

SEKISUI HOUSE

49 BLACKBUTTS ROAD
FRENCHS FOREST
CIVIL ENGINEERING WORKS
S4.55 - (DA 2024/0492)

DRAWING SCHEDULE

DRAWING NUMBER	DESCRIPTION
230057-00-DA-C01.01	COVER SHEET AND DRAWING SCHEDULE
230057-00-DA-C01.21	SPECIFICATION NOTES - SHEET 01
230057-00-DA-C01.22	SPECIFICATION NOTES - SHEET 02
230057-00-DA-C01.41	GENERAL ARRANGEMENT PLAN
230057-00-DA-C03.01	EROSION AND SEDIMENTATION CONTROL PLAN
230057-00-DA-C03.21	EROSION AND SEDIMENTATION CONTROL DETAILS
230057-00-DA-C04.01	EARTHWORKS CUT AND FILL PLAN
230057-00-DA-C04.21	EARTHWORKS CUT AND FILL SECTIONS
230057-00-DA-C05.01	SITWORKS AND STORMWATER MANAGEMENT PLAN - SHEET 01
230057-00-DA-C05.02	SITWORKS AND STORMWATER MANAGEMENT PLAN - SHEET 02
230057-00-DA-C06.01	ROAD TYPICAL CROSS SECTIONS
230057-00-DA-C07.01	ROAD LONGITUDINAL SECTION
230057-00-DA-C11.01	PAVEMENT, SIGNAGE AND LINEMARKING PLAN - SHEET 01
230057-00-DA-C11.02	PAVEMENT, SIGNAGE AND LINEMARKING PLAN - SHEET 02
230057-00-DA-C13.01	SITE SECTIONS
230057-00-DA-C14.01	SITWORKS DETAILS
230057-00-DA-C15.01	RETAINING WALL ELEVATIONS - SHEET 01
230057-00-DA-C15.02	RETAINING WALL ELEVATIONS - SHEET 02
230057-00-DA-C17.01	OSD TANK PLAN AND SECTION
230057-00-DA-C18.01	STORMWATER DETAILS
230057-00-DA-C20.01	PRE-DEVELOPMENT CATCHMENT PLAN
230057-00-DA-C20.21	POST-DEVELOPMENT CATCHMENT PLAN
230057-00-DA-C22.01	TURNING PATH PLAN - SHEET 01
230057-00-DA-C22.02	TURNING PATH PLAN - SHEET 02

REV.	DATE	DESCRIPTION	DRN.	DES.	VERIF.	APPD.
5	25/06/2025	ISSUED FOR S4.55 APPROVAL	DK	AL		MKH
4	31/03/2025	UPDATES ADDRESSING COUNCIL COMMENTS DA ISSUE	DK	AL		MKH
3	15/01/2025	ISSUED FOR DEVELOPMENT APPLICATION	DK	AL		MKH
2	14/03/2024	ISSUED FOR DEVELOPMENT APPLICATION	ZW	LD		MKH
1	7/03/2024	ISSUED FOR DEVELOPMENT APPLICATION	ZW	LD		MKH

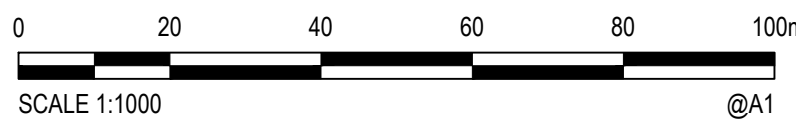
Client



SEKISUI HOUSE



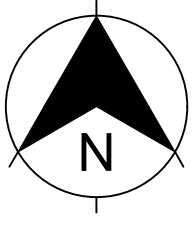
Scale



SCALE 1:1000 @A1

The copyright of this drawing remains with Enspire Solutions Pty Ltd and must not be copied wholly or in part without the permission of Enspire Solutions Pty Ltd.

North





Enspire Solutions Pty Ltd
Level 4, 153 Walker Street, North Sydney NSW 2060
ABN: 71 624 801 690
Phone: 02 9922 6135
enspiresolutions.com.au

Scale 1:1000	Status FOR INFORMATION ONLY NOT TO BE USED FOR CONSTRUCTION
Date 07/03/2024	Project Number/Drawing Number 230057-00-DA-C01.01
Size A1	Revision 5
Datum GDA 2020	

1. ORIGIN OF SURVEY

PROJECT:	51298 001DT	DATE: 20/04/2021
CARRIED OUT BY:	LTS	
SSM/PM:	PERMANENT MARK 3392	
RL:	164.23 AHD	
2. THE EXISTING SITE CONDITIONS SHOWN ON THE FOLLOWING DRAWINGS HAVE BEEN SUPPLIED BY REGISTERED SURVEYORS TO PROVIDE A BASIS FOR DESIGN. THE USE OF THIS SURVEY BASE DOES NOT GUARANTEE THE ACCURACY OR COMPLETENESS OF THE SURVEY BASE OR ITS SUITABILITY AS A BASIS FOR CONSTRUCTION DRAWINGS.
3. SHOULD DISCREPANCIES BE ENCOUNTERED DURING CONSTRUCTION BETWEEN THE SURVEY DATA AND ACTUAL FIELD DATA, CONTACT THE SUPERINTENDENT.
4. THE RELATIONSHIP OF IMPROVEMENTS TO BOUNDARIES ARE DIAGRAMMATIC ONLY. WHERE DISTANCES TO BOUNDARIES ARE CRITICAL THEY SHOULD BE CONFIRMED ON SITE PRIOR TO CONSTRUCTION BY FURTHER SURVEY.

1. ALL WORKS TO BE CONSTRUCTED IN ACCORDANCE WITH NORTHERN BEACHES COUNCIL STANDARDS.
2. NORTHERN BEACHES COUNCIL STANDARD DETAILS TO BE USED WHERE POSSIBLE.
3. UTILITY ADJUSTMENTS AT DEVELOPERS EXPENSE.
4. CONDUITS TO BE PLACED WHERE REQUIRED BY THE RELEVANT AUTHORITIES.

THE CONTRACTOR IS TO NOTIFY THE ENGINEER OF THE FOLLOWING HOLD POINT INSPECTIONS (MIN 48 HOURS NOTICE)

1. STORMWATER PIPE AND PIPE INSTALLATION PRIOR TO BACKFILL
2. VEHICULAR CROSSING AND LAYBACK FORMWORK PRIOR TO CONCRETE POUR (COUNCIL VERGE WORKS)
3. RAINWATER REUSE TANK FORMWORK PRIOR TO CONCRETE POUR
4. BELOW GROUND FIRST FLUSH DEVICE PRIOR TO BACKFILL
5. FINAL INSPECTION ON COMPLETION OF CIVIL WORKS

1. ALL UTILITY SERVICES INDICATED ON THE DRAWINGS ORIGINATE FROM SUPPLIED DATA, SURVEY INFORMATION AND SERVICE AUTHORITY INFORMATION. THE SERVICE INFORMATION HAS BEEN PREPARED ONLY TO SHOW THE PRESENCE AND APPROXIMATE POSITION OF ANY KNOWN SERVICES. THEREFORE THEIR ACCURACY AND COMPLETENESS IS NOT GUARANTEED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE AND CONFIRM THE LOCATION AND LEVEL OF ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY WORK. ANY DISCREPANCIES SHALL BE REPORTED TO THE SUPERINTENDENT. CLEARANCES SHALL BE OBTAINED FROM THE RELEVANT SERVICE AUTHORITY. ENSPIRE SOLUTIONS CAN NOT GUARANTEE THAT THE SERVICES INFORMATION SHOWN ON THESE DRAWINGS ACCURATELY INDICATES THE PRESENCE OR ABSENCE OF SERVICES OR THEIR LOCATION AND WILL ACCEPT NO LIABILITY FOR INACCURACIES IN THE SERVICES INFORMATION SHOWN FROM ANY CAUSE WHATSOEVER.
2. CARE TO BE TAKEN WHEN EXCAVATING NEAR EXISTING SERVICES. NO MECHANICAL EXCAVATIONS ARE TO BE UNDERTAKEN OVER ALL LIVE SERVICES. HAND EXCAVATION ONLY IN THESE AREAS.
3. THE CONTRACTOR SHALL PROTECT AND MAINTAIN ALL EXISTING SERVICES THAT ARE TO BE RETAINED IN THE VICINITY OF THE PROPOSED WORKS. ANY AND ALL DAMAGE TO THESE SERVICES AS A RESULT OF THESE WORKS SHALL BE REPAIRED BY THE CONTRACTOR UNDER THE DIRECTION OF THE SUPERINTENDENT, AND AT NO EXTRA COST.
4. THE CONTRACTOR SHALL ALLOW IN THE PROGRAM FOR ADJUSTMENT (IF REQUIRED) OF EXISTING SERVICES IN AREAS AFFECTED BY WORKS.
5. THE CONTRACTOR SHALL ALLOW IN THE PROGRAM FOR THE CAPPING OFF, EXCAVATION AND REMOVAL (IF REQUIRED) OF EXISTING SERVICES IN AREAS AFFECTED BY WORKS UNLESS DIRECTED OTHERWISE ON THE DRAWINGS OR BY THE SUPERINTENDENT.
6. THE CONTRACTOR SHALL ENSURE THAT AT ALL TIMES SERVICES TO ALL BUILDINGS NOT AFFECTED BY THE WORKS ARE NOT DISRUPTED.
7. PRIOR TO COMMENCEMENT OF ANY WORKS THE CONTRACTOR SHALL GAIN APPROVAL OF THE PROGRAM FOR THE RELOCATION AND/OR CONSTRUCTION OF TEMPORARY SERVICES AND FOR ANY ASSOCIATED INTERRUPTION OF SUPPLY.
8. THE CONTRACTOR SHALL CONSTRUCT TEMPORARY SERVICES TO MAINTAIN EXISTING SUPPLY TO BUILDINGS REMAINING IN OPERATION DURING WORKS TO THE SATISFACTION AND APPROVAL OF THE SUPERINTENDENT. ONCE DIVERSION IS COMPLETE AND COMMISSIONED THE CONTRACTOR SHALL REMOVE ALL SUCH TEMPORARY SERVICES AND MAKE GOOD TO THE SATISFACTION OF THE SUPERINTENDENT.
9. PRIOR TO ANY DEMOLITION, EXCAVATION OR CONSTRUCTION A THOROUGH SEARCH OF ALL SERVICE AUTHORITIES SHOULD BE MADE TO DETERMINE THE POSSIBLE LOCATION OF ANY FURTHER UNDERGROUND SERVICES.
10. AUTHORITY PLANS GENERALLY SHOW ONLY THE PRESENCE OF CABLES AND PLANT AND DO NOT WARRANT OR GUARANTEE THAT SUCH PLANS ARE ACCURATE. DO NOT ASSUME DEPTH OR ALIGNMENT OF CABLES OR PLANT AS THESE VARY SIGNIFICANTLY. THE CONTRACTOR HAS A DUTY OF CARE WHEN EXCAVATING NEAR EXISTING SERVICES AND PLANT. BEFORE USING MACHINE EXCAVATORS SERVICES MUST FIRST BE PHYSICALLY EXPOSED BY SOFT DIG POTHOLING TO IDENTIFY ITS LOCATION.
11. THE CONTRACTOR IS TO UNDERTAKE A BEFORE YOU DIG AUSTRALIA (BYDA) SEARCH PRIOR TO ANY EXCAVATION AND MAINTAIN A CURRENT SET ON-SITE DURING EXCAVATION WORKS.
12. THE LOCATIONS OF UNDERGROUND SERVICES SHOWN IN THIS SET OF DRAWINGS HAVE BEEN PLOTTED FROM SURVEY INFORMATION AND SERVICE AUTHORITY INFORMATION. THE SERVICE INFORMATION HAS BEEN PREPARED ONLY TO SHOW THE APPROXIMATE POSITIONS OF ANY KNOWN SERVICES AND MAY NOT BE AS CONSTRUCTED OR ACCURATE. ENSPIRE SOLUTIONS CAN NOT GUARANTEE THAT THE SERVICES INFORMATION SHOWN ON THESE DRAWINGS ACCURATELY INDICATES THE PRESENCE OR ABSENCE OF SERVICES OR THEIR LOCATION AND WILL ACCEPT NO LIABILITY FOR INACCURACIES IN THE SERVICES INFORMATION SHOWN FROM ANY CAUSE WHATSOEVER.
13. CONTRACTORS SHALL TAKE DUE CARE WHEN EXCAVATING ONSITE INCLUDING HAND EXCAVATION WHERE NECESSARY. CONTRACTORS ARE TO CONTACT THE RELEVANT SERVICE AUTHORITY PRIOR TO COMMENCEMENT OF EXCAVATION WORKS. CONTRACTORS ARE TO UNDERTAKE A SERVICES SEARCH, PRIOR TO COMMENCEMENT OF WORKS ON SITE. SEARCH RESULTS ARE TO BE KEPT ON SITE AT ALL TIMES.

EXISTING

OVERHEAD ELECTRICAL	e oh
COMMUNICATIONS	c
SEWER	s
GAS	g
WATER	w



GENERAL INSTRUCTIONS

1. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE CONTROL OF EROSION AND SEDIMENTATION TO THE SATISFACTION OF COUNCIL, NSW OFFICE OF WATER, DEPARTMENT OF PLANNING, INDUSTRY AND ENVIRONMENT. THE EROSION AND SEDIMENTATION CONTROLS SHOWN ON THE DRAWINGS SHALL ONLY BE USED AS A GUIDE BY THE CONTRACTOR, AND SHALL REPRESENT THE MINIMUM REQUIREMENT ONLY.
2. THE CONTRACTOR SHALL ENSURE THAT ALL SOIL AND WATER MANAGEMENT WORKS ARE LOCATED TO SUIT CONSTRUCTION STAGING AND WORK PRACTICES OR AS OTHERWISE DIRECTED BY THE SUPERINTENDENT.
ALL WORK SHALL BE GENERALLY CARRIED OUT IN ACCORDANCE WITH
 - a. LOCAL AUTHORITY REQUIREMENTS
 - b. EPA REQUIREMENTS
 - c. LANDCOM MANUAL "MANAGING URBAN STORMWATER, SOILS AND CONSTRUCTION", 4th edition, MARCH 2004.
3. MAINTAIN THE EROSION CONTROL DEVICES TO THE SATISFACTION OF THE SUPERINTENDENT AND THE LOCAL AUTHORITY.
4. WHEN STORMWATER PITS ARE CONSTRUCTED, PREVENT SITE RUNOFF ENTERING UNLESS SEDIMENT FENCES ARE ERECTED AROUND PITS.
5. CONTRACTOR IS TO ENSURE ALL EROSION & SEDIMENT CONTROL DEVICES ARE MAINTAINED IN GOOD WORKING ORDER AND OPERATE EFFECTIVELY. REPAIRS AND OR MAINTENANCE SHALL BE UNDERTAKEN AS REQUIRED, PARTICULARLY FOLLOWING STORM EVENTS.

WHERE PRACTICAL, THE SOIL EROSION HAZARD ON THE SITE WILL BE KEPT AS LOW AS POSSIBLE. TO THIS END, WORKS SHOULD BE UNDERTAKEN IN THE FOLLOWING SEQUENCE:

- INSTALL A SEDIMENT FENCE ALONG THE BOUNDARIES AS SHOWN ON PLAN. REFER DETAIL.
- CONSTRUCT STABILISED CONSTRUCTION ENTRANCE TO LOCATION AS DETERMINED BY SUPERINTENDENT/ENGINEER. REFER DETAIL.
- INSTALL SEDIMENT BASIN AS SHOWN ON PLAN, INSTALL SEDIMENT TRAPS AS SHOWN ON PLAN.
- UNDERTAKE SITE DEVELOPMENT WORKS IN ACCORDANCE WITH THE ENGINEERING PLANS. WHERE POSSIBLE, PHASE DEVELOPMENT SO THAT LAND DISTURBANCE IS CONFINED TO AREAS OF WORKABLE SIZE

7. DURING WINDY WEATHER, LARGE, UNPROTECTED AREAS WILL BE KEPT MOIST (NOT WET) BY SPRINKLING WITH WATER TO KEEP DUST UNDER CONTROL.

- STOCKPILES WILL NOT BE LOCATED WITHIN 2 METRES OF HAZARD AREAS, INCLUDING LIKELY AREAS OF CONCENTRATED OR HIGH VELOCITY FLOWS SUCH AS WATERWAYS. WHERE THEY ARE BETWEEN 2 AND 5 METRES FROM SUCH AREAS, SPECIAL SEDIMENT CONTROL MEASURES SHOULD BE TAKEN TO MINIMISE POSSIBLE POLLUTION TO DOWNSTREAM WATERS, E.G. THROUGH INSTALLATION OF SEDIMENT FENCING.
- ANY SAND USED IN THE CONCRETE CURING PROCESS (SPREAD OVER THE SURFACE) WILL BE REMOVED AS SOON AS POSSIBLE AND WITHIN 10 WORKING DAYS FROM PLACEMENT.
- WATER WILL BE PREVENTED FROM ENTERING THE PERMANENT DRAINAGE SYSTEM UNLESS IT IS RELATIVELY SEDIMENT FREE, I.E. THE CATCHMENT AREA HAS BEEN PERMANENTLY LANDSCAPED AND/OR ANY LIKELY SEDIMENT HAS BEEN FILTERED THROUGH AN APPROVED STRUCTURE.
- TEMPORARY SOIL AND WATER MANAGEMENT STRUCTURES WILL BE REMOVED ONLY AFTER THE LANDS THEY ARE PROTECTING ARE REHABILITATED.
- ACCEPTABLE RECEPTORS WILL BE PROVIDED FOR CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHINGS, LIGHT-WEIGHT WASTE MATERIALS AND LITTER.
- ANY EXISTING TREES WHICH FORM PART OF THE FINAL LANDSCAPING PLAN WILL BE PROTECTED FROM CONSTRUCTION ACTIVITIES IN ACCORDANCE WITH SECTION 4 OF AS4970 "PROTECTION OF TREES ON DEVELOPMENT SITES" AND COUNCIL CONSENT CONDITIONS.

AT THE COMMENCEMENT OF THE CUT AND FILLING OPERATIONS FOR BUILDING WORKS A GEOTECHNICAL ENGINEER IS TO VISIT THE SITE & REQUIRE THE SUITABILITY OF THE METHODOLOGY OF ACHIEVING THE REQUIRED BUILDING PLATFORMS AND COMPACTION REQUIREMENTS. SUBSEQUENTLY, THE HEAD CONTRACTOR IS TO CONFIRM, IN WRITING TO THE SUPERINTENDENT THAT THE METHODOLOGY APPROVED AT THE TIME OF THE GEOTECHNICAL ENGINEERS VISIT WAS MAINTAINED DURING ALL THE BULK EARTHWORKS PROCESS.

2. STRIP TOPSOIL, ORGANIC MATTER AND RUBBLE FROM CONSTRUCTION AREA TO EXPOSE NATURALLY OCCURRING MATERIAL AND STOCKPILE ON SITE AS DIRECTED BY THE SUPERINTENDENT.

3. WHERE FILLING, STRUCTURAL SLABS OR PAVEMENTS ARE REQUIRED, PROOF ROLL THE EXPOSED NATURAL SURFACE WITH A MINIMUM OF TEN PASSES OF A SMOOTH DRUM NON-VIBRATING ROLLER (MINIMUM STATIC WEIGHT OF 10 TONNES) TO DETECT THEN REMOVE SOFT SPOTS (AREAS WITH MORE THAN 2mm MOVEMENT UNDER ROLLER) IN THE PRESENCE OF THE SUPERINTENDENT. THE CONTRACTOR IS TO ALLOW TO REMOVE AND REPLACE A PROVISIONAL QUANTITY OF UNSUITABLE SUBGRADE MATTER.

4. ALL SOFT, WET OR UNSUITABLE MATERIAL IS TO BE REMOVED AS DIRECTED BY THE SUPERINTENDENT AND REPLACED WITH APPROVED MATERIAL SATISFYING THE REQUIREMENTS LISTED BELOW.

5. EXCAVATED MATERIAL IS NOT TO BE USED AS STRUCTURAL FILL UNLESS APPROVED BY THE GEOTECHNICAL ENGINEER.

6. THE CONTRACTOR IS TO PROVIDE CERTIFICATES VERIFYING THE QUALITY OF IMPORTED MATERIAL FOR THE SUPERINTENDENTS APPROVAL.

7. ALL FILL MATERIAL SHALL BE PLACED IN MAXIMUM LAYER THICKNESS TO COUNCIL SPECIFICATIONS AND COMPACTED AT OPTIMUM MOISTURE CONTENT (+/- 2%) TO ACHIEVE A DRY DENSITY DETERMINED IN ACCORDANCE WITH AS1289 E3.1 OF NOT LESS THAN THE FOLLOWING STANDARD MINIMUM DRY DENSITY IN ACCORDANCE WITH AS1289 E5.1.1:

LOCATION	COMPACTION REQUIREMENT
UNDER BUILDING SLABS	98% SMD
LANDSCAPED AREAS	95% SMD
ROADS & PAVED AREAS	100% SMD

8. FOR NON COHESIVE MATERIAL, COMPACT TO NOT LESS THAN

UNDER ROAD	80% DENSITY
OTHER AREA	75% DENSITY

9. THE CONTRACTOR IS TO ALLOW FOR COMPACTION TESTING BY NATA REGISTERED LABORATORY FOR PLATFORMS AND FILL LAYERS IN ACCORDANCE WITH THE LATEST VERSION OF AS3798 - FOR TYPE 1 OPERATIONS (MINIMUM 3 TESTS PER LAYER).

10. FREQUENCY OF COMPACTION TESTING SHALL NOT BE LESS THAN:

- 1 TEST PER 200m² OF FILL PLACED PER LAYER OF FILL
- 3 TESTS PER VISIT
- 1 TEST PER 1000m² OF EXPOSED SUBGRADE

11. TESTING SHALL BE "LEVEL 1" UNDERTAKEN IN ACCORDANCE WITH AS 3798

12. WHERE TEST RESULTS ARE BELOW THE SPECIFIED COMPACTION, RECOMPACT AND RETEST UNTIL SPECIFIED COMPACTION STANDARD IS ACHIEVED.

13. ALLOW FOR EXCAVATION IN ALL MATERIALS AS FOUND U.N.O. NO ADDITIONAL PAYMENTS WILL BE MADE FOR EXCAVATION IN WET OR HARD GROUND.

14. REFER TO THE SITE SPECIFIC GEOTECHNICAL REPORT FOR GENERAL REQUIREMENTS ON SITE PREPARATION AND RE-USE OF EXISTING SITE MATERIAL AS ENGINEERED FILL.

15. THE CONTRACTOR SHALL PROGRAM THE EARTHWORKS OPERATION SO THAT THE WORKING AREAS ARE ADEQUATELY DRAINED DURING THE PERIOD OF CONSTRUCTION THE SURFACE SHALL BE GRADED AND SEALED OFF TO REMOVE DEPRESSIONS, ROLLER MARKS AND SIMILAR WHICH WOULD ALLOW WATER TO POND AND PENETRATE THE UNDERLYING MATERIAL. ANY DAMAGE RESULTING FROM THE CONTRACTOR NOT OBSERVING THESE REQUIREMENTS SHALL BE RECTIFIED AT THEIR COST.

16. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE AND MAINTAIN THE INTEGRITY OF ALL SERVICES, CONDUITS AND PIPES DURING CONSTRUCTION, SPECIFICALLY DURING THE BACKFILLING AND COMPACTION PROCEDURE. ANY AND ALL DAMAGE TO NEW OR EXISTING SERVICES AS A RESULT OF THESE WORKS SHALL BE REPAIRED BY THE CONTRACTOR AT NO EXTRA COST.

17. PROTECT FINAL SURFACE WITH EITHER A TEMPORARY LOOSE SOIL LAYER OR A GRANULAR SUB-BASE LAYER TO PREVENT DRYING OUT PRIOR TO ON-GROUND SLAB CONSTRUCTION.

1. ALL WORKS TO BE IN ACCORDANCE WITH LOCAL AUTHORITY REQUIREMENTS, SPECIFICATIONS AND AUSTRALIAN STANDARDS. CONFLICTS SHALL BE REFERRED TO THE SUPERINTENDENT FOR DIRECTION.
2. CONTRACTOR MUST VERIFY ALL DIMENSIONS AND EXISTING LEVELS ON SITE PRIOR TO COMMENCEMENT OF WORK. ANY DISCREPANCIES TO BE REPORTED TO THE SUPERINTENDENT.
3. THE CONTRACTOR IS TO DESIGN, OBTAIN APPROVALS AND CARRY OUT REQUIRED TEMPORARY TRAFFIC CONTROL PROCEDURES DURING CONSTRUCTION IN ACCORDANCE WITH TNSW AND LOCAL AUTHORITY REGULATIONS AND REQUIREMENTS.
4. THE CONTRACTOR IS TO OBTAIN ALL AUTHORITY APPROVALS AS REQUIRED.
5. RESTORE ALL PAVED, COVERED, GRASSED AND LANDSCAPED AREAS TO THEIR ORIGINAL CONDITION ON COMPLETION OF WORKS.
6. ON COMPLETION OF ANY TRENCHING WORKS, ALL DISTURBED AREAS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION, INCLUDING KERBS, FOOTPATHS, CONCRETE AREAS, GRAVEL, GRASSED AREAS AND ROAD PAVEMENTS.
7. THE CONTRACTOR SHALL ARRANGE ALL SURVEY SETOUT TO BE CARRIED OUT BY A REGISTERED SURVEYOR.
8. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING LEVELS ON SITE PRIOR TO LODGMENT OF TENDER AND ON SITE WORKS. THE PRICE AS TENDERED SHALL BE INCLUSIVE OF ALL WORKS SHOWN ON THE TENDER PROJECT DRAWINGS. ADDITIONAL PAYMENTS FOR WORKS SHOWN ON THE TENDER PROJECT DRAWINGS WILL NOT BE APPROVED.
9. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE ENGINEERING PLANS AND SPECIFICATIONS, AND ANY OTHER WRITTEN INSTRUCTIONS THAT MAY BE ISSUED RELATING TO DEVELOPMENT OF THE SUBJECT SITE.
10. THESE PLANS SHALL BE READ IN CONJUNCTION WITH ALL APPROVED DRAWINGS AND SPECIFICATIONS PREPARED BY OTHER PROJECT CONSULTANTS.
11. DO NOT OBTAIN DIMENSIONS BY SCALING THE DRAWINGS. ALL DIMENSION ARE IN MILLIMETERS (mm) AND ALL LEVELS ARE IN METRES (m), UNO. ALL LEVELS ARE TO AUSTRALIAN HEIGHT DATUM (AHD).
12. IN CASE OF DOUBT OR DISCREPANCY REFER TO THE SUPERINTENDENT FOR CLARIFICATION OR CONFIRMATION PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. OTHERWISE THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF REMEDIATION WORKS.
13. WHERE NEW WORKS ADJUT EXISTING THE CONTRACTOR SHALL ENSURE THAT A SMOOTH EVEN PROFILE, FREE FROM ABRUPT CHANGES IS OBTAINED.
14. THE CONTRACTOR SHALL COMPLY WITH ALL STATUTORY AND INDUSTRIAL REQUIREMENTS FOR PROVISION OF A SAFE WORKING ENVIRONMENT INCLUDING TRAFFIC CONTROL.
15. THE CONTRACTOR SHALL ENSURE THAT AT ALL TIMES ACCESS TO ALL BUILDINGS ADJACENT THE WORKS IS NOT DISRUPTED.
16. WHERE NECESSARY THE CONTRACTOR SHALL PROVIDE SAFE PASSAGE OF VEHICLES AND/OR PEDESTRIANS THROUGH OR BY THE SITE.
17. WHERE NOTED ON THE DRAWINGS THAT WORKS ARE TO BE CARRIED BY OTHERS, (eg ADJUSTMENT OF SERVICES), THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CO-ORDINATION OF THESE WORKS.
18. ALL VARIATIONS TO SPECIFIED PRODUCTS OR DESIGNS SHALL BE REFERRED TO THE DESIGN ENGINEER IN WRITING FOR APPROVAL.
19. EPA AND COMMUNITY REQUIREMENTS MUST BE ADHERED TO REGARDING THE LEVEL OF NOISE AND WORKING HOURS, TO ENSURE THAT RESIDENTS AND OTHER APPLICABLE NEIGHBOURHOODS TO THE SITE ARE NOT DISTURBED UNREASONABLY. THE GENERATION OF NOISE MUST BE MINIMISED.

TELSTRA'S PLANS SHOW ONLY THE PRESENCE OF CABLES AND PLANT. THEY ONLY SHOW THEIR POSITION RELATIVE TO ROAD BOUNDARIES, PROPERTY, FENCES ETC. AT THE TIME OF INSTALLATION AND TELSTRA DOES NOT WARRANT OR HOLD OUT THAT SUCH PLANS ARE ACCURATE. THEREAFTER DUE TO CHANGES THAT MAY OCCUR OVER TIME, DO NOT ASSUME DEPTH OR ALIGNMENT OF CABLES OR PLANT AS THESE VARY SIGNIFICANTLY. THE CONTRACTOR HAS A DUTY OF CARE WHEN EXCAVATING NEAR TELSTRA CABLES AND PLANT.

BEFORE USING MACHINE EXCAVATORS, TELSTRA PLANT MUST FIRST BE PHYSICALLY EXPOSED BY SOFT DIG POTHOLING TO IDENTIFY ITS LOCATION. TELSTRA WILL SEEK COMPENSATION FOR DAMAGES CAUSED TO ITS PROPERTY AND LOSSES CAUSED TO TELSTRA AND ITS CUSTOMERS.

[illegible]

Client



SEKISUI HOUSE

Scale	North
<p>The copyright of this drawing remains with Enspire Solutions Pty Ltd and must not be copied wholly or in part without the permission of Enspire Solutions Pty Ltd.</p>	



Inspire Solutions Pty Ltd
 Level 4, 153 Walker Street, North Sydney NSW 2060
 ABN: 71 624 801 690
 Phone: 02 9922 6135
inspiresolutions.com.au

Project	Scale
49 BLACKBUTTS ROAD	N.T.S
FRENCHS FOREST	Date
CIVIL ENGINEERING WORKS	07/03/2024
Title	Size
SPECIFICATION NOTES	A1
SHEET 01	Date
	GDA 2020

Status	
<p style="text-align: center;">FOR INFORMATION ONLY NOT TO BE USED FOR CONSTRUCTION</p>	
Project Number/Drawing Number	Revision
230057-00-DA-C01.21	3

STORMWATER DESIGN CRITERIA:
(A) ANNUAL EXCEEDANCE PROBABILITIES (AEP):

1% (1 IN 100)	PIPED NETWORK
1% (1 IN 100)	MAJOR (OVERLAND FLOW) SYSTEM

(B) RAINFALL INTENSITIES:
1987
RAINFALL FROM NORTHERN BEACHES COUNCIL WATER
MANAGEMENT FOR DEVELOPMENT POLICY.

(C) HYDROLOGIC METHOD:
DRAINS WITH LISAX METHOD

2. PIPES 375 DIA. AND LARGER TO BE REINFORCED CONCRETE CLASS "2"
APPROVED SPIGOT AND SOCKET WITH RUBBER RING JOINTS. U.N.O.

3. PIPES 300 DIA AND LESS SHALL BE DWV GRADE (CLASS SN8) uPVC WITH
SOLVENT WELDED JOINTS.

4. ALL PIPES ARE TO BE UNIFORMLY SUPPORTED ALONG THE LENGTH OF THE
BARREL BY SUITABLE FILL MATERIAL. REFER TO BEDDING SUPPORT TYPE.

5. ALL PIPES ARE TO BE LAID AT (min.) 1.0% GRADE (U.N.O).

6. PIPES WITH SOCKETS SHALL BE LAID IN BEDDING WHERE SUITABLE
RECESSES HAVE BEEN PROVIDED TO ENSURE PIPES DO NOT BEAR ON
THEIR SOCKETS.

7. ALL STORMWATER DRAINAGE LINES UNDER PROPOSED BUILDING SLABS
TO BE uPVC PRESSURE PIPE PN6. ENSURE ALL VERTICALS AND
DOWNPIPES ARE uPVC PRESSURE PIPE, GRADE 6 FOR A MIN OF 3.0m IN
HEIGHT.

8. ALL PIPE PENETRATIONS (EXISTING, IN-SITU AND PRECAST) ARE TO BE
FINISHED FLUSH WITH THE INTERNAL PIT WALL AND PROPERLY SEALED
WITH CEMENT RENDER. MASS CONCRETE BENCHING IS TO BE INSTALLED
TO MATCH THE OUTLET PIPE INVERT LEVEL.

9. ALL CONCRETE PIPES AND ALL uPVC PIPES UNDER ROAD PAVEMENTS TO
BE INSTALLED TO TYPE H2S2 SUPPORT IN ACCORDANCE WITH AS3725
(U.N.O). uPVC PIPES IN GENERAL AREAS (NOT UNDER ROAD PAVEMENTS)
TO BE INSTALLED TO TYPE H2 SUPPORT IN ACCORDANCE WITH AS3725
(U.N.O). IN ALL CASES BACKFILL TRENCH WITH SAND TO 300mm ABOVE
PIPE. WHERE PIPE IS UNDER PAVEMENTS BACKFILL REMAINDER OF
TRENCH TO UNDERSIDE OF PAVEMENT WITH SAND OR APPROX 98%
GRANULAR MATERIAL COMPACTED IN 150mm LAYERS TO MINIMUM 98%
STANDARD MAXIMUM DRY DENSITY IN ACCORDANCE WITH AS 1289 5.2.1.
(OR A DENSITY INDEX OF NOT LESS THAN 75).

10. REFER TO AS/NZS 3725 TABLE B1 FOR REQUIRED FILL DEPTHS ABOVE PIPE
BARREL PRIOR TO USE OF COMPACTION MACHINERY OR TRAVERSING OF
PIPES BY GENERAL SITE EQUIPMENT.

11. WHERE WORKING METHODS REQUIRE HIGHER CLASS PIPE, THE
CONTRACTOR SHALL REFER TO AS 3725 TO DETERMINE THE APPROPRIATE
PIPE CLASS. PROPOSED PIPE CLASS SHALL BE SUBMITTED TO THE
SUPERINTENDENT FOR APPROVAL PRIOR TO INSTALLATION.

12. ALL INTERNAL WORKS WITHIN PROPERTY BOUNDARIES ARE TO COMPLY
WITH THE REQUIREMENTS OF AS/NZS 3500.3.

13. PRECAST PITS MAY BE USED EXTERNAL TO THE BUILDING SUBJECT TO
APPROVAL BY THE SUPERINTENDENT.

14. ENLARGERS, CONNECTIONS AND JUNCTIONS TO BE PREFABRICATED
FITTINGS WHERE PIPES ARE 300 DIA AND LESS.

15. Ø100mm SUB-SOIL DRAINAGE LINES SHALL BE CONNECTED TO A
STORMWATER DRAINAGE PIT AND PROVIDED IN THE FOLLOWING
LOCATIONS:

- ADJACENT ALL TRAFFICKED AND CARPARK PAVEMENT AREAS
(BEHIND KERB), EXCEPT WHERE DRAINAGE IS LOCATED ALONG
THE KERBLINE.
- ALL PLANTER AND TREE BEDS PROPOSED ADJACENT TO
PAVEMENT AREAS.
- BEHIND RETAINING WALLS (IN ACCORDANCE WITH DRAWINGS)
- BELOW ALL TRAFFICABLE DISH DRAININGS.
- ALL OTHER AREAS SHOWN ON THE DRAWINGS.

16. A MINIMUM OF 3m OF SUBSOIL LINE SHALL BE LAID INTO UPSTREAM SIDE
OF ALL DRAINAGE PITS.

17. FLUSHING POINTS SHALL BE INSTALLED ON SUBSOIL LINES TO COUNCIL
SPECIFICATION.

18. SUBSOIL TRENCHES SHALL BE BACKFILLED WITH SINGLE SIZED 10mm
AGGREGATE WRAPPED IN NON-WOVEN GEOTEXTILE FABRIC. SUBSOIL
TRENCHES BELOW TRAFFICABLE PAVEMENTS SHALL BE BACKFILLED WITH
NO FINES CONCRETE WRAPPED IN NON-WOVEN GEOTEXTILE FABRIC,
U.N.O.

