL BE UPVC (CLASS SH) STORMWATER DRAINAGE PIPE, UNO.
ALL DRAINAGE LINES SHALL BE LAID @ 1% FALL MIN, UNO.
FIRST FLUSH RAINWATER DEVICES TO BE FITTED TO DRAINAGE LINES TO BUILDER'S DETAIL,
MINIMUM EFFECTIVE EAVES GUTTER SLOPE = 1:500
THE FOLLOWING SYMBOLS & ABBREVIATIONS HAVE BEEN USED:

SIP = SURFACE INLET PIT (NO LINTEL)
DP = Ø150 DOWNPIPE
X [100.00] = PROPOSED FINISHED SURFACE LEVEL

= DENOTES DISABLED PARKING BAY AT 2.5% MAX. GRADE

= DENOTES ABOVE GROUND DETENTION, **TWL = RL 4.40, VOLUME = 46.83m³**

STORMWATER DRAINAGE STRATEGY

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- BOX GUTTERS & DOWNPIPES ARE DESIGNED TO ACCEPT A 1:100 YEAR ARI STORM EVENT
- ALL PITS & PIPES ARE DESIGNED TO ACCEPT A 1:20 YEAR ARI STORM EVENT
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- SQID'S USED ON THIS SITE INCLUDE:
  - BELOW GROUND OSD TANK

ON-SITE DETENTION DESIGN SUMMARY

TOTAL SITE AREA ON DP = 3,090 m²

DRAINS MODEL HAS BEEN PREPARED FOR CALCULATION OF PRE & POST DEVELOPMENT FLOWS.

PRE-DEVELOPMENT IMPERVIOUS AREA	= 0 m² (0% OF SITE)
POST-DEVELOPMENT IMPERVIOUS AREA	= 2,860 m² (92.6%)
TOTAL SITE DRAINING TO OSD	= 92.6%
TOTAL OSD STORAGE VOLUME REQUIRED	= 56.0 m³
VOLUME IN PAVEMENT PONDING	= 46.8m³
VOLUME IN PIPE STORAGE	= 7.0m³
VOLUME IN PIT STORAGE	= 2.3m³
TOTAL OSD VOLUME PROVIDED	= 56.1 m³
ORIFICE PLATE	= Ø230 mm

PRE & POST DEVELOPMENT FLOWS

	5 YEAR ARI	10 YEAR ARI	20 YEAR ARI	50 YEAR ARI	100 YEAR ARI
PRE - DEVELOPMENT FLOW (l/s)	63	77	98	118	134
POST - DEVELOPMENT FLOW (l/s)	63	76	89	92	101
STORAGE REQUIRED (m³)	33.8	38.5	43.2	49.1	56.0

NOTE :
- ALL STORMWATER RUNOFF WILL BE DISCHARGE INTO THE EXISTING PIT WITH A EXISTING Ø375 OUTLET PIPE.
- FOR 5 YEARS UP TO 50 YEARS ARI STORM EVENT, THE STORMWATER DISCHARGE FLOW MUST BE LIMITED TO POST DEVELOPMENT EQUAL OR LESS THAN PRE-DEVELOPMENT FLOW.
- FOR A 100 YEAR ARI STORM EVENT ALL STORMWATER RUNOFF FROM PROPOSED DEVELOPMENT MUST BE LIMITED TO 108 L/s. (LIMITED TO THE DISCHARGE FLOW FROM THE EXISTING PIT WITH Ø375 PIPE)

FOR APPROVAL

A1 ORIGINAL SIZE

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PROPOSED INDUSTRIAL BUILDING

