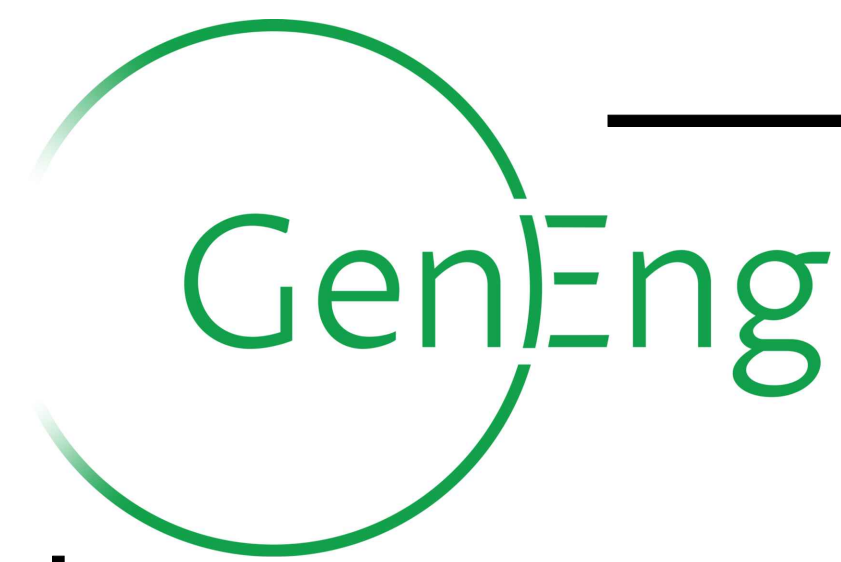


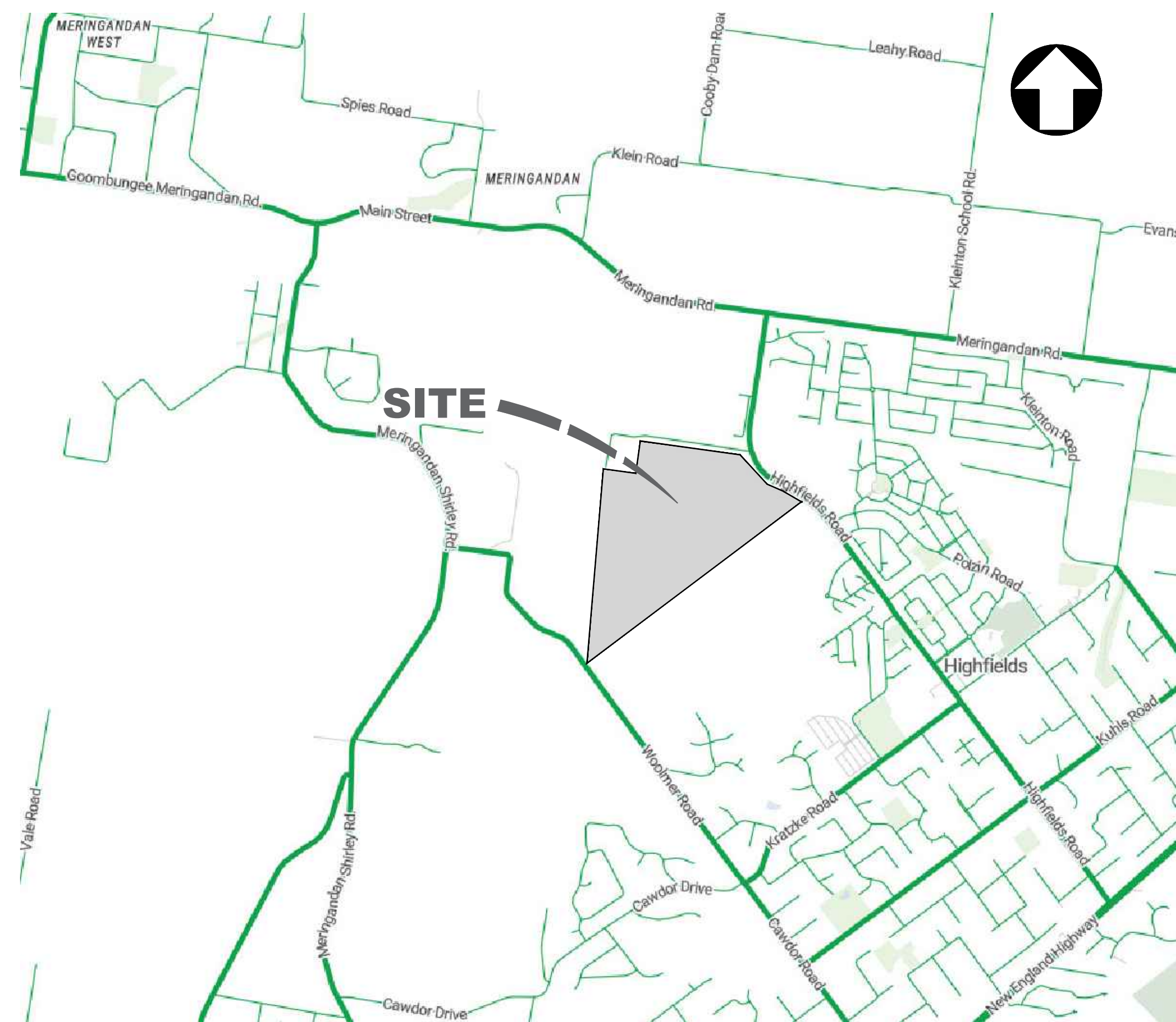


BIRD IN HAND 3 PTY LTD

BOTANIC HIGHFIELDS

STAGE 9

BROWNE ROAD, HIGHFIELDS



LOCALITY PLAN
SCALE N.T.S.

DRAWING INDEX

DRAWING NO.	REVISION	DRAWING TITLE
GS562-09-001	B	LOCALITY PLAN AND DRAWING INDEX
GS562-09-002	B	CONSTRUCTION NOTES
GS562-09-010	B	OVERALL LAYOUT AND STAGING PLAN
GS562-09-020	B	STAGE 9 DEVELOPMENT LAYOUT PLAN
GS562-09-100	B	EARTHWORKS LAYOUT PLAN
GS562-09-101	B	EARTHWORKS SECTIONS SHEET 1 OF 2
GS562-09-102	B	EARTHWORKS SECTIONS SHEET 2 OF 2
GS562-09-105	B	EARTHWORKS LAYOUT PLAN ADDITIONAL FILL AREA
GS562-09-106	B	EARTHWORKS SECTION ADDITIONAL FILL AREA
GS562-09-110	B	EARTHWORKS TYPICAL RETAINING WALL
GS562-09-111	B	EARTHWORKS TYPICAL FRONT RETAINING WALL
GS562-09-120	B	RETAINING WALL 3 PLAN AND ELEVATION
GS562-09-200	B	ROADS AND FOOTPATHS DETAIL PLAN
GS562-09-210	B	ROADS TYPICAL SECTIONS
GS562-09-220	B	ROAD 04 LONGITUDINAL SECTION
GS562-09-221	B	ROAD 04 CROSS SECTIONS SHEET 1 OF 3
GS562-09-222	B	ROAD 04 CROSS SECTIONS SHEET 2 OF 3
GS562-09-223	B	ROAD 04 CROSS SECTIONS SHEET 3 OF 3
GS562-09-224	B	ROAD 31 LONGITUDINAL SECTION
GS562-09-225	B	ROAD 31 CROSS SECTIONS
GS562-09-226	B	ROAD 32 LONGITUDINAL SECTION
GS562-09-227	B	ROAD 32 CROSS SECTIONS
GS562-09-250	B	ROAD 04 - ROAD 31 INTERSECTION DETAIL PLAN
GS562-09-251	B	ROAD 04 - ROAD 32 INTERSECTION DETAIL PLAN
GS562-09-252	B	ROAD 04 CULDESAC DETAIL PLAN
GS562-09-260	B	PAVEMENT DETAILS
GS562-09-270	B	SIGNAGE AND LINEMARKING PLAN
GS562-09-300	B	STORMWATER CATCHMENT PLAN
GS562-09-310	B	STORMWATER LAYOUT PLAN
GS562-09-320	B	STORMWATER LONGITUDINAL SECTIONS SHEET 1 OF 2
GS562-09-321	B	STORMWATER LONGITUDINAL SECTIONS SHEET 2 OF 2
GS562-09-330	B	STORMWATER CALCULATION TABLES
GS562-09-400	B	SEWERAGE LAYOUT PLAN
GS562-09-410	B	SEWERAGE LONGITUDINAL SECTIONS -SHEET 1 OF 2
GS562-09-411	B	SEWERAGE LONGITUDINAL SECTIONS -SHEET 2 OF 2
GS562-09-500	B	WATER LAYOUT PLAN
GS562-09-600	B	ESC PLAN
GS562-09-610	B	ESC DETAILS AND NOTES

ISSUED
FOR APPROVAL

REV.	DATE	DRAWN	APPD	DRAWING REVISION
B	16/02/26	BE	DET	ISSUED FOR RFI RESPONSE
A	21/11/25	BE	DET	ISSUED FOR APPROVAL

RPEQ Certification			
Engineer	David Taylor	RPEQ Number	35089
Signature		Date	16/02/2026
Project Number	GS562-09 BOTANIC STAGE 9 REV B		



CLIENT BIRD IN HAND 3 PTY LTD			
PROJECT BOTANIC HIGHFIELDS STAGE 9			
DRAWN B ENRIGHT	CHECKED B LUSK	ENGINEER D TAYLOR	SURVEYOR PARKINSON SURVEYS
DESIGNED B ENRIGHT			HORIZ DATUM MGA 2020 (Z 56) AHD

TITLE LOCALITY PLAN AND DRAWING INDEX				
SHEET A1	SCALE AS SHOWN	JOB No GS562-09	SHEET No 001	B

1

2

3

4

5

6

7

8

9

10

11

12

GENERAL NOTES

1. ALL DIMENSIONS AND SETOUT ARE TO BE CHECKED ON-SITE BEFORE WORK COMMENCES.

2. CONSTRUCTION CONTRACTOR TO CONFIRM THE LEVELS AND POSITION OF ALL SURVEY MARKS PRIOR TO CONSTRUCTION.

3. DIMENSIONS SHALL NOT BE OBTAINED BY SCALING FROM THE DRAWINGS.

4. DRAWINGS SHALL BE PLOTTED IN COLOUR SO ALL DESIGN ELEMENTS ARE SHOWN.

5. THE CONTRACTOR SHALL LIAISE WITH ALL RELEVANT UTILITY AUTHORITIES AND THEIR AGENTS TO LOCATE ALL EXISTING SERVICES, CO-ORDINATE PROTECTION OF AND/OR RELOCATION OF ANY EXISTING SERVICES WITHIN THE CONSTRUCTION AREA FOOTPRINT AS REQUIRED.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OF ANY SERVICES DAMAGED AS A RESULT OF THE WORKS.

7. OVERHEAD POWER MAY EXIST IN THIS AREA. ALL CONSTRUCTION WITHIN 3m OF OVERHEAD POWER LINES TO BE IN ACCORDANCE WITH SAFETY ADVICE FROM ERGON ENERGY.

8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING ALL RELEVANT AUTHORITIES AND PAYING ALL FEES NECESSARY BEFORE COMMENCING WORK.

9. ALL NEW SURFACES TO MATCH NEATLY TO EXISTING SURFACES IN LEVEL AND FINISH. CONCRETE SHALL BE SAW CUT AND REINSTATED TO MATCHING FINISH.

10. CONSTRUCTION CONTRACTOR TO ARRANGE ALL NECESSARY PERMITS AND APPROVALS FOR THE CLEARING OF ANY TREES PROPOSED UNDER THIS DESIGN.

11. DURING CONSTRUCTION TRAFFIC BARRIERS, LIGHTS & SIGNS SHALL BE MAINTAINED TO ENSURE SAFE PASSAGE OF TRAFFIC AND PEDESTRIANS IN ACCORDANCE WITH THE REQUIREMENTS OF TOOWOOMBA REGIONAL COUNCIL AND THE DEPARTMENT OF TRANSPORT AND MAIN ROADS.

12. DURING CONSTRUCTION THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION AND MAINTENANCE OF SEDIMENT & EROSION CONTROL DEVICES TO COMPLY WITH REQUIREMENTS OF TOOWOOMBA REGIONAL COUNCIL, DEPARTMENT OF TRANSPORT AND MAIN ROADS, AND IECA.

13. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH S.A.A CODES, BY-LAWS AND ORDINANCES OF THE TOOWOOMBA REGIONAL COUNCIL AND WORKPLACE HEALTH AND SAFETY REQUIREMENTS.

14. PRIOR TO CONSTRUCTION, A REGISTERED SURVEYOR SHOULD STAKE R.P. BOUNDARIES, SETOUT AND CHECK CONSTRUCTION EXTENTS, LINES AND LEVELS OF ALL PROPOSED WORKS.

15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING SURVEY MARK PEGS DURING THE COURSE OF THE CONTRACT.

16. ANY ROADS, FOOTPATHS AND PRIVATE PROPERTY DAMAGED DURING CONSTRUCTION SHALL BE REINSTATED TO THEIR ORIGINAL CONDITION TO THE SATISFACTION OF THE SUPERINTENDENT.

17. THE CONTRACTORS ATTENTION IS DRAWN TO THE REQUIREMENTS OF THE CURRENT WORKPLACE HEALTH AND SAFETY ACT. ALL WORK IS TO BE CARRIED OUT IN ACCORDANCE WITH THIS ACT AND IN PARTICULAR THE CONTRACTOR IS TO ENSURE THE REQUIREMENTS OF THIS SPECIFICATION WITH REGARD TO “ NOTIFICATION IN RELATION TO A NOTIFIABLE PROJECT” ARE FULFILLED.

18. ANY CONFLICTING INFORMATION IN THE DRAWINGS AND SPECIFICATION MUST BE REFERRED TO THE SUPERINTENDENT FOR RESOLUTION PRIOR TO PROCEEDING.

19. ALL WORKS ARE TO BE GRADED TO PROVIDE ADEQUATE DRAINAGE DURING CONSTRUCTION.

20. ALL VEHICLES LEAVING THE WORK SITE TO COMPLY WITH ENVIRONMENTAL MANAGEMENT PLAN AND ENSURE NO MATERIAL IS DEPOSITED ON ROADWAYS.

21. ELECTRICAL ALIGNMENT SHOWN IS INDICATIVE ONLY FOR THE PURPOSES OF SETTING OUT OTHER CIVIL SERVICES AND IS BASED ON STANDARD OFFSETS. REFER PLANS BY ROBIN RUSSELL FOR DESIGN AND FURTHER DETAILS.

DESIGN NOTES

1. DESIGN IS BASED ON SURVEY DATA SUPPLIED BY PARKINSON SURVEYORS. THE DESIGNER TAKES NO RESPONSIBILITY FOR ERRORS OR OMISSIONS IN THE SURVEY DATA AND THE DESIGN DECISIONS MADE ON THE BASIS OF SURVEY INFORMATION.

2. ALL PROPRIETARY ITEMS SPECIFIED IN THIS DESIGN SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS GUIDELINES.

3. AHD DERIVED FROM TOPNET ALLDAY RTK STN 1, MGA 2020 (ZONE 56) VIDE GNSS, PLANE PROJECTION SCALED FROM STN 1.

ROADWORKS NOTES

1. PAVEMENT & SUBGRADE REPLACEMENT MATERIAL TO BE COMPACTED IN LAYERS NOT EXCEEDING 150mm COMPACTED THICKNESS.

2. SUBGRADE TO BE PROOF-ROLLED WITH FULLY LOADED WATER CART. THERE IS TO BE NO VISIBLE DEFORMATION UNDER THE LOAD.

3. PROVIDE COMPACTION TESTING IN ACCORDANCE WITH TRC PLANNING SCHEME POLICY SCHEDULE 6.

4. A HOLD POINT EXISTS FOR RELEASE BY THE SUPERVISING ENGINEER PRIOR TO PLACEMENT OF SUBSEQUENT PAVEMENT LAYERS.

5. BASE AND SUB-BASE MATERIALS TO BE TESTED AND APPROVED PRIOR TO DELIVERY TO SITE. TESTING IS TO BE IN ACCORDANCE WITH THE RELEVANT MRTS, SAA STANDARDS AND TRC PLANNING SCHEME POLICY SCHEDULE 6.