19. WHERE SUBSOIL DRAINS PASS UNDER FLOOR SLABS AND VEHICULAR
PAVEMENTS, UNSLOTTED uPVC PRESSURE PIPE PN6 IS TO BE USED.

20. CARE IS TO BE TAKEN WITH LEVELS OF STORMWATER LINES. GRADES
SHOWN ARE NOT TO BE REDUCED WITHOUT APPROVAL.

21. GRATES AND COVERS SHALL CONFORM TO AS 3996.

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

23. NOTE THAT THE PIT COVER LEVEL NOMINATED IN GUTTERS ARE TO THE
INVERT OF THE COVER WHICH IS 40mm LOWER THAN THE PAVEMENT
LEVEL AT LIP OF GUTTER.

24. ALL BOX CULVERTS SHALL BE STRUCTURALLY DESIGNED BY THE
MANUFACTURER AND DELIVERED TO SITE AS FIT FOR PURPOSE.

25. AT ALL TIMES DURING CONSTRUCTION OF STORMWATER PITS, ADEQUATE
SAFETY PROCEDURES SHALL BE TAKEN TO ENSURE AGAINST THE
POSSIBILITY OF PERSONNEL FALLING DOWN PITS.

26. ALL EXISTING STORMWATER DRAINAGE LINES AND PITS THAT ARE TO REMAIN ARE TO BE INSPECTED AND CLEANED. DURING THIS PROCESS ANY PART OF THE STORMWATER DRAINAGE SYSTEM THAT WARRANTS REPAIR SHALL BE REPORTED TO THE SUPERINTENDENT/ENGINEER FOR FURTHER DIRECTIONS.
27. ELECTRICAL PITS ARE TO DRAIN TO THE NEAREST STORMWATER PIT WITH VERMIN PROOF NON-RETURN FLAP VALVES AS REQUIRED. THE CONTRACTOR IS TO CONFIRM WITH THE ELECTRICAL DESIGNER AS PART OF THE TENDER.
28. THE CONTRACTOR SHALL ENSURE AND PROTECT THE INTEGRITY OF ALL STORMWATER PIPES DURING CONSTRUCTION. ANY AND ALL DAMAGE TO THESE PIPES AS A RESULT OF THESE WORKS SHALL BE REPAIRED BY THE CONTRACTOR UNDER THE DIRECTION OF THE SUPERINTENDENT, AND AT NO EXTRA COST.
29. ANY VARIATION TO SPECIFIED PRODUCTS OR DETAILS SHALL BE REFERRED TO THE SUPERINTENDENT FOR APPROVAL.
30. ALL RECTANGULAR HOLLOW SECTIONS (RHS) SPECIFIED AS STORMWATER CONDUITS TO BE HOT DIPPED GALVANISED AND HAVE (MINIMUM) 5mm WALL THICKNESS.

- ALL PAVEMENT MATERIALS SHALL COMPLY WITH CURRENT TNSW SPECIFICATIONS. PROVIDE MECHANICAL ANALYSIS FOR EACH BATCH OF PAVEMENT MATERIAL TO ENSURE CONFORMITY.
2. COMPACTION STANDARDS:
 - A) BASE: 98% MODIFIED MAXIMUM DRY DENSITY
 - B) SUBBASE: 95% MODIFIED MAXIMUM DRY DENSITY
3. THE CONTRACTOR SHALL CONFIRM THE DESIGN CBR WITH A MINIMUM OF 3 TESTS TAKEN AT SUBGRADE LEVEL. WHERE DISCREPANCY IS FOUND, CONTACT THE SUPERINTENDING.
4. ALLOW FOR COMPACTION TESTING BY NATA REGISTERED LABORATORY FOR: BASE LAYER, SUBBASE LAYER, SUBGRADE IN ACCORDANCE WITH THE LATEST VERSION OF AS3798 FOR PAVEMENTS. ALLOW FOR AT LEAST TWO SUCCESSFUL COMPACTION TESTS IN EACH LAYER.
5. MATCH NEW PAVEMENT LAYERS NEATLY AND FLUSH WITH EXISTING WHERE REQUIRED.
6. KEY NEW BASE AND SUBBASE LAYERS INTO EXISTING WITH 150mm WIDE STRIPS. ASPHALTIC CONCRETE WEARING COURSE IS TO EXTEND 150mm (MIN) PAST BASECOURSE INTERFACE.
7. TRENCHES THROUGH EXISTING ROAD AND CONCRETE PAVEMENTS SHALL BE SAWCUT TO FULL DEPTH OF CONCRETE AND A MIN 50mm IN BITUMINOUS PAVING.
8. ALL ASPHALTIC CONCRETE (AC) WORK IS TO BE PREPARED AND CARRIED OUT IN ACCORDANCE WITH GOOD ASPHALTIC PAVING PRACTICE AS DESCRIBED IN AS2734 "ASPHALT (HOT-MIXED) PAVING - GUIDE TO GOOD PRACTICE" AND CURRENT TNSW SPECIFICATIONS (R16).
9. WHERE NOMINATED, THE CONTRACTOR SHALL ALLOW FOR ALL COMPONENTS OF PROPRIETARY JOINTING SYSTEMS INCLUDING FINE, TEMPLATES & PECKING TO ENSURE THAT ALL DOWEL BARS REMAIN IN THE CORRECT ALIGNMENT AND POSITION.
10. ALL BASECOURSE MATERIAL SHALL BE IGNEOUS ROCK QUARRIED MATERIAL TO COMPLY WITH TNSW. SPECIFICATION 3051, COMPACTED TO MINIMUM 98% MODIFIED DENSITY IN ACCORDANCE WITH A S 1289 5.2.1 FREQUENCY OF COMPACTION TESTING SHALL NOT BE LESS THAN 1 TEST PER 50m³ OF BASECOURSE MATERIAL PLACED.
11. ALL SUB-BASE COURSE MATERIAL SHALL BE IGNEOUS ROCK QUARRIED MATERIAL TO COMPLY WITH TNSW. SPECIFICATION 3051, AND COMPACTED TO MINIMUM 95% MODIFIED DENSITY IN ACCORDANCE WITH A S 1289 5.2.1 FREQUENCY OF COMPACTION TESTING SHALL NOT BE LESS THAN 1 TEST PER 50m³ OF SUB-BASE COURSE MATERIAL PLACED.
12. AS AN ALTERNATIVE TO THE USE OF IGNEOUS ROCK AS A SUB-BASE MATERIAL IN (11) A CERTIFIED RECYCLED CONCRETE MATERIAL COMPLYING WITH TNSW. SPECIFICATION 3051 WILL BE CONSIDERED SUBJECT TO MATERIAL SAMPLES AND APPROPRIATE TEST CERTIFICATIONS BEING PROVIDED TO THE SATISFACTION OF THE COUNCIL ENGINEER.
13. SHOULD THE CONTRACTOR WISH TO USE A RECYCLED PRODUCT THIS SHALL BE CLEARLY INDICATED IN THEIR TENDER AND THE PRICE DIFFERENCE BETWEEN AN IGNEOUS PRODUCT AND A RECYCLED PRODUCT SHALL BE CLEARLY INDICATED.

1. THIS SECTION REFERS TO CIVIL CONCRETE WORKS AND DOES NOT INCLUDE BUILDINGS OR BRIDGE STRUCTURES.
2. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 3600 CURRENT EDITION WITH AMENDMENTS, EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.
3. CONCRETE QUALITY:
ALL REQUIREMENTS OF THE CURRENT AS3600 CONCRETE SPECIFICATION DOCUMENT 1 SHALL APPLY TO THE FORMWORK, REINFORCEMENT AND CONCRETE UNLESS NOTED OTHERWISE.

ELEMENT	AS 3600 F _c Mpa AT 28 DAYS	SPECIFIED SLUMP	NOMINAL AGG. SIZE	MAX 56 DAY DRYING SHRINKAGE
KERBS AND PATHS	25	60	20	650um
PITS AND VEHICULAR PAVEMENTS	32	80	20	650um

4. CONCRETE PROPERTIES FOR SLABS AND BEAMS SHALL BE VARIED FROM NORMAL CLASS AS FOLLOWS:
 - A. MINIMUM CEMENT CONTENT 250kg/m³
 - B. MAXIMUM 56 DAY SHRINKAGE STRAIN ϵ_{sh} AS NOMINATED ABOVE
 - C. PRIOR TO COMMENCEMENT CONCRETE SUPPLIER TO PROVIDE DRYING SHRINKAGE TEST RESULTS FROM PRODUCTION ASSESSMENT AS EVIDENCE THAT SPECIFIED DRYING SHRINKAGE LIMITS CAN BE ACHIEVED USING NORMAL MIX DESIGN.

FOLLOWING THE FABRIC SYMBOL SL IS THE REFERENCE NUMBER FOR FABRIC TO AS 1304.

12. uPVC SHEET SHALL BE PLACED BELOW ALL CONCRETE PAVEMENTS.

13. ALL PENETRATIONS TO HAVE 2#12 TRIMMER BARS TOP AND BOTTOM TO EACH FACE U.N.O. EXTEND TRIMMERS 700 BEYOND PENETRATION.

14. FORMWORK CLASS SHALL BE IN ACCORDANCE WITH AS380.

15. SURFACE FINISHES:

ELEMENT	FORMWORK CLASS
STORMWATER PIT	OFF FORM
PAVEMENTS	MACHINE FLOAT/BROOM FINISHED
KERBS	STEEL FLOAT/TROWEL

16. REINFORCEMENT SYMBOLS:

N	DENOTES GRADE 450 N BARS TO AS 1302 GRADE N
R	DENOTES 230 R HOT ROLLED PLAIN BARS TO AS 1302
SL	DENOTES HARD-DRAWN WIRE REINFORCING FABRIC TO AS 1304

NUMBER OF BARS IN A GROUP BAR GRADE AND TYPE

17 N 20 250

NOMINAL BAR SIZE IN mm SPACING IN mm THE FIGURE

ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH 3700.

2. STRENGTHS OF MASONRY UNITS AND TYPE OF MORTAR SHALL BE AS FOLLOWS:

ELEMENT	MATERIAL	CHARACTERISTIC UNCONFINED COMPRESSIVE STRENGTH (Fc)	MORTAR (CEMENT: LIME: SAND) (Fc)
BRICKS	CLAY	20 MPa	1:1.6
BLOCKS CORE FILLED	CONC	15 MPa	1:0.25:3
BLOCKS SOLID	CONC	12 MPa	1:0.25:3

MORTAR ADMIXTURES SHALL NOT BE USED WITHOUT THE WRITTEN APPROVAL OF THE SUPERINTENDENT.

3. ONLY LOAD BEARING MASONRY WALLS ARE SHOWN UNDER CONCRETE SLABS.

4. OTHER THAN REINFORCED CONCRETE BLOCKWORK, MASONRY SUPPORTING SLABS AND BEAMS SHALL BE TROWELED SMOOTH WITH MORTAR FILLING ALL VOIDS. TWO LAYERS OF MALTHOID SHALL BE PLACED FULL WIDTH ACROSS SUCH LOAD BEARING SURFACES EXCEPT WHERE PROPRIETARY BEARING STRIP IS NOTED OR ALTERNATIVE DETAIL IS DOCUMENTED. THE HEADS OF LOAD BEARING WALLS SHALL NOT EXTEND ABOVE THE SOFFIT OF THE CONCRETE SLAB ABOVE.

5. ALL DOUBLE SKIN SOLID WALLS SUCH AS 230mm THICK BRICKWORK SHALL BE BONDED BY A HEADER COURSE EVERY 4th COURSE.

6. ALL MASONRY SUPPORTING OR SUPPORTED BY CONCRETE FLOORS SHALL BE PROVIDED WITH VERTICAL JOINTS TO MATCH ANY CONTROL JOINTS IN THE CONCRETE.

7. NON LOAD BEARING WALLS BUILT PRIOR TO POURING CONCRETE SHALL BE SEPARATED FROM CONCRETE ABOVE BY 16 mm THICK CLOSED CELL POLYSTYRENE STRIP. WHERE BUILT AFTER CONCRETE IS POURED LEAVE 12 mm CLEAR OF CONCRETE SOFFIT.

8. NO CHASES OR RECESSES ARE PERMITTED IN LOAD BEARING MASONRY WITHOUT THE APPROVAL OF THE ENGINEER.

9. PROVIDE VERTICAL CONTROL JOINTS AT 10 m MAX. CENTRES GENERALLY AND 5 m MAX. FROM CORNERS FOR BRICKWORK AND UNREINFORCED BLOCKWORK.

10. REFER TO CONCRETE NOTES FOR DE-PROPPING PRIOR TO CONSTRUCTION OF MASONRY WALLS ON SUSPENDED SLABS.

11. ALL CAVITY CONSTRUCTION SHALL INCLUDE STAINLESS STEEL TIES INSTALLED IN ACCORDANCE WITH CLAUSE 3.8 AS 3700.

12. REINFORCED CONCRETE BLOCKWORK SHALL COMPLY WITH THE FOLLOWING, UNLESS NOTED

* BLOCKS SHALL BE STRENGTH GRADE 15 CONFORMING TO AS 2733.

* MORTAR SHALL COMPRISE 1 CEMENT:0.25 LIME:3 SAND.

* PROVIDE CLEANOUT HOLES 100 mm SQUARE MINIMUM AT BASE OF ALL WALLS AND ROD CORE HOLES TO REMOVE PROTRUDING MORTAR FINISH PRIOR TO GROUTING.

* CORE FILLING GROUT SHALL BE : Fc = 20 MPa MINIMUM
CEMENT CONTENT = 300 kg/m³
SLUMP = 230 ± 30 mm.

* REINFORCEMENT PROJECTING FROM FOUNDATION OR SLABS INTO CORES, SHALL BE SET ACCURATELY IN PLACE USING TEMPLATES TO ALIGN WITH THE CENTRE OF THE LENGTH OF CORES AND WITH COVER AS NOTED. WHERE HORIZONTAL BARS ARE INDICATED, THE WEBS OF THE BLOCKS BELOW THE BARS SHALL BE CUT DOWN TO ACCOMMODATE THE BARS.

* GROUT ALL CORES IN REINFORCED BLOCKWORK UNLESS OTHERWISE NOTED. HEIGHT OF BLOCKWORK TO BE GROUTED ON ONE DAY SHALL BE 2400mm. GROUT SHALL BE PLACED IN LIFTS OF 1200mm MAXIMUM AND COMPACTED BY POKER VIBRATOR. A SHORT TIME SHOULD ELAPSE BETWEEN SUCCESSIVE LIFTS TO ALLOW PLASTIC SETTLEMENT TO OCCUR.

* PROVIDE 50 mm COVER FROM THE OUTSIDE OF THE BLOCKWORK UNLESS NOTED.

13. BACKFILL TO RETAINING WALLS SHALL BE FREE DRAINING GRANULAR MATERIAL. PROVIDE SUBSOIL DRAIN AT BASE OF WALL. DO NOT BACKFILL UNTIL 14 DAYS AFTER GROUTING, IF APPLICABLE. AFTER RESTRAINED SLAB OVER HAS BEEN POURED AND CURED FOR 7 DAYS, BACKFILL SHALL BE COMPACTED TO 98% STANDARD MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT ± 2 %.

PEDESTRIAN PAVEMENTS

1. ALL PEDESTRIAN PAVEMENTS ARE TO BE JOINED AS FOLLOWS U.N.O ON THE DESIGN DRAWINGS.
2. EXPANSION JOINTS ARE TO BE LOCATED WHERE POSSIBLE AT TANGENT POINTS OF CURVES AND ELSEWHERE AT MAX. 6.0m CENTRES.
3. WEAKENED PLANE JOINTS ARE TO BE LOCATED AT A MAX. SPACING OF 1.5 x WIDTH OF THE PAVEMENT.
4. WHERE POSSIBLE JOINTS SHOULD BE LOCATED TO MATCH KERBING AND OR ADJACENT PAVEMENT JOINTS.
5. TYPICAL PEDESTRIAN PAVEMENT JOINT DETAIL.

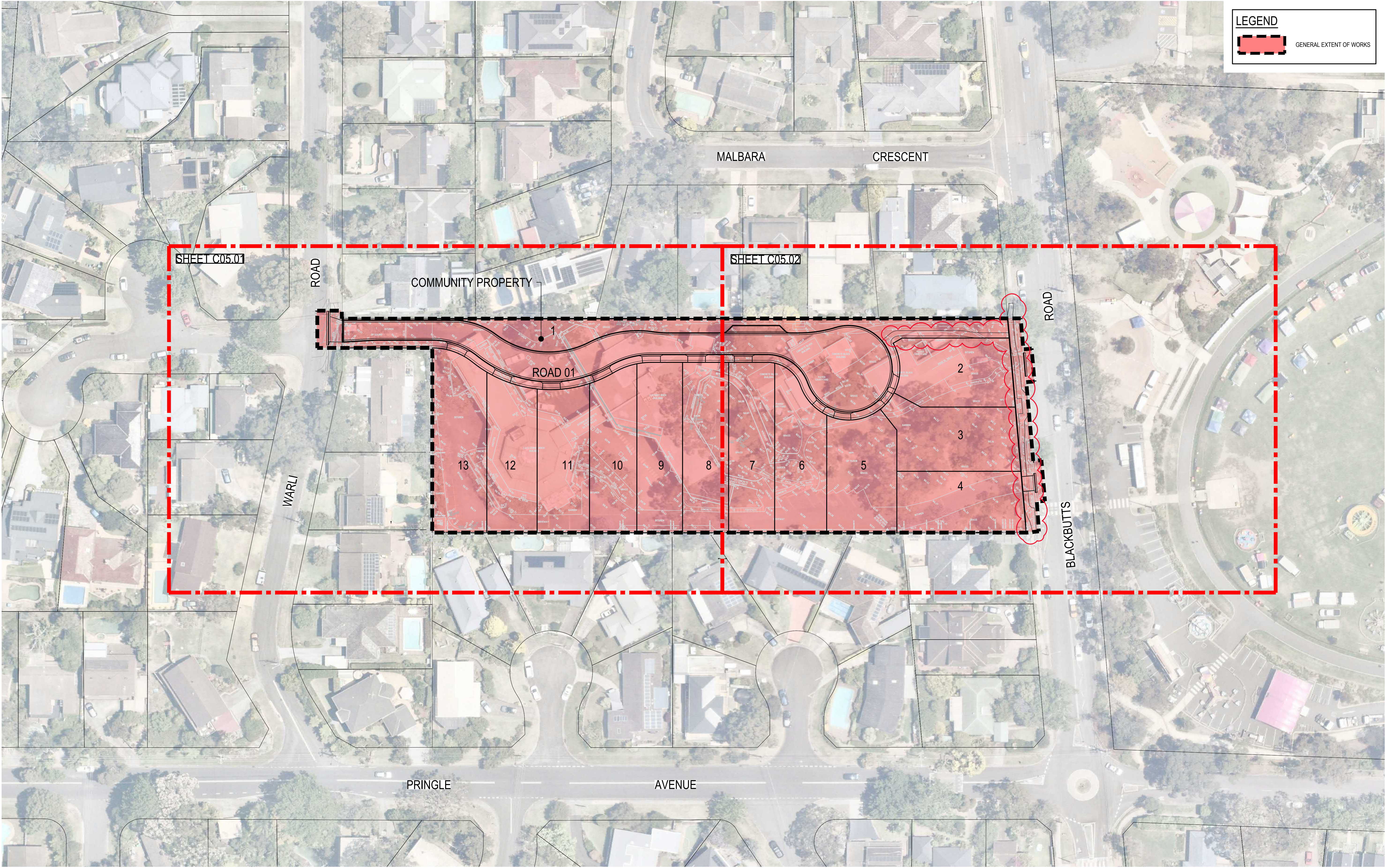
VEHICULAR PAVEMENTS

6. ALL VEHICULAR PAVEMENTS TO BE JOINED AS FOLLOWS U.N.O ON THE DESIGN DRAWINGS.
7. TIED KEYED CONSTRUCTION JOINTS SHOULD GENERALLY BE LOCATED LONGITUDINALLY AT A MAX OF 6.0m CENTRES
8. SAWN JOINTS SHOULD GENERALLY BE LOCATED LATERALLY AT A MAX OF 6.0m CENTRES WITH DOWELED EXPANSION JOINTS AT MAX 18.0m CENTRES
9. TYPICAL VEHICULAR PAVEMENT JOINT DETAIL.

10. PROVIDE 10mm EXPANSION FOAM BETWEEN NEW CONCRETE WORKS AND EXISTING STRUCTURES.
11. LOCAL AUTHORITY REQUIREMENTS SHALL TAKE PRECEDENCE WITHIN THE PUBLIC ROAD RESERVE.
12. DOWELS TO BE PLACED ON PROPRIETARY CRADLES TO ENSURE CORRECT SPACING AND ALIGNMENT.

1. ALL KERBS, GUTTERS, DISH DRAINS AND CROSSINGS TO BE CONSTRUCTED ON 220mm GRANULAR BASECOURSE COMPACTED TO MINIMUM 95% MODIFIED DRY DENSITY (AS 1289 S 2.1).
2. EXPANSION JOINTS (E.J.) TO BE FORMED FROM 10mm COMPRESSIBLE FOAM FILLER BOARD FOR THE FULL DEPTH OF THE SECTION AND CUT TO PROFILE. EXPANSION JOINTS TO BE LOCATED AT DRAINAGE PITS, ON TANGENT POINTS OF CURVES AND ELSEWHERE AS SPECIFIED BY COUNCIL EXCEPT FOR INTEGRAL KERBS WHERE THE EXPANSION JOINTS ARE TO MATCH THE JOINT LOCATIONS IN THE SLABS.
3. WEAKENED PLANE JOINTS TO BE MIN 3mm WIDE AND LOCATED AS SPECIFIED BY COUNCIL EXCEPT FOR INTEGRAL KERBS WHERE THE WEAKENED PLANE JOINTS ARE TO MATCH THE JOINT LOCATIONS IN THE SLABS.
4. EXISTING ALLOTMENT DRAINAGE PIPES ARE TO BE BUILT INTO THE NEW KERB AND GUTTER WITH 100mm DIA HOLE OR IN ACCORDANCE WITH LOCAL AUTHORITY REQUIREMENTS.
5. IN THE REPLACEMENT OF KERB AND GUTTER -
- EXISTING ROAD PAVEMENT IS TO BE SAWCUT 600mm U.N.O. FROM THE LIP OF GUTTER. UPON COMPLETION OF THE NEW KERB AND GUTTER NEW BASECOURSE AND SURFACE TO BE LAID 600mm WIDE U.N.O.

Status	
FOR INFORMATION ONLY NOT TO BE USED FOR CONSTRUCTION	
Project Number/Drawing Number	Revision
230057-00-DA-C01.22	3



LEGEND

GENERAL EXTENT OF WORKS

REV.	DATE	DESCRIPTION	DRN.	DES.	VERIF.	APPD.
4	25/06/2025	ISSUED FOR \$4.55 APPROVAL	DK	AL		MKH
3	31/03/2025	UPDATES ADDRESSING COUNCIL COMMENTS DA ISSUE	DK	AL		MKH
2	15/01/2025	ISSUED FOR DEVELOPMENT APPLICATION	DK	AL		MKH
1	7/03/2024	ISSUED FOR DEVELOPMENT APPLICATION	ZW	LD		MKH

Client



SEKISUI HOUSE

Scale

01020304050m

SCALE 1:500

@A1

The copyright of this drawing remains with Enspire Solutions Pty Ltd and must not be copied wholly or in part without the permission of Enspire Solutions Pty Ltd.

North





Enspire Solutions Pty Ltd
Level 4, 153 Walker Street, North Sydney NSW 2060
ABN: 71 624 801 690
Phone: 02 9922 6135
enspiresolutions.com.au

Project

49 BLACKBUTTS ROAD
FRENCHS FOREST
CIVIL ENGINEERING WORKS

Title

GENERAL ARRANGEMENT PLAN

Scale

1:500

Date

07/03/2024

Size

A1

Datum

GDA 2020

Status

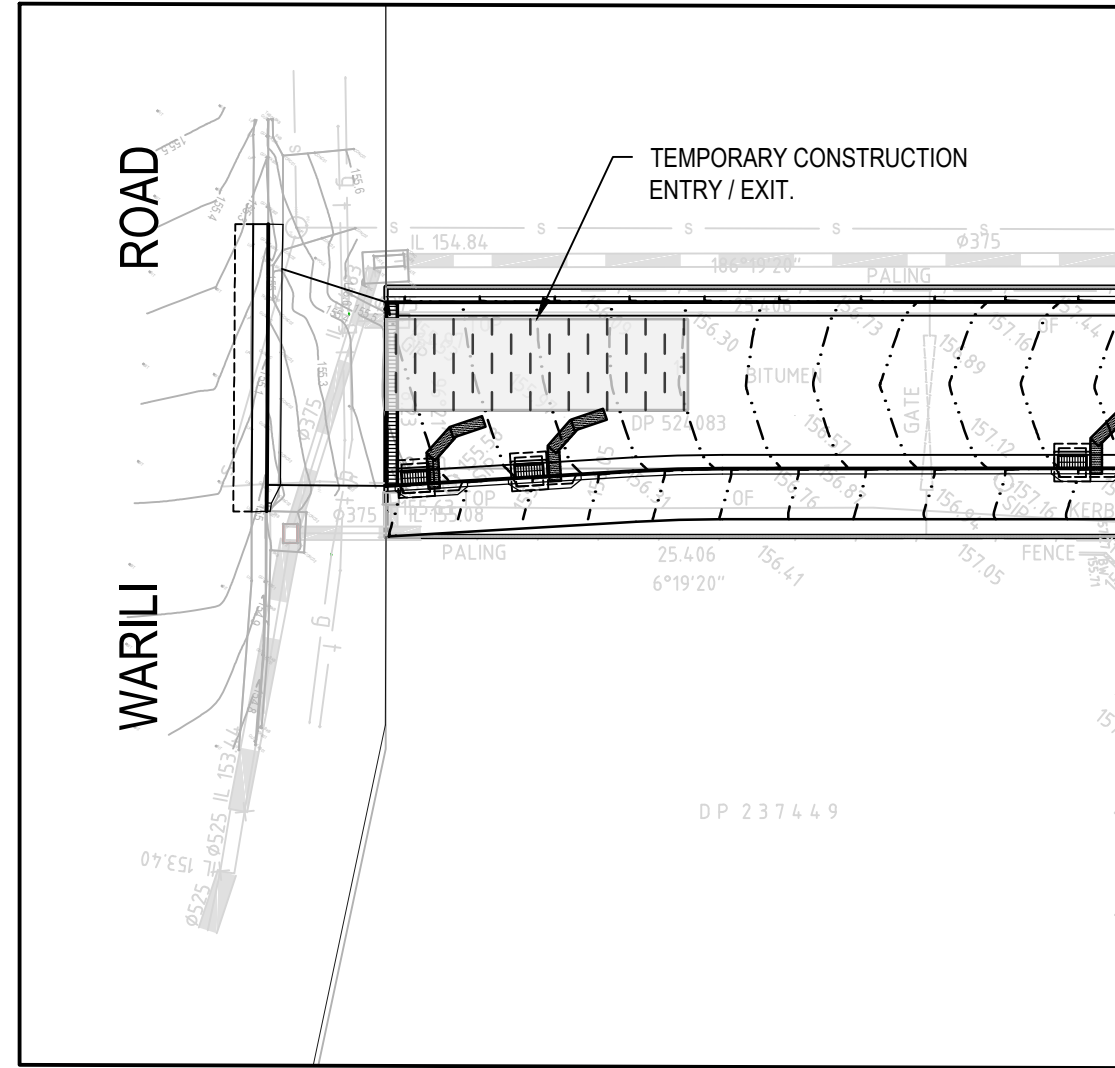
FOR INFORMATION ONLY
NOT TO BE USED FOR CONSTRUCTION

Project Number/Drawing Number

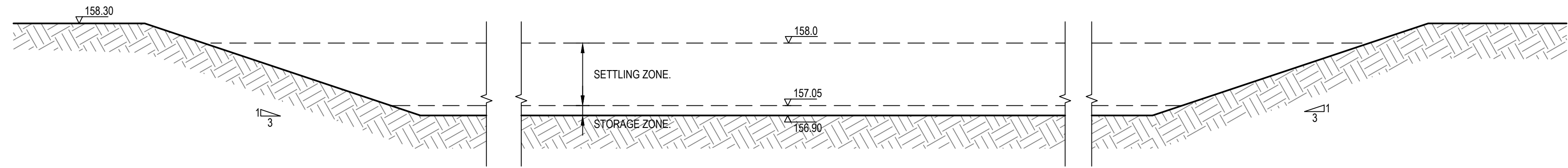
230057-00-DA-C01.41

Revision

4



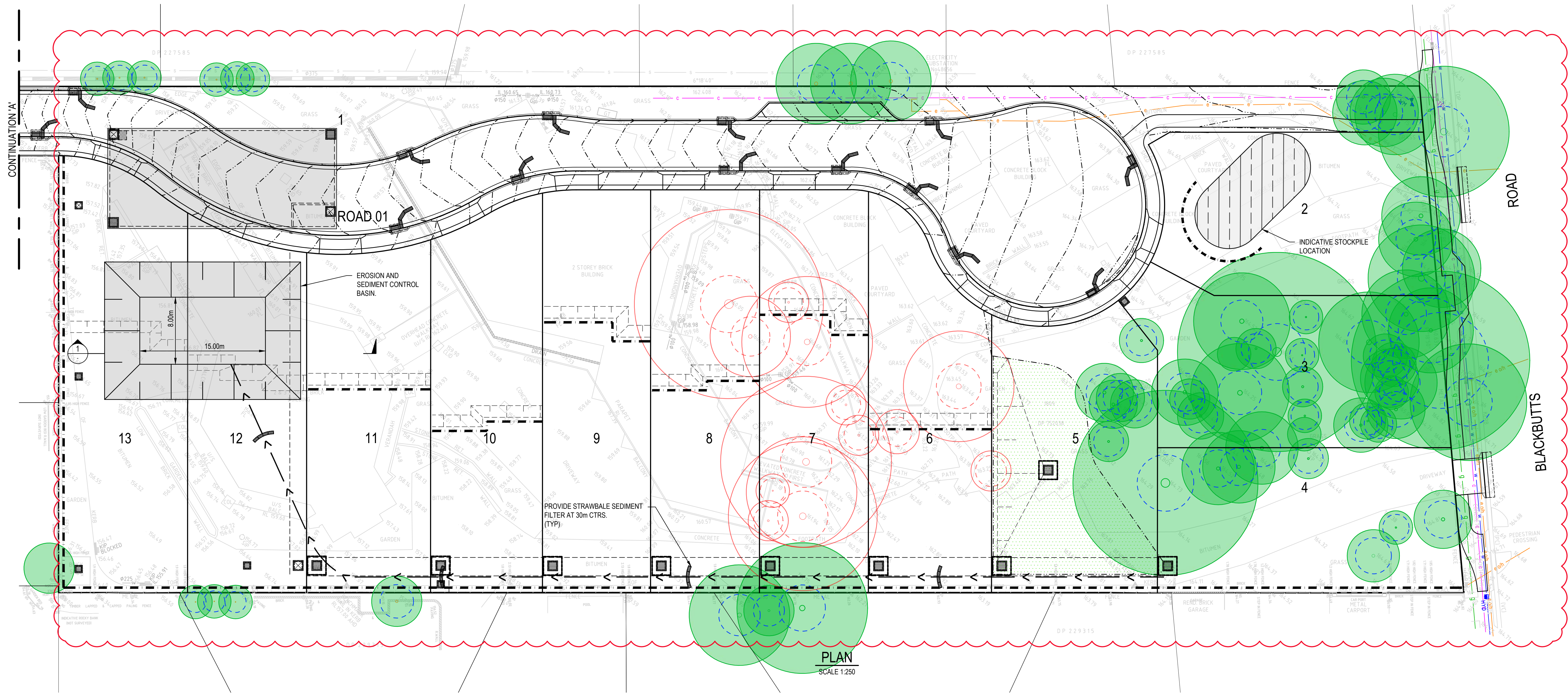
CONTINUATION 'A'
SCALE 1:250



SECTION 1
SCALE 1:50

NOTE
REFER DRG: CC03.21 FOR EROSION AND
SEDIMENT BASIN CALCULATION TABLE.

LEGEND	
	TEMPORARY CONSTRUCTION EXIT REFER TO DRG. C03.21 FOR DETAIL
	STOCKPILES (SD 4-1) REFER TO DRG. C03.21 FOR DETAIL
	SEDIMENT FENCE (SD 6-8) REFER TO DRG. C03.21 FOR DETAIL
	CATCH DRAIN REFER TO DRG. C03.21 FOR DETAIL
	SEDIMENT TRAP FOR KERB INLET (ON GRADE - SANDBAG) REFER TO DRG. C03.21 FOR DETAIL
	GEOTEXTILE INLET FILTER (SD 6-12) REFER TO DRG. C03.21 FOR DETAIL
	STRAWBALE SEDIMENT FILTER (SD 6-7) REFER TO DRG. C03.21 FOR DETAIL



PLAN
SCALE 1:250

REV.	DATE	DESCRIPTION	DRN.	DES.	VERIF.	APPD.
6	08/07/2025	ISSUED FOR S4.55 APPROVAL	DK	AL		MKH
5	25/06/2025	ISSUED FOR S4.55 APPROVAL	DK	AL		MKH
4	31/03/2025	UPDATES ADDRESSING COUNCIL COMMENTS DA ISSUE	DK	AL		MKH
3	22/01/2025	ISSUED FOR DEVELOPMENT APPLICATION	DK	AL		MKH
2	15/01/2025	ISSUED FOR DEVELOPMENT APPLICATION	DK	AL		MKH
1	7/03/2024	ISSUED FOR DEVELOPMENT APPLICATION	ZW	LD		MKH

Client

SEKISUI HOUSE

Scale

SCALE 1:50 @A1
SCALE 1:250 @A1

North

The copyright of this drawing remains with Enspire Solutions Pty Ltd and must not be copied wholly or in part without the permission of Enspire Solutions Pty Ltd.