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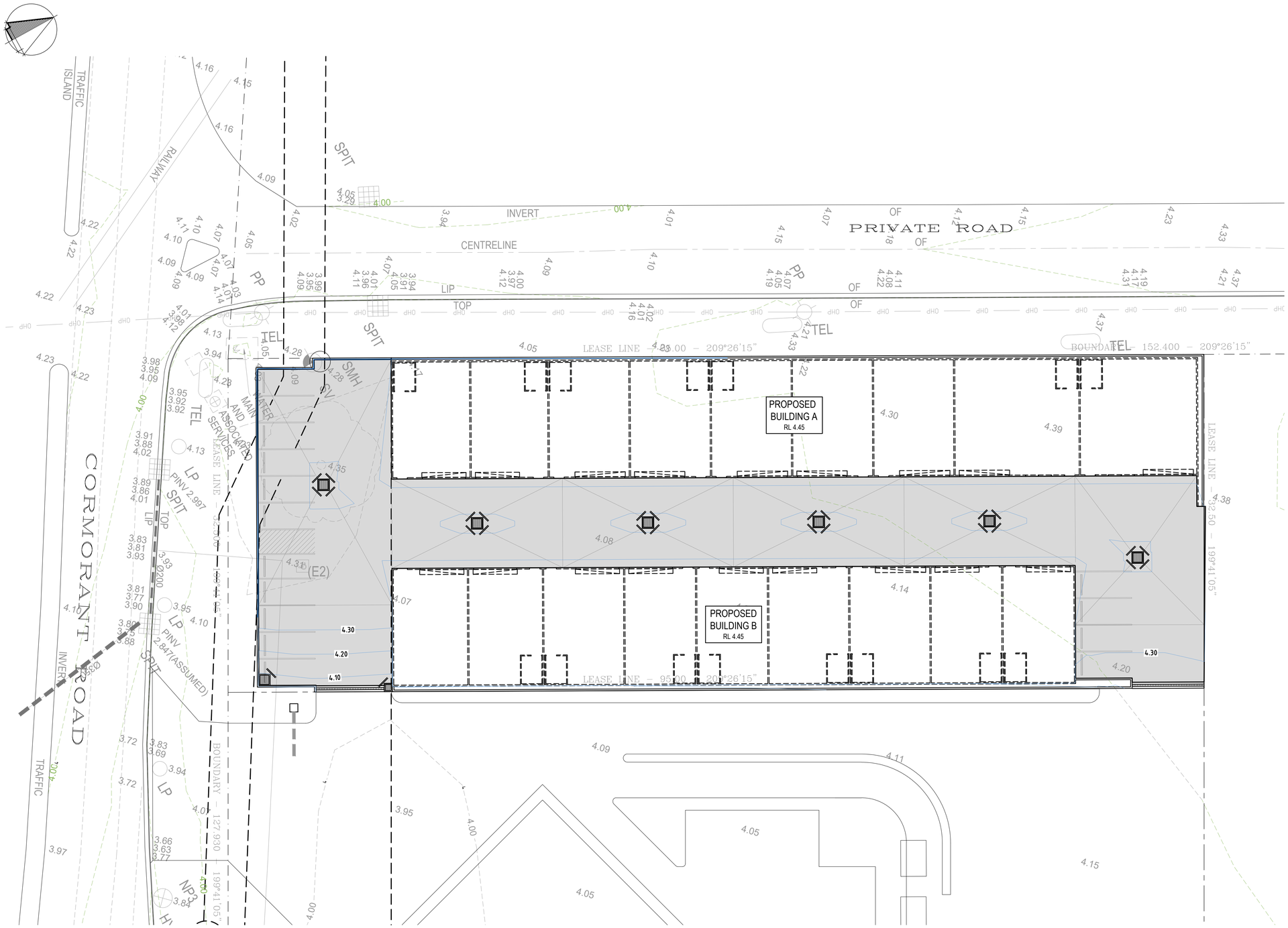
For Brown Commercial Building

STORMWATER DRAINAGE PLAN

DESIGN	DRAWN	DATE	PROJECT No.
SWH	RCL	JAN 2024	10747
CHECKED	APPROVED	SCALE	DRG No.
		1:200	C04 - B



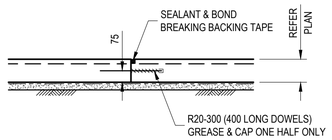
EXTERNAL PAVEMENT LAYOUT PLAN

1:200

DENOTES **150 THICK SLAB** WITH **SL82 MESH TOP** THROUGHOUT
CONCRETE STRENGTH = **32 MPa**

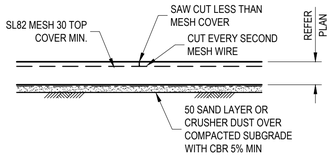
2-N12 (75 SPACING 1200 LONG) TRIMMERS TOP SHALL BE LOCATED 50 FROM ALL RE-ENTRANT CORNERS, TYPICAL U.N.O.