6. SAW CUT EXISTING SEAL TO FORM NEAT EDGE WITH NEW WORKS.

7. DEFECTS IN THE EXISTING PAVEMENT ARE TO BE REPAIRED BY EXCAVATION AND REPLACEMENT, AND SEALED.

8. ALL KERB TYPES SPECIFIED IN THE DRAWINGS TO BE IN ACCORDANCE WITH IPWEAQ STANDARD DRAWING No. RS-080.

9. PAVEMENT MATERIAL TO EXTEND MIN 300 mm BEHIND BACK OF KERB, OR TO SUIT KERBER AT CONTRACTORS EXPENSE

PAVEMENT AND BITUMEN SEAL NOTES

1. ALL COMPACTION TO BE SUBJECTED TO TESTING IN ACCORDANCE WITH THE RELEVANT S.A.A CODE AND TRC PLANNING SCHEME POLICY SCHEDULE 6.

2. MINIMUM DEPTH OF PAVEMENT IS DETAILED ON TYPICAL SECTION. ACTUAL PAVEMENT DEPTHS ARE TO BE DETERMINED FOLLOWING SOAKED CBR TESTS ON SUBGRADE.

3. FOR PAVEMENT DESIGN, REFER TO SHEET 260.

4. BASE COURSE PAVEMENT GRAVELS ARE TO BE COMPACTED AT OPTIMUM MOISTURE CONTENT TO ACHIEVE 100% STANDARD COMPACTION.

5. SUB BASE COURSE PAVEMENT GRAVELS (IF SPECIFIED) ARE TO BE COMPACTED AT OPTIMUM MOISTURE CONTENT TO ACHIEVE 100% STANDARD COMPACTION.

6. SUBGRADE IS TO BE COMPACTED AT OPTIMUM MOISTURE CONTENT TO ACHIEVE 98% STANDARD FOR THE TOP 300mm AND 95% STANDARD BELOW THE TOP 300mm.

7. SEAL DESIGN BASED ON DESIGN ASSUMPTIONS AND THIS IS TO BE VERIFIED FULLY WITH THE DESIGNER BY THE SPRAY CONTRACTOR PRIOR TO APPLICATION.

EARTHWORKS AND FILL MANAGEMENT NOTES

1. ALL WORKS TO BE GENERALLY IN ACCORDANCE WITH AS 3798.

2. ALL WORK TO BE STRICTLY IN ACCORDANCE WITH THE STANDARD EARTHWORKS SPECIFICATION.

3. SURFACE LEVELS OVER THE SITE HAVE BEEN INTERPOLATED THROUGH COMPUTER MODELLING OF FIELD SURVEY DATA. THESE CALCULATED LEVELS MAY VARY FROM THE ACTUAL GROUND LEVEL.

4. ALL DRAINAGE, EROSION AND SEDIMENT CONTROLS TO BE INSTALLED AND FULLY OPERATIONAL BEFORE COMMENCING UP-SLOPE EARTHWORKS.

5. ALL EXISTING UNDERGROUND SERVICES TO BE LOCATED AND MARKED PRIOR TO COMMENCING EARTHWORKS.

6. CLEARING, STRIPPING AND GRUBBING SHOULD BE CARRIED OUT IN AREAS SUBJECT TO EARTHWORKS. ALSO, ALL SOILS CONTAINING ORGANIC MATTER SHOULD BE STRIPPED FROM THE CONSTRUCTION AREA. THIS MATERIAL IS NOT CONSIDERED SUITABLE FOR USE AS STRUCTURAL FILL.

7. ALL STRIPPED TOPSOIL IS TO BE STOCKPILED ON SITE AND REUSED DURING REVEGETATION WORKS.

8. AFTER CLEARING, GRUBBING AND STRIPPING THE EXPOSED SURFACE, ALL PAVED CONSTRUCTION AREAS SHOULD BE PROOF ROLLED TO DETECT ANY SOFT OR LOOSE MATERIAL. WEAK SOILS, PARTICULARLY LOOSE SURFACE, CLAYEY OR SANDS SHOULD BE COMPACTED TO THE APPROPRIATE REQUIREMENTS WHERE POSSIBLE. WEAK, OVERLY MOIST SOILS PARTICULARLY CLAY SOILS, SHOULD BE PREFERABLY REMOVED. PROOF ROLLING OF CUT AREAS SHOULD BE DEFERRED UNTIL AFTER FULL EXCAVATION IS COMPLETED.

9. MATERIAL EXCAVATED FROM CUT AREAS SHALL NOT BE USED AS FILL WITHOUT THE SUPERINTENDENTS APPROVAL.

10. THE INSITU SOILS, WHERE FREE OF ORGANIC AND DELETERIOUS MATERIAL, MAY BE USED FOR STRUCTURAL FILL PROVIDED THE MOISTURE CONTENT OF THE SOILS ON PLACEMENT APPROXIMATES THE OPTIMUM MOISTURE CONTENT REQUIRED FOR COMPACTION.

11. FILL TO BE PLACED IN MAXIMUM 200mm LIFTS, UNLESS APPROVED OTHERWISE BY A SUITABLY QUALIFIED CONSULTANT, AND COMPACTED TO SPECIFICATION.

12. PLACEMENT OF FILL SHALL CONFORM TO THE FOLLOWING MINIMUM DRY DENSITY RATIO (M.D.D.R.) COMPACTION STANDARDS:

A) RESIDENTIAL ALLOTMENTS = 95% STD

B) ROAD VERGES/EMBANKMENTS = 95% STD

C) PAVEMENT SUBGRADE = 100% STD

13. ANY IMPORTED FILL, IF NEEDED TO MAKE UP EARTHWORK DEFICIENCIES, SHOULD HAVE A SOAKED CBR OF NOT LESS THAN 15% AND A MAXIMUM AGGREGATE SIZE OF NO GREATER THAN 75 mm, MAX LIQUID LIMIT = 40, MAX P.I.= 15, MAX P.I X % PASSING 4.25 um = 450. TEST RESULTS SHALL BE PROVIDED.

14. FIELD DENSITY TESTING SHOULD BE CARRIED OUT TO CHECK THE STANDARD OF COMPACTION ACHIEVED AND THE PLACEMENT MOISTURE CONTENT. THE FREQUENCY AND EXTENT OF TESTING SHOULD BE AS PER GUIDELINES IN AS 3798-2007 AND TRC PLANNING SCHEME POLICY SCHEDULE 6.

15. CONTROL TESTING OF EARTHWORKS TO BE IN ACCORDANCE WITH AS1289.5 & AS3798-2007, WITH **LEVEL 1** GEOTECHNICAL CERTIFICATION FOR ALLOTMENT AND TEMPORARY DRAIN FILLING.

16. FILL DENSITY TESTING SHALL CONFORM TO THE FOLLOWING:

A) 1 TEST PER 500m³ – GENERALLY

B) 1 TEST PER 100m³ – WATERCOURSES

C) 1 TEST PER 2 LAYERS PER 40m – TRENCH FOR NON-COHESIVE MATERIALS, M.D.D.R. = 80%

13. ALL FILL MATERIAL PLACED ON THE SITE IS TO:

i) COMPRISE ONLY OF NATURAL EARTH AND ROCK AND IS TO BE FREE OF CONTAMINANTS, NOXIOUS, HAZARDOUS, DELETERIOUS AND ORGANIC MATERIALS. FILL MATERIAL IS TO BE FREE DRAINING. NO DEMOLITION MATERIAL IS TO BE USED. THE FILL SHALL BE COMPACTED IN LAYERS NOT EXCEEDING 300 mm AND TO A MINIMUM 95% DRY DENSITY RATIO USING STANDARD COMPACTION IN ACCORDANCE WITH AS 1289.29. A MINIMUM OF 98% DRY DENSITY IS REQUIRED OF SUBGRADE LEVEL AND 100% DRY DENSITY IS REQUIRED FOR PAVEMENTS.

ii) BE PLACED IN ACCORDANCE WITH AS 3798 – GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL PROPERTIES.

14. STRIP TURF OPEN DRAIN INVERTS AND BATTERS AT 3m INTERVALS. APPLY GRASS SEEDING TO ALL REMAINING DISTURBED AREAS.

15. ALL AREAS SUBJECT TO EARTHWORKS ARE TO BE FREE DRAINING WITH A MINIMUM SLOPE OF 1:100 (1%).

16. ALL TEMPORARY STOCKPILES (IF APPLICABLE) TO HAVE 1:6 MAXIMUM SIDE BATTERS (GRASS SEEDED).

17. WHERE TOPSOIL STOCKPILES ARE LOCATED ADJACENT TO FILL AREAS, CARE MUST BE TAKEN TO ENSURE STRUCTURAL FILL DOES NOT BECOME CONTAMINATED BY BLENDING WITH TOPSOIL.

18. EARTHWORKS BATTERS ARE TO BE TREATED AS FOLLOWS:

A) 1V:4H OR FLATTER TO BE GRASS SEEDED (UNLESS NOTED OTHERWISE)

B) STEEPER THAN 1V:4H OR HIGHER THAN 300mm TO BE MULCHED

19. WHERE THERE IS EVIDENCE OF REMOVAL OF TREES, THE STUMP HOLE SHALL BE EXCAVATED, FILLED AND COMPACTED AS PART OF THE LEVEL 1 CERTIFICATION.

CONCRETE NOTES

1. ALL CONCRETE TO BE IN ACCORDANCE WITH AS1379 AND AS3600 WITH COMPRESSIVE STRENGTHS AS SHOWN ON THE DRAWINGS.

2. CONCRETE CONSTRUCTION TO COMPLY WITH THE REQUIREMENTS OF AS3600.

3. REINFORCEMENT FABRIC TO AS1304, WITH COVER AS SPECIFIED ON THE DRAWINGS.

4. CONCRETE TO BE BROOM FINISHED AND HAVE A MAXIMUM AGGREGATE SIZE AS SPECIFIED ON THE DRAWINGS.

PIT AND CONCRETE NOTES

1. BASE OF PITS TO BE PREPARED WITH 150 MM OF 3.2 PAVEMENT MATERIAL, COMPACTED TO 95% OF MAXIMUM DRY DENSITY.

2. CONCRETE TO BE S40, 60 MM COVER AND TO COMPLY WITH MRTS70.

3. ALL REINFORCING STEEL AND PLACEMENT TO COMPLY WITH MRTS71.

STORMWATER DRAINAGE NOTES

1. PIPE MATERIAL TO BE UPVC DRAINAGE PIPE PLASCOR OR EQUIVALENT AND RCP CLASS “3” RUBBER RING JOINTED, UNLESS NOTED OTHERWISE.

2. UPVC PIPES ARE EITHER RUBBER RING JOINTED OR SOLVENT WELD JOINTED. STANDARD MANUFACTURER’S FITTING ARE TO BE USED IN BOTH CASES.

3. LIDS TO CAST-IN-SITU MANHOLES ARE CLASS ‘D’, CLOSE FITTING BOLT DOWN CAST IRON OR GALVANISED STEEL, CONCRETE INFILL TYPE (GATIC LIGHT DUTY, POLYCRETE BROADSTEL, OR SIMILAR) OF APPROXIMATELY THE SAME INTERNAL DIMENSIONS AS THE MANHOLE.

4. LIDS TO FRC AND RCP MANHOLES ARE IN ACCORDANCE WITH THE MANUFACTURE’S PROPRIETARY CONCRETE OR CONCRETE INFILL TYPE.

5. LIDS MATCH FINISHED SURFACE GROUND SLOPE AND ARE MARKED “STORMWATER” IMPRESSED INTO THE CONCRETE INFILL.

6. INFILL CONCRETE IS CLASS N25.

7. UPVC PIPE AND KERB ADAPTORS ARE USED WHERE DISCHARGE IS INTO THE KERB AND CHANNEL.

8. 150mm UPVC PIPE WHERE DISCHARGING DIRECTLY TO GULLY PIT. REFER TRC DRAWING 101450-001.

9. MATERIALS AND CONSTRUCTION ARE IN ACCORDANCE WITH THE LOCAL AUTHORITY STANDARD SPECIFICATION.

WATER RETICULATION NOTES

1. ALL WATER RETICULATION MAINS SHALL BE RIGID PVC-M PIPE, SOCKET AND SPIGOT, RUBBER RING JOINTED CLASS 12 OR GREATER TO COMPLY WITH A.S. 2977 AND BE COMPATIBLE WITH DICL PIPE FITTINGS TO AS 2280 – U.N.O.

2. ALL WATER RETICULATION MAINS TO BE LOCATED IN FOOTPATH ON A 1.2m ALIGNMENT FROM PROPERTY BOUNDARIES (UNLESS NOTED OTHERWISE).

3. CONCRETE (GRADE N20) THRUST BLOCKS TO WSAA STANDARDS SHALL BE PLACED AT ALL BENDS, TEES, REDUCERS, VALVES AND DEAD ENDS.

4. CONNECTION TO EXISTING WATER RETICULATION MAIN TO BE CARRIED OUT BY COUNCIL AT THE CONTRACTORS EXPENSE.

5. ALL DUCTILE IRON FITTING TO BE HEAVY CEMENT LINED & COMPLY WITH AS 2280.

6. WATER SERVICE ENVELOPING CONDUITS SHALL BE CONSTRUCTED IN ACCORDANCE WITH TRC STANDARD DRAWING 101214-001 REV. A. A BRASS INDICATOR DISC SHALL BE SET IN THE KERB TO DENOTE CONDUIT LOCATION.

7. WATER SERVICES TO BE CONSTRUCTED IN ACCORDANCE WITH TOOWOOMBA REGIONAL COUNCIL WATER INFRASTRUCTURE POLICY 2.03.

8. WATER SERVICE ENVELOPING CONDUITS SHALL BE PLUGGED TO PREVENT THE ENTRY OF DIRT ETC.

9. THE CONTRACTOR SHALL MAINTAIN ACCURATE RECORDS OF LEVELS & LOCATIONS OF SERVICES TO FULLY COMPLY WITH COUNCILS “AS CONSTRUCTED” INFORMATION REQUIREMENTS.

10. MARKER PLATES- ONLY KERB PAINTING WILL BE DONE PRIOR TO ON-MAINTENANCE INSPECTION. MARKER PLATE SHALL BE INSTALLED TOWARDS OFF-MAINTENANCE INSPECTION.

11. HYDRANT RRPM’S SHALL BE SUPPLIED AND INSTALLED IN ACCORDANCE WITH WSAA STANDARDS.

12. ALL CAST IRON FITTINGS INCLUDING VALVES AND HYDRANTS SHALL HAVE THERMALLY APPLIED PROTECTIVE COATINGS IN ACCORDANCE WITH AS 4158.

13. REFER WSAA STANDARDS FOR ALL TRENCHING AND THRUST BLOCK DETAILS ETC.

14. ALL WATER MAINS UNDER ROADWAYS SHALL BE DUCTILE IRON CEMENT LINED (DICL)

15. MAXIMUM SPACING OF FIRE HYDRANTS SHALL BE 80 m BUT LOCATED WITHIN 40m OF EACH PROPERTY. HYDRANTS SHALL BE LOCATED < 200 mm FROM THE DIVIDING PROPERTY BOUNDARY.

16. COVER TO WATER MAINS SHALL BE IN ACCORDANCE WITH TOOWOOMBA REGIONAL COUNCIL’S WATER INFRASTRUCTURE POLICY 2.03.

17. SLUICE VALVES TO BE CLASS 14 AND COMPLY WITH AS 2638.

18. MINIMUM 1.0m HORIZONTAL SEPERATION TO STREET LIGHTING AND GREEN BOYS TO WATER MAINS AND WATER CROSSINGS AS PER TRC REQUIREMENTS.

SEWERAGE RETICULATION NOTES

PIPELINES

1. ALL SEWERS ARE TO BE 150 TO 300 mm DIA. UPVC CLASS ‘SN8’ – AS 1260 – RUBBER RING JOINTED IN MAXIMUM 3.0 m LENGTHS UNLESS NOTED OTHERWISE.