Enspire Solutions Pty Ltd
Level 4, 153 Walker Street, North Sydney NSW 2060
ABN: 71 624 801 690
Phone: 02 9922 6135
enspiresolutions.com.au

Project
49 BLACKBUTTS ROAD
FRENCHS FOREST
CIVIL ENGINEERING WORKS

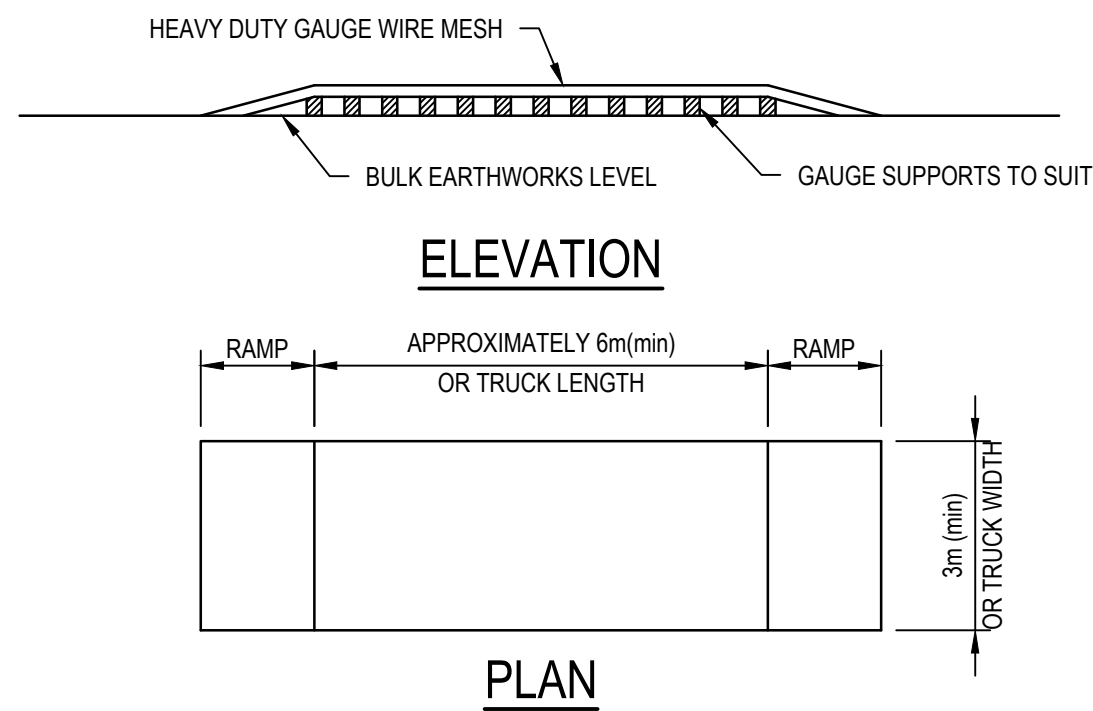
Title
EROSION AND SEDIMENTATION
CONTROL PLAN

Scale
AS SHOWN
Date
07/03/2024
Size
A1
Datum
GDA 2020

Status
FOR INFORMATION ONLY
NOT TO BE USED FOR CONSTRUCTION

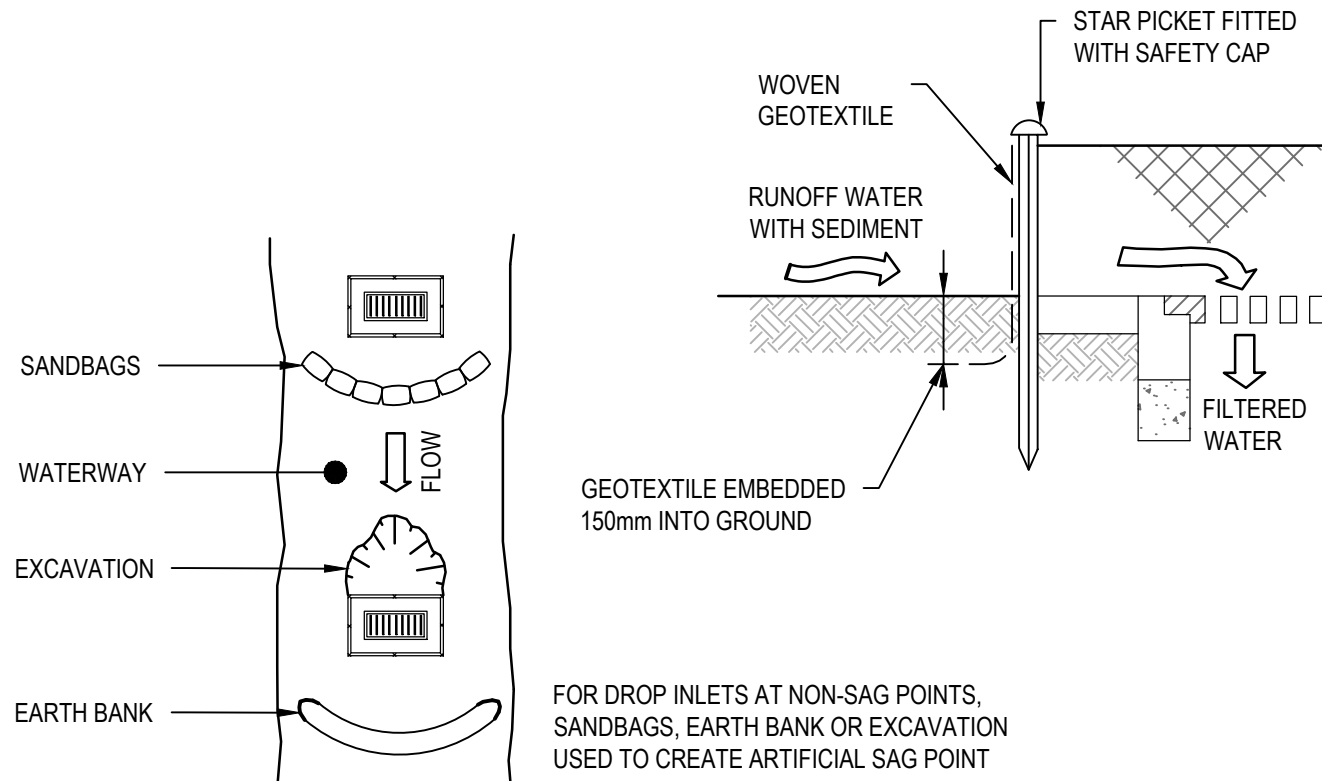
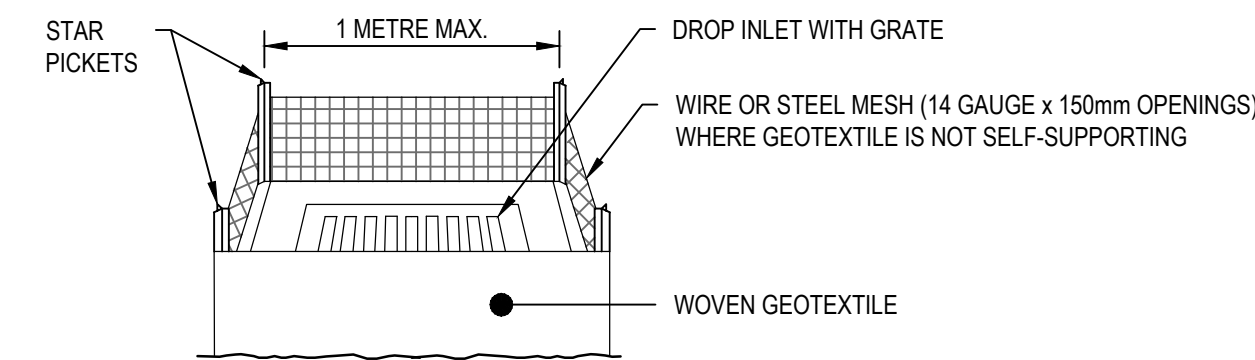
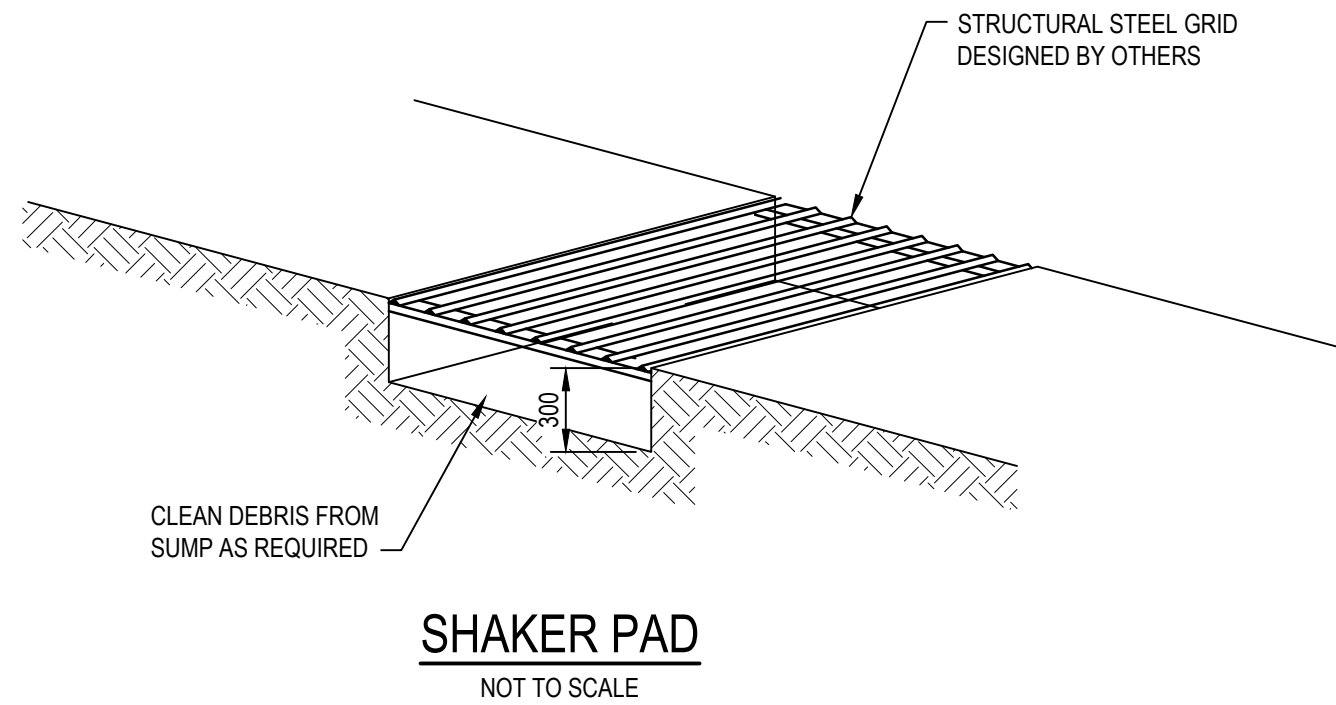
Project Number/Drawing Number
230057-00-DA-C03.01

Revision
6



TEMPORARY CONSTRUCTION EXIT (SHAKER PAD DETAIL)

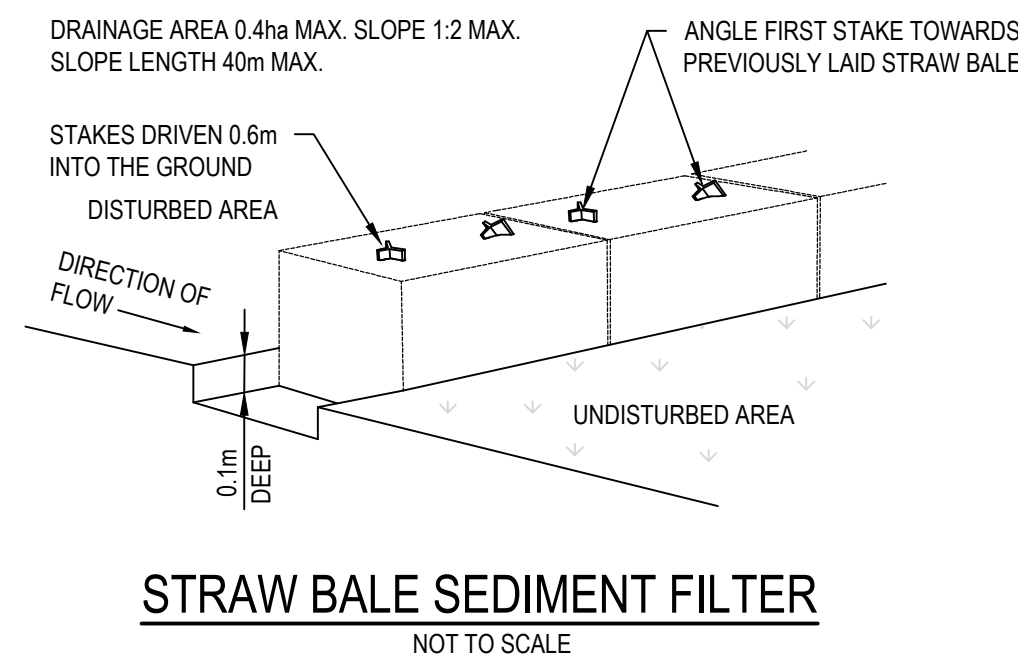
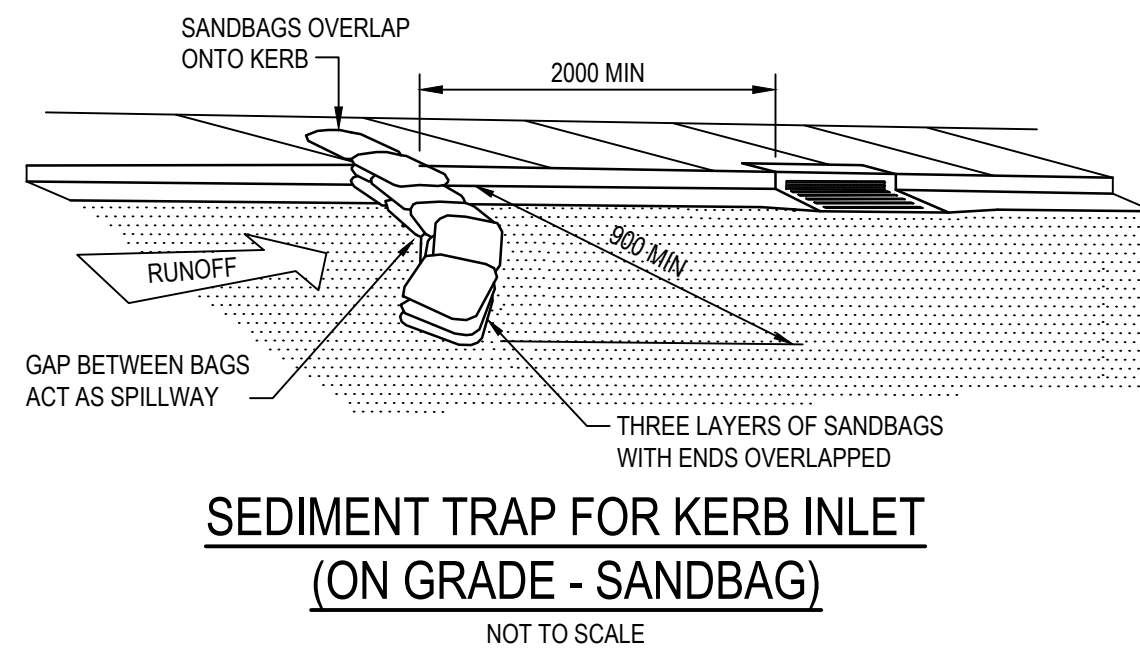
THE EXIT SHALL BE MAINTAINED IN A CONDITION WHICH PREVENTS TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS OF WAY. THIS MAY REQUIRE REPAIR AND OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS OF WAY MUST BE REMOVED IMMEDIATELY.



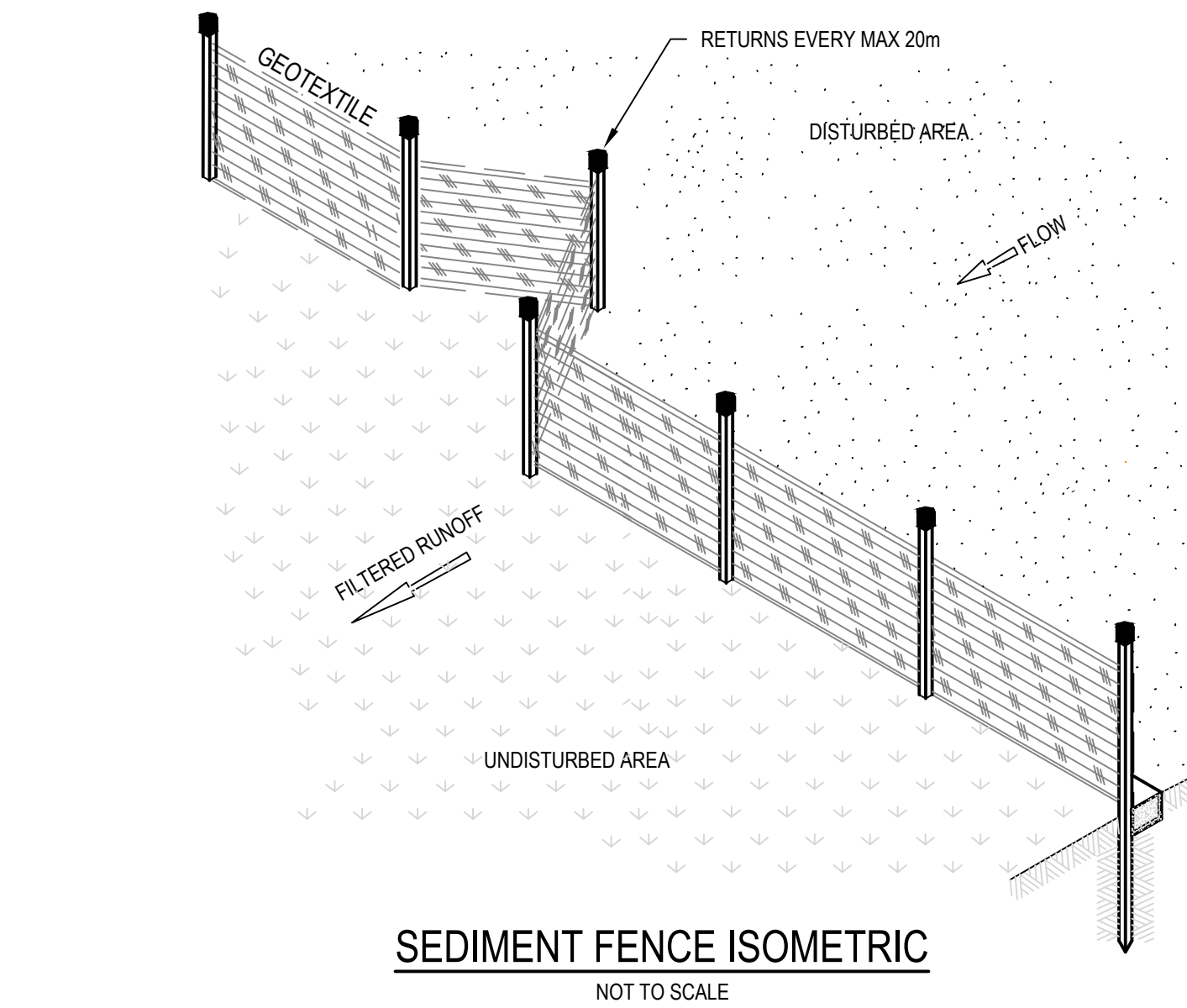
CONSTRUCTION NOTES

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

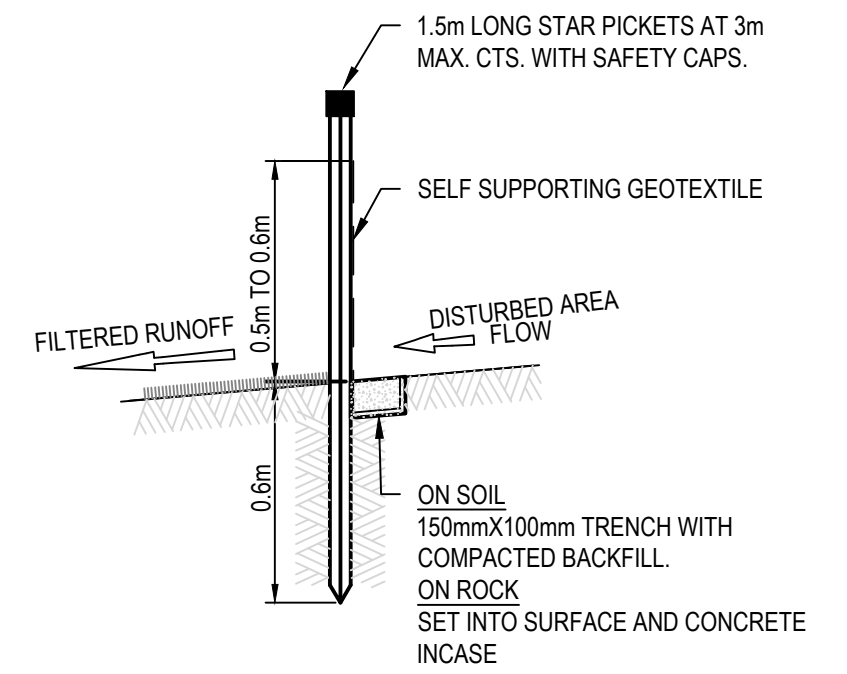
GEOTEXTILE INLET FILTER (SD 6-12)



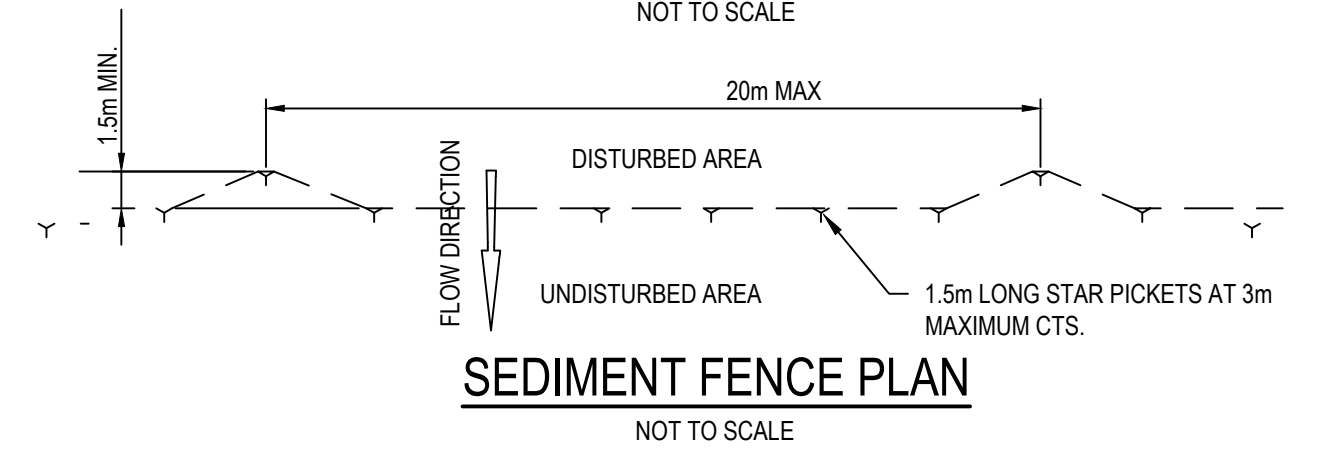
STRAW BALE SEDIMENT FILTER



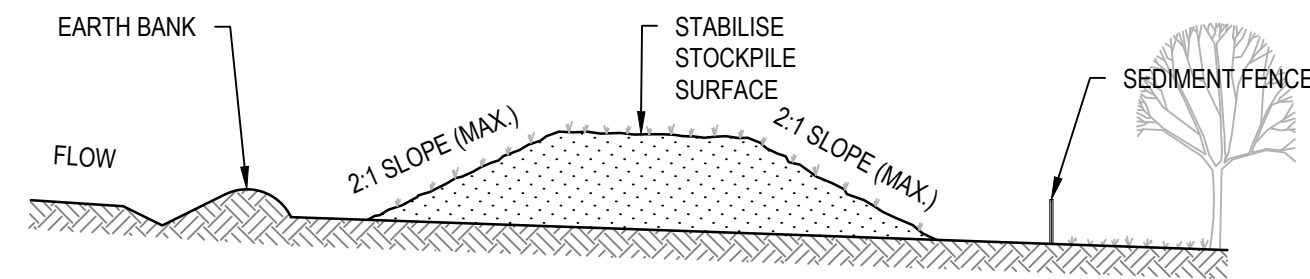
SEDIMENT FENCE ISOMETRIC



SEDIMENT FENCE SECTION



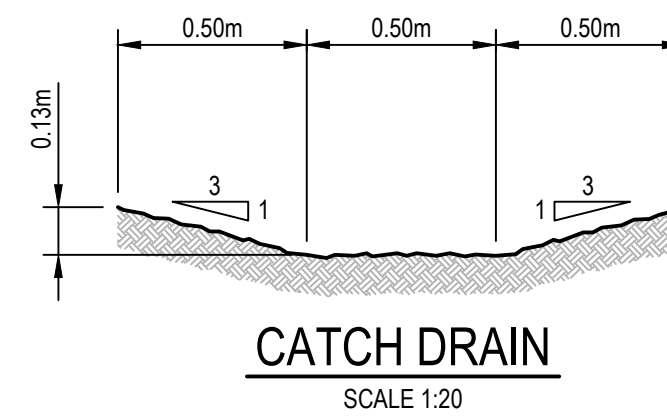
SEDIMENT FENCE PLAN



CONSTRUCTION NOTES

- PLACE STOCKPILES MORE THAN 2m (PREFERABLY 5m) FROM EXISTING VEGETATION, CONCENTRATED WATER FLOW, ROADS AND HAZARD AREAS.
- CONSTRUCT ON THE CONTOUR AS LOW, FLAT, ELONGATED MOUNDS.
- WHERE THERE IS SUFFICIENT AREA, TOPSOIL STOCKPILES SHALL BE LESS THAN 2m IN HEIGHT.
- 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.
- 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 2m DOWNSLOPE.

STOCKPILES (SD 4-1)



CATCH DRAIN

1. Erosion Hazard and Sediment Basins

Site Name: 49 Blackbuts Road						
Site Location: Frenchs Forest						
Precinct/Stage:						
Other Details:						
Site area	Sub-catchment or Name of Structure					Notes
Total catchment area (ha)	1.017					
Disturbed catchment area (ha)	1.017					
Soil analysis (enter sediment type if known, or laboratory particle size data)						
Sediment Type (C, F or D) if known:	C					From Appendix C (if known)
% sand (fraction 0.02 to 2.00 mm)						Enter the percentage of each soil fraction. E.g. enter 10 for 10%
% silt (fraction 0.002 to 0.02 mm)						
% clay (fraction finer than 0.002 mm)						E.g. enter 10 for dispersion of 10%
Dispersion percentage						See Section 6.3.3(e). Auto-calculated
% of whole soil dispersible						Automatic calculation from above
Soil Texture Group	C					
Rainfall data						
Design rainfall depth (no of days)	5					See Section 6.3.4 and, particularly, Table 6.3 on pages 6-24 and 6-25.
Design rainfall depth (percentile)	85					
x-day, y-percentile rainfall event (mm)	44					
Rainfall R-factor (if known)						Only need to enter one or the other here
IFD: 2-year, 6-hour storm (if known)	14					
RUSLE Factors						
Rainfall erosivity (R-factor)	4280					Auto-filled from above
Soil erodibility (K-factor)	0.007					
Slope length (m)	170					
Slope gradient (%)	5.5					RUSLE LS factor calculated for a high n/interill ratio.
Length/gradient (LS-factor)	2.07					
Erosion control practice (P-factor)	1.3	1.3	1.3	1.3	1.3	
Ground cover (C-factor)	1	1	1	1	1	

4. Volume of Type C (Coarse) Sediment Basins

Type C Basin Design Criteria						
Structure Name						Auto-filled from Worksheet 1
Catchment Area (ha)	1.017					Auto-filled from Worksheet 1
Sediment type (C, F or D)	C					Auto-filled from Worksheet 1
Design rainfall event	0.5					Choose design event from dropdown
Flow volume (m³/s)	0.087					Calculated from IFD values above
Area Factor	4100	4100	4100	4100	4100	Default is 4,100. See pg 6-12
Depth of settling (water zone) (m)	0.6	0.6	0.6	0.6	0.6	Minimum is 0.6m (pg 6-12)
Type C Basin Volume Calculations						
Basin Surface Area (m²)	356.7	Not Type C	Not Type C	Not Type C	Not Type C	Auto-calculated
Settling (water) zone volume (m³)	214	Not Type C	Not Type C	Not Type C	Not Type C	Auto-calculated
Storage (soil) zone volume (m³)	10.7	Not Type C	Not Type C	Not Type C	Not Type C	Auto-calculated
Total basin volume (m³)	224.7	Not Type C	Not Type C	Not Type C	Not Type C	Auto-calculated

REV.	DATE	DESCRIPTION	DRN.	DES.	VERIF.	APPD.
3	31/03/2025	UPDATES ADDRESSING COUNCIL COMMENTS DA ISSUE	DK	AL		MKH
2	15/01/2025	ISSUED FOR DEVELOPMENT APPLICATION	DK	AL		MKH
1	7/03/2024	ISSUED FOR DEVELOPMENT APPLICATION	ZW	LD		MKH

Client

SEKISUI HOUSE

Scale

North

The copyright of this drawing remains with Enspire Solutions Pty Ltd and must not be copied wholly or in part without the permission of Enspire Solutions Pty Ltd.

Enspire Solutions Pty Ltd
Level 4, 153 Walker Street, North Sydney NSW 2060
ABN: 71 624 801 690
Phone: 02 9922 6135
enspiresolutions.com.au

Project
49 BLACKBUTTS ROAD
FRENCHS FOREST
CIVIL ENGINEERING WORKS

Title
EROSION AND SEDIMENTATION
CONTROL DETAILS

Scale
N.T.S

Date
07/03/2024

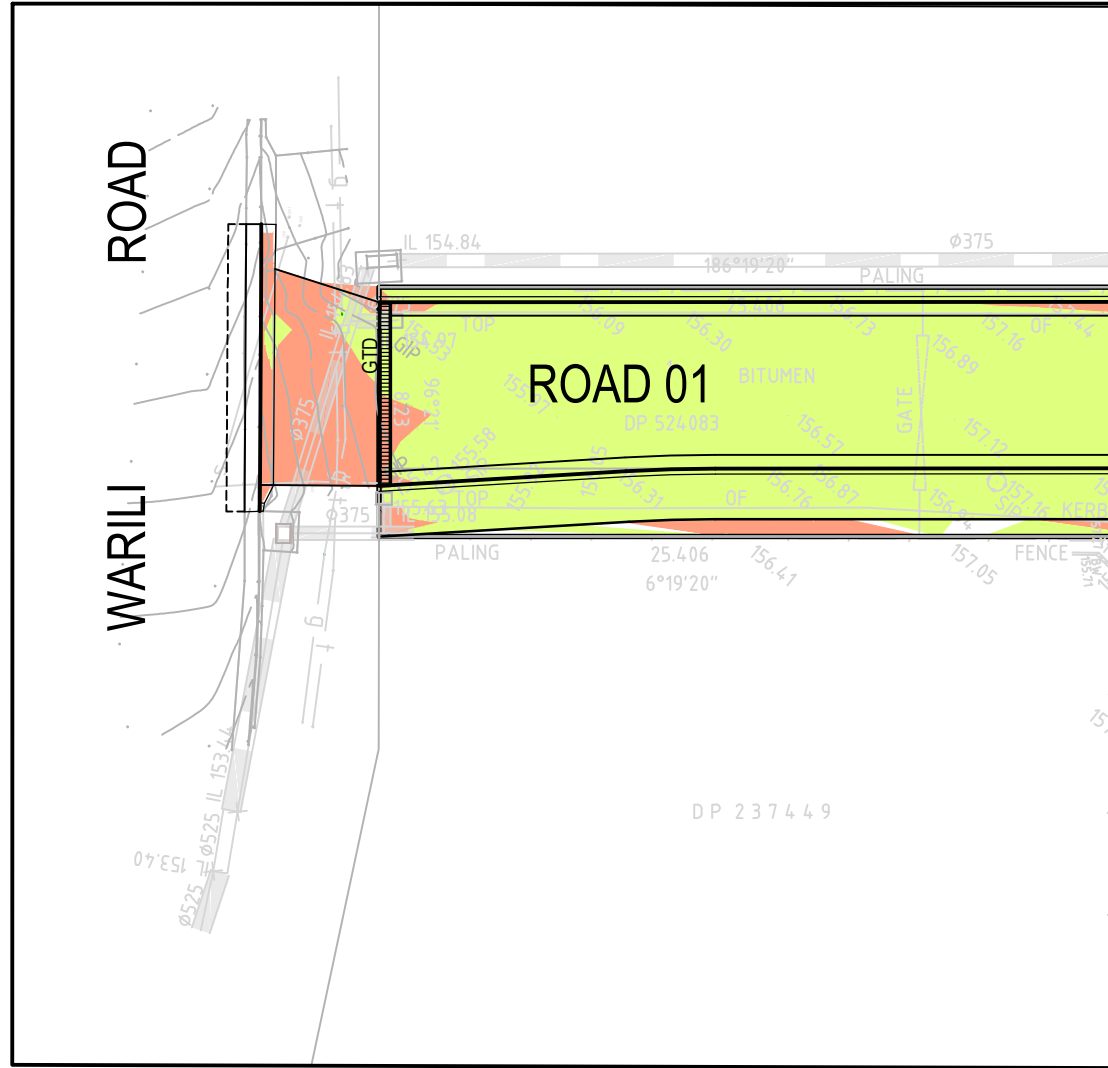
Size
A1

Datum
GDA 2020

Status
FOR INFORMATION ONLY
NOT TO BE USED FOR CONSTRUCTION

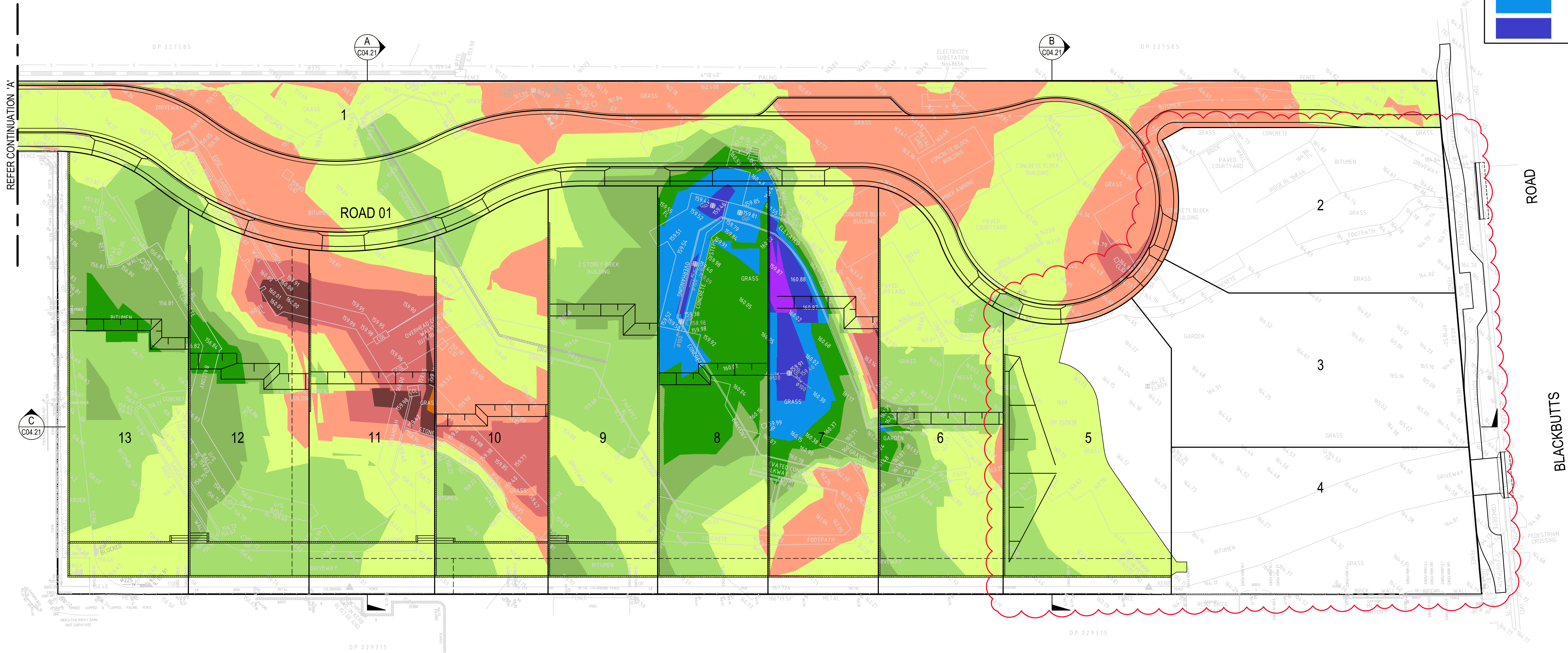
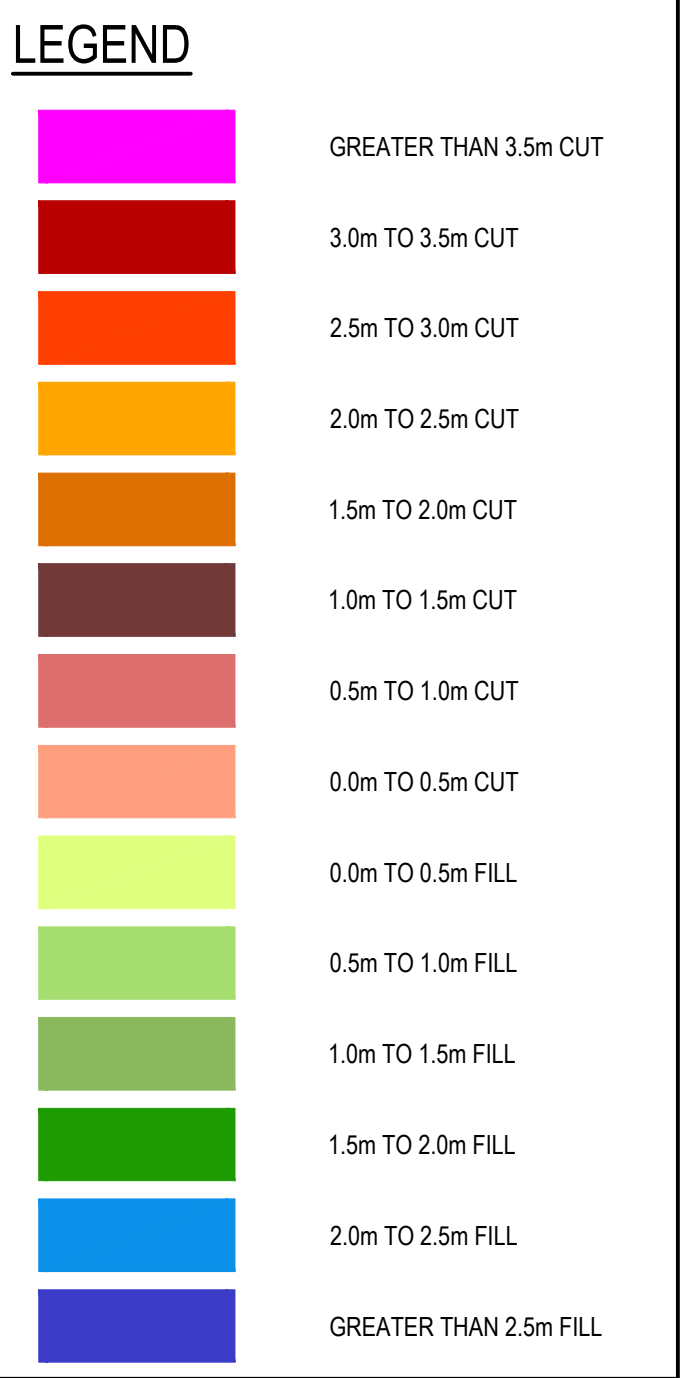
Project Number/Drawing Number
230057-00-DA-C03.21

Revision
3



CONTINUATION 'A'
SCALE 1:250

- NOTES**
- NO ALLOWANCE HAS BEEN MADE FOR BULKING FACTORS. NOTE ALL VOLUMES DEPICTED ARE SOLID VOLUMES ONLY AND MAY NOT REFLECT DETAILED EARTHWORKS.
 - NO ALLOWANCE HAS BEEN MADE FOR DETAILED EARTHWORKS. ie SERVICE TRENCHING, DETAILED EXCAVATION AND THE LIKE.
 - APPROXIMATE BULK EARTHWORKS VALUES AS FOLLOWS;
CUT 518m³
FILL 4,001m³
BALANCE 3,483m³ (IMPORT)
VOLUMES BASED ON EXISTING SURFACE LEVEL
VERSUS DESIGN SURFACE LEVEL. ALLOWANCE HAS BEEN MADE FOR STRIPPING AND BULKING OF ROAD.