REINFORCEMENT COVER TO GROUND FLOOR SLAB SHALL BE AS FOLLOWS:
- 40mm - TO UNPROTECTED GROUND
- 40mm - EXTERNAL EXPOSURE
- 30mm - TO A MEMBRANE IN CONTACT WITH GROUND
- 30mm - INTERNAL EXPOSURE



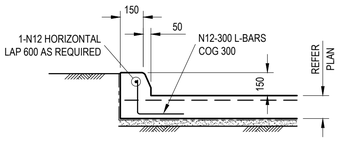
CONSTRUCTION JOINT (C.J.) DETAIL

1:20



SAWN JOINT (S.J.) DETAIL

1:20



INTEGRAL KERB DETAIL

1:20

FOR APPROVAL

A1 ORIGINAL SIZE

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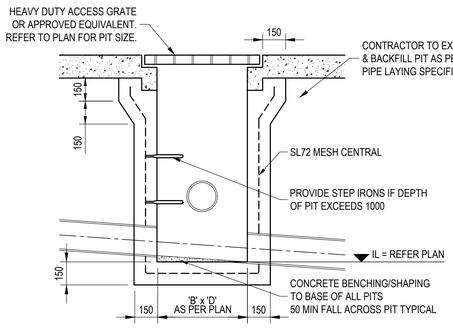
EXTERNAL PAVEMENT PLAN AND DETAILS

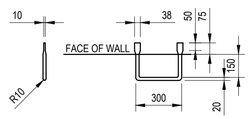
DESIGN	DRAWN	DATE	PROJECT No.
SWH	RCL	JAN 2024	10747
CHECKED	APPROVED	SCALE	DRG No.
		1:200	C05 - B



TYPICAL SURFACE INLET PIT DETAIL

1:20

TYPICAL FOR ALL PITS IN DRIVEWAY/CARPARK AREAS.



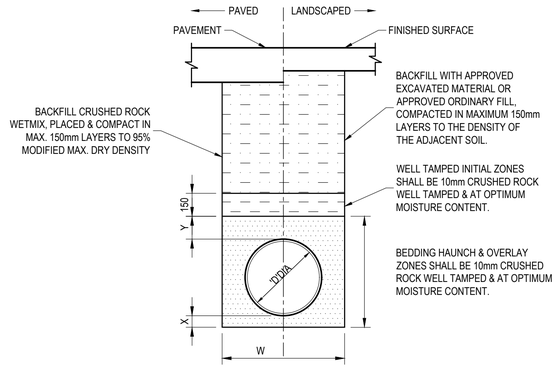
STEP IRONS FOR DRAINAGE PITS

NOTE:

1. FIRST RUNG 150mm DOWN FROM TOP, THEN SPACED AT 300 CENTRES.
2. STEP IRON MATERIAL, 20m DIAMETER MILD STEEL, HEAVY GALVANISED.

STEP IRONS FOR DRAINAGE PITS

1:20

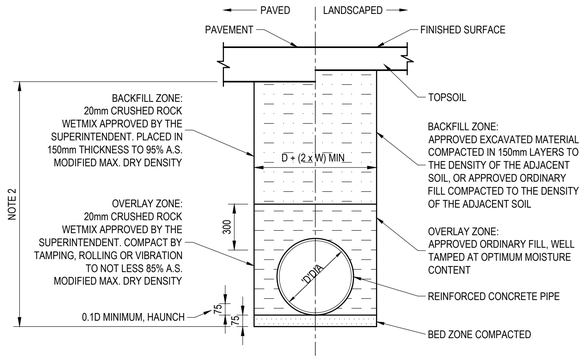


NOTE:

1 REFER TO PIPE LAYING SPECIFICATIONS FOR DETAILS.

PIPE DIA 'D'	W	X MIN	Y
100-150	300	75	75
225-300	600	75	75

UPVC PIPE



NOTE:

1 REFER TO PIPE LAYING SPECIFICATION FOR DETAILS.
2 BACKFILL OVERLAY & BEDDING ZONES 20mm CRUSHED ROCK COMPACT BY TAMPING ROLLING OR VIBRATION TO NOT LESS THAN 85% A.S. STD. MAX. DRY DENSITY.