2. ALIGNMENT UNLESS OTHERWISE NOTED SHALL BE:

2.1. 1.5 m INSIDE FRONT OR REAR BOUNDARY OF ALLOTMENTS

2.2. 1.5 m FROM SIDE BOUNDARY OF ALLOTMENTS

2.3. 1.5 m WHERE A RETAINING WALL GREATER THAN 0.8 m HIGH IS LOCATED ON THE REAR OR SIDE BOUNDARY.

3. BEDDING FOR PIPELINES TO BE GENERALLY TYPE 3 BEDDING UNLESS OTHERWISE NOTED AND PLACED IN ACCORDANCE WITH WSAA STANDARD DRAWING NO. SEW-1201.

4. MINIMUM COVER FOR SEWER PIPES SHALL BE 0.9 m FOR ALLOTMENTS, 0.9 m FOR PARKS AND 1.2 m FOR ROADWAYS AND PATHS.

5. ALL BACKFILL TO PIPES TO BE COMPACTED TO 98% OF THE MAXIMUM DRY DENSITY (STANDARD) WITH REPRESENTATIVE TESTING AS REQUESTED BY THE ENGINEER ON SITE.

6. CONTRACTOR TO SUPPLY ENGINEER WITH ACCURATE AS CONSTRUCTED PLANS ON COMPLETION OF WORKS.

7. MARKER TAPE REQUIRED FOR ALL NEW SEWER MAIN INSTALLATION.

8. WHERE ACID SULFATE SOILS ARE ENCOUNTERED, REMOVAL AND TREATMENT SHALL BE IN ACCORDANCE WITH AN APPROVED ACID SULFATE SOIL MANAGEMENT PLAN.

9. DROP STRUCTURES TO BE CONSTRUCTED AS A ‘TYPE C INLET’ IN ACCORDANCE WITH TRC STANDARD DRAWING NO 101211-001 REVISION C. REFER DWG GS323-411.

HOUSE CONNECTION BRANCHES

10. HOUSE CONNECTION BRANCHES TO BE 100mm DIA AND EXTEND TO 1.0 m INTO PROPERTY BEING SERVED.

11. ALL HOUSE CONNECTION BRANCHES TO BE CONSTRUCTED IN ACCORDANCE WITH TRC STANDARD DRAWING NO 101211-001 REVISION C.

12. HOUSE CONNECTION JUMP UPS/STUBS TO BE CAPPED AT 1 m ABOVE GROUND LEVEL AND FINISHED WITH A PUSH ON CAPPING PIECE, PAINTED YELLOW, IN ACCORDANCE WITH TRC STANDARD DRAWING NO. 101211-001 REV C.

WORK ON EXISTING SEWERS

13. ALL WORK ON EXISTING SEWERS TO BE PERFORMED BY TOOWOOMBA REGIONAL COUNCIL, UNLESS OTHERWISE DIRECTED AND ACTUAL COST INCLUDING LABOUR AND MATERIALS SHALL BE MET BY THE DEVELOPER.

MANHOLES

14. MANHOLES ON 150 mm Ø SEWER LINES SHALL BE PRE-CAST 1050 mm DIAMETER UNLESS NOTED OTHERWISE AND CONSTRUCTED IN ACCORDANCE WITH WSAA STANDARD DRAWING NO. SEW-1300.

15. MANHOLES ON 300 mm Ø SEWER LINES SHALL BE PRE-CAST 1200 mm DIAMETER, EPOXY COATED.

16. ALL MANHOLES TO HAVE LIDS AS SHOWN ON THE SEWER LONGITUDINAL SECTIONS.

17. FINAL SURFACE LEVELS OF MANHOLES NOMINATED ON LONG SECTIONS ARE TO DESIGN SURFACE LEVEL AND ARE TO BE ADJUSTED ON SITE TO SUIT ALL EARTHWORKS TYPICALLY 75 mm ABOVE SURROUNDING FINISHED SURFACE LEVELS.

18. INVERTS IN ALL MANHOLES TO BE BENCHED TO SUIT INLET AND OUTLET PIPES IN ACCORDANCE WITH WSAA.

LIST OF ABBREVIATIONS

WSAA

TRC

DTMR

ID

OD

DICL

HDPE

RCP

PRV

DN

WATER SERVICES ASSOCIATION OF AUSTRALIA

TOOWOOMBA REGIONAL COUNCIL

DEPARTMENT OF TRANSPORT AND MAIN ROADS

INSIDE DIAMETER

OUTSIDE DIAMETER

DUCTILE IRON CEMENT LINED

HIGH DENSITY POLYETHYLENE

REINFORCED CONCRETE PIPE

PRESSURE REDUCING VALVE

NOMINAL DIAMETER

ISSUED

FOR APPROVAL

8

16/02/26

BE

DET

ISSUED FOR RFI RESPONSE

A

21/11/25

BE

DET

ISSUED FOR APPROVAL

REV. DATE DRAWN APPD

DRAWING REVISION

RPEQ Certification

Engineer

David Taylor

RPEQ Number

35089

Signature



Date

16/02/2026

Project Number

GS562-09 BOTANIC STAGE 9 REV B





GenEng Solutions Pty Ltd

ABN 81 150 773 961

PO Box 300

Crows Nest QLD 4355

Ph: (07) 4698 2100

www.genengsolutions.com.au

CLIENT

BIRD IN HAND 3 PTY LTD

PROJECT

BOTANIC HIGHFIELDS STAGE 9

DRAWN

B ENRIGHT

CHECKED

B LUSK

ENGINEER

D TAYLOR

SURVEYOR

PARKINSON SURVEYS

DESIGNED

B ENRIGHT

HORIZ DATUM

MGA 2020 (Z 56)

VERT DATUM

AHD

TITLE

CONSTRUCTION NOTES

SHEET

A1

SCALE

AS SHOWN

JOB No

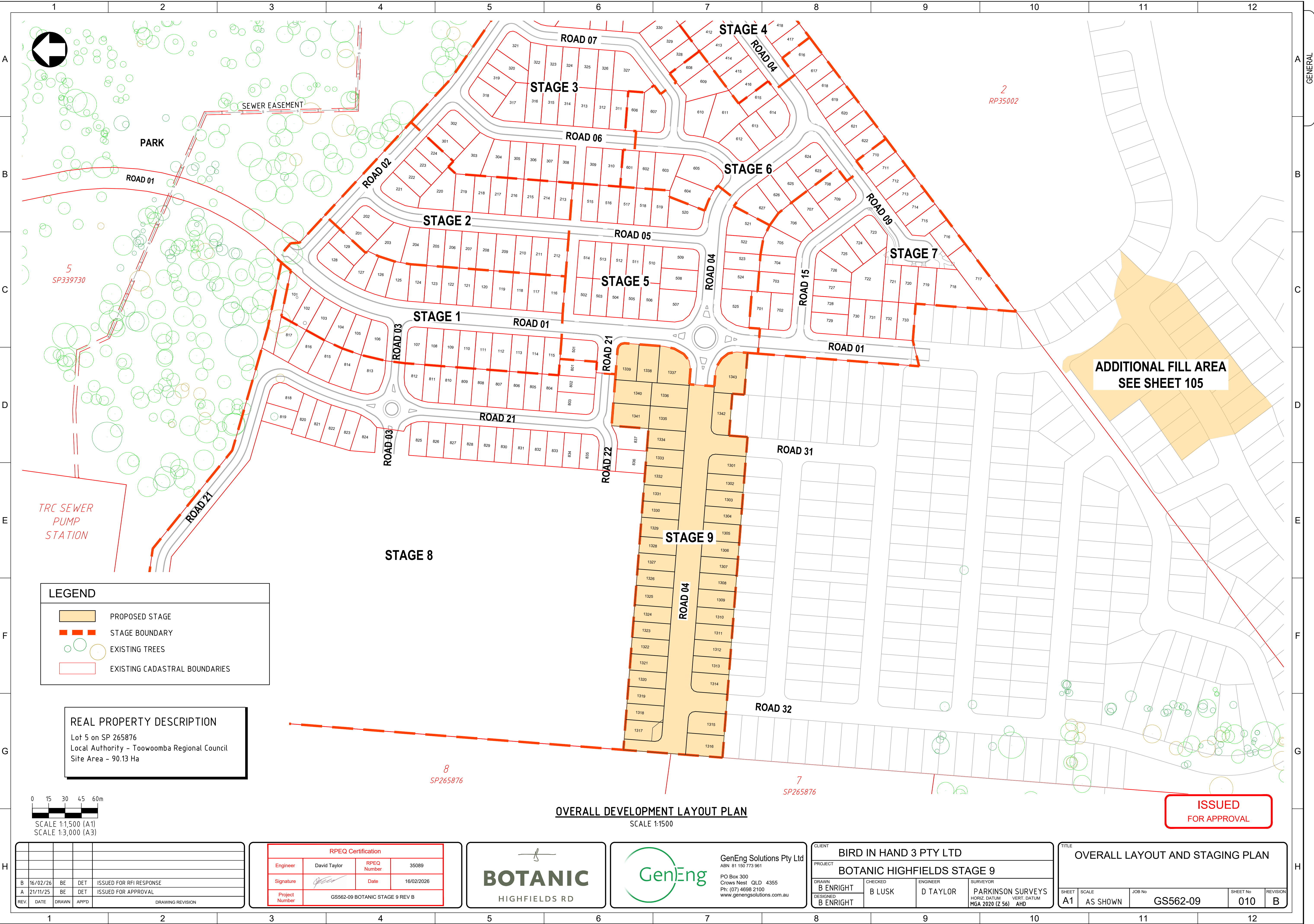
GS562-09

SHEET No

002

REVISION

B



LEGEND

PROPOSED ROAD PAVEMENT

PROPOSED CONCRETE PATH

EXISTING ELECTRICAL

EXISTING SEWER

EXISTING STORMWATER

EXISTING WATER MAIN

ELECTRICAL/COMMS, PILLAR AND LIGHT
REFER PLANS BY P.E. CONSULTING ENGINEERS

PROPOSED SEWER

PROPOSED STORMWATER

PROPOSED WATER MAIN

PROPOSED RETAINING WALL

FUTURE SEWER

FUTURE STORMWATER

FUTURE WATER MAIN

STAGE BOUNDARY

DESIGN SURFACE CONTOURS (0.5m INTERVAL)

EXISTING SURFACE CONTOURS (1.0m INTERVAL)

STAGE 8

STAGE 9

STAGE 5

STAGE 7

STAGE 6

STAGE 4

STAGE 3

STAGE 2

STAGE 1

STAGE 0

ROAD 21

ROAD 22

ROAD 04

ROAD 32

ROAD 31

1317

608m²

1318

513m²

1319

533m²

1320

513m²

1321

513m²

1322

513m²

1323

513m²

1324

513m²

1325

616m²

1326

513m²

1327

513m²

1328

513m²

1329

605m²

1330

513m²

1331

513m²

1332

605m²

1333

554m²

1334

605m²

1335

718m²

1336

733m²

1337

929m²

1338

653m²

1339

652m²

1340

729m²

1341

714m²

1342

647m²

1343

1002m²

1316

685m²

1315

677m²

1314

604m²

1313

510m²

1312

510m²

1311

510m²

1310

510m²

1309

561m²

1308

510m²

1307

510m²

1306

510m²

1305

561m²

1304

510m²

1303

510m²

1302

510m²

1301

604m²

POTENTIAL FUTURE
LOT LAYOUT

FUTURE STAGE

0

5

10

15

20m

SCALE 1:500 (A1)

SCALE 1:1,000 (A3)

STAGE 9 DEVELOPMENT LAYOUT PLAN
SCALE 1:500

ISSUED
FOR APPROVAL

REV	DATE	DRAWN	APPD	DRAWING REVISION
B	16/02/26	BE	DET	ISSUED FOR RFI RESPONSE
A	21/11/25	BE	DET	ISSUED FOR APPROVAL

RPEQ Certification			
Engineer	David Taylor	RPEQ Number	35089
Signature		Date	16/02/2026
Project Number	GS562-09 BOTANIC STAGE 9 REV B		

BOTANIC

HIGHFIELDS RD

GenEng

GenEng Solutions Pty Ltd

ABN 81 150 773 961

PO Box 300
Crow's Nest QLD 4355

Ph: (07) 4698 2100

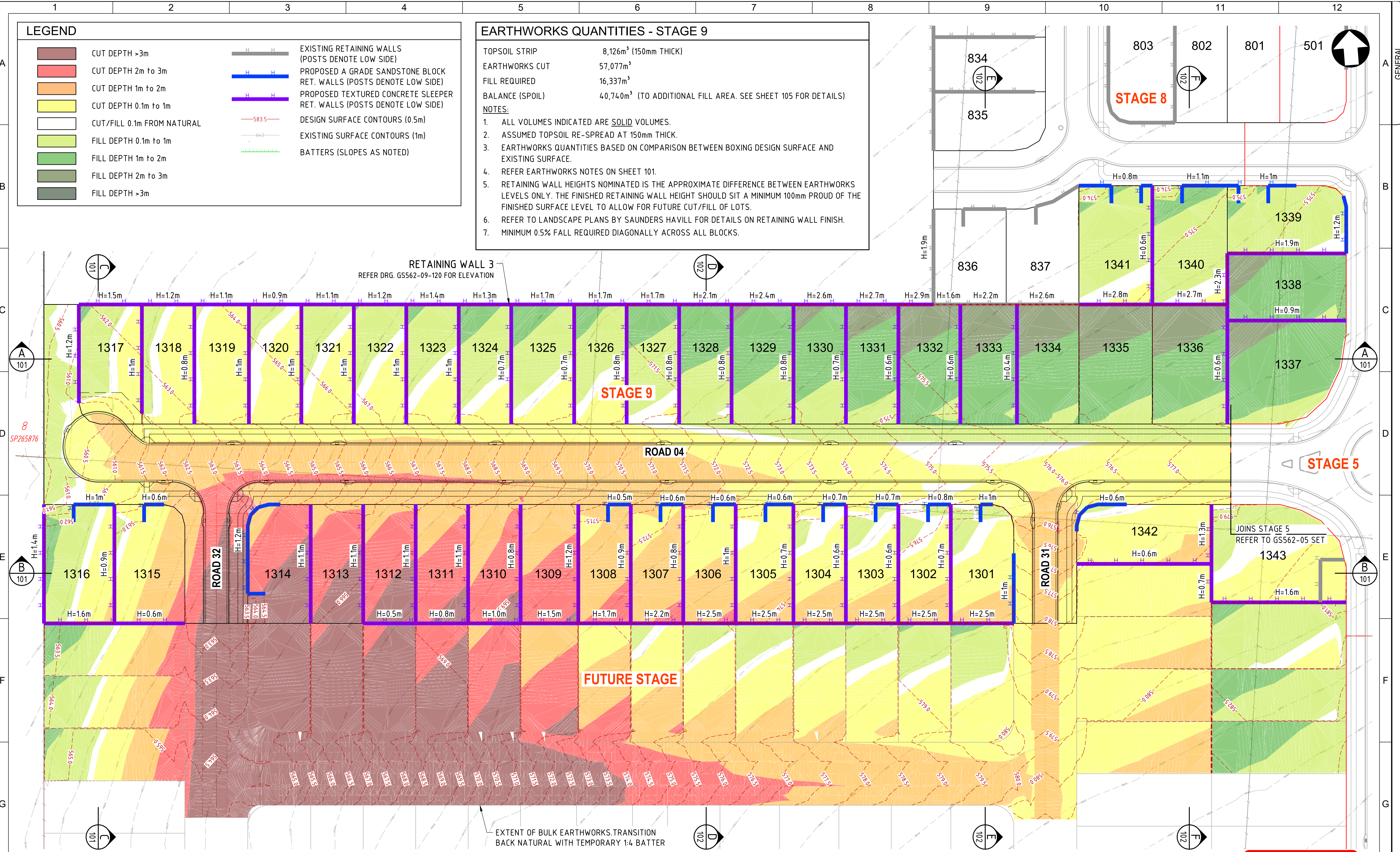
www.genengsolutions.com.au

CLIENT BIRD IN HAND 3 PTY LTD			
PROJECT BOTANIC HIGHFIELDS STAGE 9			
DRAWN B ENRIGHT	CHECKED B LUSK	ENGINEER D TAYLOR	SURVEYOR PARKINSON SURVEYS
DESIGNED B ENRIGHT			HORIZ DATUM MGA 2020 (Z 56) AHD