REV.	DATE	DESCRIPTION	DRN.	DES.	VERIF.	APPD.
6	08/07/2025	ISSUED FOR \$4.55 APPROVAL	DK	AL		MKH
5	25/06/2025	ISSUED FOR \$4.55 APPROVAL	DK	AL		MKH
4	31/03/2025	UPDATES ADDRESSING COUNCIL COMMENTS DA ISSUE	DK	AL		MKH
3	22/01/2025	ISSUED FOR DEVELOPMENT APPLICATION	DK	AL		MKH
2	15/01/2025	ISSUED FOR DEVELOPMENT APPLICATION	DK	AL		MKH
1	7/03/2024	ISSUED FOR DEVELOPMENT APPLICATION	ZW	LD		MKH

Client

SEKISUI HOUSE

Scale

0 5 10 15 20 25m

SCALE 1:250

@A1

North

The copyright of this drawing remains with Enspire Solutions Pty Ltd and must not be copied wholly or in part without the permission of Enspire Solutions Pty Ltd.

enspire

Enspire Solutions Pty Ltd
Level 4, 153 Walker Street, North Sydney NSW 2060
ABN: 71 624 801 690
Phone: 02 9922 6135
enspiresolutions.com.au

Project
49 BLACKBUTTS ROAD
FRENCHS FOREST
CIVIL ENGINEERING WORKS

Title
EARTHWORKS CUT AND FILL PLAN

Scale
1:250

Date
07/03/2024

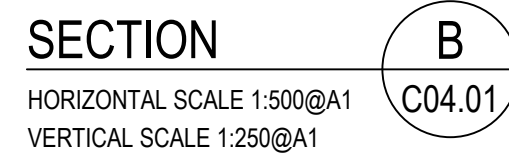
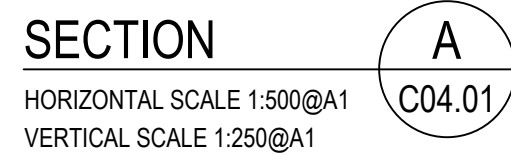
Size
A1

Datum
GDA 2020

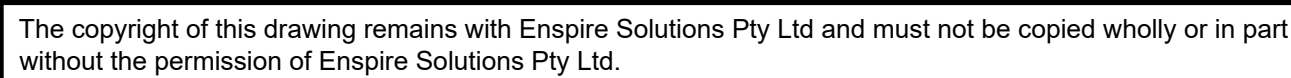
Status
FOR INFORMATION ONLY
NOT TO BE USED FOR CONSTRUCTION

Project Number/Drawing Number
230057-00-DA-C04.01

Revision
6



SEKISUI HOUSE



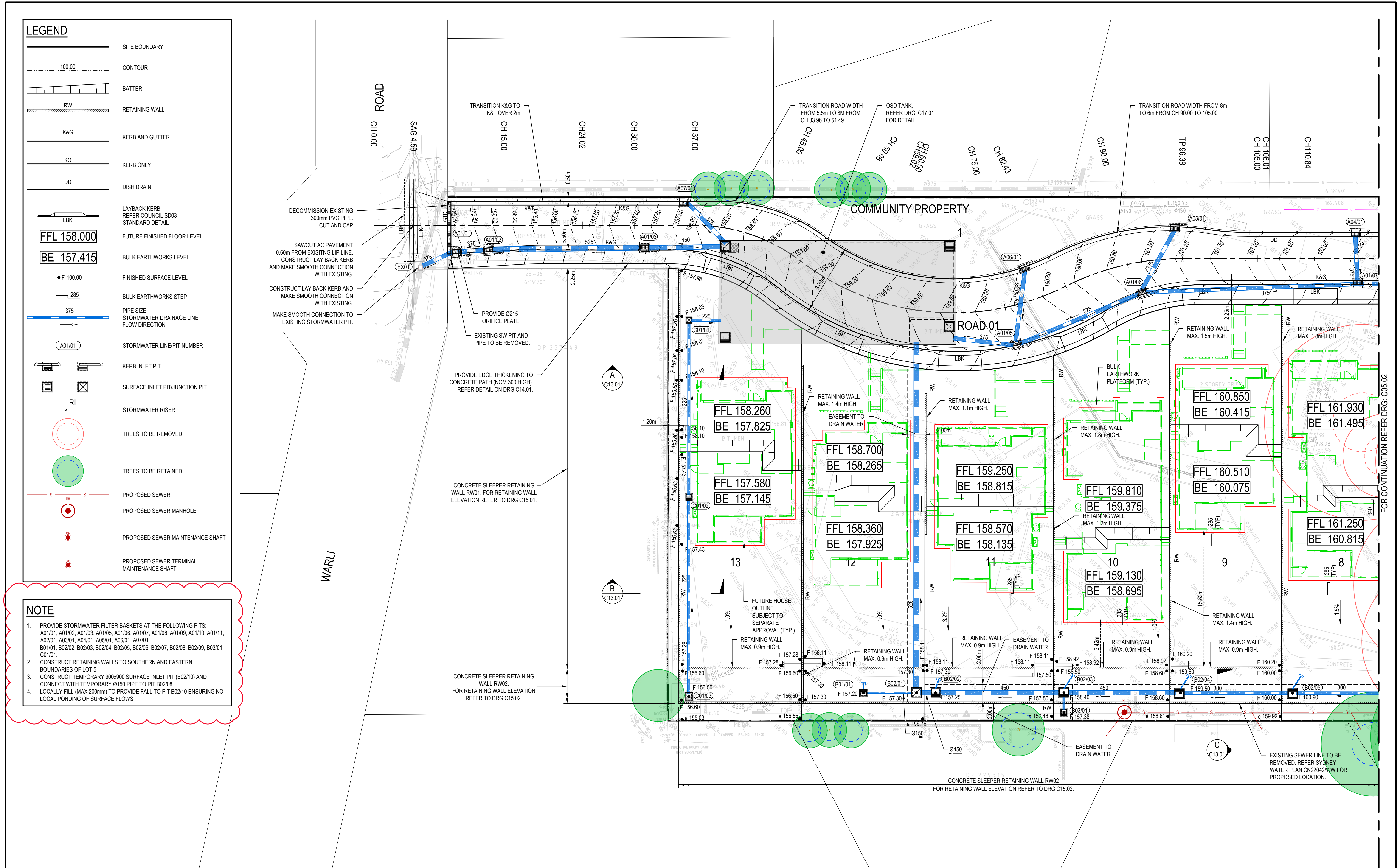
Project 49 BLACKBUTTS ROAD FRENCHS FOREST CIVIL ENGINEERING WORKS	Scale	Status <div style="color: red; text-align: center;"> FOR INFORMATION ONLY NOT TO BE USED FOR CONSTRUCTION </div>
	AS SHOWN Date 07/03/2024	
Title EARTHWORKS CUT AND FILL SECTIONS	Size	Project Number/Drawing Number <div style="font-size: 24pt; font-weight: bold;">230057-00-DA-C04.21</div>
	A1 Datum GDA 2020	
		Revision <div style="font-size: 24pt; font-weight: bold;">5</div>

LEGEND

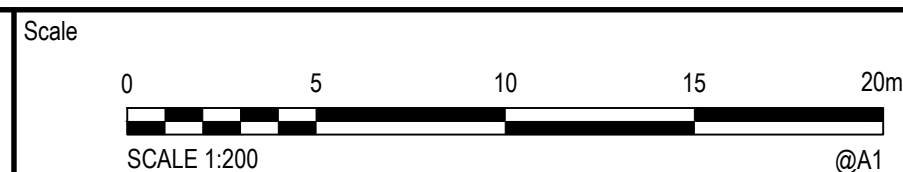
	SITE BOUNDARY
	CONTOUR
	BATTER
	RETAINING WALL
	KERB AND GUTTER
	KERB ONLY
	DISH DRAIN
	LAYBACK KERB REFER COUNCIL SD03 STANDARD DETAIL
	FUTURE FINISHED FLOOR LEVEL
	BULK EARTHWORKS LEVEL
	FINISHED SURFACE LEVEL
	BULK EARTHWORKS STEP
	PIPE SIZE
	STORMWATER DRAINAGE LINE FLOW DIRECTION
	STORMWATER LINE/PIT NUMBER
	KERB INLET PIT
	SURFACE INLET PIT/JUNCTION PIT
	STORMWATER RISER
	TREES TO BE REMOVED
	TREES TO BE RETAINED
	PROPOSED SEWER
	PROPOSED SEWER MANHOLE
	PROPOSED SEWER MAINTENANCE SHAFT
	PROPOSED SEWER TERMINAL MAINTENANCE SHAFT

NOTE

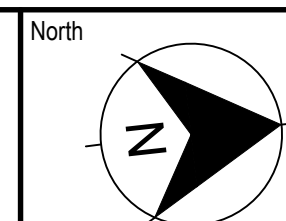
1. PROVIDE STORMWATER FILTER BASKETS AT THE FOLLOWING PITS:
A01/01, A01/02, A01/03, A01/05, A01/06, A01/07, A01/08, A01/09, A01/10, A01/11, A02/01, A03/01, A04/01, A05/01, A06/01, A07/01
B01/01, B02/02, B02/03, B02/04, B02/05, B02/06, B02/07, B02/08, B02/09, B03/01, C01/01.
2. CONSTRUCT RETAINING WALLS TO SOUTHERN AND EASTERN BOUNDARIES OF LOT 5.
3. CONSTRUCT TEMPORARY 900x900 SURFACE INLET PIT (B02/10) AND CONNECT WITH TEMPORARY Ø150 PIPE TO PIT B02/08.
4. LOCALLY FILL (MAX 200mm) TO PROVIDE FALL TO PIT B02/10 ENSURING NO LOCAL PONDING OF SURFACE FLOWS.



REV.	DATE	DESCRIPTION	DRN.	DES.	VERIF.	APPD.
7	08/07/2025	ISSUED FOR S4.55 APPROVAL	DK	AL		MKH
6	25/06/2025	ISSUED FOR S4.55 APPROVAL	DK	AL		MKH
5	31/03/2025	UPDATES ADDRESSING COUNCIL COMMENTS DA ISSUE	DK	AL		MKH
4	22/01/2025	ISSUED FOR DEVELOPMENT APPLICATION	DK	AL		MKH
3	15/01/2025	ISSUED FOR DEVELOPMENT APPLICATION	DK	AL		MKH
1	7/03/2024	ISSUED FOR DEVELOPMENT APPLICATION	ZW	LD		MKH
1	28/02/2024	80% ISSUED FOR INFORMATION	ZW	LD		MKH



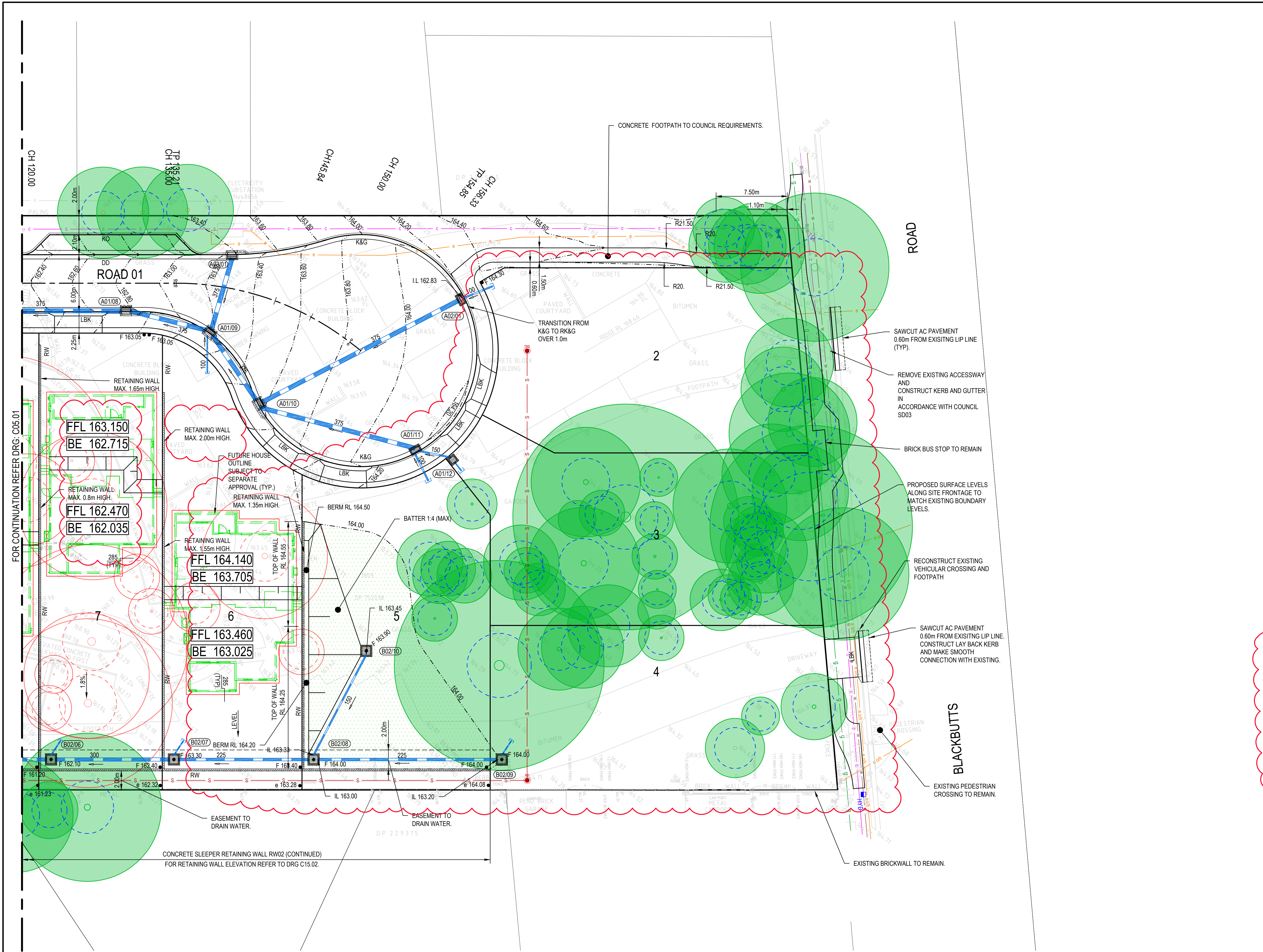
The copyright of this drawing remains with Enspire Solutions Pty Ltd and must not be copied wholly or in part without the permission of Enspire Solutions Pty Ltd.



Project	49 BLACKBUTTS ROAD FRENCHS FOREST CIVIL ENGINEERING WORKS
Title	SITEWORKS AND STORMWATER MANAGEMENT PLAN
SHEET 01	

Scale	1:200	Status	FOR INFORMATION ONLY NOT TO BE USED FOR CONSTRUCTION
Date	28/02/2024	Project Number/Drawing Number	230057-00-DA-C05.01
Size	A1	Revision	7
Datum	GDA 2020		

CAD FILE: P:\230057 BlackbutsRd\ID-Civil\00-SiteWide\Drawings\6-DACC\230057-00-DA-C05.01-C05.02 SITEWORKS AND STORMWATER MANAGEMENT PLAN.dwg



LEGEND

SITE BOUNDARY

100.00
CONTOUR

BATTER

RW
RETAINING WALL

K&G
KERB AND GUTTER

KO
KERB ONLY

DD
DISH DRAIN

LKB
LAYBACK KERB
REFER COUNCIL SD03
STANDARD DETAIL

FFL 158.000
FUTURE FINISHED FLOOR LEVEL

BE 157.415
BULK EARTHWORKS LEVEL

F 100.00
FINISHED SURFACE LEVEL

285
BULK EARTHWORKS STEP

375
PIPE SIZE
STORMWATER DRAINAGE LINE
FLOW DIRECTION

A01/01
STORMWATER LINE/PIT NUMBER

Kerb Inlet Pit

Surface Inlet Pit/Junction Pit

RI
STORMWATER RISER

Trees to be Removed

Trees to be Retained

PROPOSED SEWER

PROPOSED SEWER MANHOLE

PROPOSED SEWER MAINTENANCE SHAFT

PROPOSED SEWER TERMINAL
MAINTENANCE SHAFT

NOTE

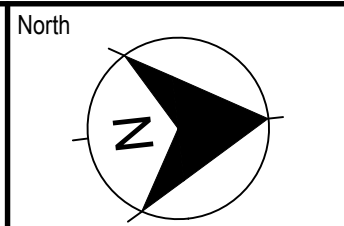
- PROVIDE STORMWATER FILTER BASKETS AT THE FOLLOWING PITS:
A01/01, A01/02, A01/03, A01/05, A01/06, A01/07, A01/08, A01/09, A01/10, A01/11, A02/01, A03/01, A04/01, A05/01, A06/01, A07/01, B01/01, B02/02, B02/03, B02/04, B02/05, B02/06, B02/07, B02/08, B02/09, B03/01, C01/01
- CONSTRUCT RETAINING WALLS TO SOUTHERN AND EASTERN BOUNDARIES OF LOT 5.
- CONSTRUCT TEMPORARY 900x900 SURFACE INLET PIT (B02/10) AND CONNECT WITH TEMPORARY Ø150 PIPE TO PIT B02/08.
- LOCALLY FILL (MAX 200mm) TO PROVIDE FALL TO PIT B02/10 ENSURING NO LOCAL PONDING OF SURFACE FLOWS.

REV.	DATE	DESCRIPTION	DRN.	DES.	VERIF.	APPD.
7	08/07/2025	ISSUED FOR S4.55 APPROVAL	DK	AL		MKH
6	25/06/2025	ISSUED FOR S4.55 APPROVAL	DK	AL		MKH
5	31/03/2025	UPDATES ADDRESSING COUNCIL COMMENTS DA ISSUE	DK	AL		MKH
4	22/01/2025	ISSUED FOR DEVELOPMENT APPLICATION	DK	AL		MKH
3	15/01/2025	ISSUED FOR DEVELOPMENT APPLICATION	DK	AL		MKH
1	7/03/2024	ISSUED FOR DEVELOPMENT APPLICATION	ZW	LD		MKH
1	28/02/2024	80% ISSUED FOR INFORMATION	ZW	LD		MKH



Scale

SCALE 1:200 @A1



Enspire Solutions Pty Ltd
Level 4, 153 Walker Street, North Sydney NSW 2060
ABN: 71 624 801 690
Phone: 02 9922 6135
enspiresolutions.com.au

Project
49 BLACKBUTTS ROAD
FRENCHS FOREST
CIVIL ENGINEERING WORKS

Title
SITEWORKS AND STORMWATER MANAGEMENT PLAN

SHEET 02

Scale
1:200

Date
28/02/2024

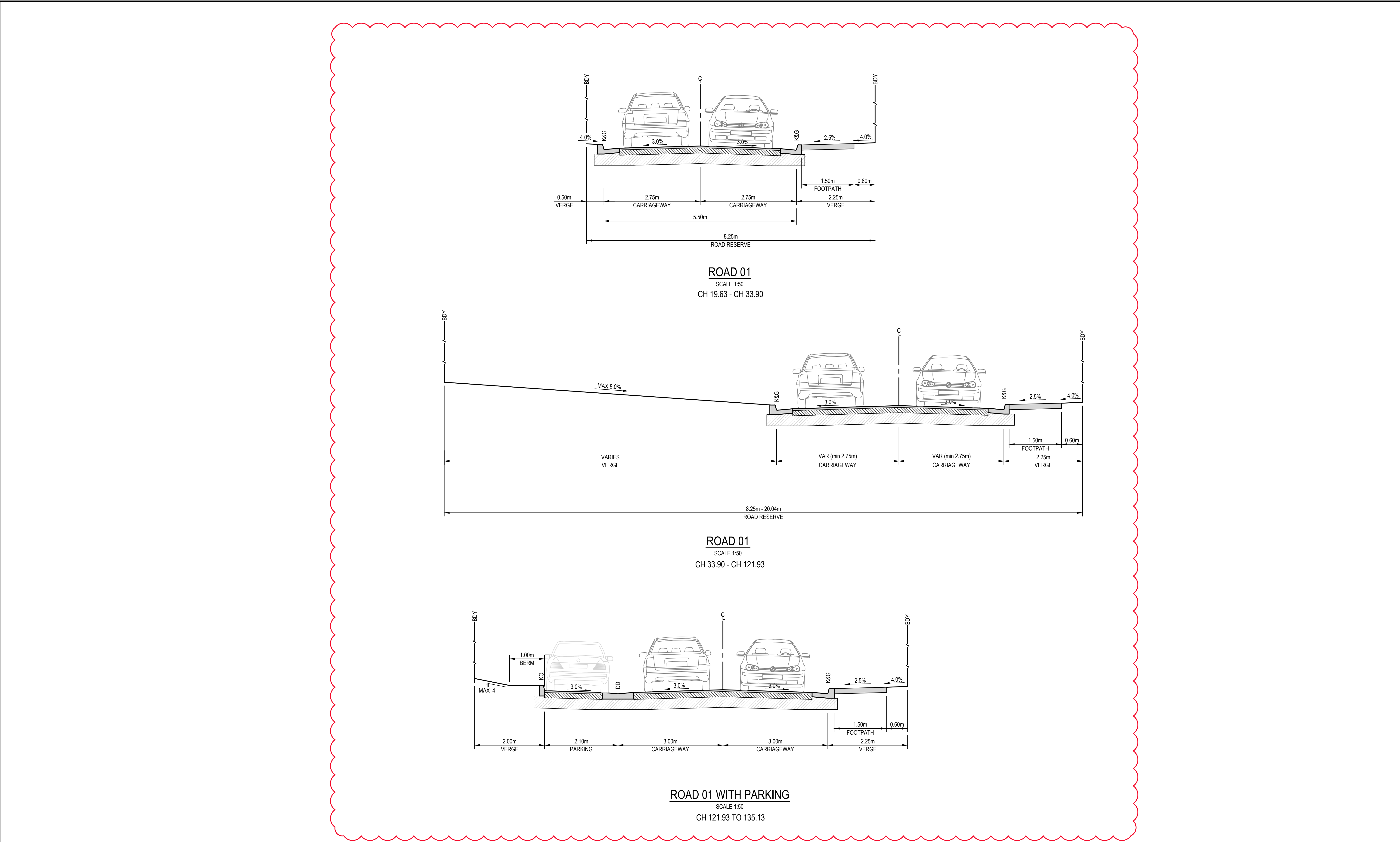
Size
A1

Datum
GDA 2020

Status
FOR INFORMATION ONLY
NOT TO BE USED FOR CONSTRUCTION

Project Number/Drawing Number
230057-00-DA-C05.02

Revision
7




4	25/06/2025	ISSUED FOR S4.55 APPROVAL	DK	AL	MKH
3	31/03/2025	UPDATES ADDRESSING COUNCIL COMMENTS DA ISSUE	DK	AL	MKH
2	15/01/2025	ISSUED FOR DEVELOPMENT APPLICATION	DK	AL	MKH
1	7/03/2024	ISSUED FOR DEVELOPMENT APPLICATION	ZW	LD	MKH
REV.	DATE	DESCRIPTION	DRN.	DES.	VERIF./APPD.

Client



SEKISUI HOUSE

Scale



SCALE 1:50 @A1

North

The copyright of this drawing remains with Enspire Solutions Pty Ltd and must not be copied wholly or in part without the permission of Enspire Solutions Pty Ltd.



Enspire Solutions Pty Ltd
Level 4, 153 Walker Street, North Sydney NSW 2060
ABN: 71 624 801 690
Phone: 02 9922 6135
enspiresolutions.com.au

Project
49 BLACKBUTTS ROAD
FRENCHS FOREST
CIVIL ENGINEERING WORKS

Title
ROAD TYPICAL CROSS SECTIONS

Scale
1:50

Date
07/03/2024

Size
A1

Datum
GDA 2020

Status
FOR INFORMATION ONLY
NOT TO BE USED FOR CONSTRUCTION

Project Number/Drawing Number
230057-00-DA-C06.01

Revision
4

1. CONCRETE DRIVEWAY TO NORTHERN BEACHES
COUNCIL STANDARD DRAWING No.1.
2. CONCRETE LAYBACK TO NORTHERN BEACHES
COUNCIL STANDARD DRAWING No.3.



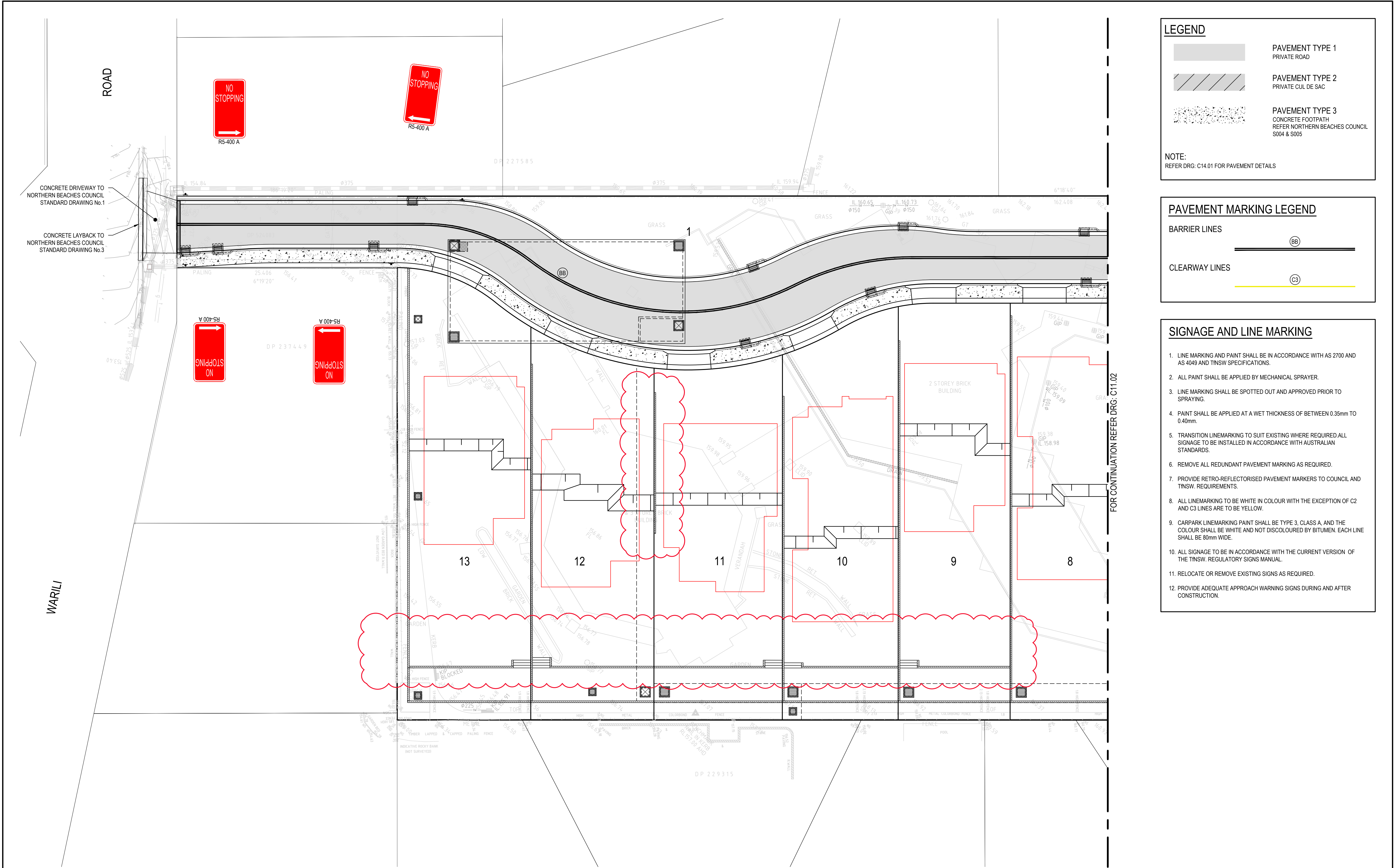
Client



SEKISUI HOUSE



CAD File: P:\230057 BlackbuttsRd\D-Civil\00-SiteWide\Drawings\6-DACC\230057-00-DA-C07.01 ROAD LONGITUDINAL SECTION.dwg



LEGEND

PAVEMENT TYPE 1
PRIVATE ROAD

PAVEMENT TYPE 2
PRIVATE CUL DE SAC

PAVEMENT TYPE 3
CONCRETE FOOTPATH
REFER NORTHERN BEACHES COUNCIL
S004 & S005

NOTE:
REFER DRG: C14.01 FOR PAVEMENT DETAILS

PAVEMENT MARKING LEGEND

BARRIER LINES

BB

CLEARWAY LINES

C3

SIGNAGE AND LINE MARKING

1. LINE MARKING AND PAINT SHALL BE IN ACCORDANCE WITH AS 2700 AND AS 4049 AND TNSW SPECIFICATIONS.

2. ALL PAINT SHALL BE APPLIED BY MECHANICAL SPRAYER.

3. LINE MARKING SHALL BE SPOTTED OUT AND APPROVED PRIOR TO SPRAYING.

4. PAINT SHALL BE APPLIED AT A WET THICKNESS OF BETWEEN 0.35mm TO 0.40mm.

5. TRANSITION LINEMARKING TO SUIT EXISTING WHERE REQUIRED ALL SIGNAGE TO BE INSTALLED IN ACCORDANCE WITH AUSTRALIAN STANDARDS.

6. REMOVE ALL REDUNDANT PAVEMENT MARKING AS REQUIRED.

7. PROVIDE RETRO-REFLECTORISED PAVEMENT MARKERS TO COUNCIL AND TNSW REQUIREMENTS.

8. ALL LINEMARKING TO BE WHITE IN COLOUR WITH THE EXCEPTION OF C2 AND C3 LINES ARE TO BE YELLOW.

9. CARPARK LINEMARKING PAINT SHALL BE TYPE 3, CLASS A, AND THE COLOUR SHALL BE WHITE AND NOT DISCOLOURED BY BITUMEN. EACH LINE SHALL BE 80mm WIDE.

10. ALL SIGNAGE TO BE IN ACCORDANCE WITH THE CURRENT VERSION OF THE TNSW REGULATORY SIGNS MANUAL.

11. RELOCATE OR REMOVE EXISTING SIGNS AS REQUIRED.

12. PROVIDE ADEQUATE APPROACH WARNING SIGNS DURING AND AFTER CONSTRUCTION.

REV.	DATE	DESCRIPTION	DRN.	DES.	VERIF.	APPD.
5	25/06/2025	ISSUED FOR S4.55 APPROVAL	DK	AL	MKH	
4	31/03/2025	UPDATES ADDRESSING COUNCIL COMMENTS DA ISSUE	DK	AL	MKH	
3	22/01/2025	ISSUED FOR DEVELOPMENT APPLICATION	DK	AL	MKH	
2	15/01/2025	ISSUED FOR DEVELOPMENT APPLICATION	DK	AL	MKH	
1	7/03/2024	ISSUED FOR DEVELOPMENT APPLICATION	ZW	LD	MKH	

Client



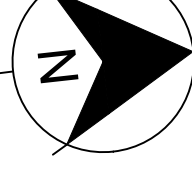
SEKISUI HOUSE

Scale

0 5 10 15 20m

SCALE 1:200 @A1

North



The copyright of this drawing remains with Enspire Solutions Pty Ltd and must not be copied wholly or in part without the permission of Enspire Solutions Pty Ltd.