D	W
150-300	150
375-750	300
+750	600

REINFORCED CONCRETE PIPE

TYPICAL PIPE LAYING DETAIL

1:20

TYPICAL GRATED DRAIN DETAIL

1:20

FOR APPROVAL

A1 ORIGINAL SIZE

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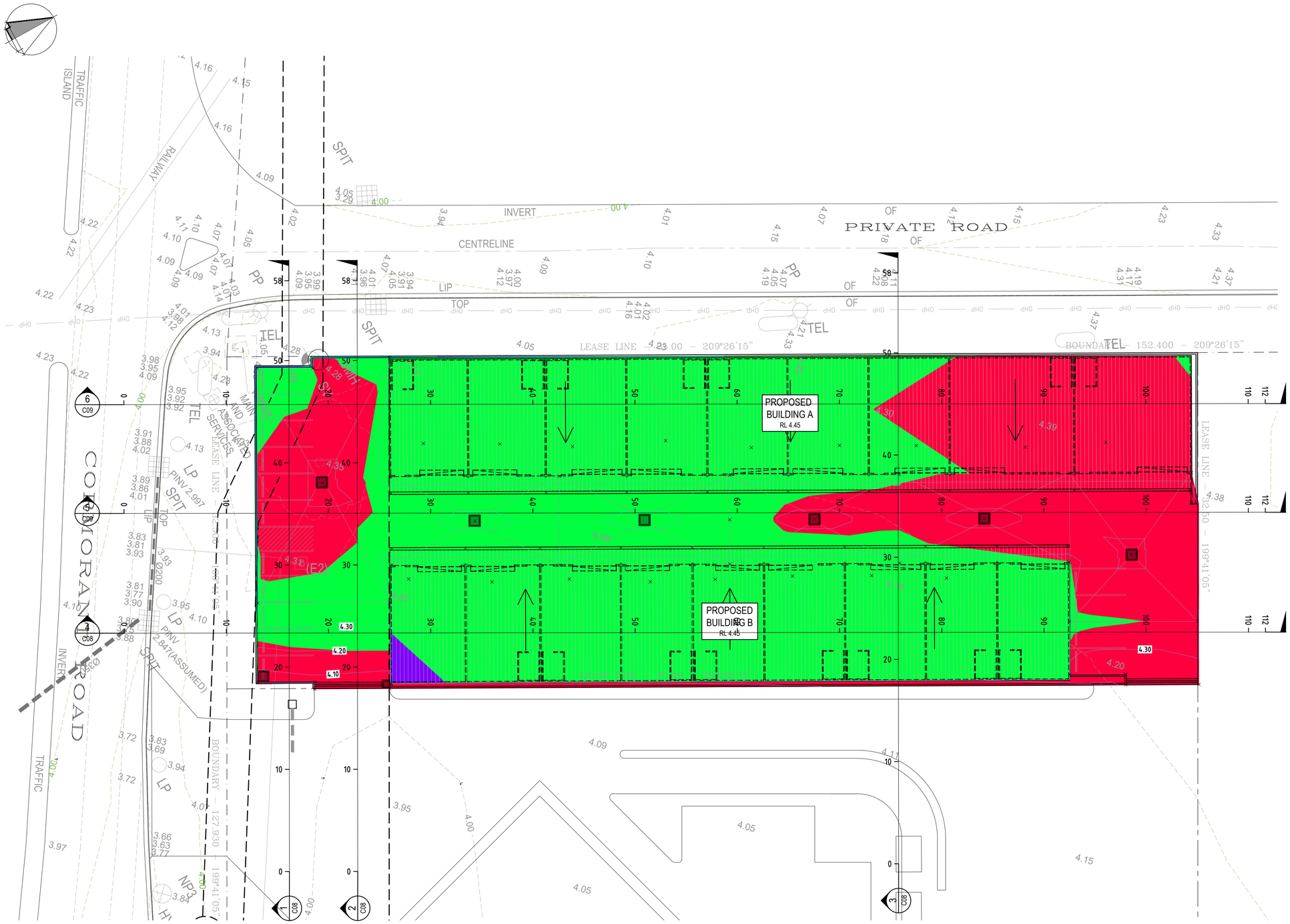
PROPOSED INDUSTRIAL BUILDING