TITLE STAGE 9 DEVELOPMENT LAYOUT			
SHEET A1	SCALE AS SHOWN	JOB No GS562-09	SHEET No 020
			REVISION B

LEGEND			
	CUT DEPTH >3m		EXISTING RETAINING WALLS (POSTS DENOTE LOW SIDE)
	CUT DEPTH 2m to 3m		PROPOSED A GRADE SANDSTONE BLOCK RET. WALLS (POSTS DENOTE LOW SIDE)
	CUT DEPTH 1m to 2m		PROPOSED TEXTURED CONCRETE SLEEPER RET. WALLS (POSTS DENOTE LOW SIDE)
	CUT DEPTH 0.1m to 1m		DESIGN SURFACE CONTOURS (0.5m)
	CUT/FILL 0.1m FROM NATURAL		EXISTING SURFACE CONTOURS (1m)
	FILL DEPTH 0.1m to 1m		BATTERS (SLOPES AS NOTED)
	FILL DEPTH 1m to 2m		
	FILL DEPTH 2m to 3m		
	FILL DEPTH >3m		

EARTHWORKS QUANTITIES - STAGE 9	
TOPSOIL STRIP	8,126m³ (150mm THICK)
EARTHWORKS CUT	57,077m³
FILL REQUIRED	16,337m³
BALANCE (SPOIL)	40,740m³ (TO ADDITIONAL FILL AREA. SEE SHEET 105 FOR DETAILS)
NOTES:	
1. ALL VOLUMES INDICATED ARE SOLID VOLUMES.	
2. ASSUMED TOPSOIL RE-SPREAD AT 150mm THICK.	
3. EARTHWORKS QUANTITIES BASED ON COMPARISON BETWEEN BOXING DESIGN SURFACE AND EXISTING SURFACE.	
4. REFER EARTHWORKS NOTES ON SHEET 101.	
5. RETAINING WALL HEIGHTS NOMINATED IS THE APPROXIMATE DIFFERENCE BETWEEN EARTHWORKS LEVELS ONLY. THE FINISHED RETAINING WALL HEIGHT SHOULD SIT A MINIMUM 100mm PROUD OF THE FINISHED SURFACE LEVEL TO ALLOW FOR FUTURE CUT/FILL OF LOTS.	
6. REFER TO LANDSCAPE PLANS BY SAUNDERS HAVILL FOR DETAILS ON RETAINING WALL FINISH.	
7. MINIMUM 0.5% FALL REQUIRED DIAGONALLY ACROSS ALL BLOCKS.	



EARTHWORKS LAYOUT PLAN
SCALE 1:500

ISSUED
FOR APPROVAL

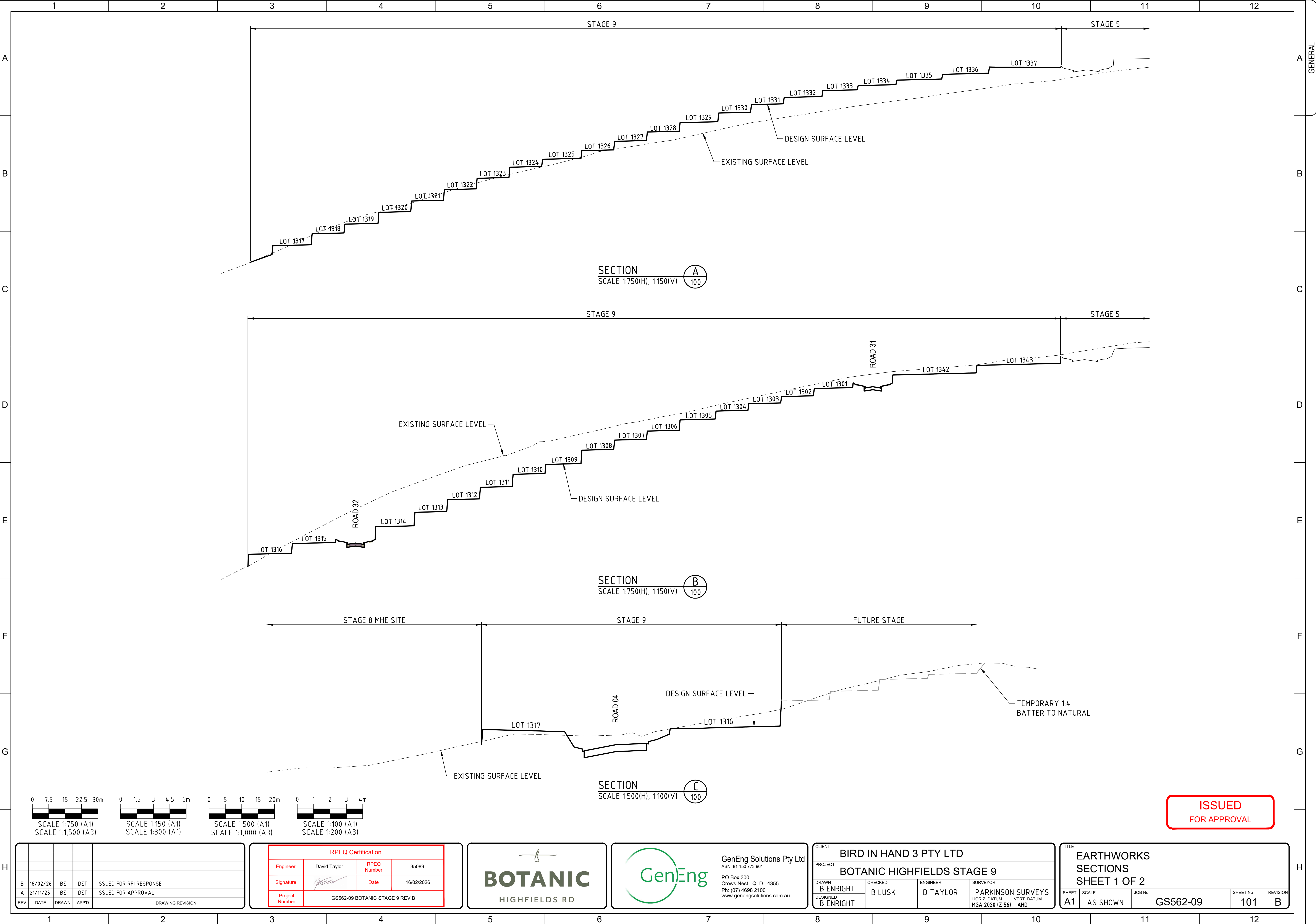
B	16/02/26	BE	DET	ISSUED FOR RFI RESPONSE
A	21/11/25	BE	DET	ISSUED FOR APPROVAL
REV.	DATE	DRAWN	APPD	DRAWING REVISION

RPEQ Certification			
Engineer	David Taylor	RPEQ Number	35089
Signature		Date	16/02/2026
Project Number	GS562-09 BOTANIC STAGE 9 REV B		



CLIENT BIRD IN HAND 3 PTY LTD			
PROJECT BOTANIC HIGHFIELDS STAGE 9			
DRAWN B ENRIGHT	CHECKED B LUSK	ENGINEER D TAYLOR	SURVEYOR PARKINSON SURVEYS
DESIGNED B ENRIGHT			HORIZ. DATUM MGA 2020 (Z 56) AHD

TITLE EARTHWORKS LAYOUT PLAN			
SHEET A1	SCALE AS SHOWN	JOB No GS562-09	SHEET No 100
			REVISION B



SECTION A
SCALE 1:750(H), 1:150(V)

SECTION B
SCALE 1:750(H), 1:150(V)

SECTION C
SCALE 1:500(H), 1:100(V)

ISSUED
FOR APPROVAL

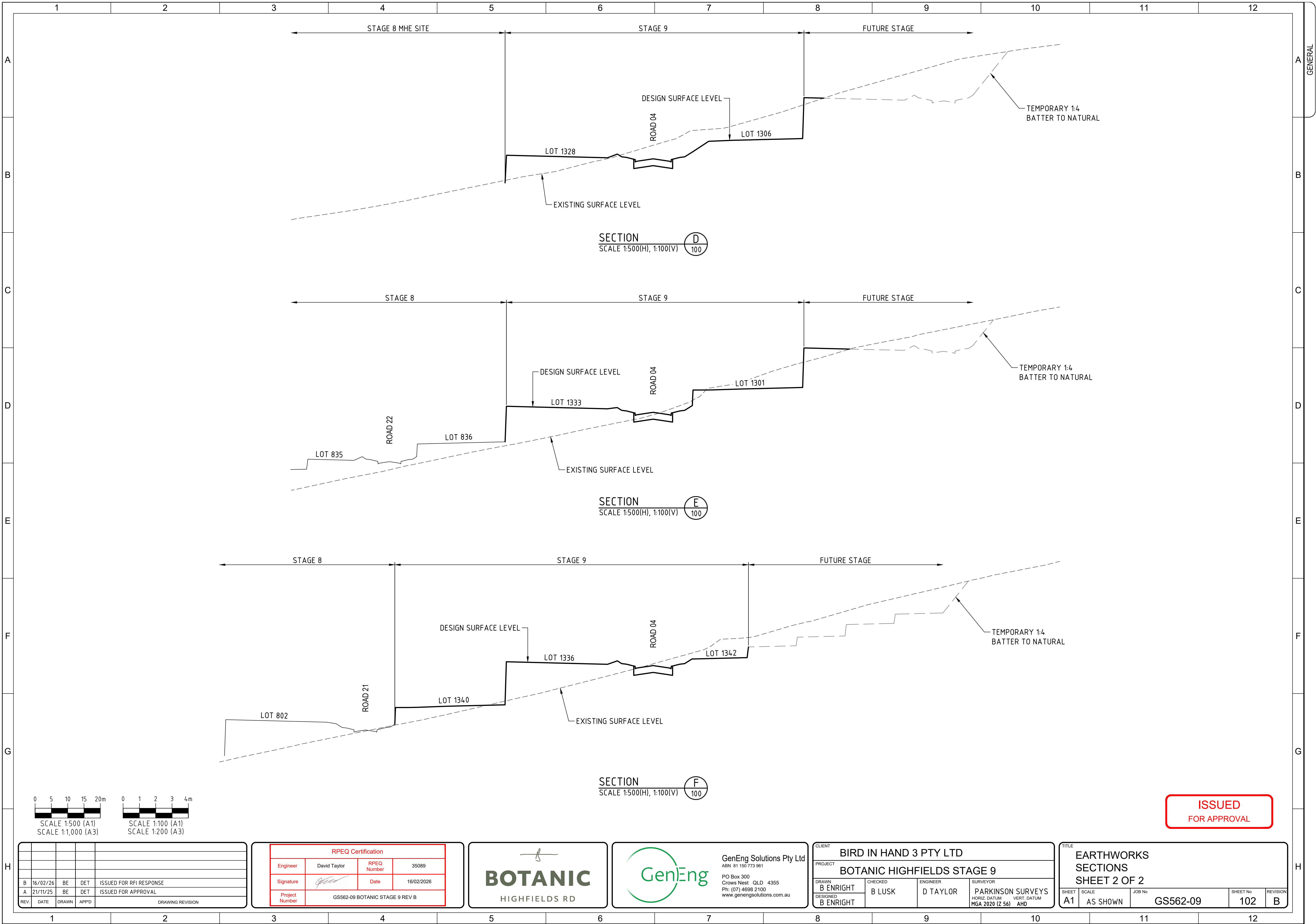
8	16/02/26	BE	DET	ISSUED FOR RFI RESPONSE
A	21/11/25	BE	DET	ISSUED FOR APPROVAL
REV	DATE	DRAWN	APPD	DRAWING REVISION

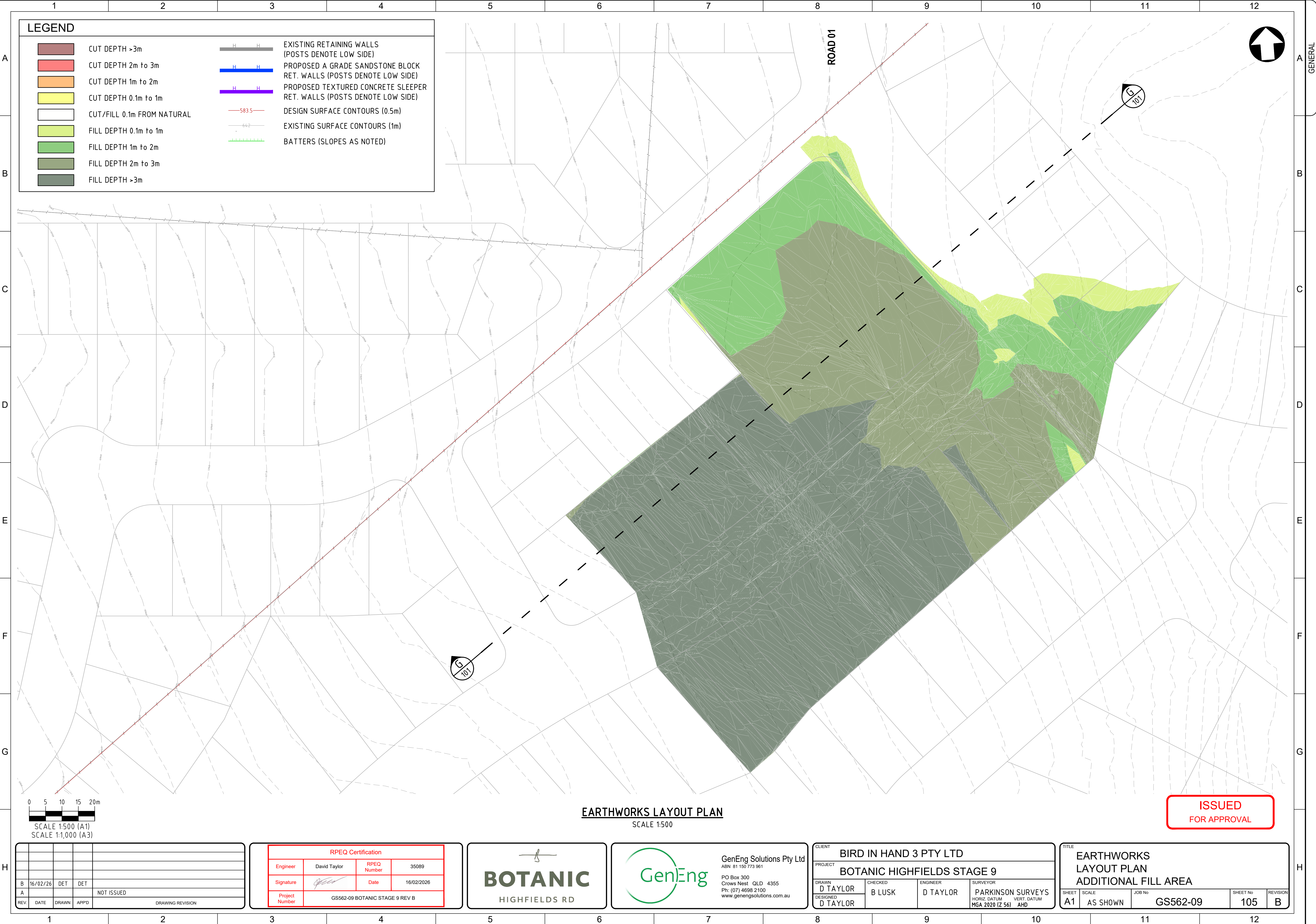
RPEQ Certification			
Engineer	David Taylor	RPEQ Number	35089
Signature		Date	16/02/2026
Project Number	GS562-09 BOTANIC STAGE 9 REV B		