Enspire Solutions Pty Ltd
Level 4, 153 Walker Street, North Sydney NSW 2060
ABN: 71 624 801 690
Phone: 02 9922 6135
enspiresolutions.com.au

Project
49 BLACKBUTTS ROAD
FRENCHS FOREST
CIVIL ENGINEERING WORKS

Title
PAVEMENT, SIGNAGE AND LINEMARKING PLAN

SHEET 01

Scale
1:200

Date
07/03/2024

Size
A1

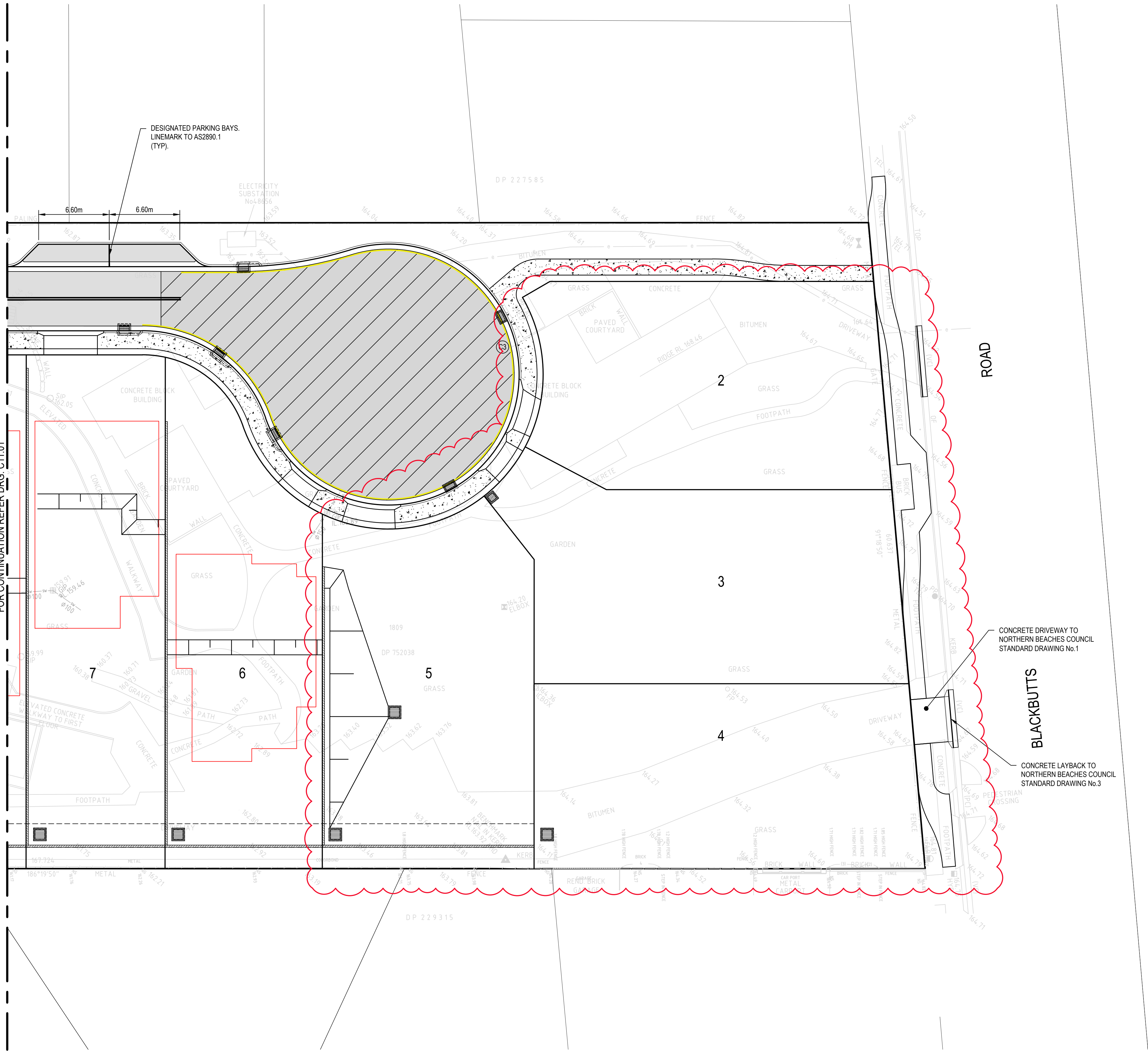
Datum
GDA 2020

Status
FOR INFORMATION ONLY
NOT TO BE USED FOR CONSTRUCTION

Project Number/Drawing Number
230057-00-DA-C11.01

Revision
5

FOR CONTINUATION REFER DRG: C11.01



LEGEND

	PAVEMENT TYPE 1 PRIVATE ROAD
	PAVEMENT TYPE 2 PRIVATE CUL DE SAC
	PAVEMENT TYPE 3 CONCRETE FOOTPATH REFER NORTHERN BEACHES COUNCIL S004 & S005

NOTE:
REFER DRG: C14.01 FOR PAVEMENT DETAILS

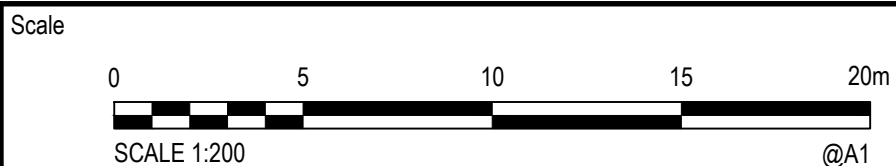
PAVEMENT MARKING LEGEND

BARRIER LINES	
CLEARWAY LINES	

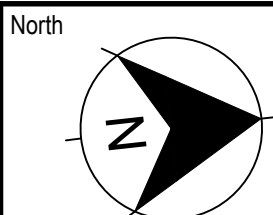
SIGNAGE AND LINE MARKING

1. LINE MARKING AND PAINT SHALL BE IN ACCORDANCE WITH AS 2700 AND AS 4049 AND TNSW SPECIFICATIONS.
2. ALL PAINT SHALL BE APPLIED BY MECHANICAL SPRAYER.
3. LINE MARKING SHALL BE SPOTTED OUT AND APPROVED PRIOR TO SPRAYING.
4. PAINT SHALL BE APPLIED AT A WET THICKNESS OF BETWEEN 0.35mm TO 0.40mm.
5. TRANSITION LINEMARKING TO SUIT EXISTING WHERE REQUIRED ALL SIGNAGE TO BE INSTALLED IN ACCORDANCE WITH AUSTRALIAN STANDARDS.
6. REMOVE ALL REDUNDANT PAVEMENT MARKING AS REQUIRED.
7. PROVIDE RETRO-REFLECTORISED PAVEMENT MARKERS TO COUNCIL AND TNSW REQUIREMENTS.
8. ALL LINEMARKING TO BE WHITE IN COLOUR WITH THE EXCEPTION OF C2 AND C3 LINES ARE TO BE YELLOW.
9. CARPARK LINEMARKING PAINT SHALL BE TYPE 3, CLASS A, AND THE COLOUR SHALL BE WHITE AND NOT DISCOLOURED BY BITUMEN. EACH LINE SHALL BE 80mm WIDE.
10. ALL SIGNAGE TO BE IN ACCORDANCE WITH THE CURRENT VERSION OF THE TNSW REGULATORY SIGNS MANUAL.
11. RELOCATE OR REMOVE EXISTING SIGNS AS REQUIRED.
12. PROVIDE ADEQUATE APPROACH WARNING SIGNS DURING AND AFTER CONSTRUCTION.

REV.	DATE	DESCRIPTION	DRN.	DES.	VERIF.	APPD.
6	08/07/2025	ISSUED FOR \$4.55 APPROVAL	DK	AL		MKH
5	25/06/2025	ISSUED FOR \$4.55 APPROVAL	DK	AL		MKH
4	25/06/2025	ISSUED FOR \$4.55 APPROVAL	DK	AL		MKH
3	31/03/2025	UPDATES ADDRESSING COUNCIL COMMENTS DA ISSUE	DK	AL		MKH
2	15/01/2025	ISSUED FOR DEVELOPMENT APPLICATION	DK	AL		MKH
1	7/03/2024	ISSUED FOR DEVELOPMENT APPLICATION	ZW	LD		MKH



The copyright of this drawing remains with Enspire Solutions Pty Ltd and must not be copied wholly or in part without the permission of Enspire Solutions Pty Ltd.



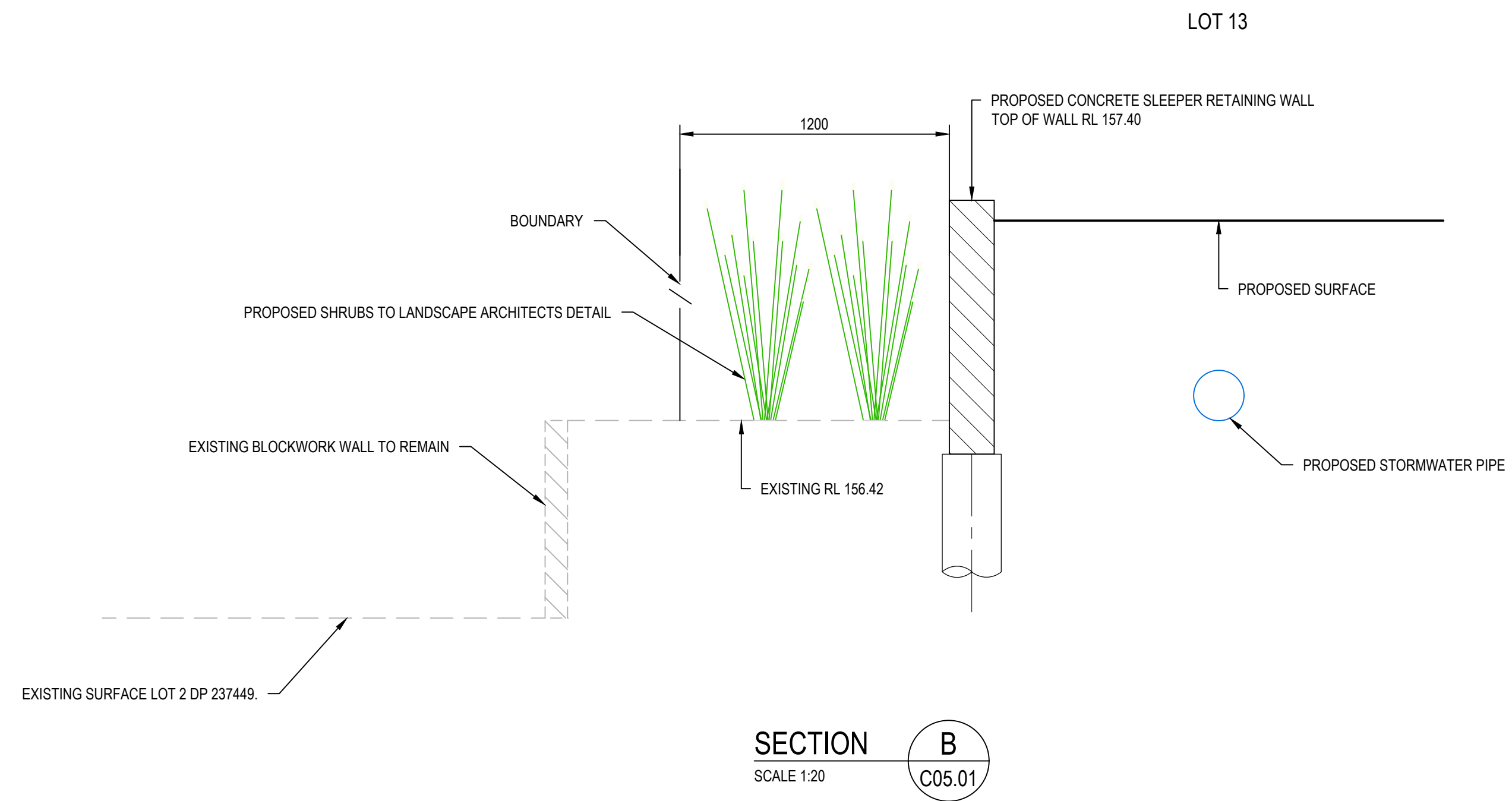
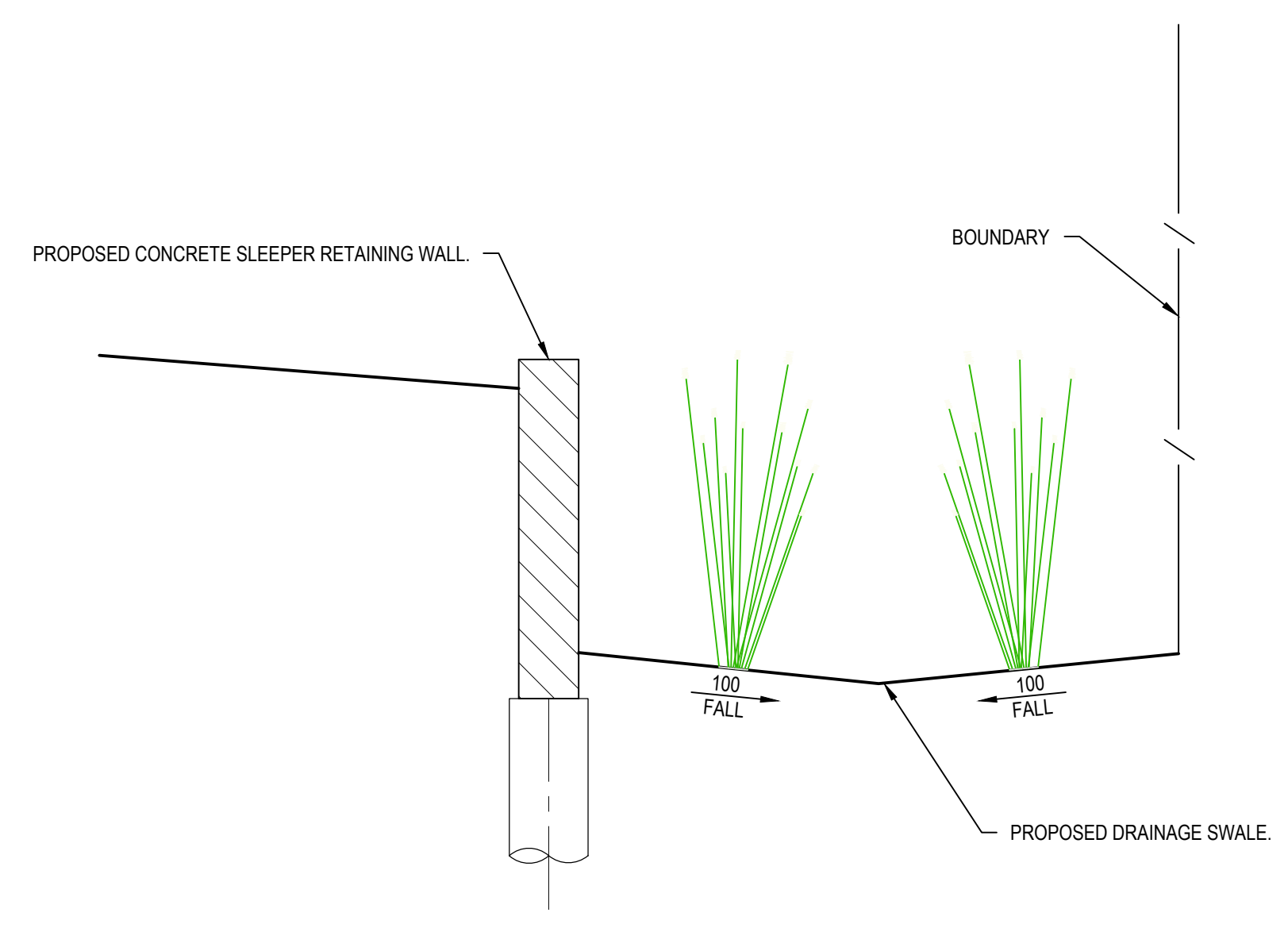
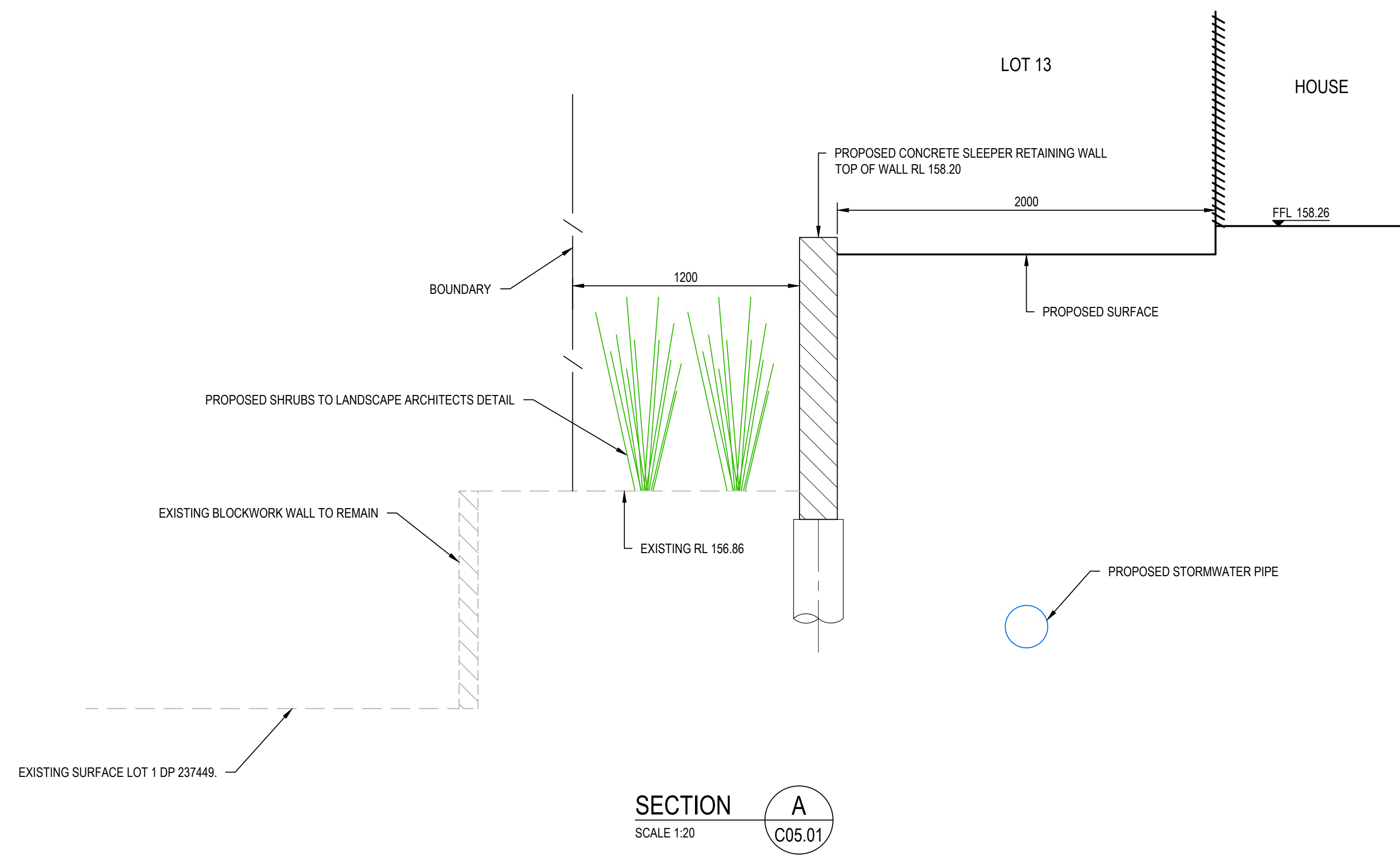
enspire
Enspire Solutions Pty Ltd
Level 4, 153 Walker Street, North Sydney NSW 2060
ABN: 71 624 801 690
Phone: 02 9922 6135
enspiresolutions.com.au

Project
49 BLACKBUTTS ROAD
FRENCHS FOREST
CIVIL ENGINEERING WORKS
Title
PAVEMENT, SIGNAGE AND LINEMARKING PLAN
SHEET 02

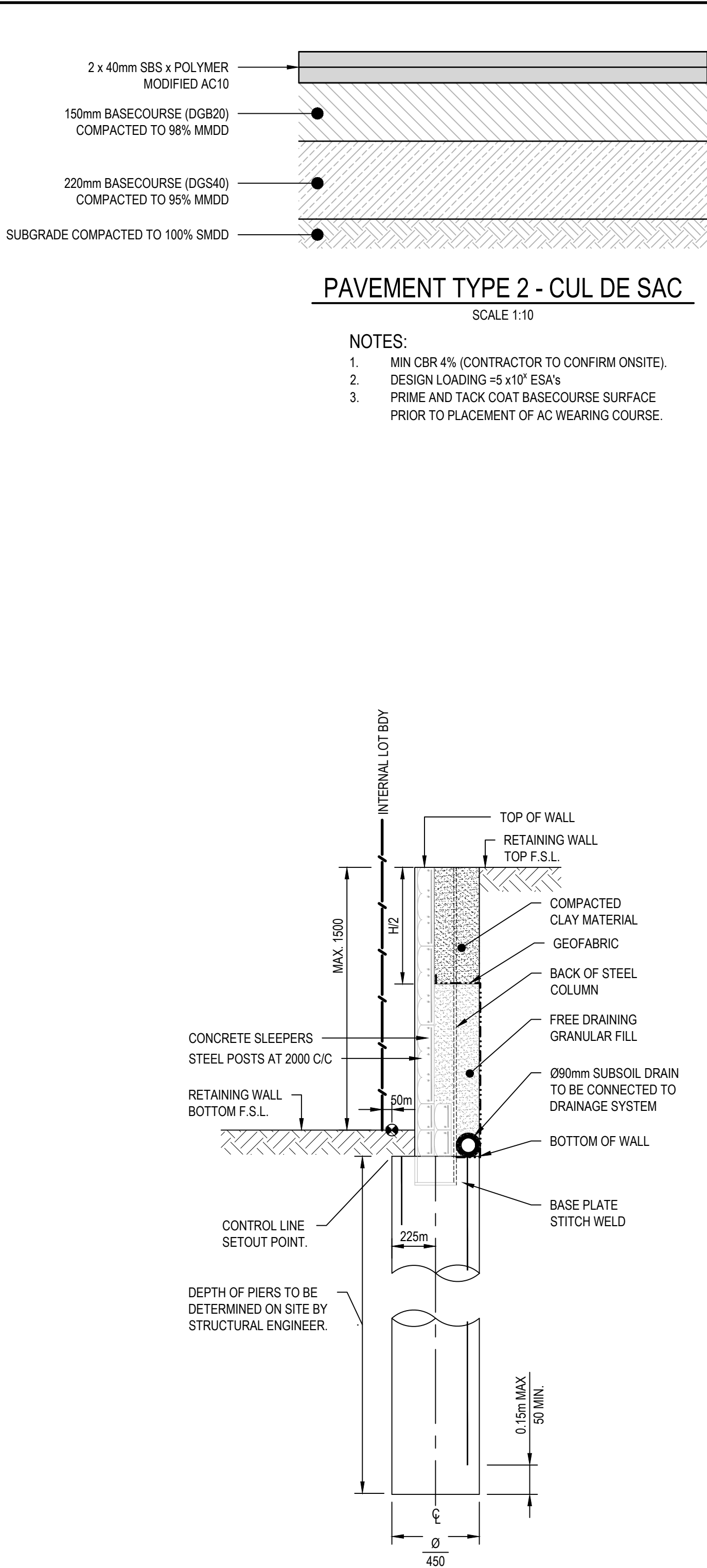
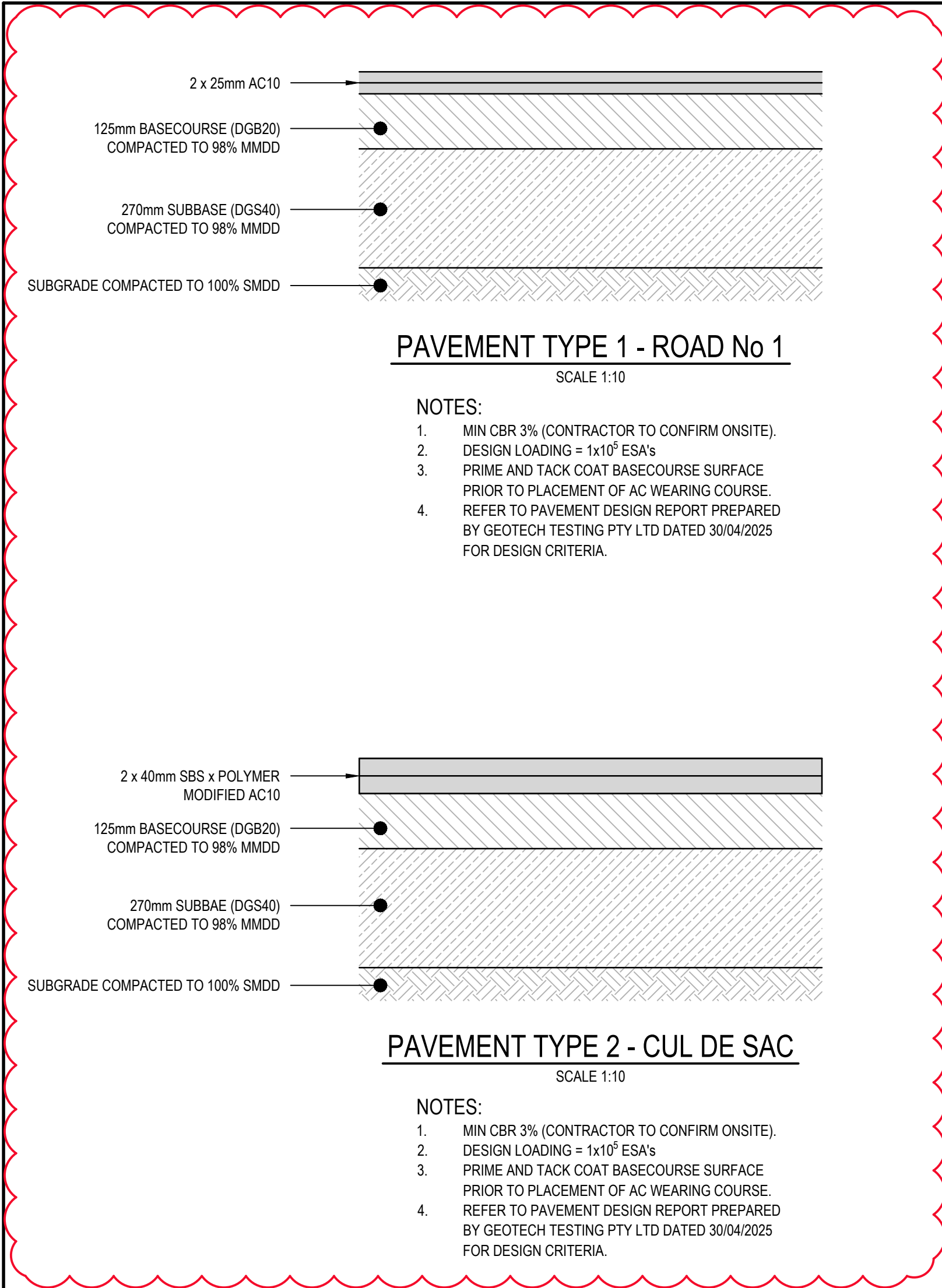
Scale
1:200
Date
07/03/2024
Size
A1
Datum
GDA 2020

Status
FOR INFORMATION ONLY
NOT TO BE USED FOR CONSTRUCTION

Project Number/Drawing Number
230057-00-DA-C11.02
Revision
6

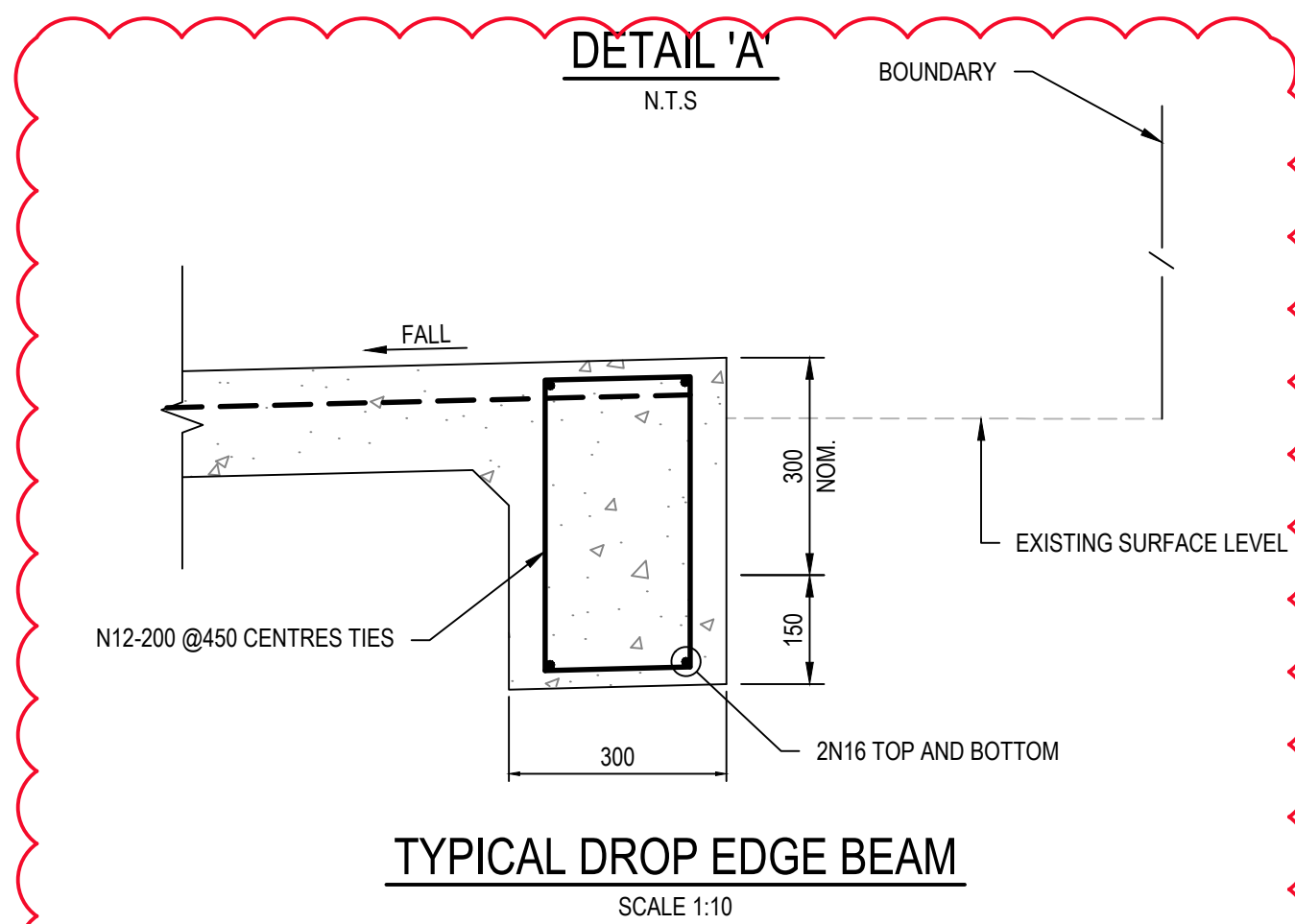
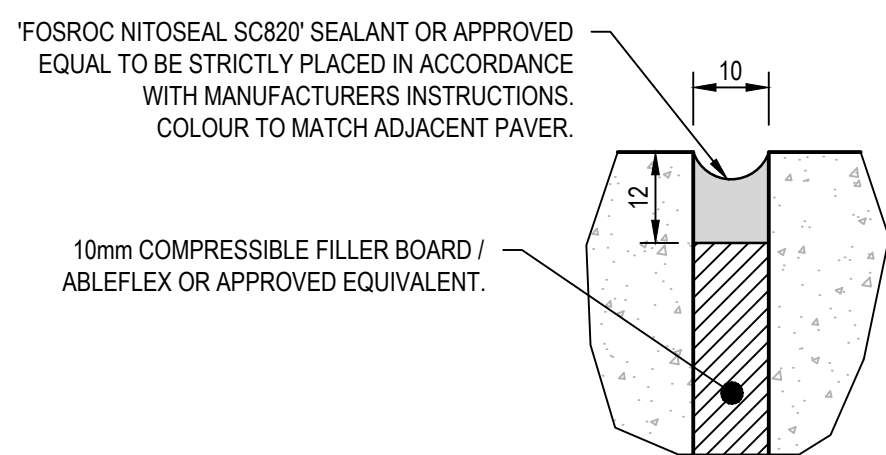
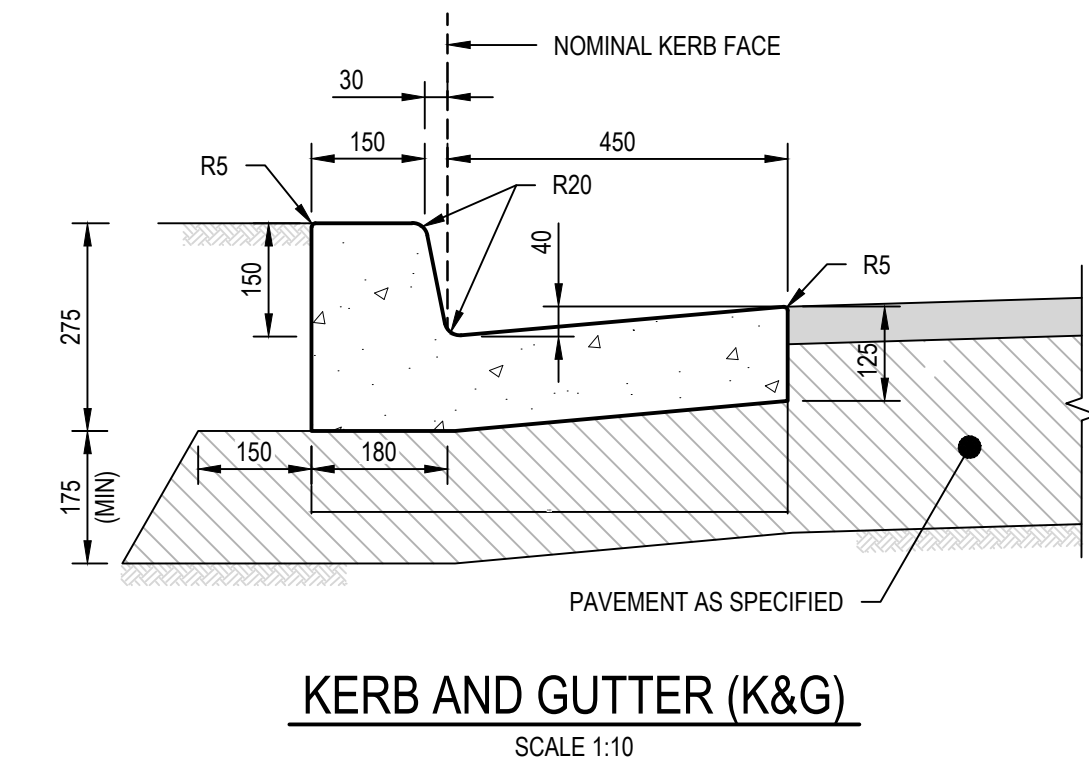
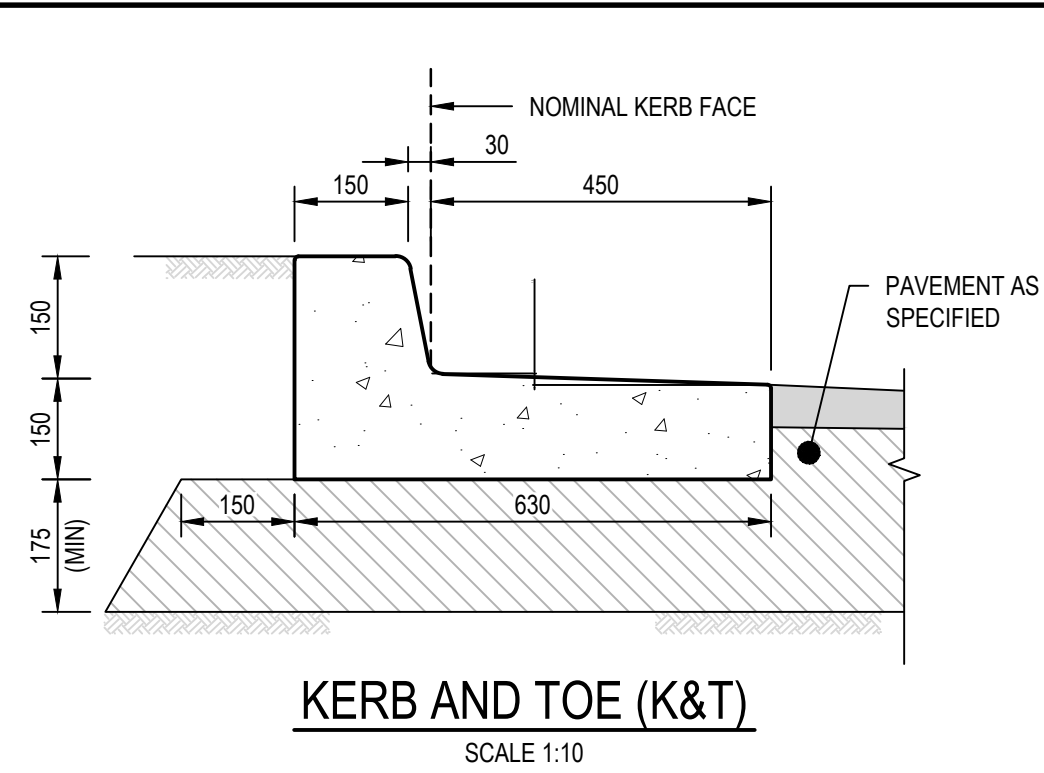
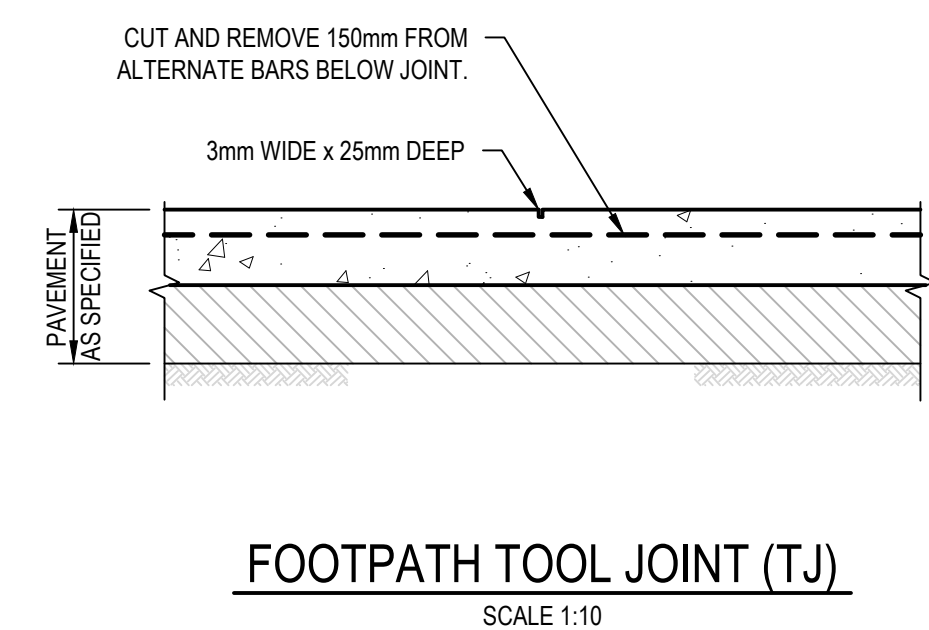
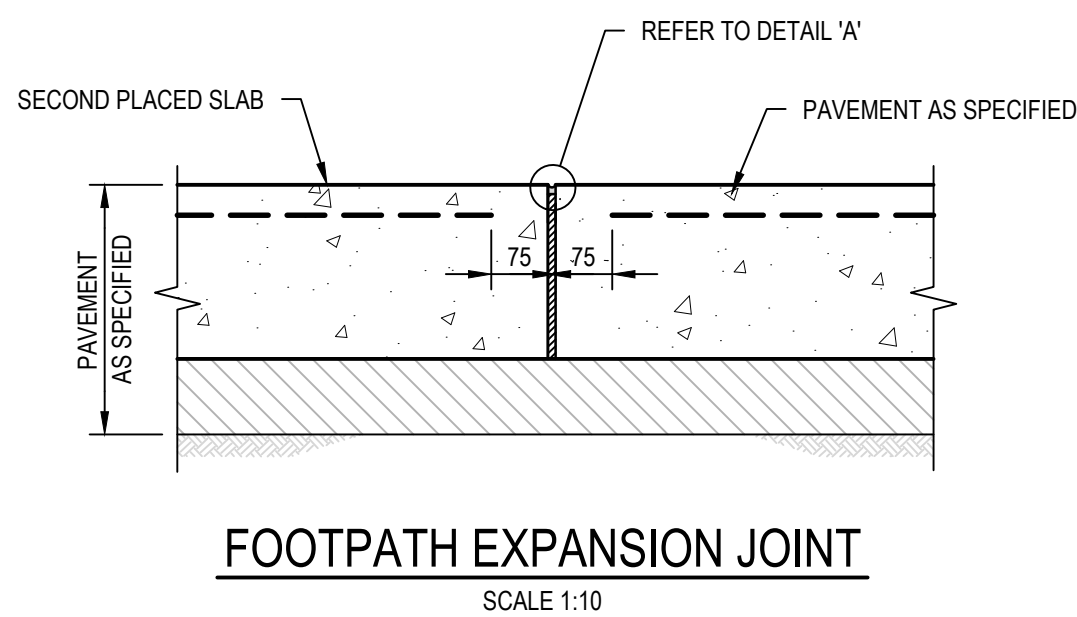
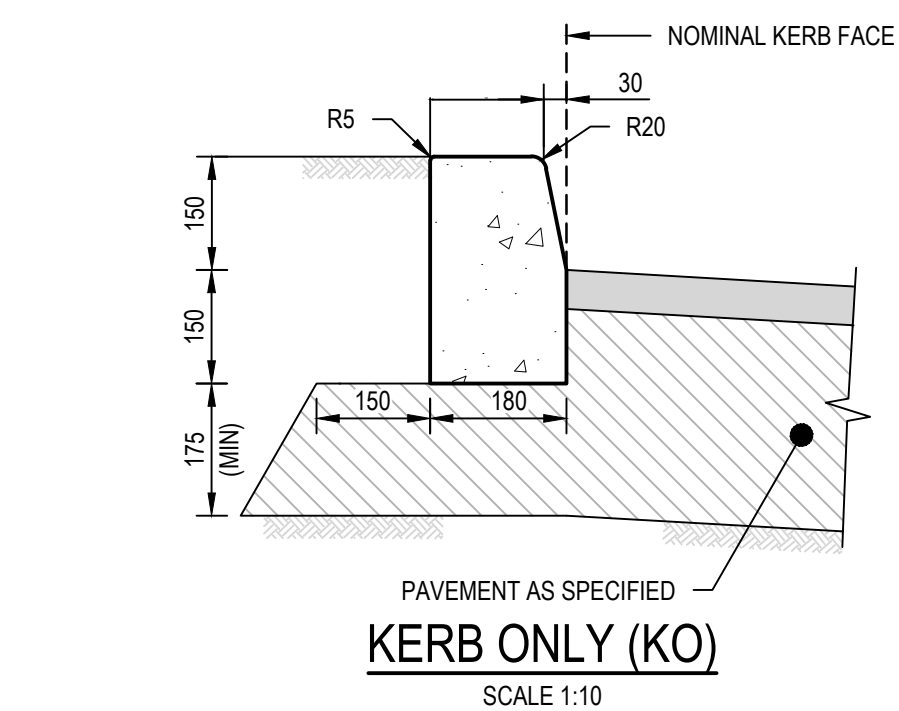
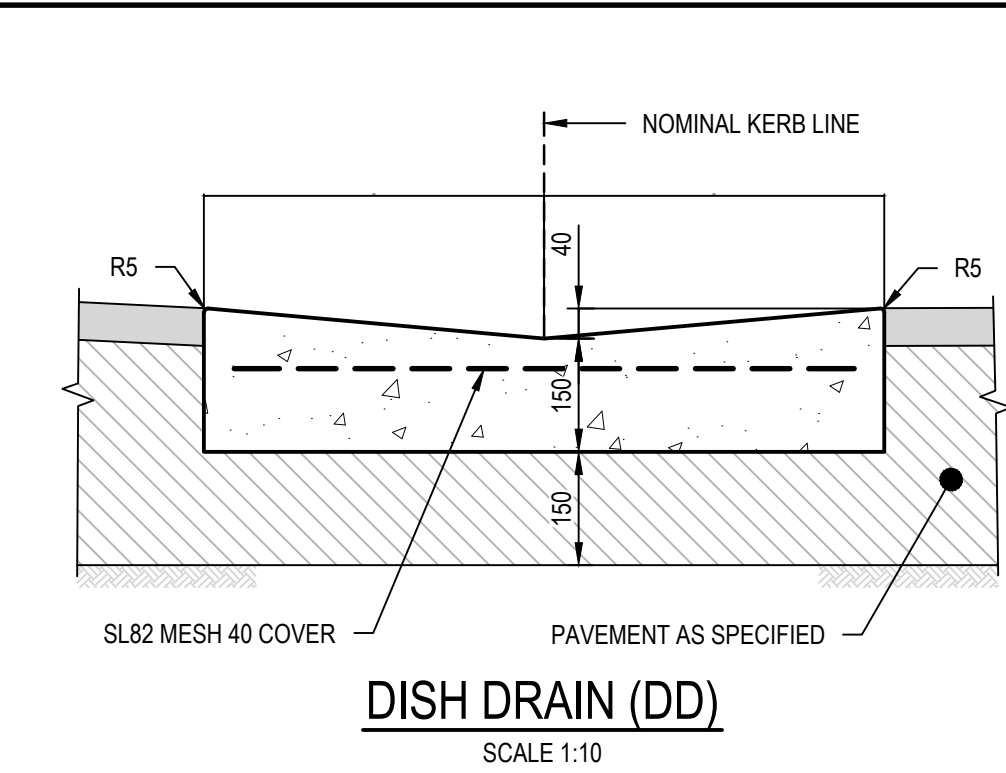