295 Cormorant Road, Kooragang

For Brown Commercial Building

STORMWATER DETAILS

DESIGN	DRAWN	DATE	PROJECT No.
SWH	RCL	JAN 2024	10747
CHECKED	APPROVED	SCALE	DRG No.
		1:20	C06 - B



BULK EARTHWORKS CUT AND FILL PLAN

1:200

Cut/Fill Summary

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
Cut and Fill Volume - proposed less 150mm	1.000	1.000	2969.055sq.m	74.547 Cu. M.	273.537 Cu. M.	198.989 Cu. M.<Fill>
Totals			2969.055sq.m	74.547 Cu. M.	273.537 Cu. M.	198.989 Cu. M.<Fill>

Surface Analysis: Elevation Ranges

Number	Color	Minimum Elevation (m)	Maximum Elevation (m)	
1		-0.250	0.000	CUT
2		0.000	0.250	FILL
3		0.250	0.500	

FOR APPROVAL

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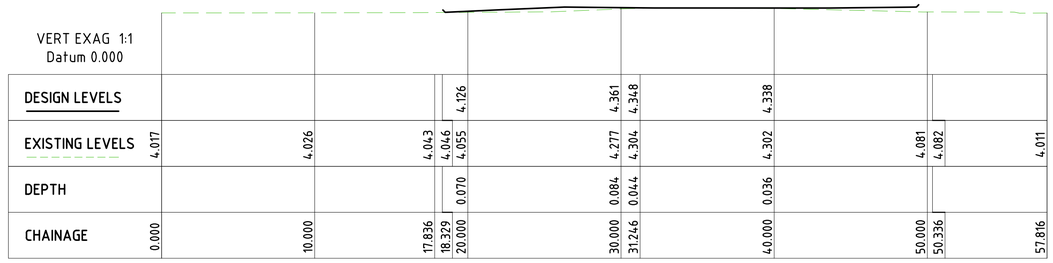
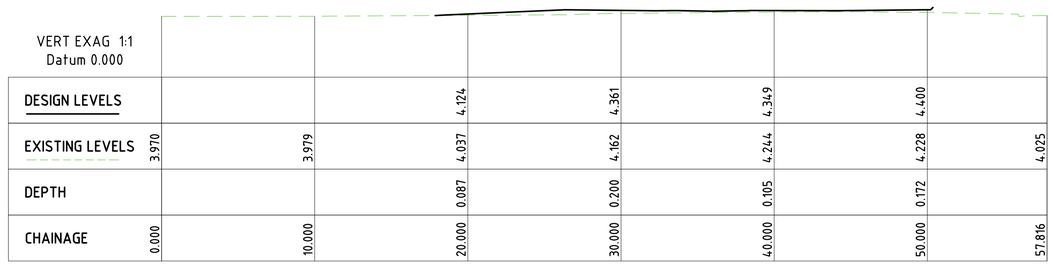
BULK EARTHWORKS CUT AND FILL PLAN

DESIGN	DRAWN	DATE	PROJECT No.
SWH	RCL	JAN 2024	10747
CHECKED	APPROVED	SCALE	DRG No.
		1:200	C07 - B



SECTION 1 / C07
1:200



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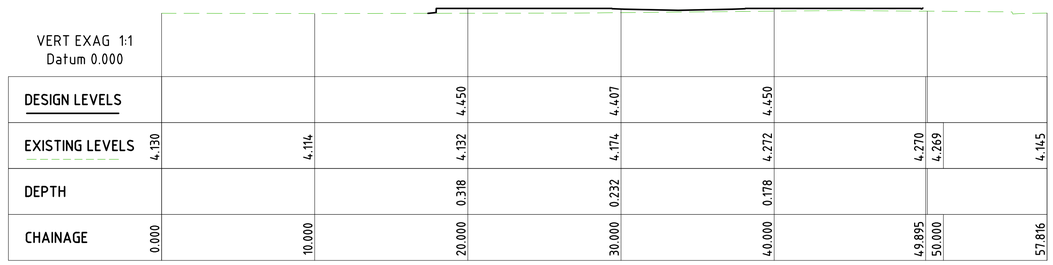
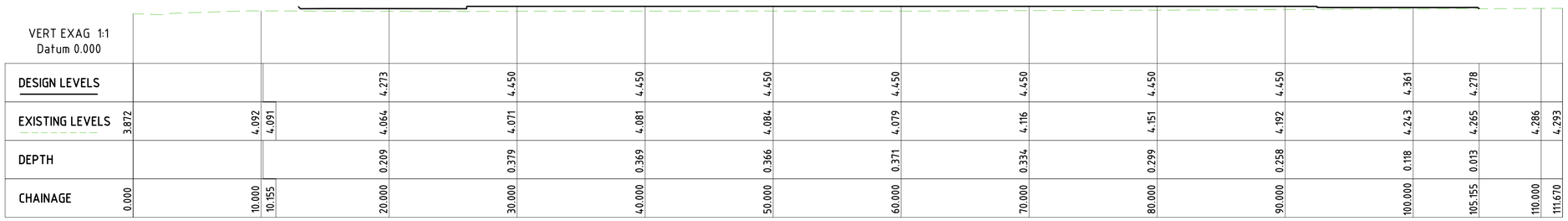