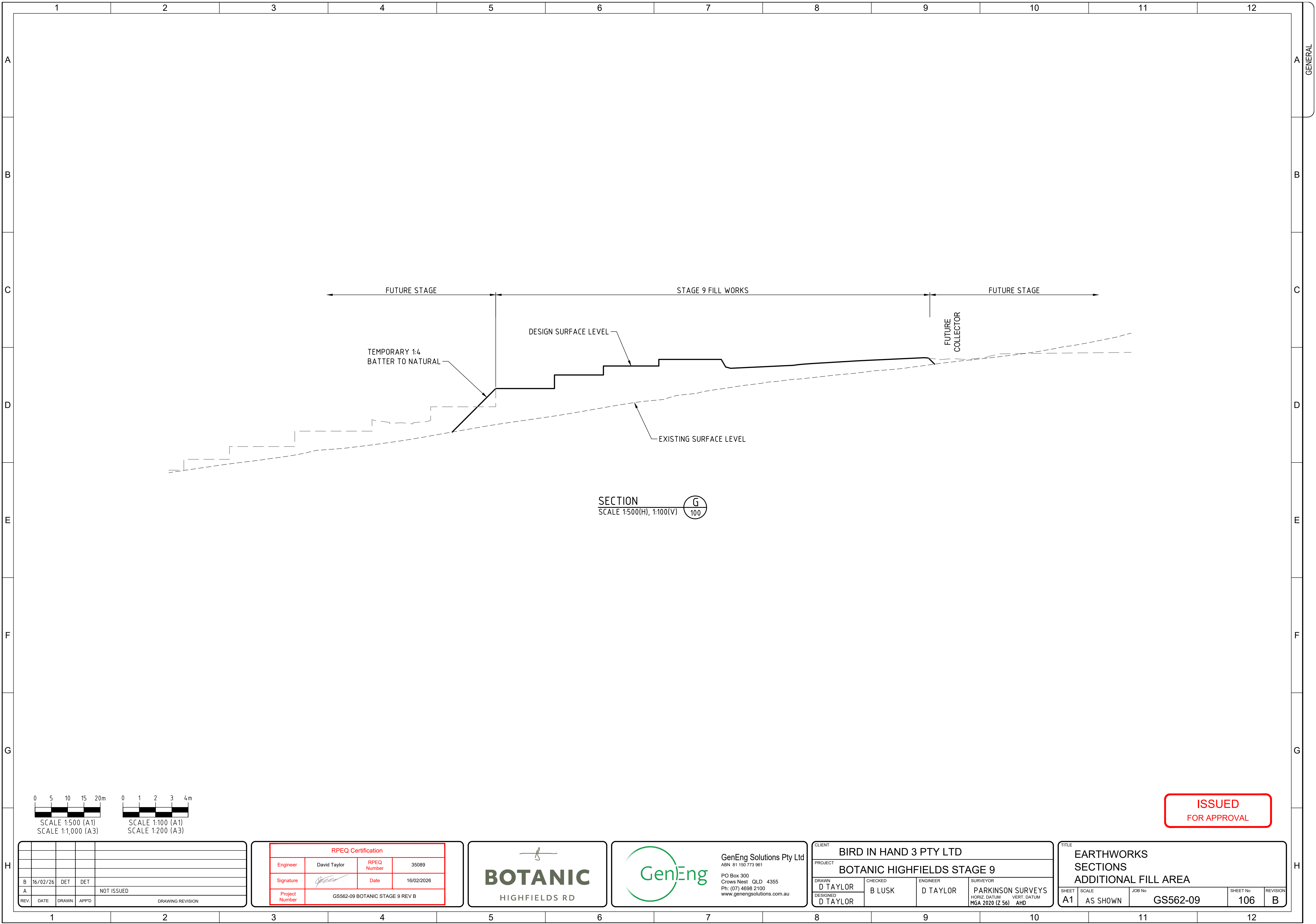


CLIENT BIRD IN HAND 3 PTY LTD			
PROJECT BOTANIC HIGHFIELDS STAGE 9			
DRAWN B ENRIGHT	CHECKED B LUSK	ENGINEER D TAYLOR	SURVEYOR PARKINSON SURVEYS
DESIGNED B ENRIGHT			HORIZ DATUM MGA 2020 (Z 56) AHD

TITLE EARTHWORKS SECTIONS SHEET 1 OF 2			
SHEET A1	SCALE AS SHOWN	JOB No GS562-09	SHEET No 101
			REVISION B

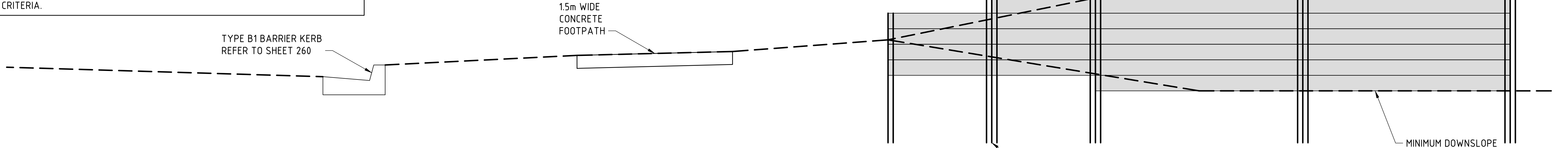






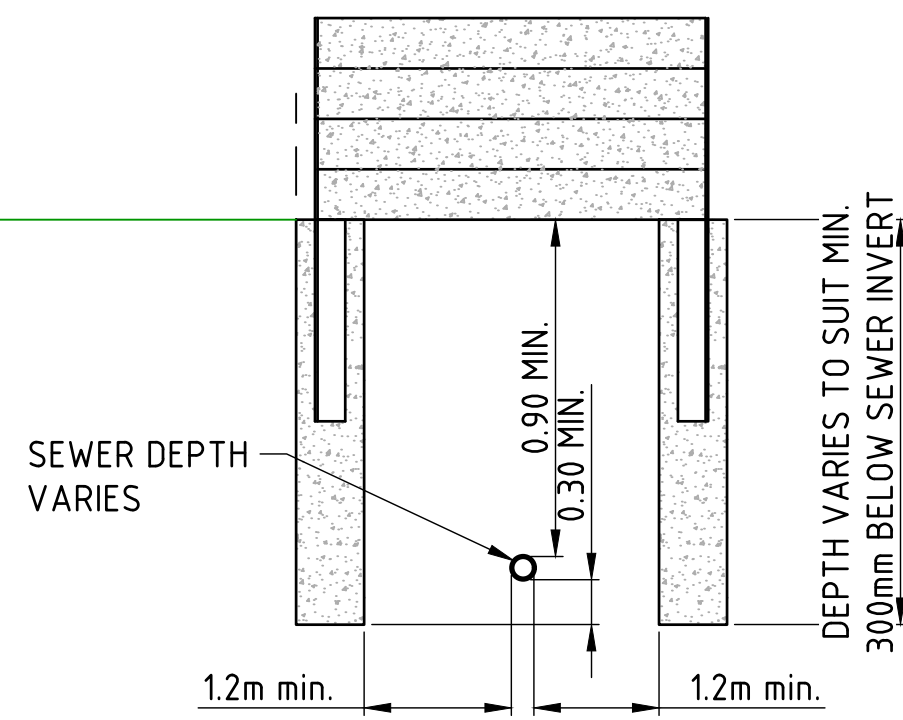
NOTES:
RETAINING WALL DESIGN AND CERTIFICATION IS PROVIDED BASED ON THE FOLLOWING PERFORMANCE CRITERIA:

- WALL DESIGN BASED ON USE OF PROPRIETARY CONCRETE SLEEPER RETAINING WALL SYSTEM OR SIMILAR
- PROTECTION OF ADJACENT SEWER SERVICES TO MEET THE REQUIREMENTS OF QDC MP14.
- PERPENDICULAR CROSSING OF SEWER WITH RETAINING WALL - FOOTINGS TO EXTEND BELOW THE INVERT OF THE SEWER. REFER DETAIL.
- PARALLEL RETAINING WALL ADJACENT TO SEWER - RETAINING WALL FOOTINGS TO EXTEND SO THAT ZONE OF INFLUENCE IS A MINIMUM OF 300mm BELOW THE INVERT OF THE SEWER. DESIGN IS BASED ON A SOIL FRICTION ANGLE OF 25°. REFER DETAIL.
- CONTRACTOR TO PROVIDE FORM 15 AND FORM 16 DURING CONSTRUCTION, CERTIFYING THAT THE RETAINING WALL MEETS THE NOMINATED PERFORMANCE CRITERIA.