SECTION C
SCALE 1:20

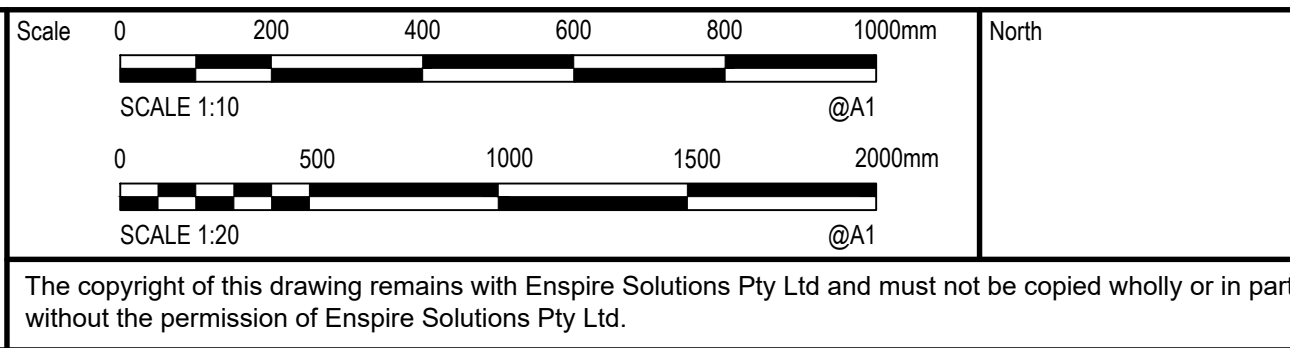


NOTE:

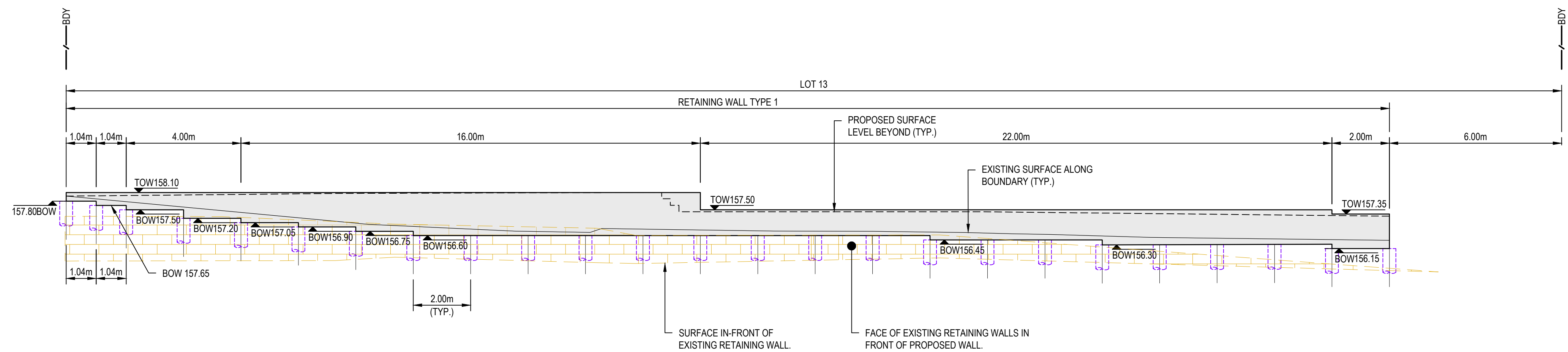
1. FOR WALL DETAILS REFER TO CONCRIB TECHNICAL DRAWING 'CONCRIB SLEEPERWALL 2006 SYSTEM DETAILS-S1'.
2. WALLS TO BE STRUCTURALLY CERTIFIED BY WALL SUPPLIER PRIOR TO CONSTRUCTION.
3. FACE OF WALL TO BE 2000mm FROM EASTERN BOUNDARY.
4. FACE OF WALL TO BE 1200mm FROM SOUTHERN BOUNDARY.
5. RETAINING WALL TO BE DESIGNED AND CONSTRUCTED FOR 5KPa SURCHARGE.
6. RETAINING WALLS TO BE DESIGNED TO MEET THE FOLLOWING AUSTRALIAN STANDARDS AS 1170.0-2022, AS 1170.1-2022 AND AS4678-2002 REQUIREMENTS AND THE RETAINING WALLS MUST NOT IMPACT A LOAD ON ANY ADJACENT SERVICE OR INFRASTRUCTURE.
7. REFER TO CROZIER GEOTECHNICAL REPORT 2023-07 DATED JUNE 2023 FOR GROUND CONDITIONS.



REV.	DATE	DESCRIPTION	DRN.	DES.	VERIF.	APPD.
4	25/06/2025	ISSUED FOR \$4.55 APPROVAL	DK	AL		MKH
3	31/03/2025	UPDATES ADDRESSING COUNCIL COMMENTS DA ISSUE	DK	AL		MKH
2	15/01/2025	ISSUED FOR DEVELOPMENT APPLICATION	DK	AL		MKH
1	7/03/2024	ISSUED FOR DEVELOPMENT APPLICATION	ZW	LD		MKH



Project 49 BLACKBUTTS ROAD FRENCHS FOREST CIVIL ENGINEERING WORKS	Scale AS SHOWN Date 07/03/2024 Size A1 Datum GDA 2020	Status FOR INFORMATION ONLY NOT TO BE USED FOR CONSTRUCTION
Title SITEWORKS DETAILS	Project Number/Drawing Number 230057-00-DA-C14.01	Revision 4



RETAINING WALL ELEVATION RW01
SCALE 1:100


REV.	DATE	DESCRIPTION	DRN.	DES.	VERIF.	APPD.
2	31/03/2025	UPDATES ADDRESSING COUNCIL COMMENTS DA ISSUE	DK	AL		MKH.
1	15/01/2025	ISSUED FOR DEVELOPMENT APPLICATION	DK	AL		MKH.

Client




SEKISUI HOUSE

Scale



SCALE 1:100 @A1

North



The copyright of this drawing remains with Enspire Solutions Pty Ltd and must not be copied wholly or in part without the permission of Enspire Solutions Pty Ltd.



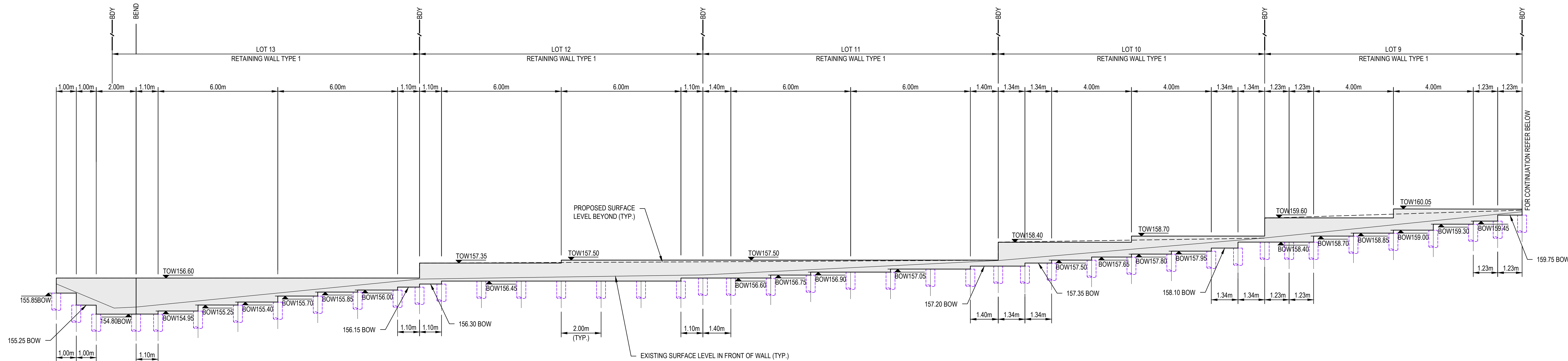
enspire

Enspire Solutions Pty Ltd
Level 4, 153 Walker Street, North Sydney NSW 2060
ABN: 71 624 801 690
Phone: 02 9922 6135
enspiresolutions.com.au

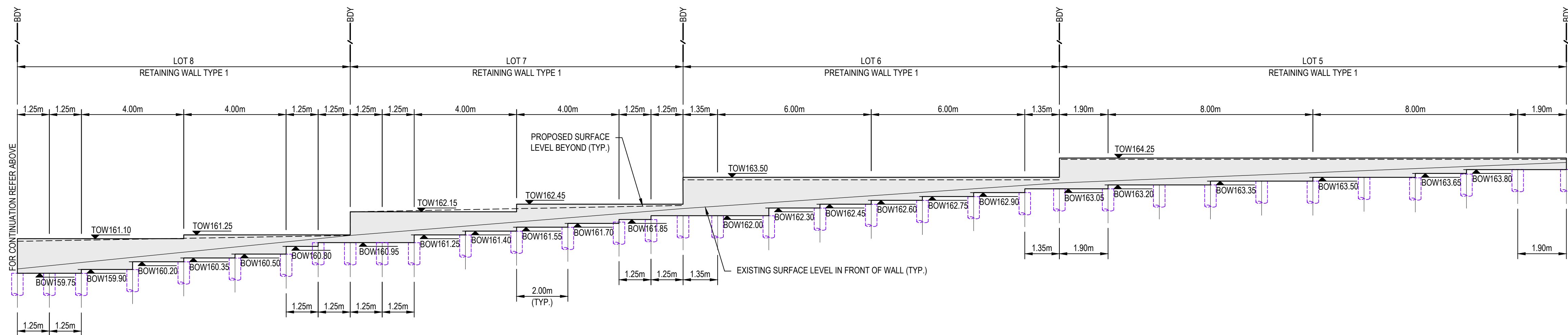
Project
49 BLACKBUTTS ROAD
FRENCHS FOREST
CIVIL ENGINEERING WORKS

Title
RETAINING WALL ELEVATIONS
SHEET 01

Scale 1:100	Status FOR INFORMATION ONLY NOT TO BE USED FOR CONSTRUCTION	
First Issue Date 15/01/2025		
Size A1		
Datum GDA 2020	Project Number/Drawing Number 230057-00-DA-C15.01	Revision 2



RETAINING WALL ELEVATION RW02
SCALE 1:100



RETAINING WALL ELEVATION RW02
SCALE 1:100

2	31/03/2025	UPDATES ADDRESSING COUNCIL COMMENTS DA ISSUE	DK	AL	MKH
1	15/01/2025	ISSUED FOR DEVELOPMENT APPLICATION	DK	AL	MKH
REV.	DATE	DESCRIPTION	DRN	DES.	VERIF.

Client


SEKISUI HOUSE

Scale
0 1 2 4 6 8 10m
SCALE 1:100 @A1

North

The copyright of this drawing remains with Enspire Solutions Pty Ltd and must not be copied wholly or in part without the permission of Enspire Solutions Pty Ltd.


Enspire Solutions Pty Ltd
Level 4, 153 Walker Street, North Sydney NSW 2060
ABN: 71 624 801 690
Phone: 02 9922 6135
enspiresolutions.com.au

Project
49 BLACKBUTTS ROAD
FRENCHS FOREST
CIVIL ENGINEERING WORKS

Title
RETAINING WALL ELEVATIONS

SHEET 02

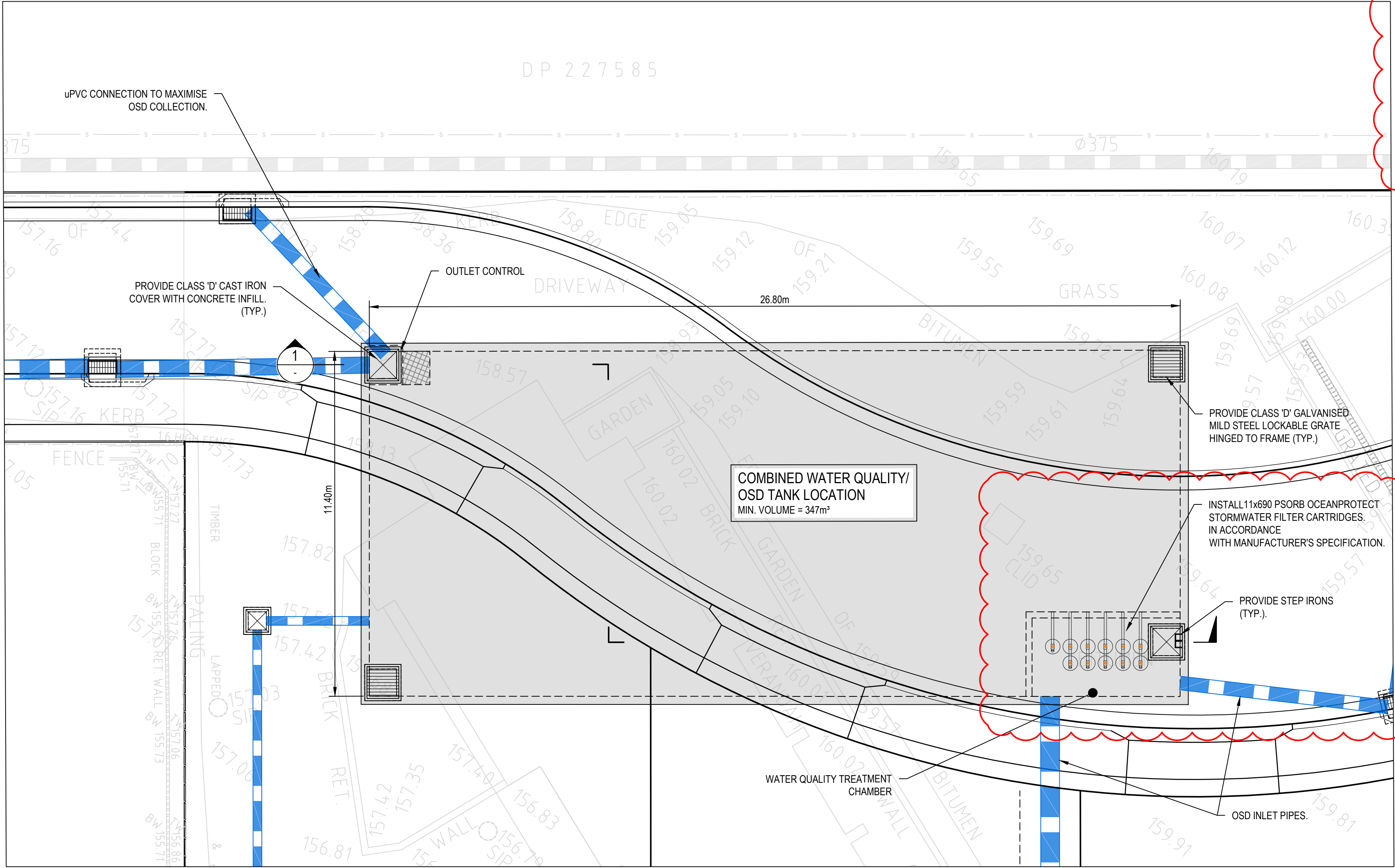
Scale
1:100
First Issue Date
15/01/2025

Status
FOR INFORMATION ONLY
NOT TO BE USED FOR CONSTRUCTION

Size
A1
Datum
GDA 2020

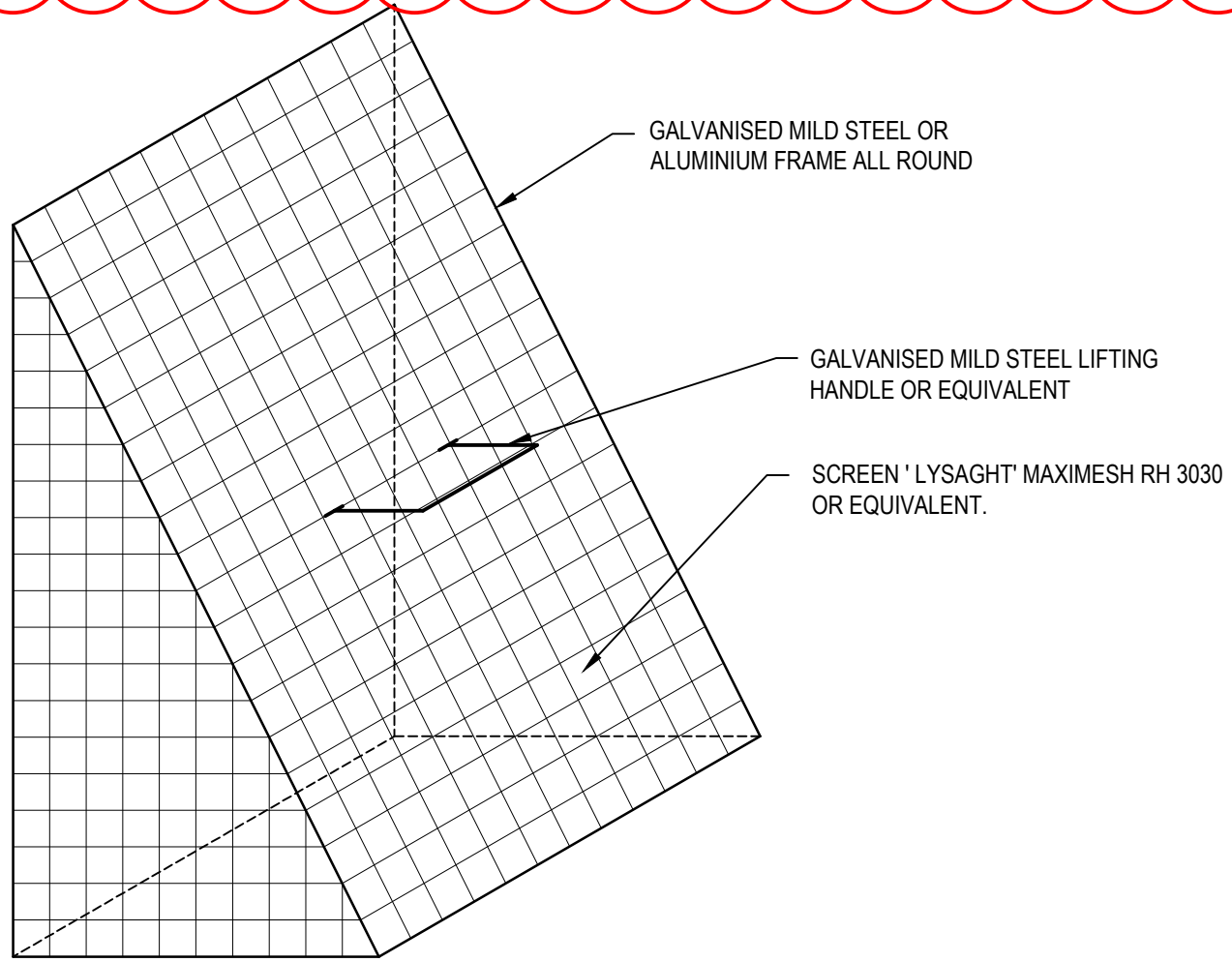
Project Number/Drawing Number
230057-00-DA-C15.02

Revision
2



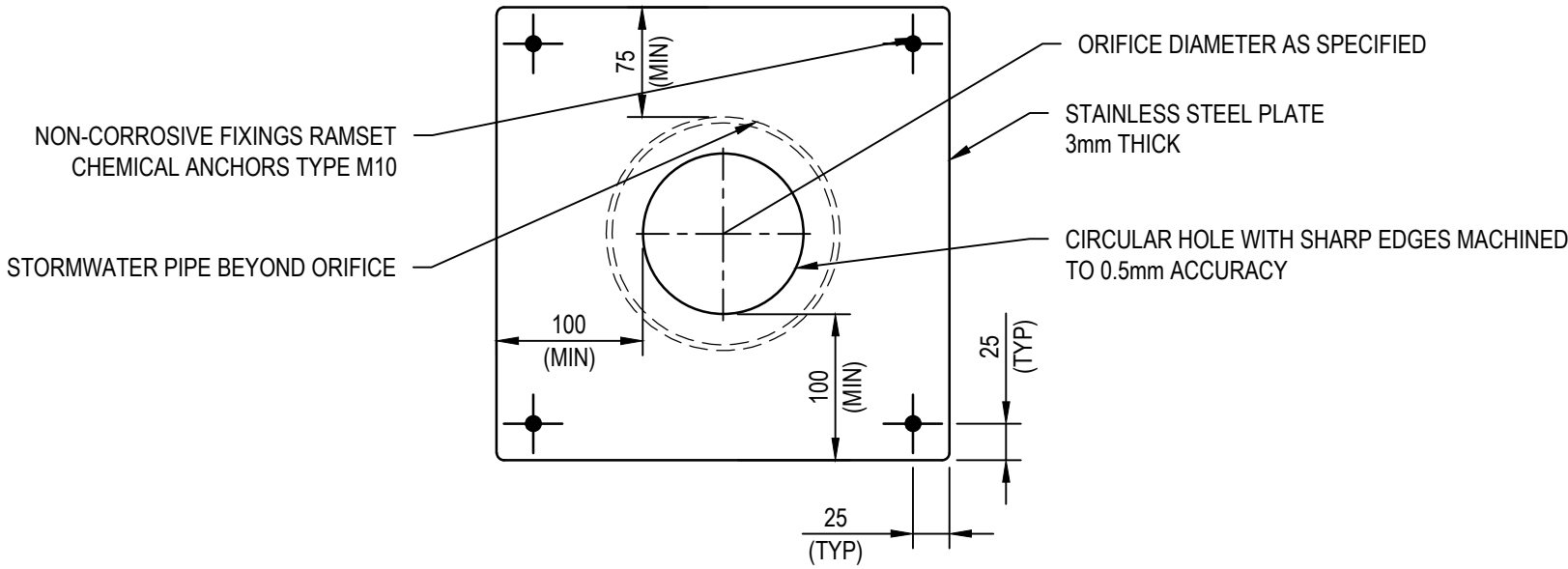
WATER QUALITY TREATMENT AND OSD TANK PLAN
SCALE 1:100

OSD TANK PERFORMANCE TABLE							
STORM (AEP%)	PSD (m³/s)	PIPED POST-DEVELOPMENT Q _{OUT} (m³/s)	OVERLAND FLOW POST-DEVELOPMENT Q _{OUT} (m³/s)	BYPASS	TOTAL POST-DEVELOPMENT Q _{OUT} (m³/s)	BASIN TWL (mAHD)	BASIN VOLUME
20	0.126	0.115	0.000	0.005	0.120	155.670	151.330
5	0.226	0.113	0.050	0.007	0.202	156.050	262.480
1	0.357	0.115	0.168	0.010	0.293	156.340	345.750

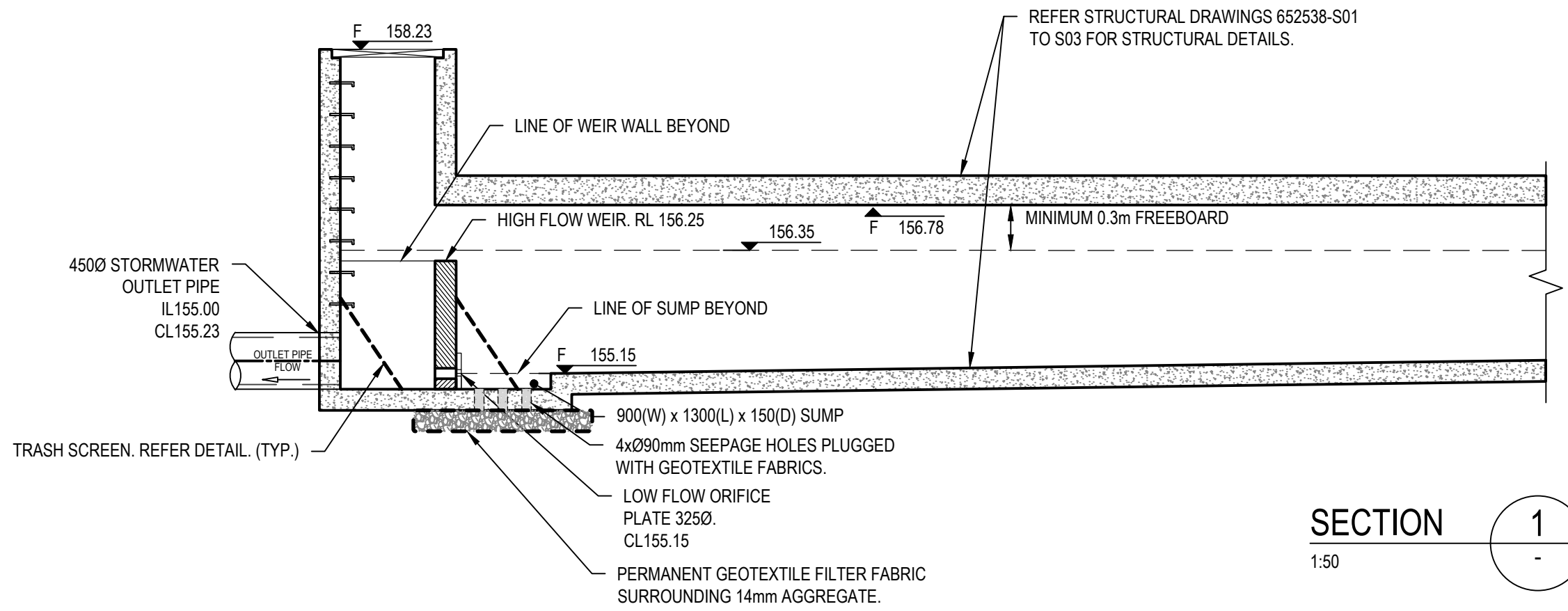


TYPICAL TRASH SCREEN DETAIL
NOT TO SCALE

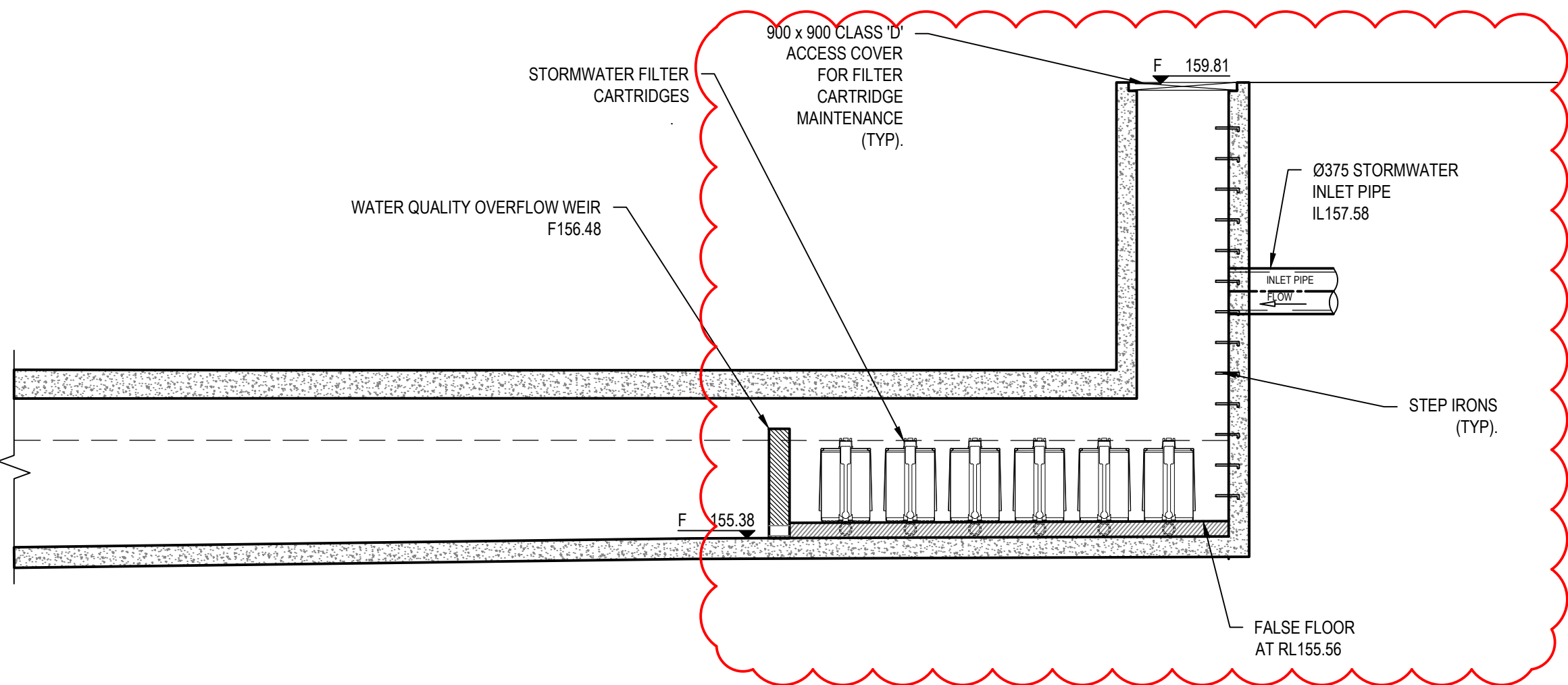
NOTE
PROVIDE FIXING CLIPS OR BRACKETS TO WALL OF PIT AT OUTLET. ALLOW FOR EASE OF REMOVAL



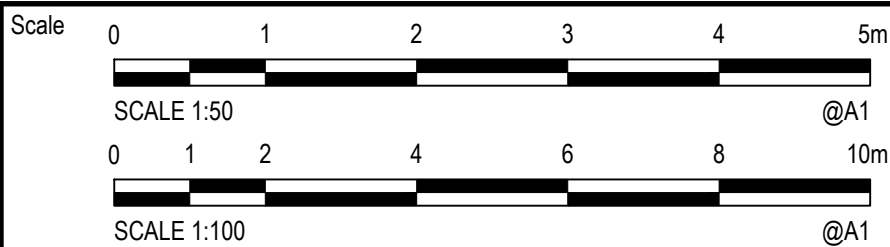
NOTE:
ORIFICE DIAMETER TO BE ENGRAVED ON THE PLATE SURFACE.
ORIFICE TO BE EPOXY SEALED AROUND OUTER EDGES.