SECTION 3 / C07
1:200



SECTION 4 / C07
1:200

FOR APPROVAL

A1 ORIGINAL SIZE

REVISION	DATE	AMENDMENT DESCRIPTION
B	18.04.24	ISSUED FOR APPROVAL
A	18.01.24	ISSUED FOR APPROVAL

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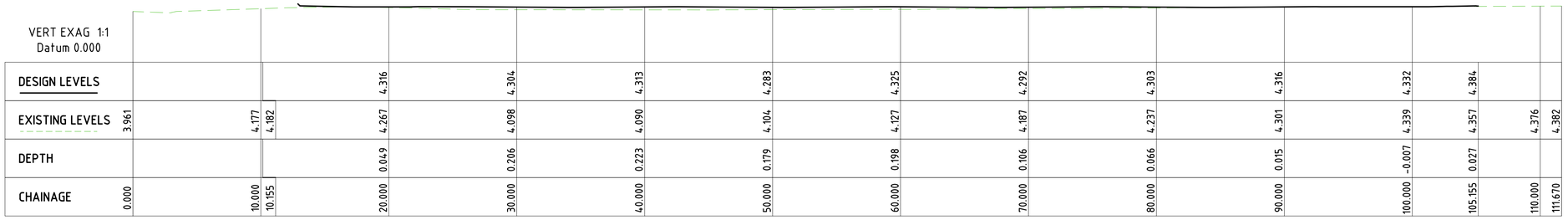
PROPOSED INDUSTRIAL BUILDING

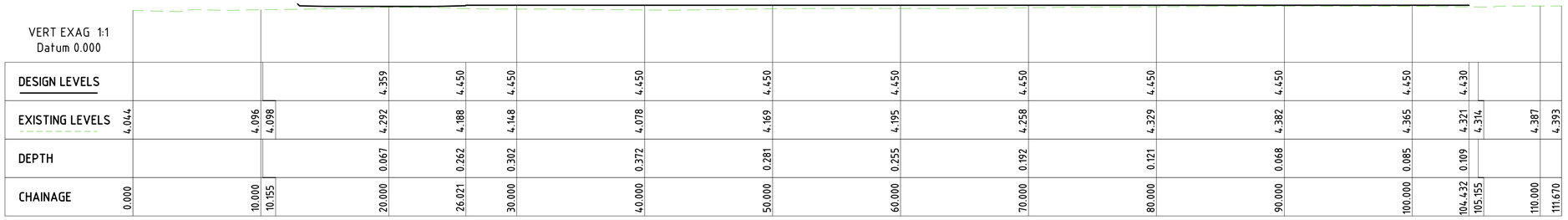
295 Cormorant Road, Kooragang
For Brown Commercial Building

SITE CROSS SECTION - SHT 1 OF 2

DESIGN	DRAWN	DATE	PROJECT No.
SWH	RCL	JAN 2024	10747
CHECKED	APPROVED	SCALE	DRG No.
		1:100	C08 - B



SECTION 5 / C07
1:200



SECTION 6 / C07
1:200

FOR APPROVAL

A1 ORIGINAL SIZE

REVISION	DATE	AMENDMENT DESCRIPTION
B	18.04.24	ISSUED FOR APPROVAL
A	18.01.24	ISSUED FOR APPROVAL

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PROPOSED INDUSTRIAL BUILDING

295 Cormorant Road, Kooragang
For Brown Commercial Building

SITE CROSS SECTION - SHT 2 OF 2

DESIGN	DRAWN	DATE	PROJECT No.
SWH	RCL	JAN 2024	10747
CHECKED	APPROVED	SCALE	DRG No.
		1:100	C09 - B