RETAINING WALL BOUNDARY STEP-DOWN DETAILS

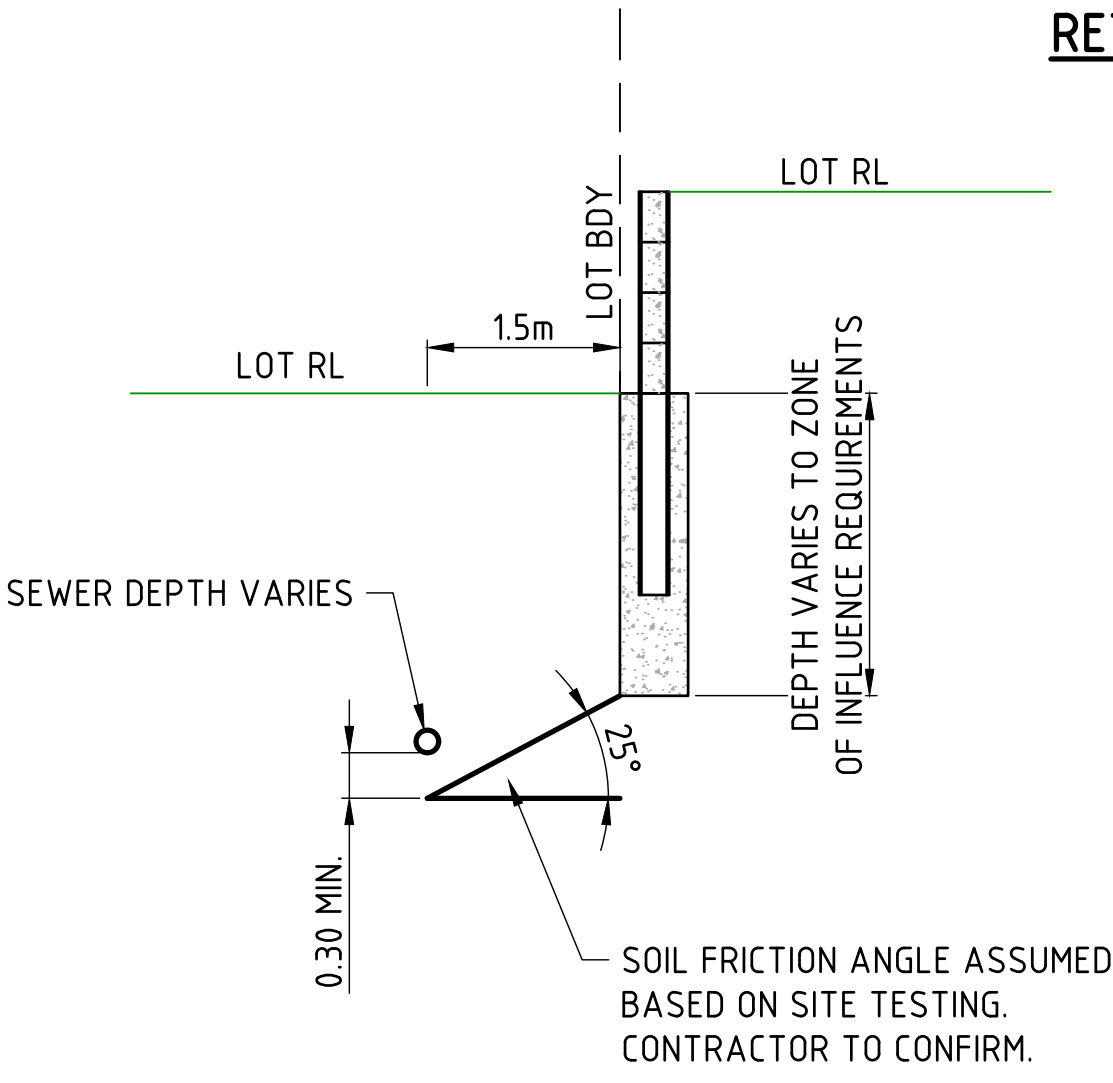
SCALE 1:50



RETAINING WALL BRIDGE OF SEWER DETAIL

TYPE 1

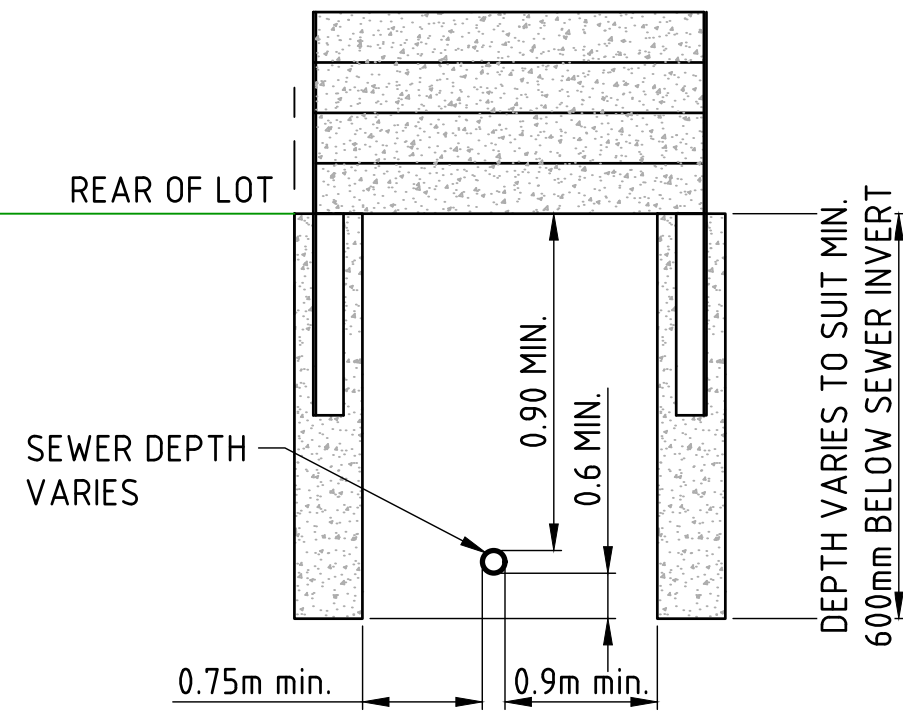
SCALE N.T.S



RETAINING WALL BRIDGE OF SEWER DETAIL

TYPE 2

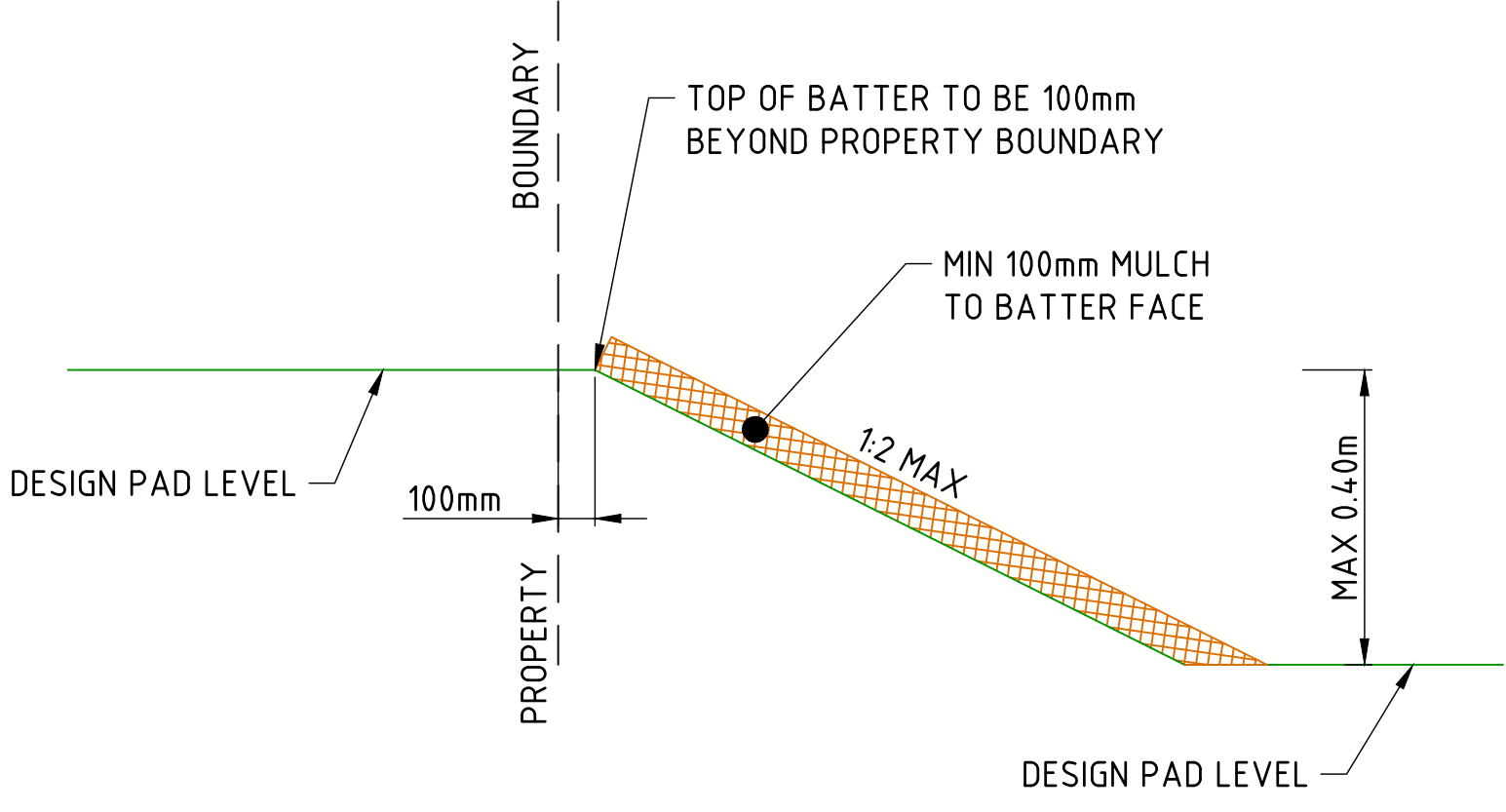
SCALE N.T.S



RETAINING WALL BRIDGE OF SEWER DETAIL

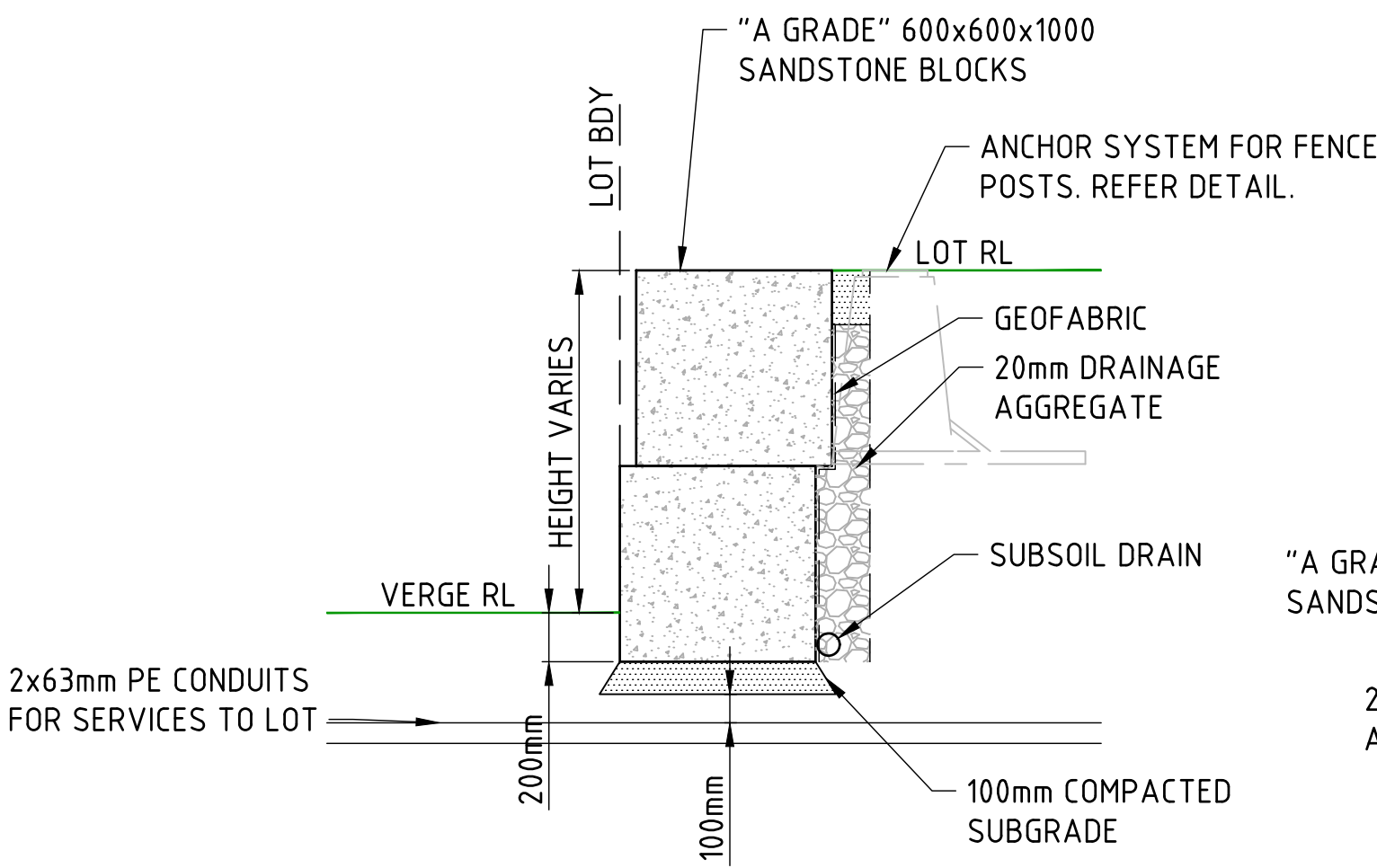
TYPE 3

SCALE N.T.S



TYPICAL BATTER DETAIL (IF REQUIRED)

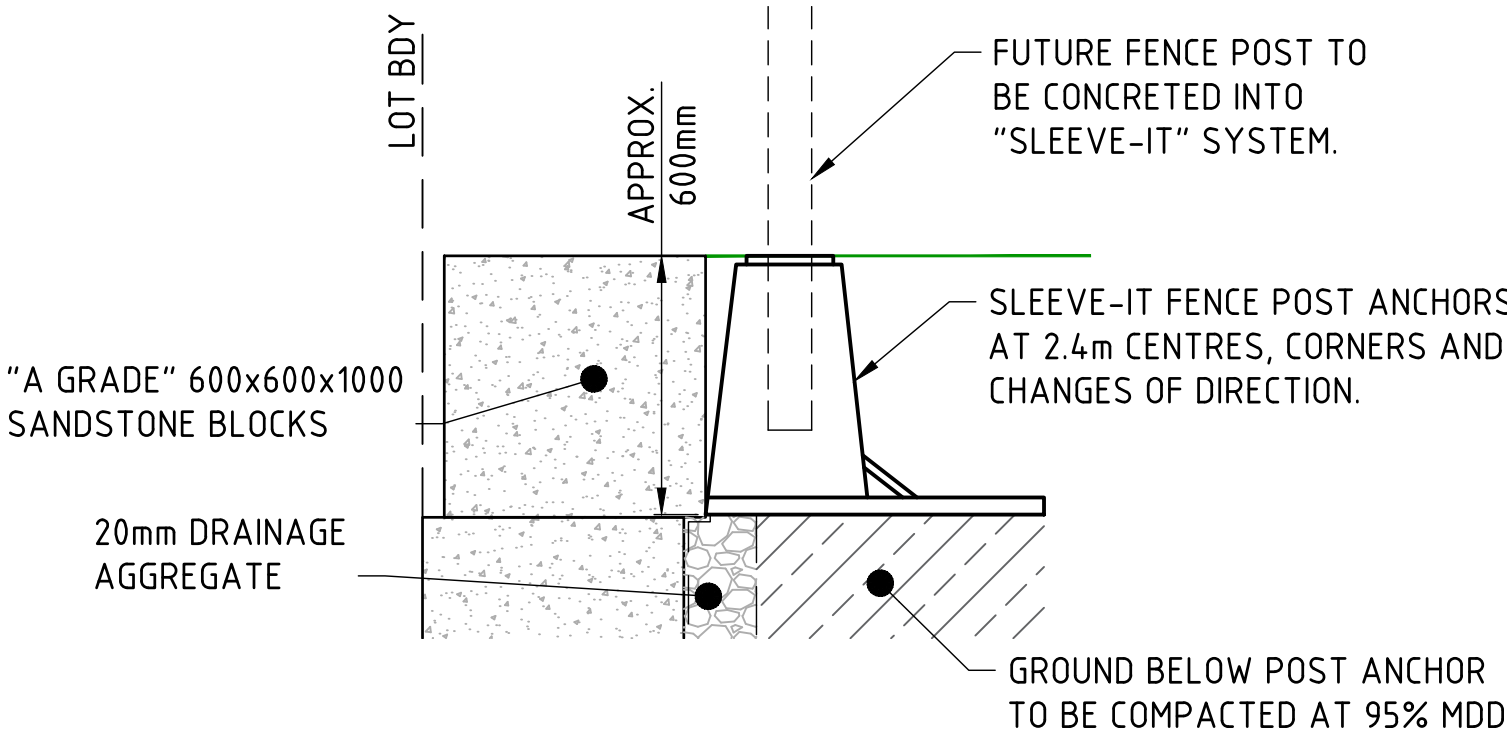
SCALE N.T.S



SANDSTONE BLOCK WALL AND

SERVICE CONDUIT DETAIL

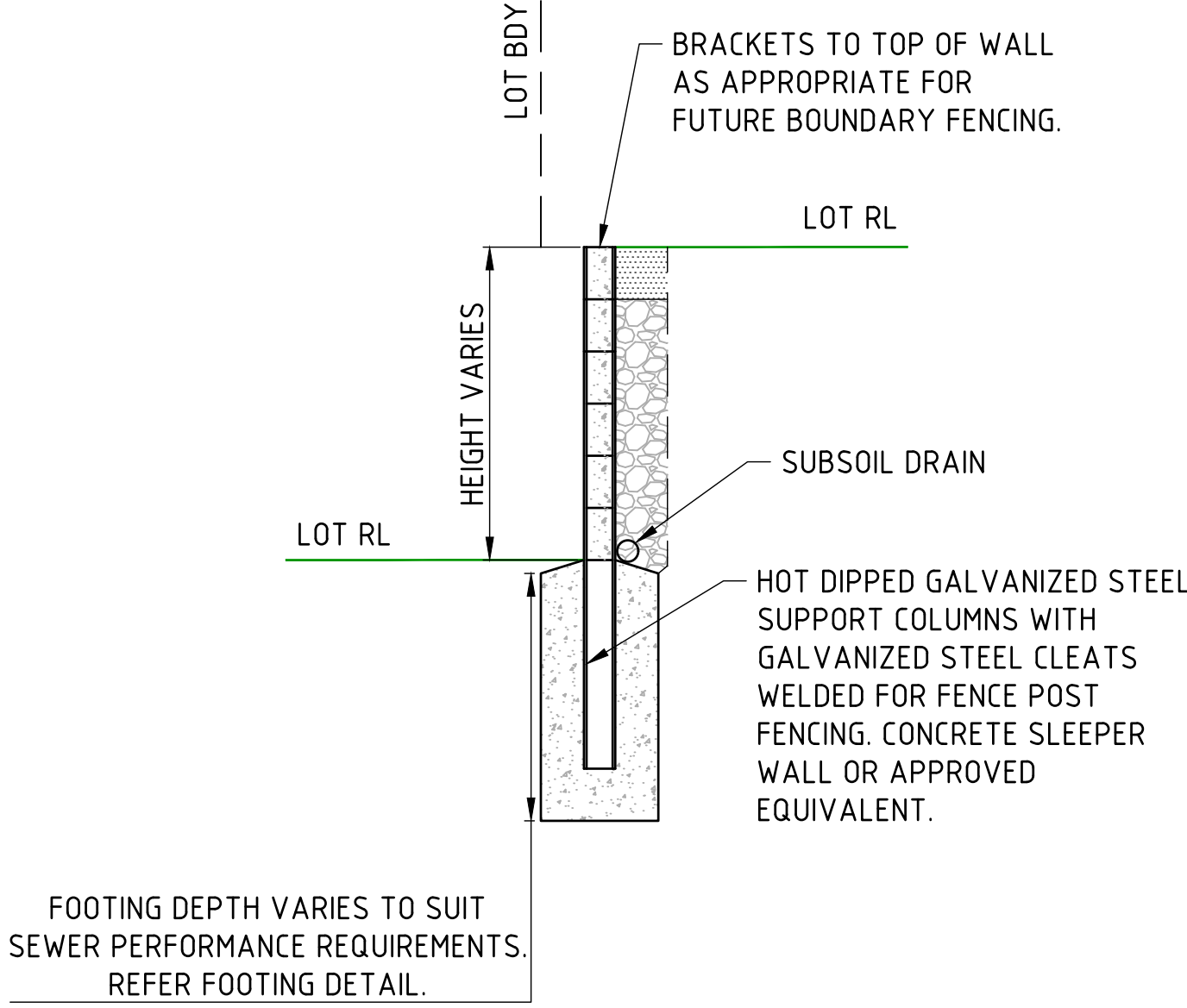
SCALE N.T.S



ANCHOR FOR FUTURE FENCE POSTS

TO SANDSTONE BLOCK WALL DETAIL

SCALE N.T.S



INDICATIVE CONCRETE SLEEPER

RETAINING WALL FOOTING DETAILS

SCALE N.T.S

REFER DRAWINGS FOR DURAWALL BY
CASEDC FOR STRUCTURAL CERTIFICATION.