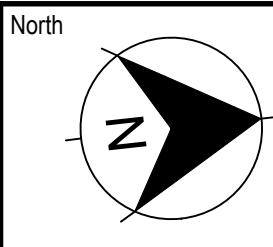
SECTION 1
SCALE 1:50



REV.	DATE	DESCRIPTION	DRN.	DES.	VERIF.	APPD.
6	08/07/2025	ISSUED FOR S4.55 APPROVAL	DK	AL		MKH
5	25/06/2025	ISSUED FOR S4.55 APPROVAL	DK	AL		MKH
4	31/03/2025	UPDATES ADDRESSING COUNCIL COMMENTS DA ISSUE	DK	AL		MKH
3	22/01/2025	ISSUED FOR DEVELOPMENT APPLICATION	DK	AL		MKH
2	15/01/2025	ISSUED FOR DEVELOPMENT APPLICATION	DK	AL		MKH
1	7/03/2024	ISSUED FOR DEVELOPMENT APPLICATION	ZW	LD		MKH



The copyright of this drawing remains with Enspire Solutions Pty Ltd and must not be copied wholly or in part without the permission of Enspire Solutions Pty Ltd.



Project
49 BLACKBUTTS ROAD
FRENCHS FOREST
CIVIL ENGINEERING WORKS

Title
OSD TANK PLAN AND SECTION

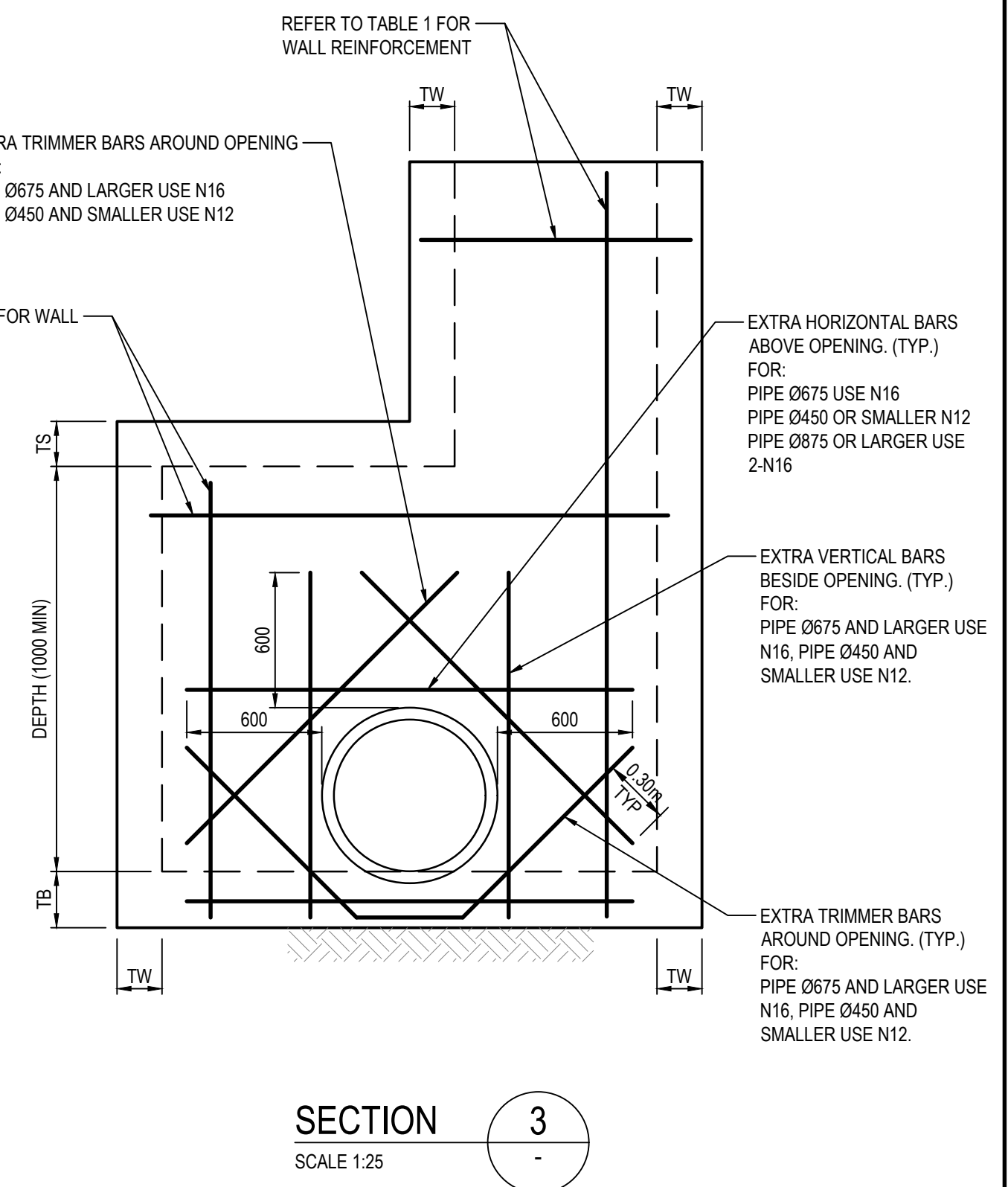
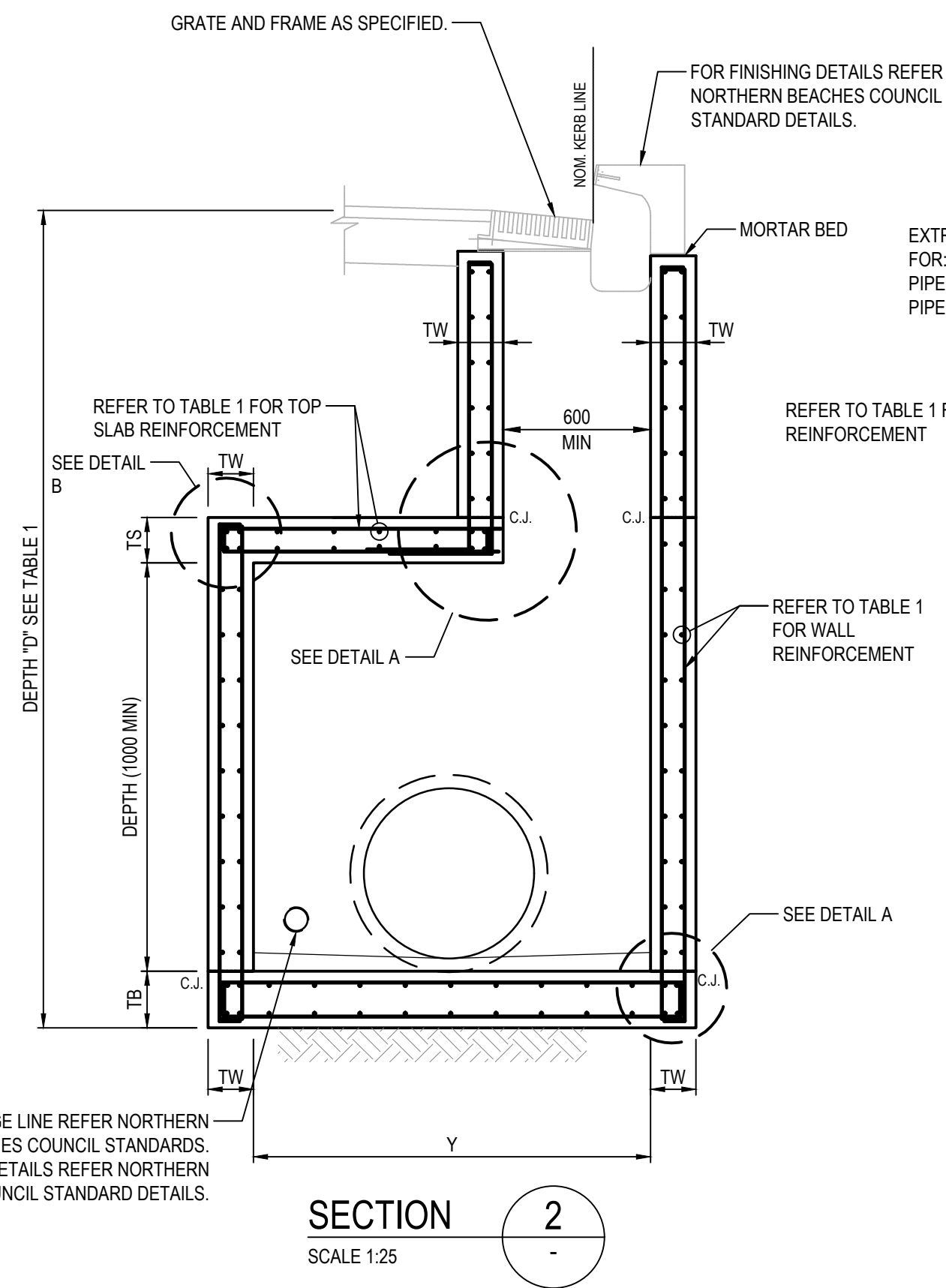
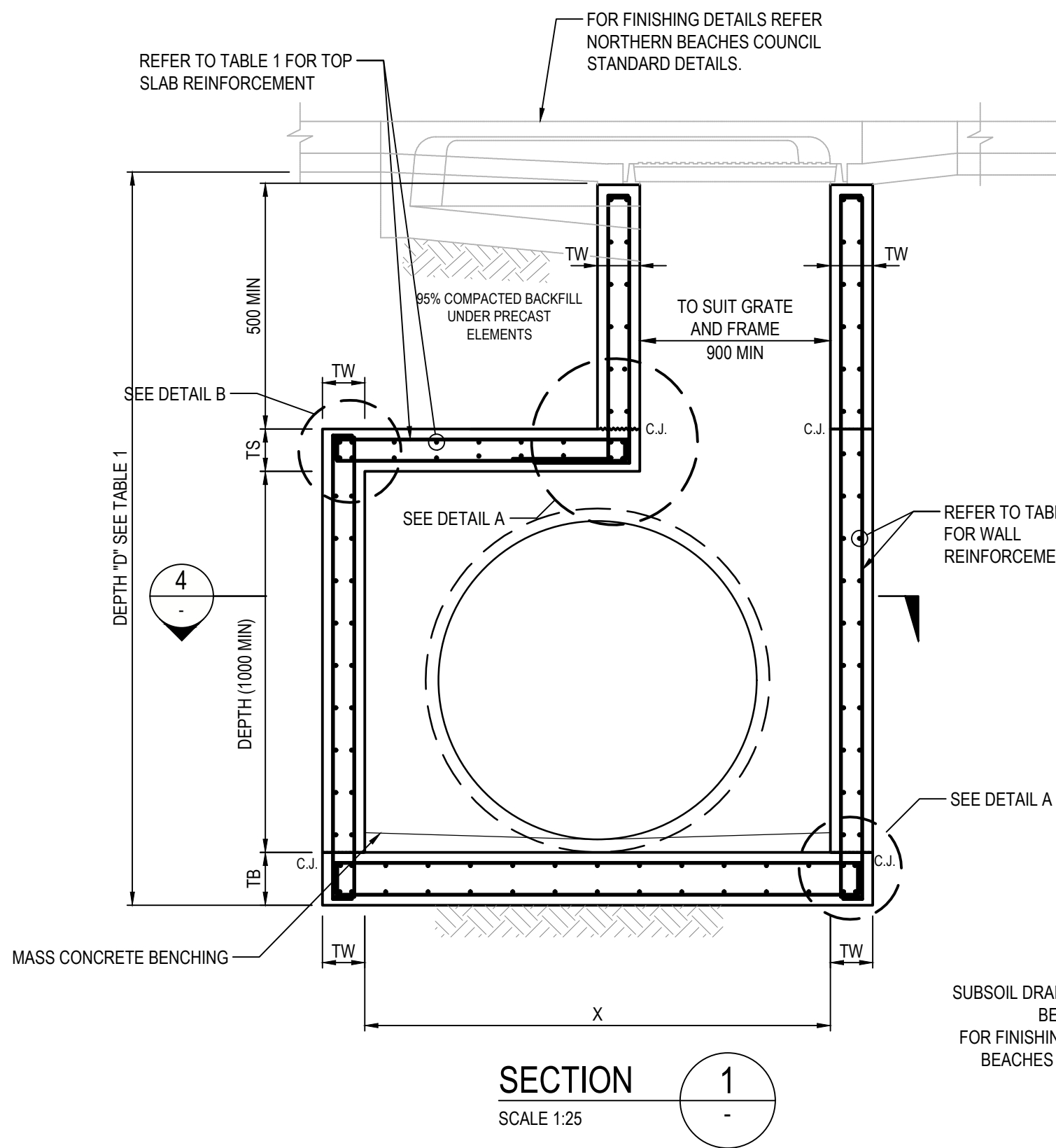
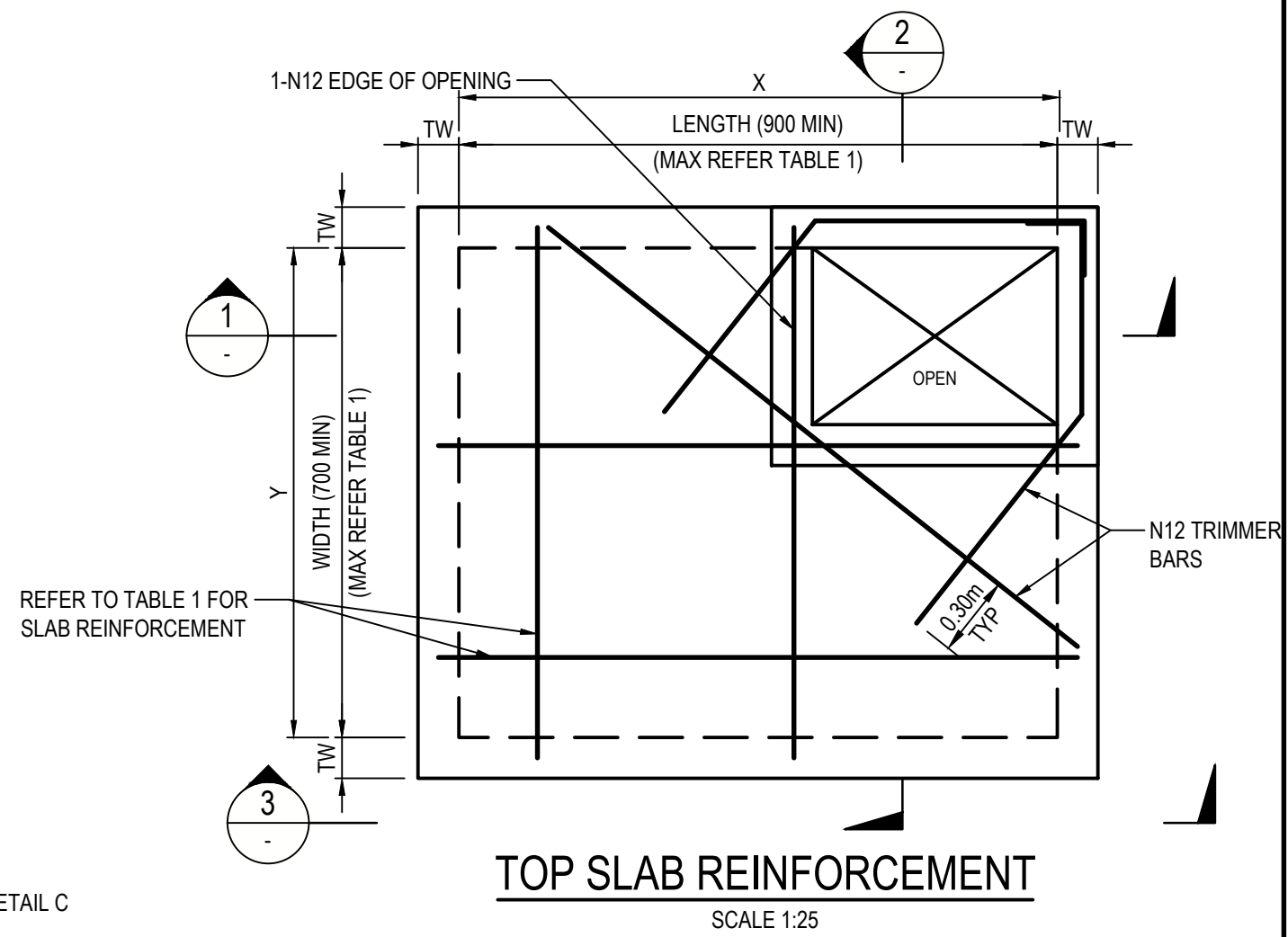
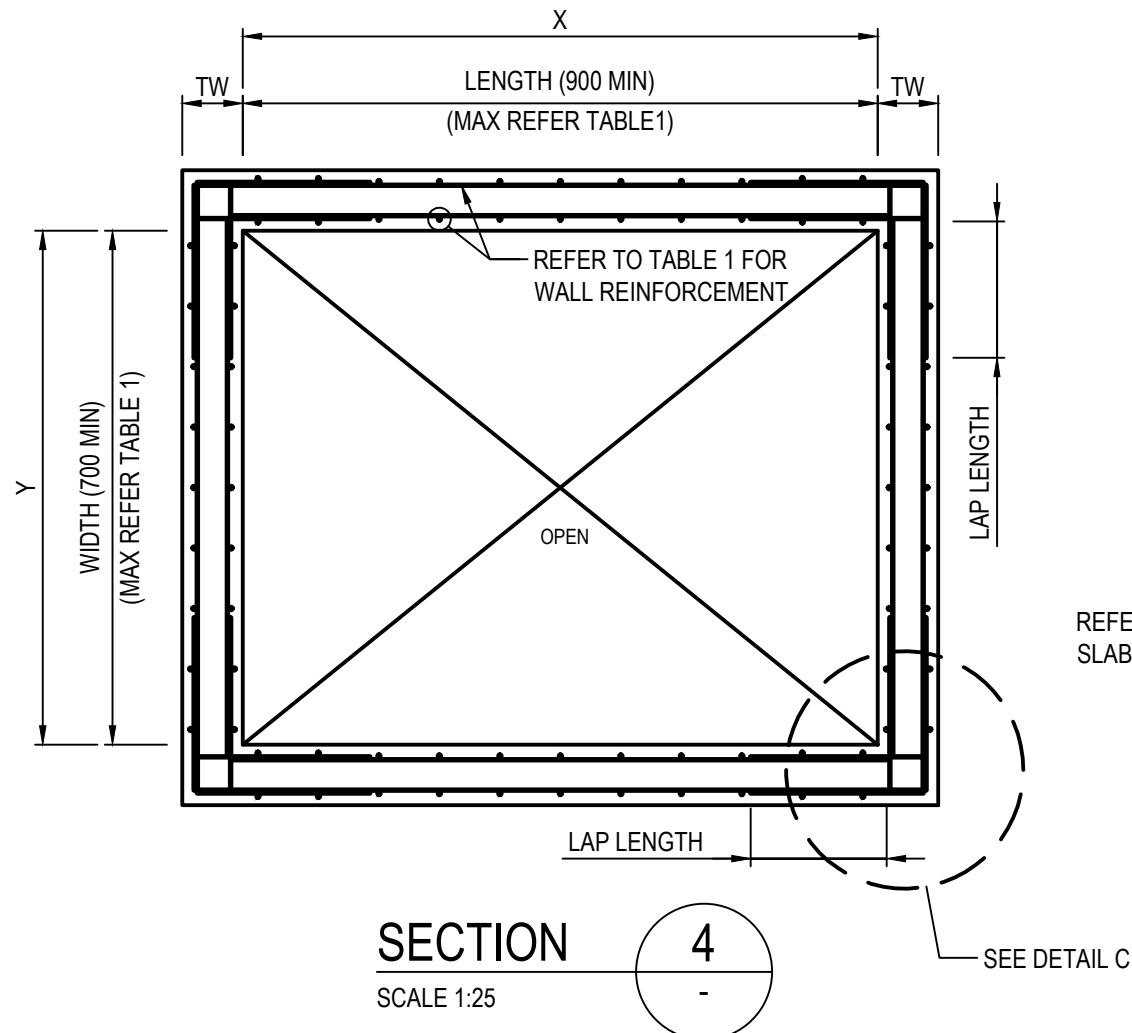
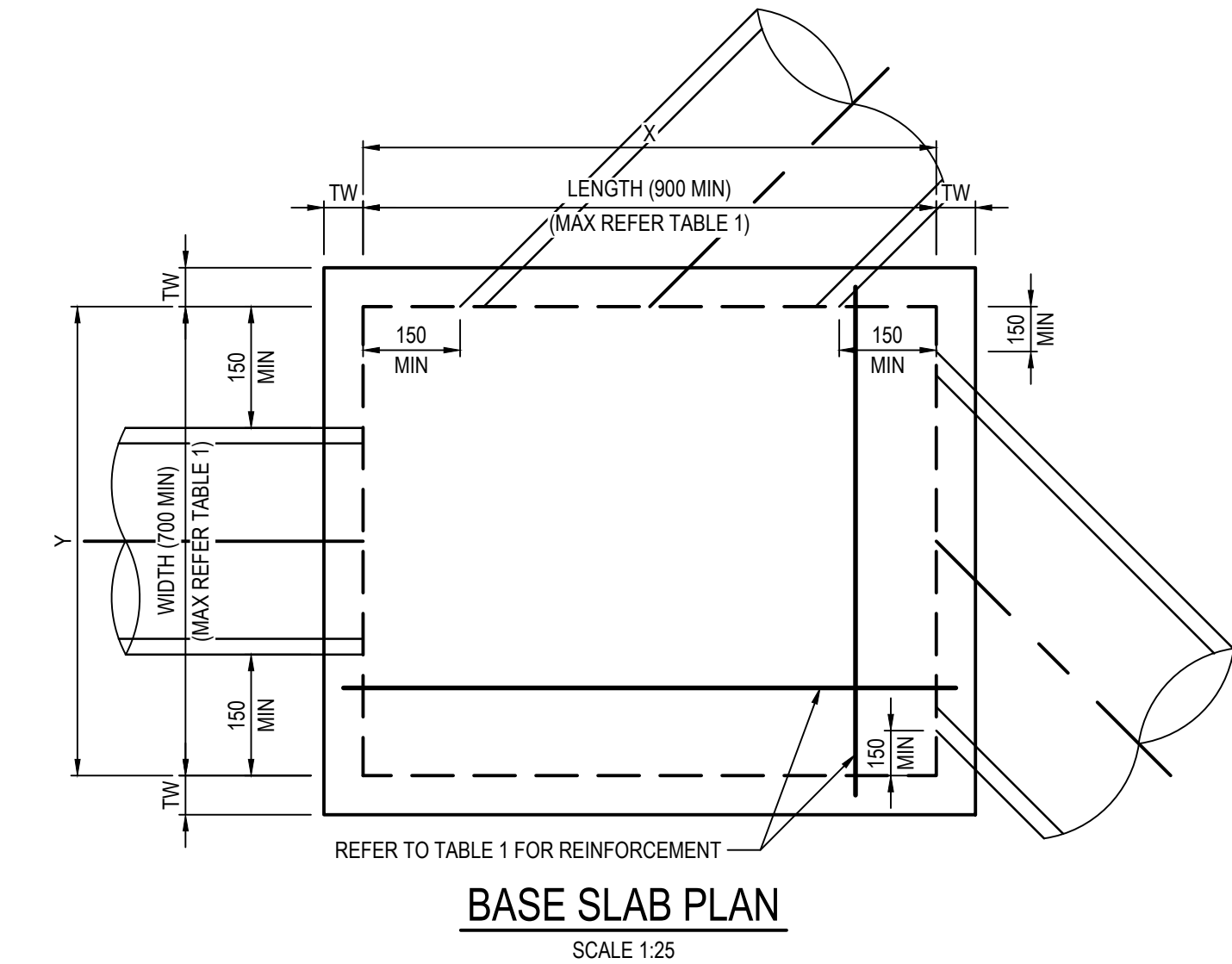
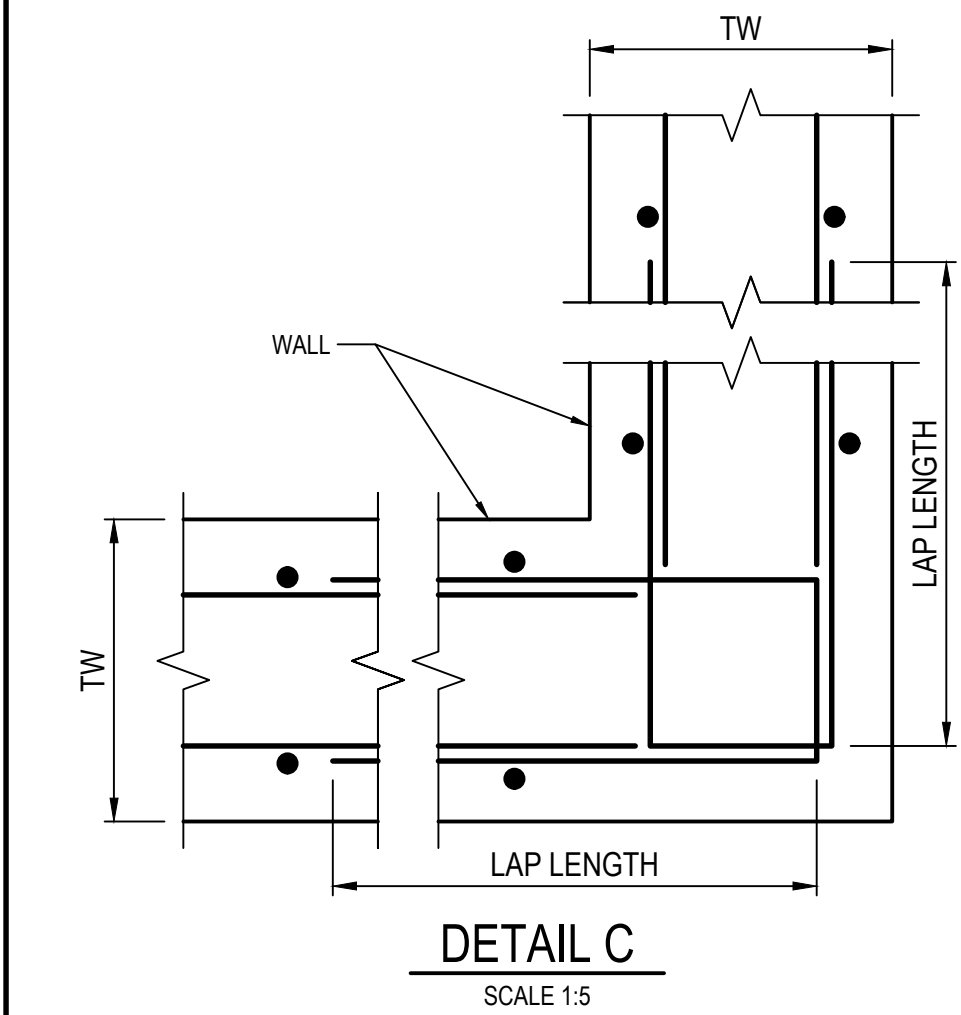
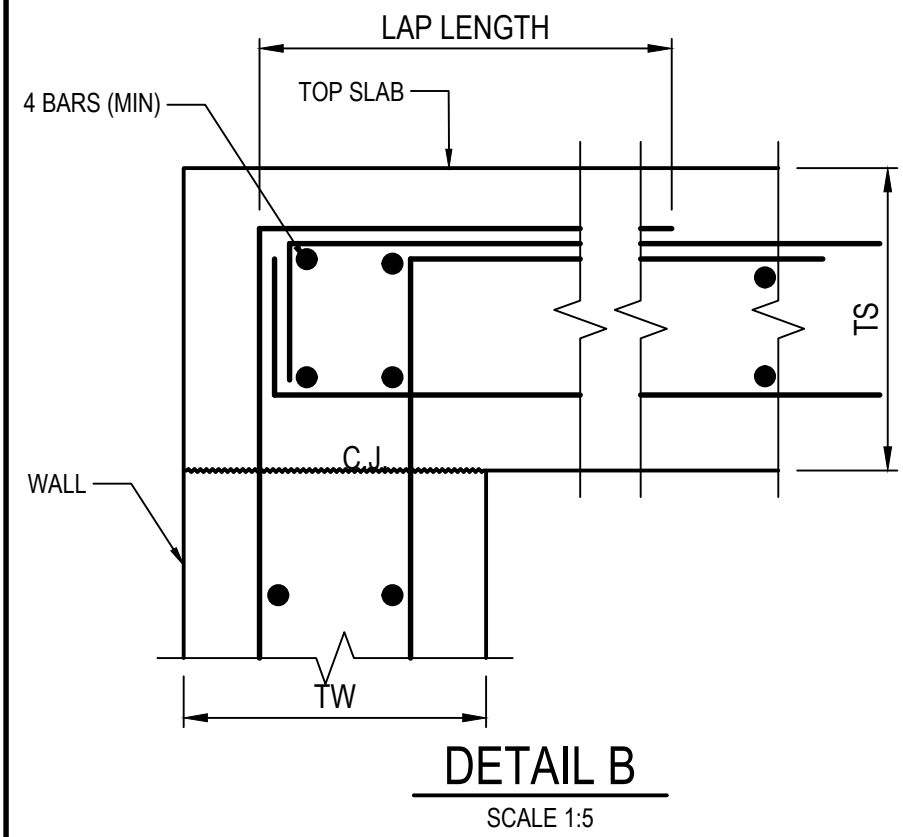
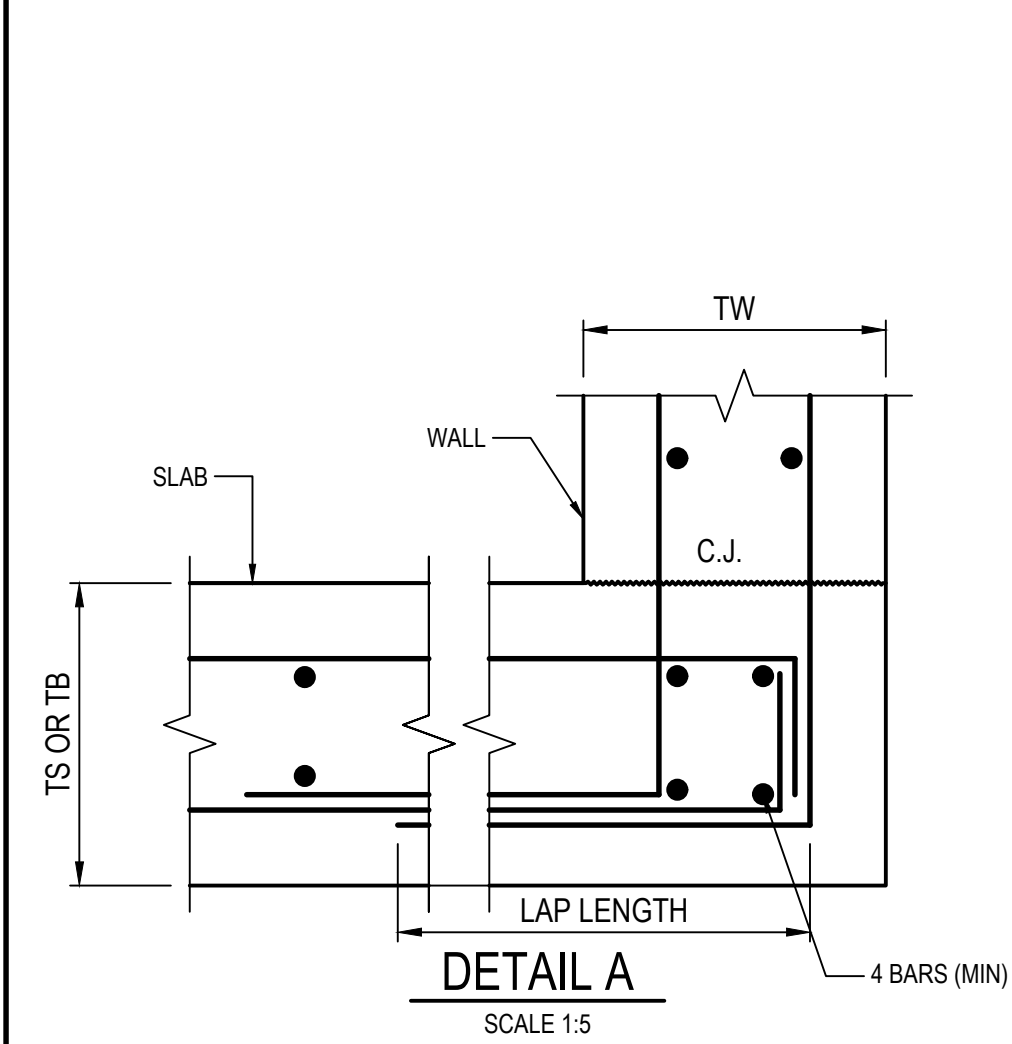
Scale
AS SHOWN
Date
07/03/2024
Size
A1
Datum
GDA 2020

Status
FOR INFORMATION ONLY
NOT TO BE USED FOR CONSTRUCTION
Project Number/Drawing Number
230057-00-DA-C17.01
Revision
6

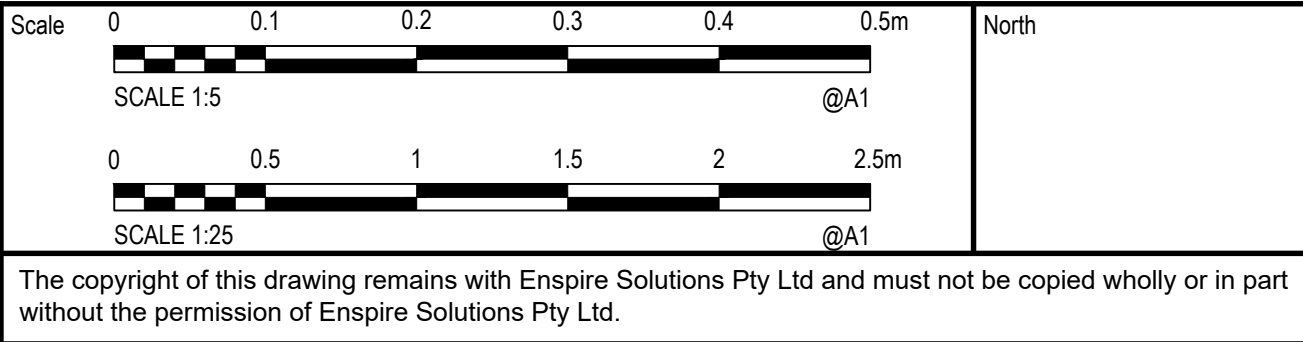
TABLE 1 - REINFORCEMENT AND WALL THICKNESS							
DEPTH "D" SEE TABLE 1 (m)	WIDTH/LENGTH (m)	TW (mm)	WALL REINFORCEMENT	TS (mm)	TOP SLAB REINFORCEMENT	TB (mm)	BASE REINFORCEMENT
1.5 - 3.0	2 / 2	200	2 LAYERS N12 - 200 EACH FACE	200	2 LAYERS N12 - 200 EACH FACE	200	2 LAYERS N12 - 200 EACH FACE
1.5 - 3.0	3 / 3	200	2 LAYERS N16 - 200 EACH FACE	250	2 LAYERS N16 - 200 EACH FACE	250	2 LAYERS N16 - 200 EACH FACE
3.0 - 4.5	2 / 2	250	2 LAYERS N12 - 200 EACH FACE	200	2 LAYERS N12 - 200 EACH FACE	200	2 LAYERS N12 - 200 EACH FACE
4.5 - 6.0	2 / 2	250	2 LAYERS N16 - 200 EACH FACE	200	2 LAYERS N16 - 200 EACH FACE	200	2 LAYERS N16 - 200 EACH FACE

NOTES:

1. CONCRETE COMPRESSIVE STRENGTH @ 28 DAYS f'_c = 40MPa
2. YIELD STRENGTH OF STEEL f_y = 500 MPa
3. ASSUMED SOIL BEARING CAPACITY = 150 kPa (MAX 3m DEPTH), 200kPa (MAX 6m DEPTH)
4. ALL CONCRETE COVER = 55mm
5. THE CONTRACTOR SHALL NOTIFY THE STRUCTURAL ENGINEER ABOUT ACTUAL SOIL CONDITION ON SITE.
6. PITS TO BE CONSTRUCTED IN ACCORDANCE WITH LANE COVE COUNCIL STANDARDS AND DETAILS.
7. STEP IRONS WHERE THE PIT EXCEEDS 1200 IN DEPTH AS PER LANE COVE COUNCIL STANDARDS AND DETAILS.
8. PITS WHICH WILL HAVE PIPES GREATER THAN 525mm, 2N16 TRIMMER BARS ARE REQUIRED AROUND THE EDGES OF THE PIPE.
9. CONTACT ENGINEER IF PIT IS WITHIN WATER TABLE.

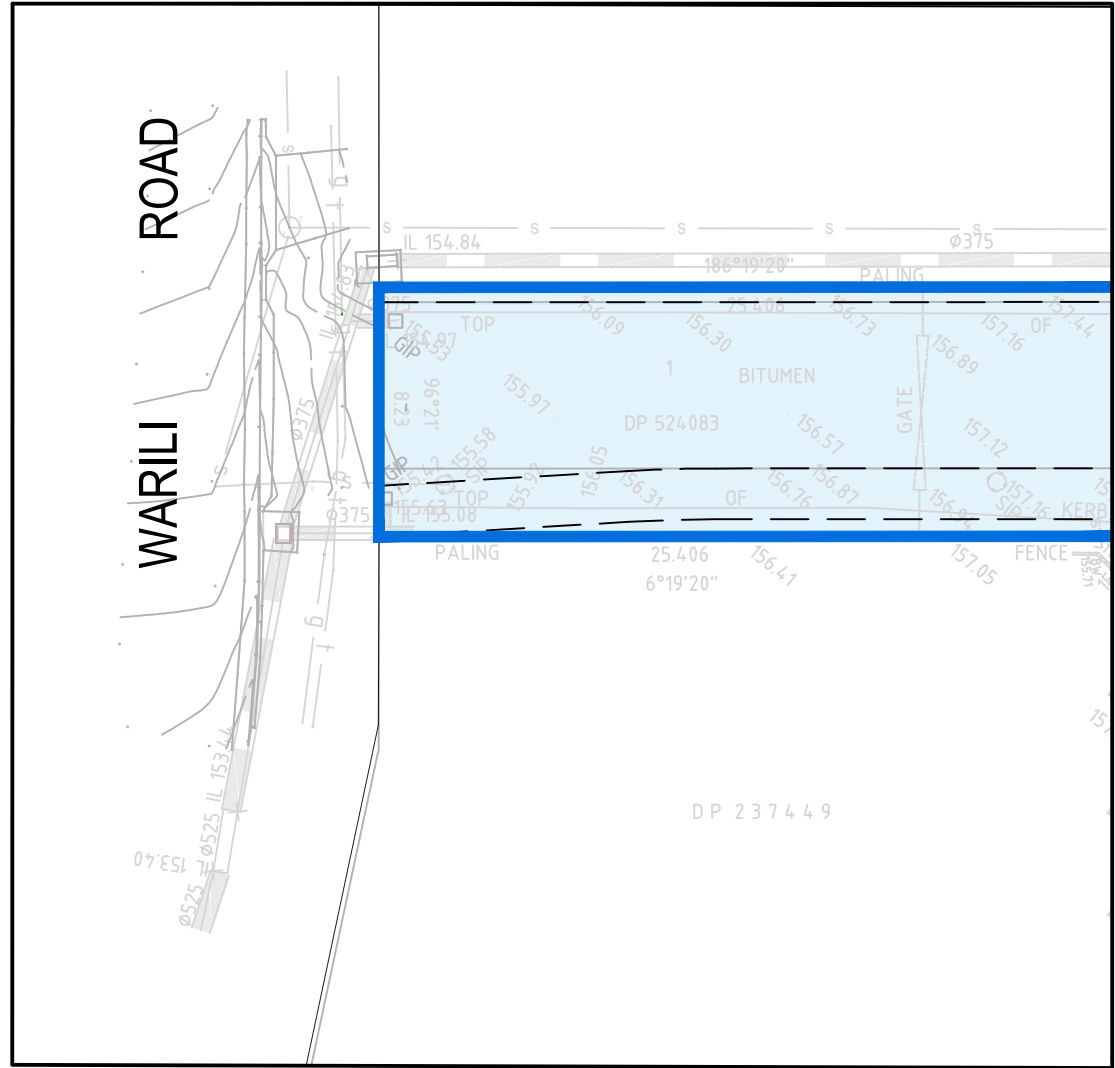


REV.	DATE	DESCRIPTION	DRN.	DES.	VERIF.	APPD.
3	31/03/2025	UPDATES ADDRESSING COUNCIL COMMENTS DA ISSUE	DK	AL		MKH
2	15/01/2025	ISSUED FOR DEVELOPMENT APPLICATION	DK	AL		MKH
1	7/03/2024	ISSUED FOR DEVELOPMENT APPLICATION	ZW	LD		MKH

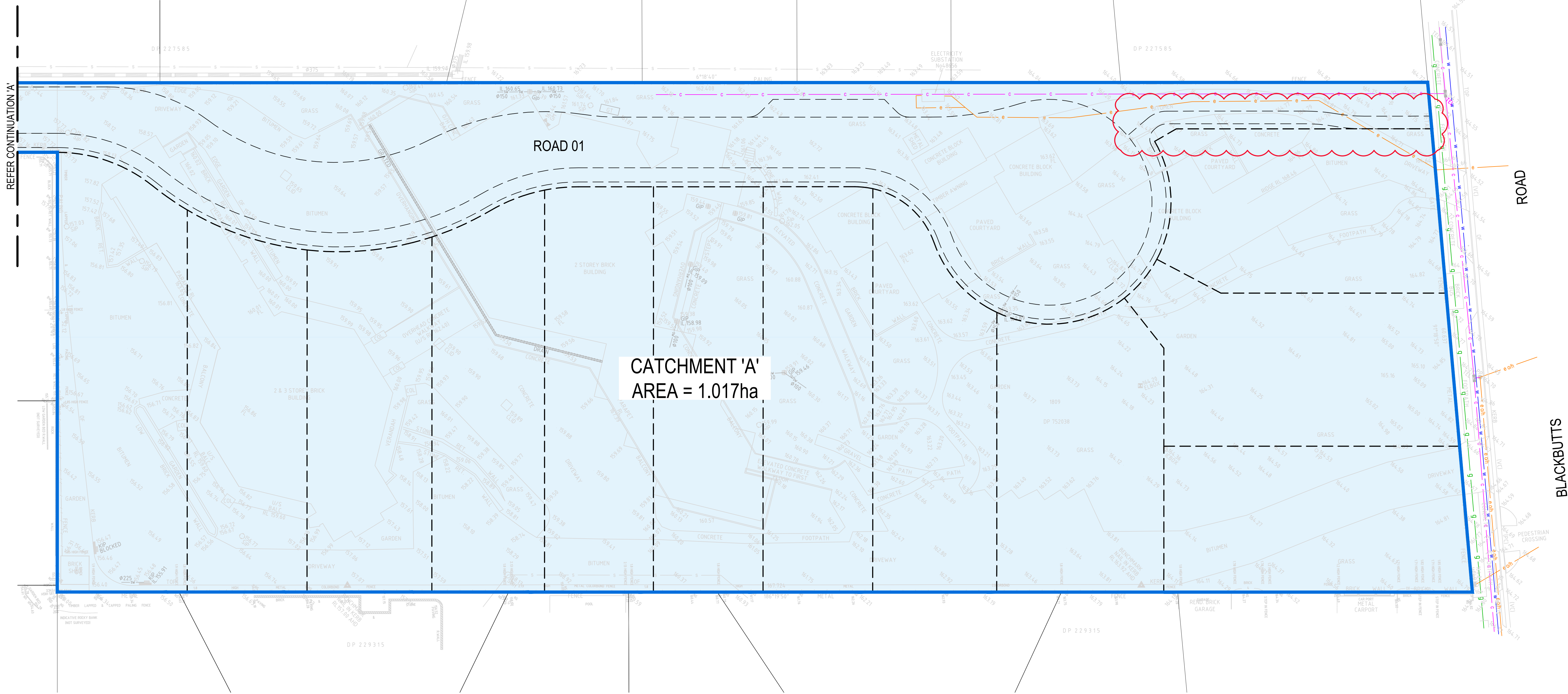


Project	49 BLACKBUTTS ROAD FRENCHS FOREST CIVIL ENGINEERING WORKS
Title	STORMWATER DETAILS

Scale	AS SHOWN	Status	FOR INFORMATION ONLY NOT TO BE USED FOR CONSTRUCTION
Date	07/03/2024	Project Number/Drawing Number	230057-00-DA-C18.01
Size	A1	Revision	3
Datum	GDA 2020		



CONTINUATION 'A'
SCALE 1:250




REV.	DATE	DESCRIPTION	DRN.	DES.	VERIF.	APPD.
4	25/06/2025	ISSUED FOR \$4.55 APPROVAL	DK	AL		MKH
3	31/03/2025	UPDATES ADDRESSING COUNCIL COMMENTS DA ISSUE	DK	AL		MKH
2	15/01/2025	ISSUED FOR DEVELOPMENT APPLICATION	DK	AL		MKH
1	7/03/2024	ISSUED FOR DEVELOPMENT APPLICATION	ZW	LD		MKH

Client



SEKISUI HOUSE

Scale



The copyright of this drawing remains with Enspire Solutions Pty Ltd and must not be copied wholly or in part without the permission of Enspire Solutions Pty Ltd.

North



Enspire Solutions Pty Ltd
Level 4, 153 Walker Street, North Sydney NSW 2060
ABN: 71 624 801 690
Phone: 02 9922 6135
enspiresolutions.com.au

Project
49 BLACKBUTTS ROAD
FRENCHS FOREST
CIVIL ENGINEERING WORKS

Title
PRE-DEVELOPMENT CATCHMENT PLAN

Scale
1:250

Date
07/03/2024

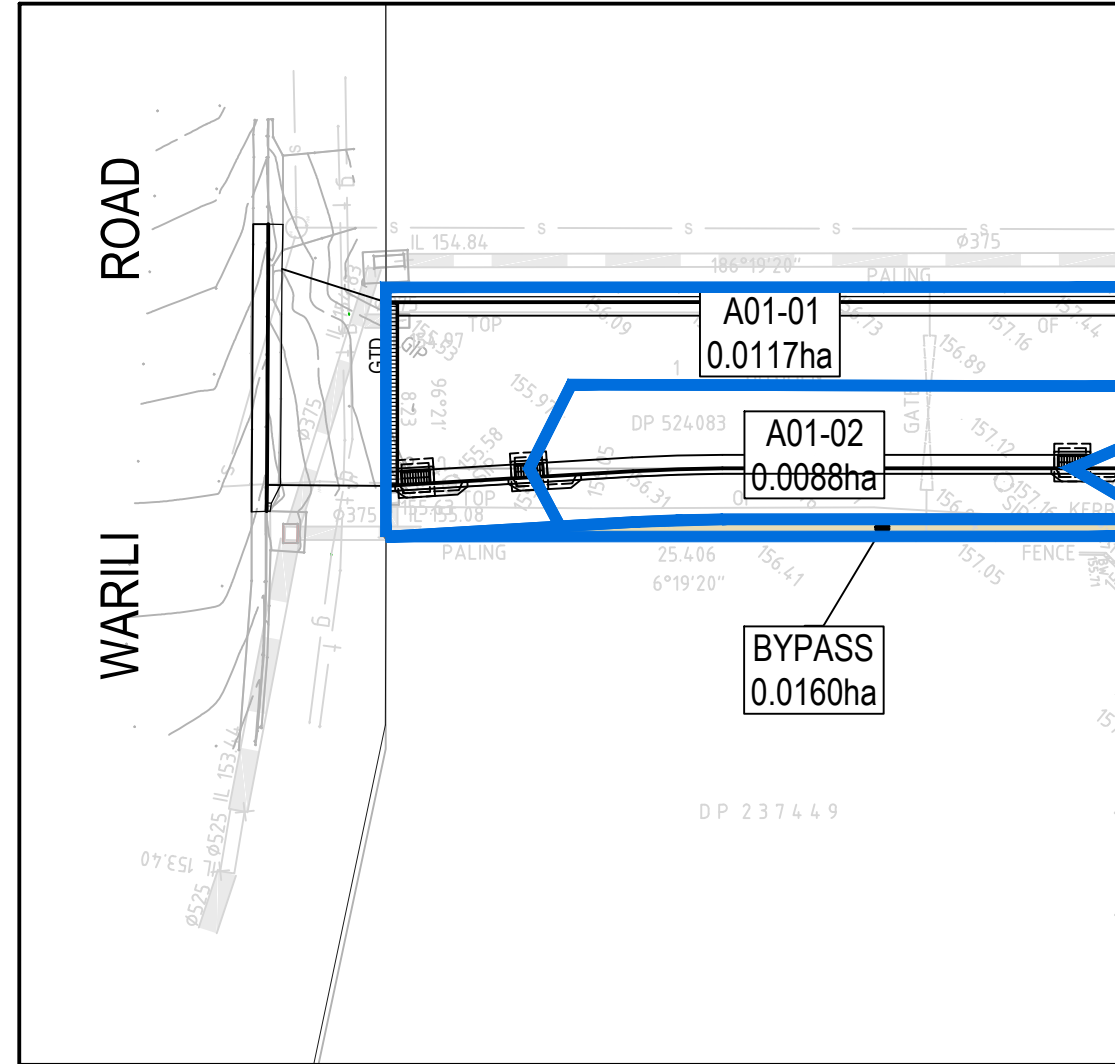
Size
A1

Datum
GDA 2020

Status
FOR INFORMATION ONLY
NOT TO BE USED FOR CONSTRUCTION

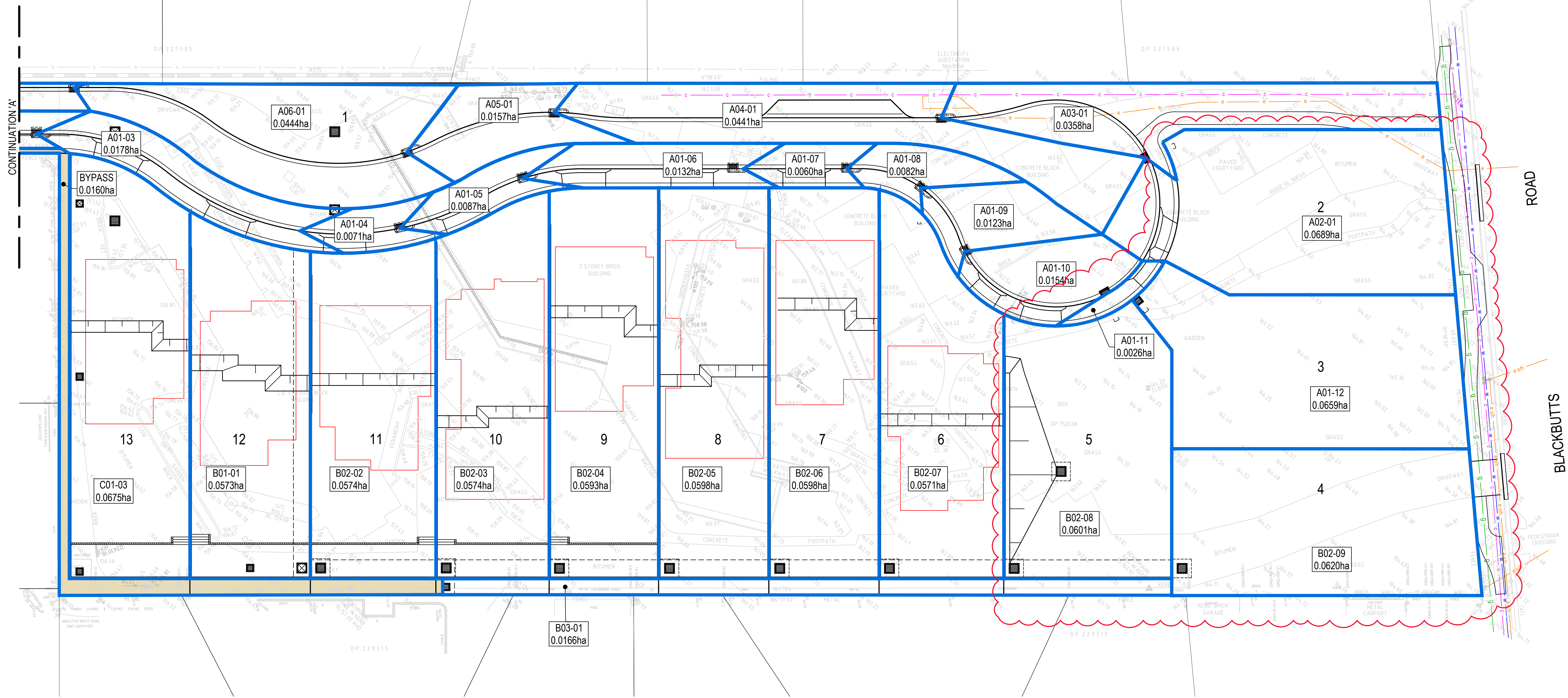
Project Number/Drawing Number
230057-00-DA-C20.01

Revision
4

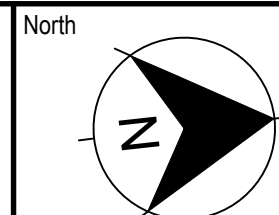
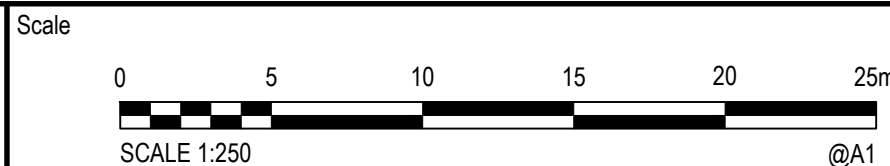


LEGEND	
	CATCHMENT BOUNDARY
	PIT NO.
	CATCHMENT AREA

CONTINUATION 'A'
SCALE 1:250



REV.	DATE	DESCRIPTION	DRN.	DES.	VERIF.	APPD.
6	08/07/2025	ISSUED FOR S4.55 APPROVAL	DK	AL		MKH
5	25/06/2025	ISSUED FOR S4.55 APPROVAL	DK	AL		MKH
4	31/03/2025	UPDATES ADDRESSING COUNCIL COMMENTS DA ISSUE	DK	AL		MKH
3	22/01/2025	ISSUED FOR DEVELOPMENT APPLICATION	DK	AL		MKH
2	15/01/2025	ISSUED FOR DEVELOPMENT APPLICATION	DK	AL		MKH
1	7/03/2024	ISSUED FOR DEVELOPMENT APPLICATION	ZW	LD		MKH

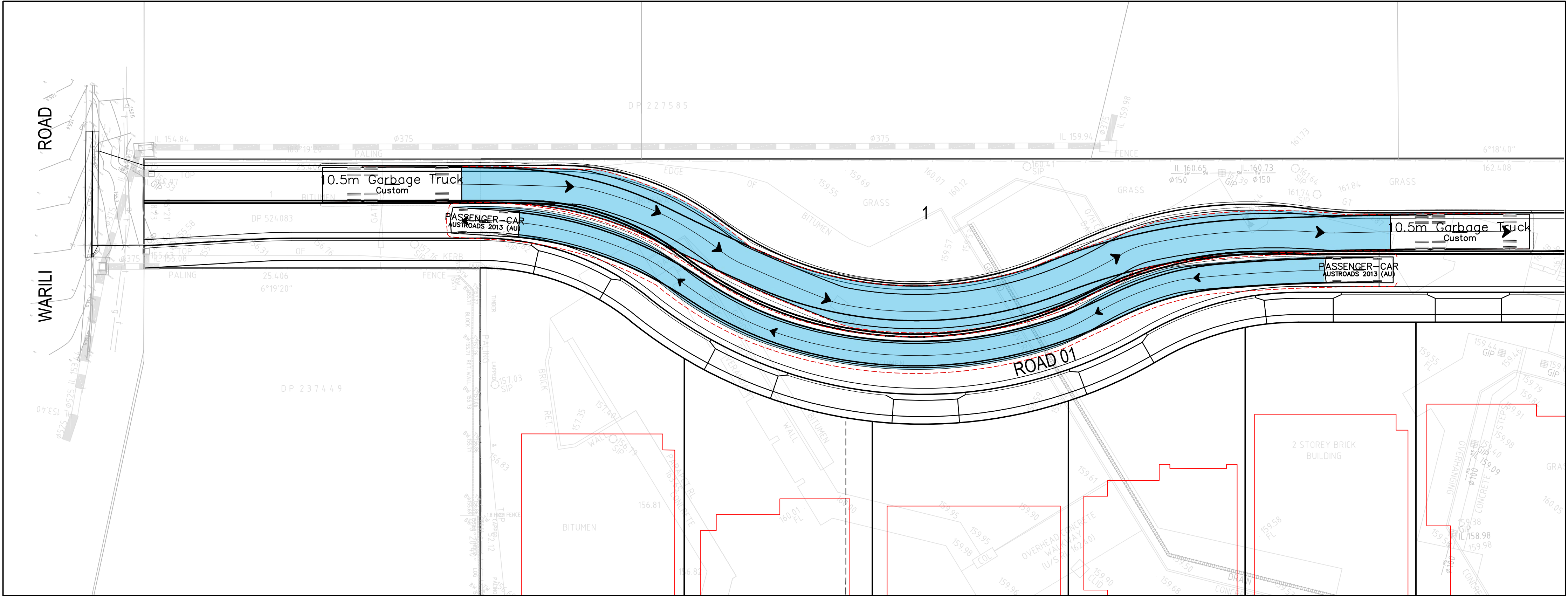


enspire
Inspire Solutions Pty Ltd
Level 4, 153 Walker Street, North Sydney NSW 2060
ABN: 71 624 801 690
Phone: 02 9922 6135
enspiresolutions.com.au

Project
49 BLACKBUTTS ROAD
FRENCHS FOREST
CIVIL ENGINEERING WORKS
Title
POST-DEVELOPMENT CATCHMENT PLAN

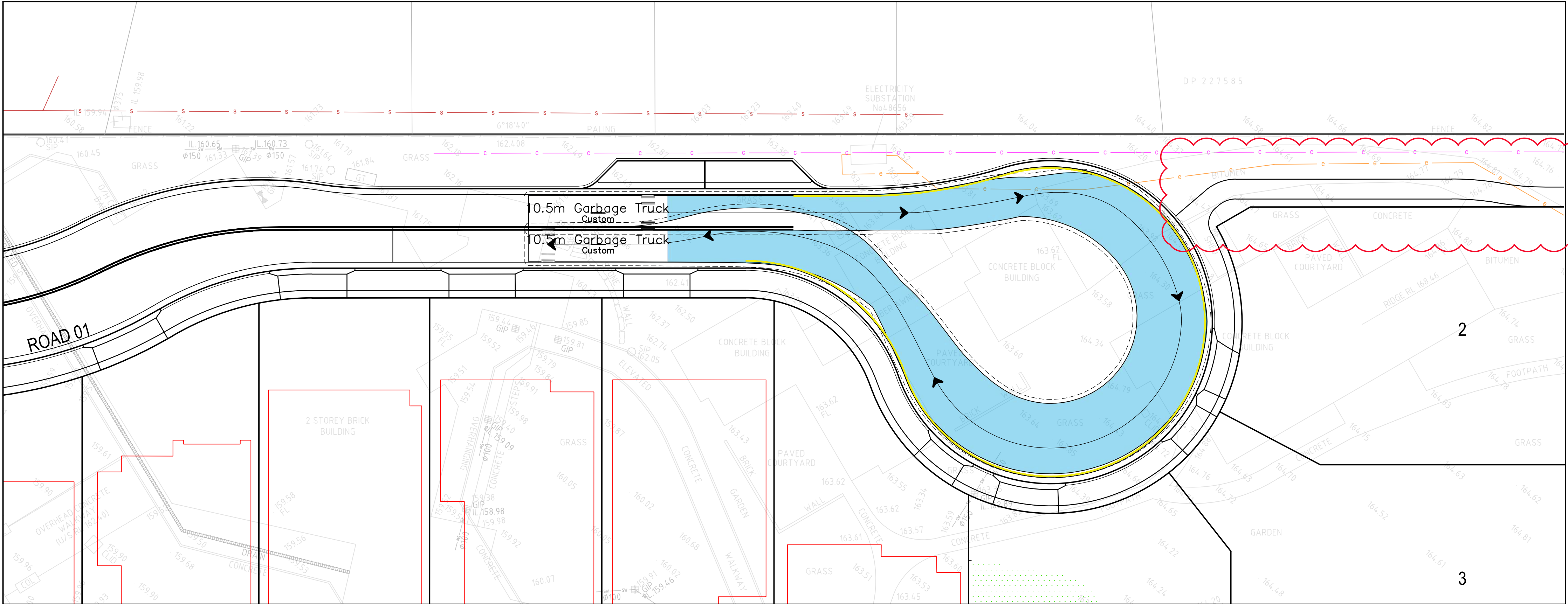
Scale
1:250
Date
07/03/2024
Size
A1
Datum
GDA 2020

Status
FOR INFORMATION ONLY
NOT TO BE USED FOR CONSTRUCTION
Project Number/Drawing Number
230057-00-DA-C20.21
Revision
6



TURN PATH 01 - 10.5m GARBAGE TRUCK PASSING B99 CAR WAITING AT GIVEWAY LINE

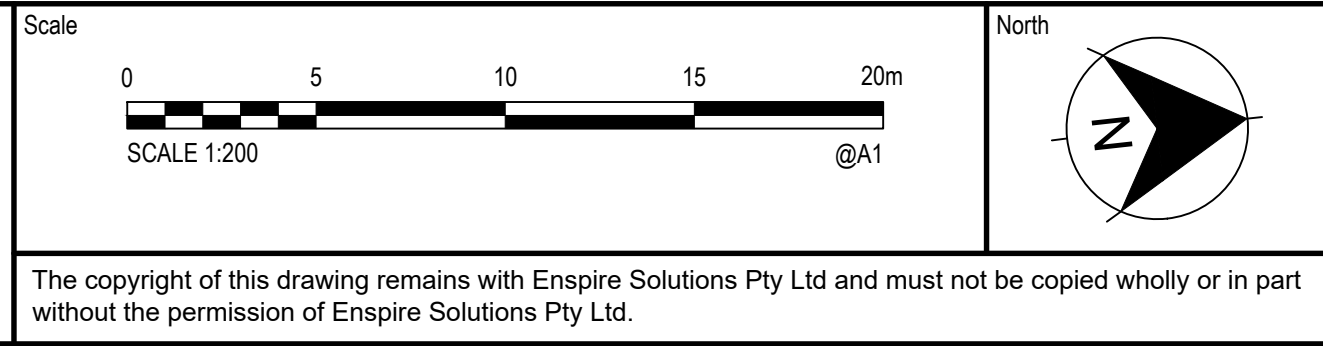
SCALE 1:200



TURN PATH 02 - 10.5m GARBAGE TRUCK AT CUL-DE-SAC

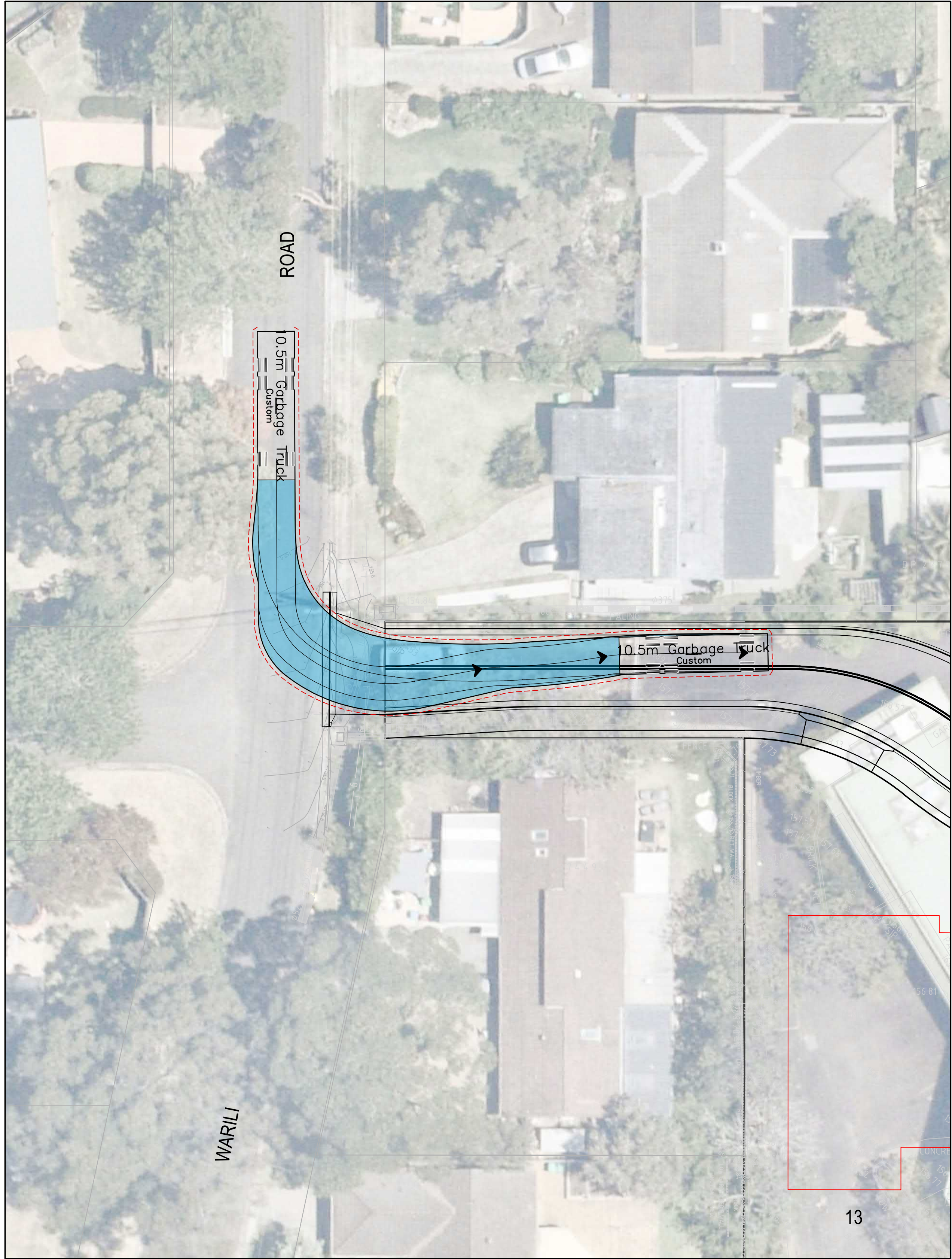
SCALE 1:200

REV.	DATE	DESCRIPTION	DRN.	DES.	VERIF.	APPD.
4	25/06/2025	ISSUED FOR S4.55 APPROVAL	DK	AL	MKH	
3	31/03/2025	UPDATES ADDRESSING COUNCIL COMMENTS DA ISSUE	DK	AL	MKH	
2	15/01/2025	ISSUED FOR DEVELOPMENT APPLICATION	DK	AL	MKH	
1	7/03/2024	ISSUED FOR DEVELOPMENT APPLICATION	ZW	LD	MKH	



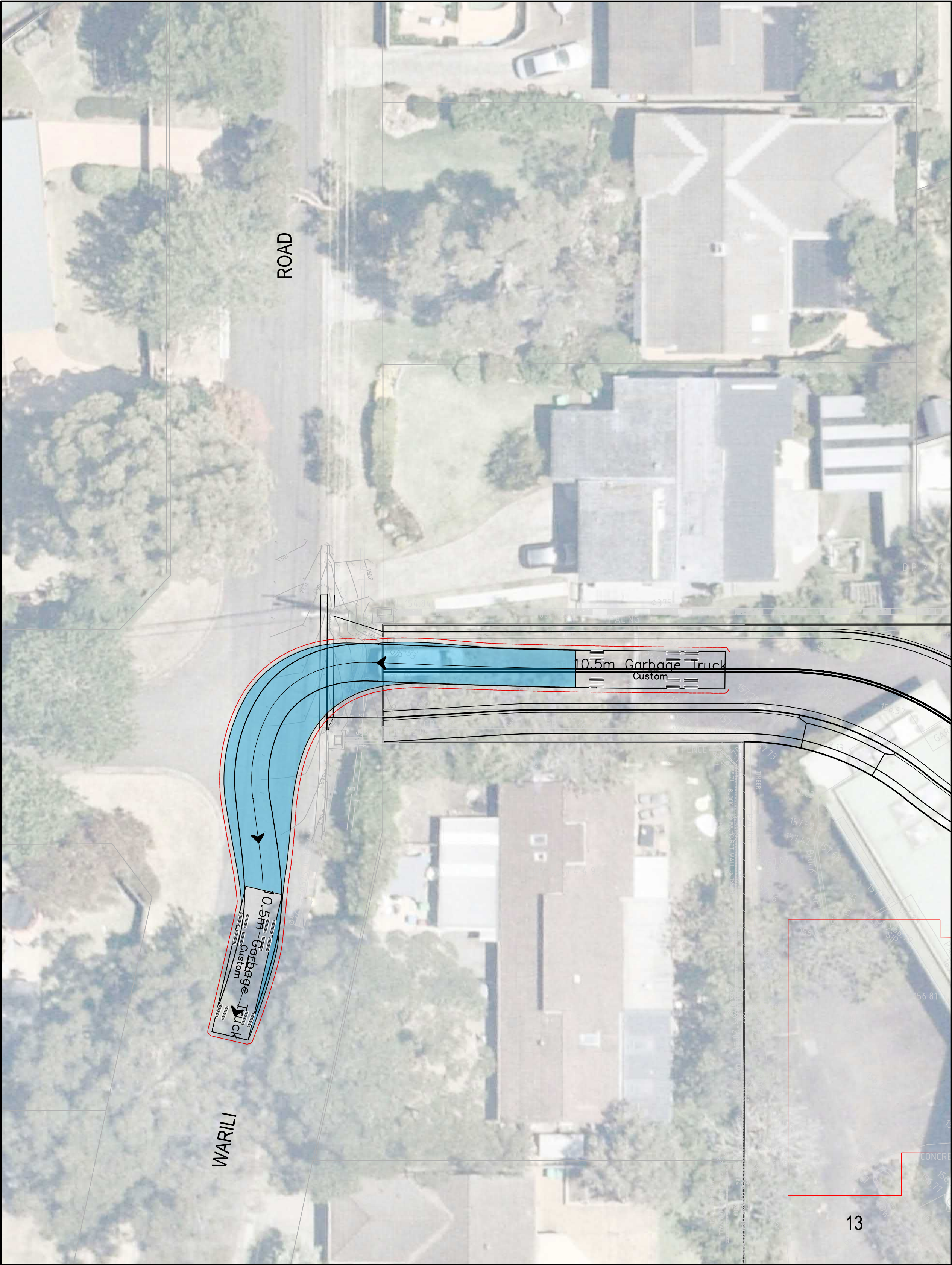
Project	49 BLACKBUTTS ROAD FRENCHS FOREST CIVIL ENGINEERING WORKS
Title	TURNING PATH PLAN
SHEET 01	

Scale	1:200	Status	FOR INFORMATION ONLY NOT TO BE USED FOR CONSTRUCTION
Date	07/03/2024	Project Number/Drawing Number	230057-00-DA-C22.01
Size	A1	Revision	4
Datum	GDA 2020		



TURN PATH 03 - 10.5m GARBAGE TRUCK AT ENTRY

SCALE 1:200



TURN PATH 04 - 10.5m GARBAGE TRUCK AT EXIT


SCALE 1:200

REV.	DATE	DESCRIPTION	DRN.	DES.	VERIF.	APPD.
1	09/04/2024	ISSUED FOR DEVELOPMENT APPLICATION	DK	AL		MKH

Client


SEKISUI HOUSE

Scale
0 5 10 15 20m
SCALE 1:200 @A1

North


The copyright of this drawing remains with Enspire Solutions Pty Ltd and must not be copied wholly or in part without the permission of Enspire Solutions Pty Ltd.


Enspire Solutions Pty Ltd
Level 4, 153 Walker Street, North Sydney NSW 2060
ABN: 71 624 801 690
Phone: 02 9922 6135
enspiresolutions.com.au

Project
49 BLACKBUTTS ROAD
FRENCHS FOREST
CIVIL ENGINEERING WORKS

Title
TURNING PATH PLAN
SHEET 02

Scale
1:200
Date
09/04/2024
Size
A1
Datum
GDA 2020

Status
FOR INFORMATION ONLY
NOT TO BE USED FOR CONSTRUCTION

Project Number/Drawing Number
230057-00-DA-C22.02

Revision
1