ISSUED
FOR APPROVAL



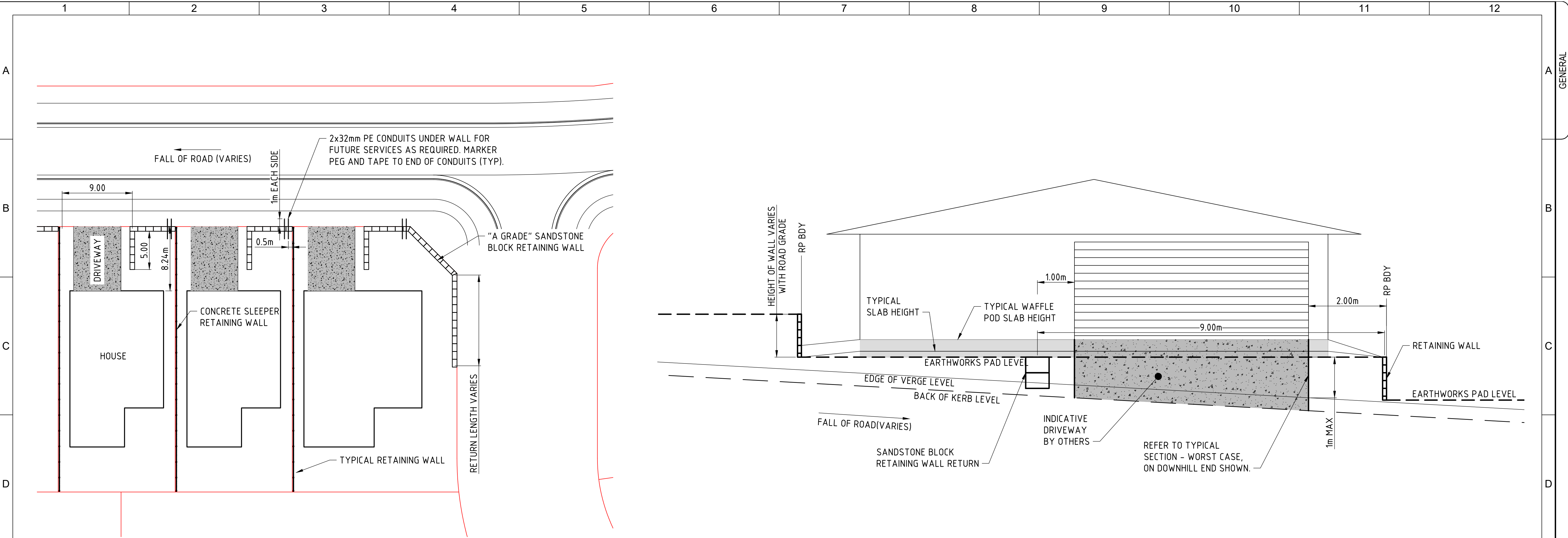
REV	DATE	DRAWN	APP'D	DRAWING REVISION
B	16/02/26	BE	DET	ISSUED FOR RFI RESPONSE
A	21/11/25	BE	DET	ISSUED FOR APPROVAL

RPEQ Certification			
Engineer	David Taylor	RPEQ Number	35089
Signature		Date	16/02/2026
Project Number	GS562-09 BOTANIC STAGE 9 REV B		



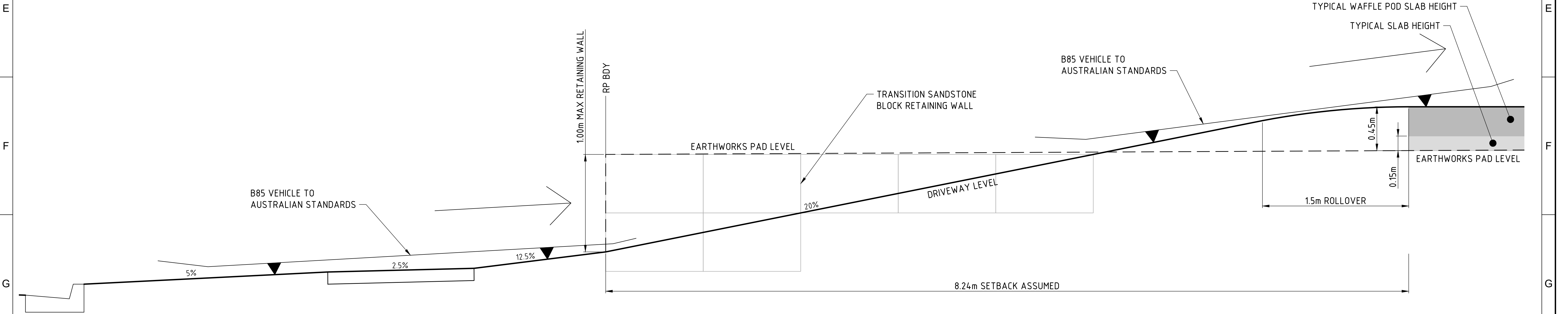
CLIENT BIRD IN HAND 3 PTY LTD			
PROJECT BOTANIC HIGHFIELDS STAGE 9			
DRAWN B ENRIGHT	CHECKED B LUSK	ENGINEER D TAYLOR	SURVEYOR PARKINSON SURVEYS
DESIGNED B ENRIGHT	HORIZ. DATUM MGA 2020 (Z 56)		

TITLE EARTHWORKS TYPICAL RETAINING WALL				
SHEET A1	SCALE AS SHOWN	JOB No GS562-09	SHEET No 110	REVISION B



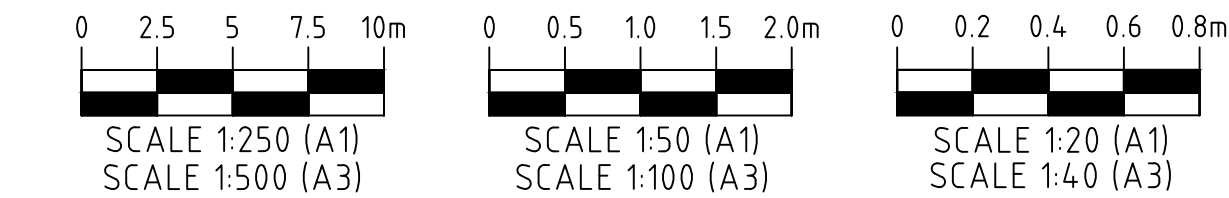
TYPICAL HOUSE LAYOUT PLAN
SCALE 1:250

ELEVATION - TYPICAL EARTHWORKS AND DRIVEWAY ARRANGEMENT
SCALE 1:50



TYPICAL CROSS SECTION - WORST CASE
SCALE 1:20

ISSUED
FOR APPROVAL



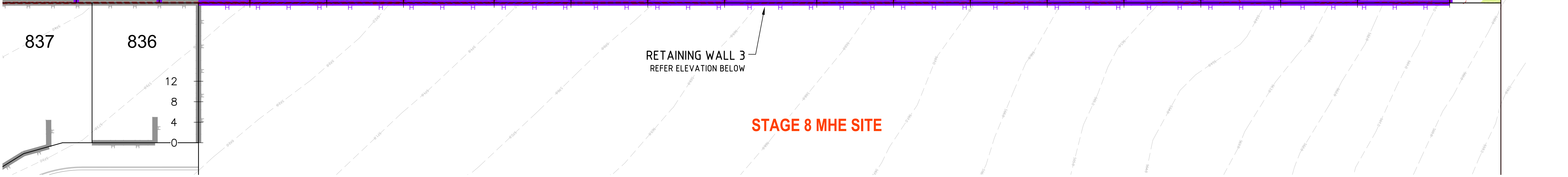
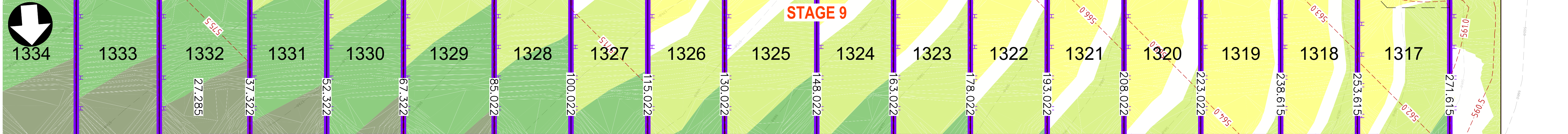
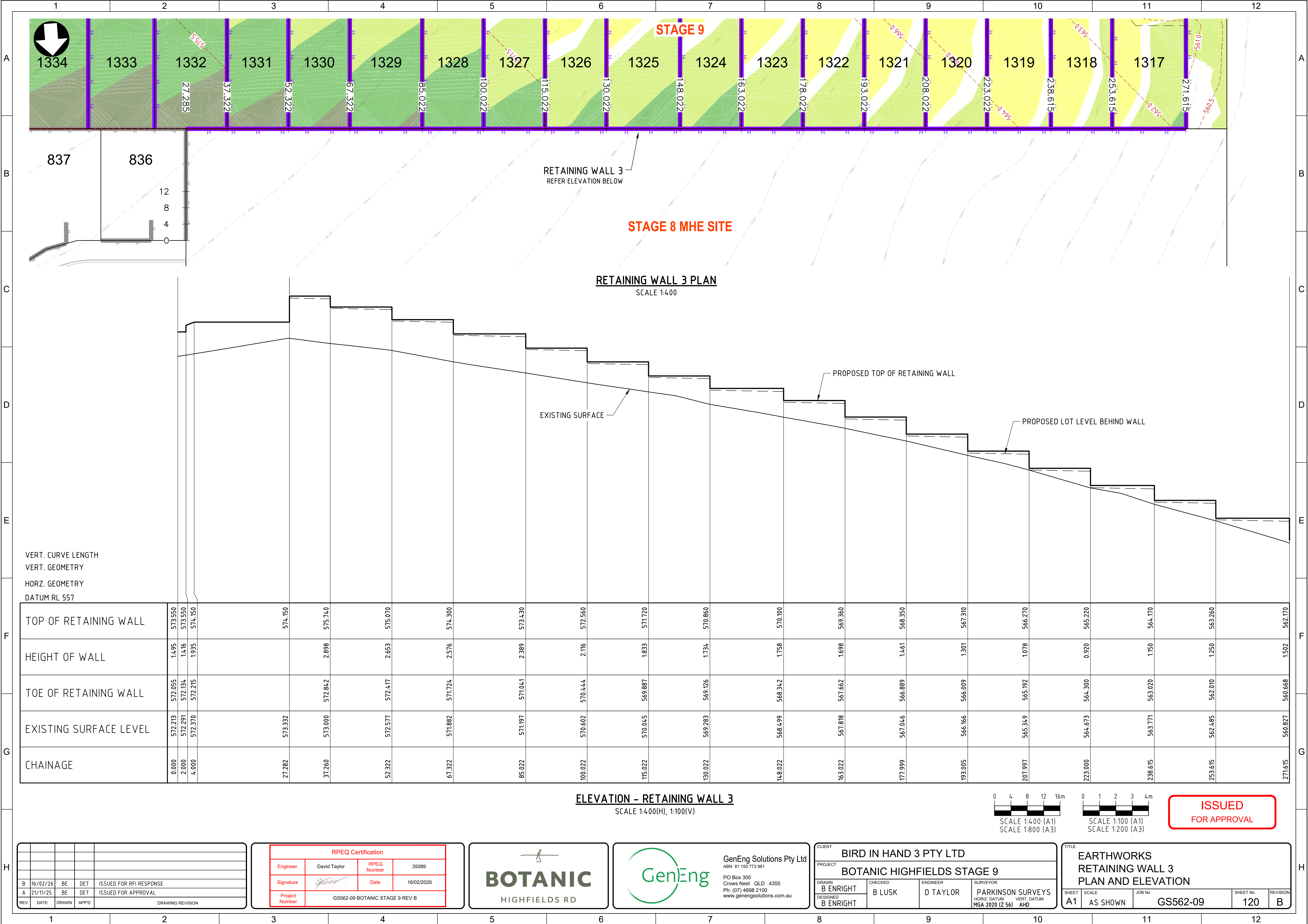
REV	DATE	DRAWN	APPD	DRAWING REVISION
B	16/02/26	BE	DET	ISSUED FOR RFI RESPONSE
A	21/11/25	BE	DET	ISSUED FOR APPROVAL

RPEQ Certification			
Engineer	David Taylor	RPEQ Number	35089
Signature		Date	16/02/2026
Project Number	GS562-09 BOTANIC STAGE 9 REV B		

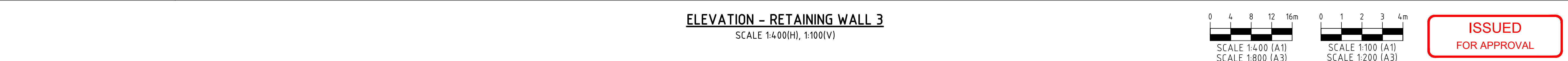


CLIENT BIRD IN HAND 3 PTY LTD			
PROJECT BOTANIC HIGHFIELDS STAGE 9			
DRAWN B ENRIGHT	CHECKED B LUSK	ENGINEER D TAYLOR	SURVEYOR PARKINSON SURVEYS
DESIGNED B ENRIGHT			HORIZ DATUM MGA 2020 (Z 56) AHD

TITLE EARTHWORKS TYPICAL FRONT RETAINING WALL			
SHEET A1	SCALE AS SHOWN	JOB No GS562-09	SHEET No 111
			REVISION B

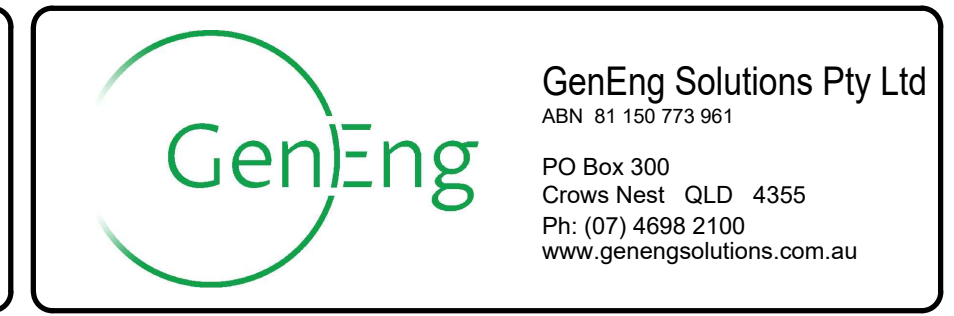


RETAINING WALL 3 PLAN					ELEVATION - RETAINING WALL 3				
SCALE 1:400					SCALE 1:400(H), 1:100(V)				
VERT. CURVE LENGTH					TOP OF RETAINING WALL				
VERT. GEOMETRY					HEIGHT OF WALL				
HORZ. GEOMETRY					TOE OF RETAINING WALL				
DATUM RL 557					EXISTING SURFACE LEVEL				
					CHAINAGE				
1	2	3	4	5	6	7	8	9	10
1334	1333	1332	1331	1330	1329	1328	1327	1326	1325
27.285	37.322	52.322	67.322	85.022	100.022	115.022	130.022	148.022	163.022
178.022	193.022	208.022	223.022	238.615	253.615	271.615			
1324	1323	1322	1321	1320	1319	1318	1317		
163.022	178.022	193.022	208.022	223.022	238.615	253.615	271.615		
1325	1324	1323	1322	1321	1320	1319	1318	1317	
115.022	130.022	148.022	163.022	178.022	193.022	208.022	223.022	238.615	253.615
85.022	100.022	115.022	130.022	148.022	163.022	178.022	193.022	208.022	223.022
67.322	85.022	100.022	115.022	130.022	148.022	163.022	178.022	193.022	208.022
52.322	67.322	85.022	100.022	115.022	130.022	148.022	163.022	178.022	193.022
37.322	52.322	67.322	85.022	100.022	115.022	130.022	148.022	163.022	178.022
27.285	37.322	52.322	67.322	85.022	100.022	115.022	130.022	148.022	163.022



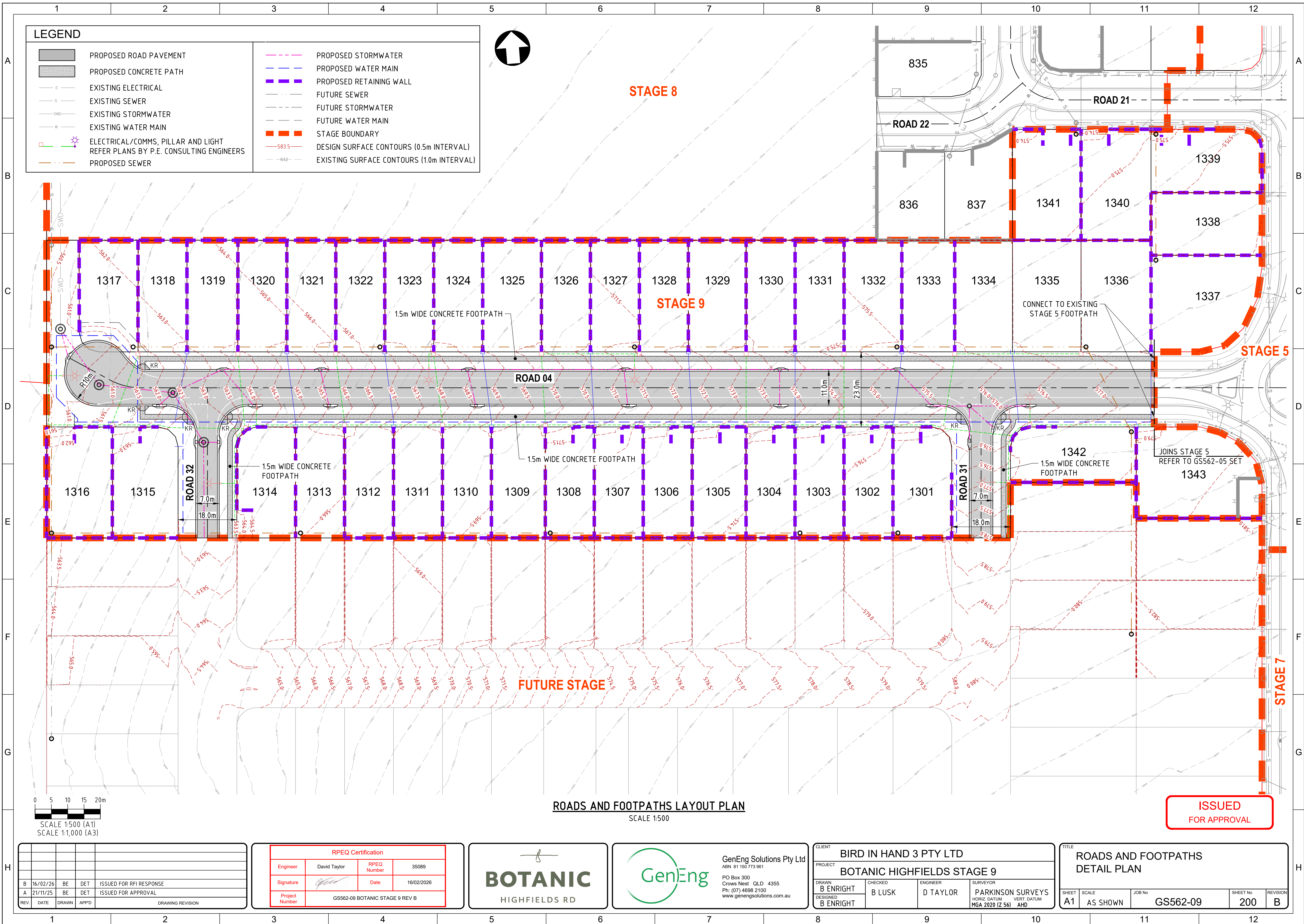
REV	DATE	DRAWN	APP'D	DRAWING REVISION
B	16/02/26	BE	DET	ISSUED FOR RFI RESPONSE
A	21/11/25	BE	DET	ISSUED FOR APPROVAL

RPEQ Certification			
Engineer	David Taylor	RPEQ Number	35089
Signature		Date	16/02/2026
Project Number	GS562-09 BOTANIC STAGE 9 REV B		



CLIENT			
BIRD IN HAND 3 PTY LTD			
PROJECT			
BOTANIC HIGHFIELDS STAGE 9			
DRAWN	CHECKED	ENGINEER	SURVEYOR
B ENRIGHT	B LUSK	D TAYLOR	PARKINSON SURVEYS
DESIGNED			
B ENRIGHT			

TITLE			
EARTHWORKS RETAINING WALL 3 PLAN AND ELEVATION			
SHEET	SCALE	JOB No	SHEET No
A1	AS SHOWN	GS562-09	120
REVISION			
B			

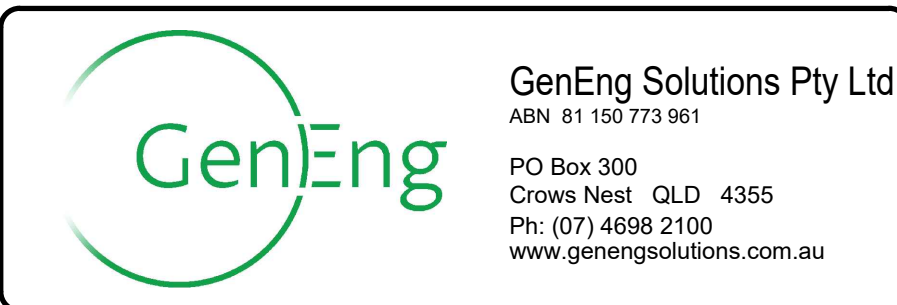


ROADS AND FOOTPATHS LAYOUT PLAN
SCALE 1:500

ISSUED
FOR APPROVAL

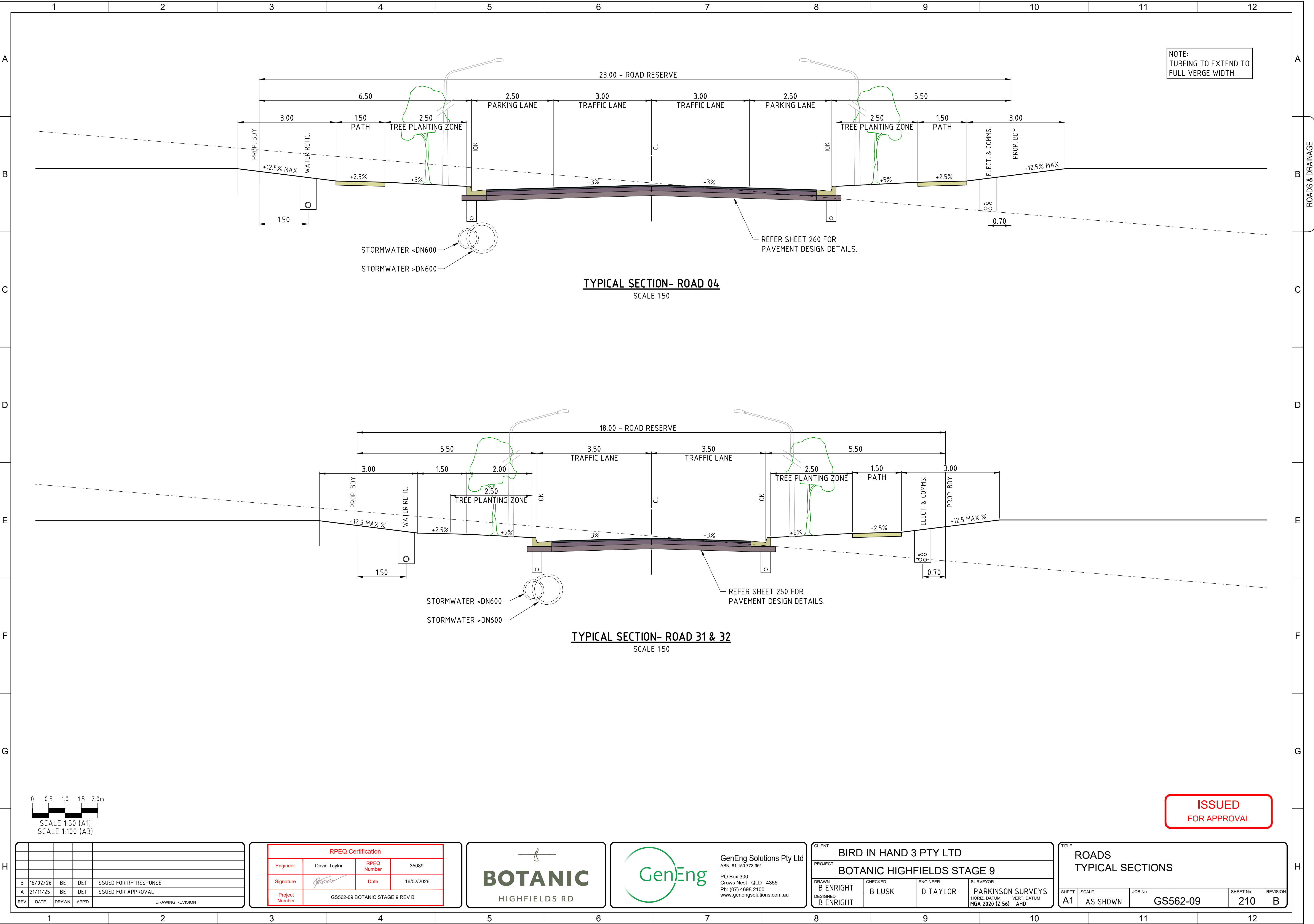
REV.	DATE	DRAWN	APPD	DRAWING REVISION
B	16/02/26	BE	DET	ISSUED FOR RFI RESPONSE
A	21/11/25	BE	DET	ISSUED FOR APPROVAL

RPEQ Certification			
Engineer	David Taylor	RPEQ Number	35089
Signature		Date	16/02/2026
Project Number	GS562-09 BOTANIC STAGE 9 REV B		



CLIENT BIRD IN HAND 3 PTY LTD			
PROJECT BOTANIC HIGHFIELDS STAGE 9			
DRAWN B ENRIGHT	CHECKED B LUSK	ENGINEER D TAYLOR	SURVEYOR PARKINSON SURVEYS
DESIGNED B ENRIGHT	HORIZ DATUM MGA 2020 (Z 56) AHD		

TITLE ROADS AND FOOTPATHS DETAIL PLAN			
SHEET A1	SCALE AS SHOWN	JOB No GS562-09	SHEET No 200
			REVISION B



NOTE:
TURFING TO EXTEND TO
FULL VERGE WIDTH.

TYPICAL SECTION- ROAD 04
SCALE 1:50

TYPICAL SECTION- ROAD 31 & 32
SCALE 1:50



ISSUED
FOR APPROVAL

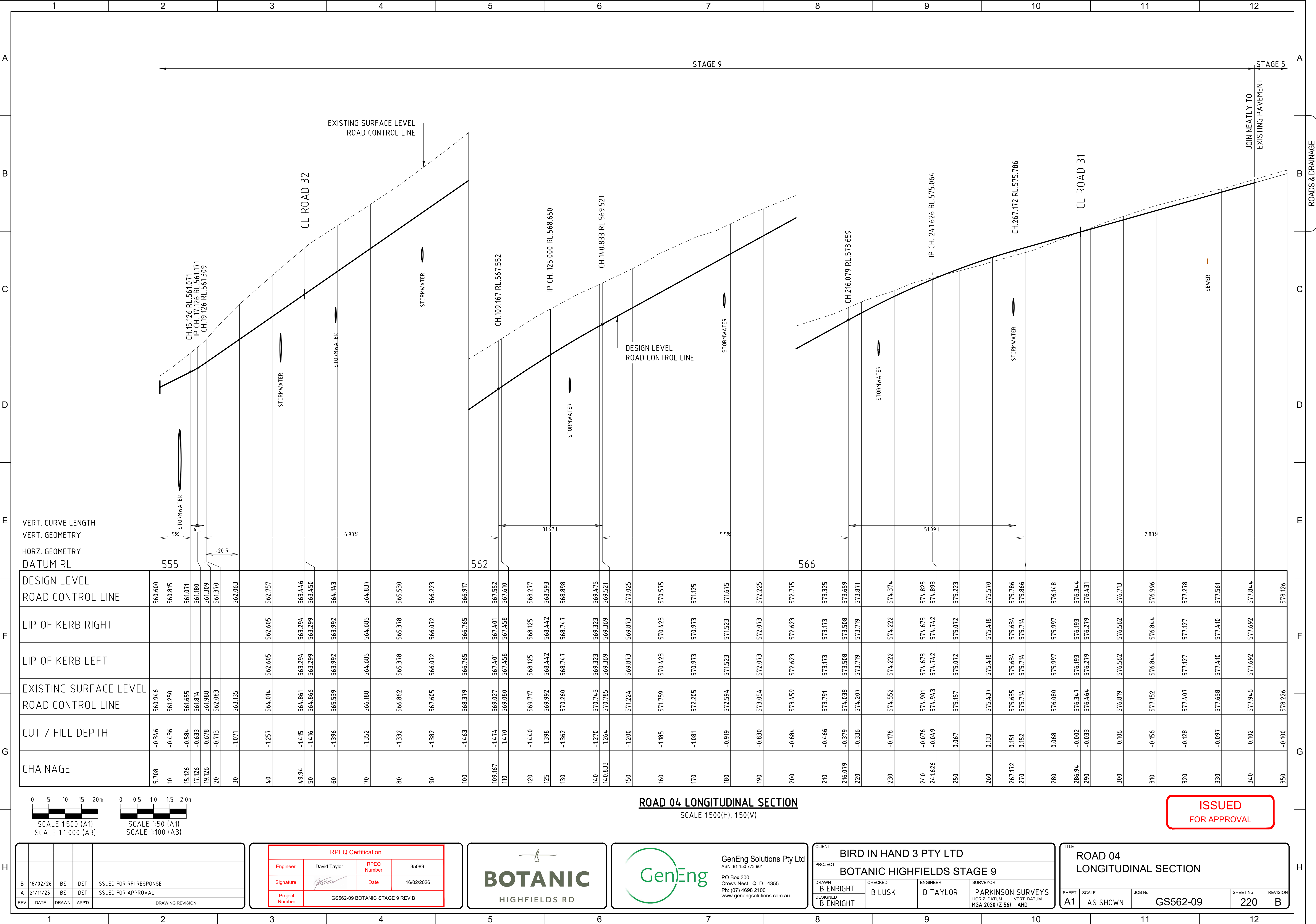
B	16/02/26	BE	DET	ISSUED FOR RFI RESPONSE
A	21/11/25	BE	DET	ISSUED FOR APPROVAL
REV.	DATE	DRAWN	APPD	DRAWING REVISION

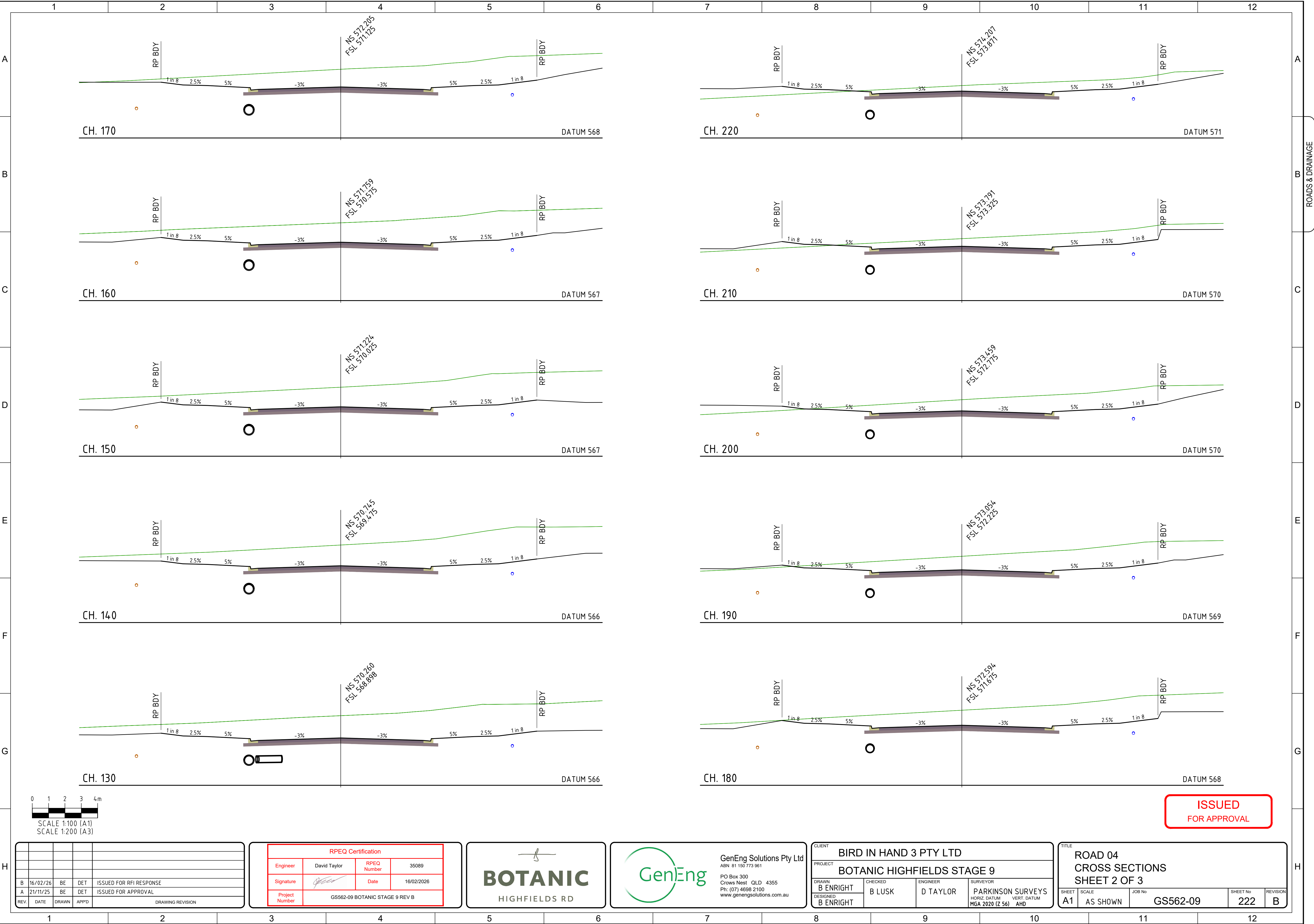
RPEQ Certification			
Engineer	David Taylor	RPEQ Number	35089
Signature		Date	16/02/2026
Project Number	GS562-09 BOTANIC STAGE 9 REV B		

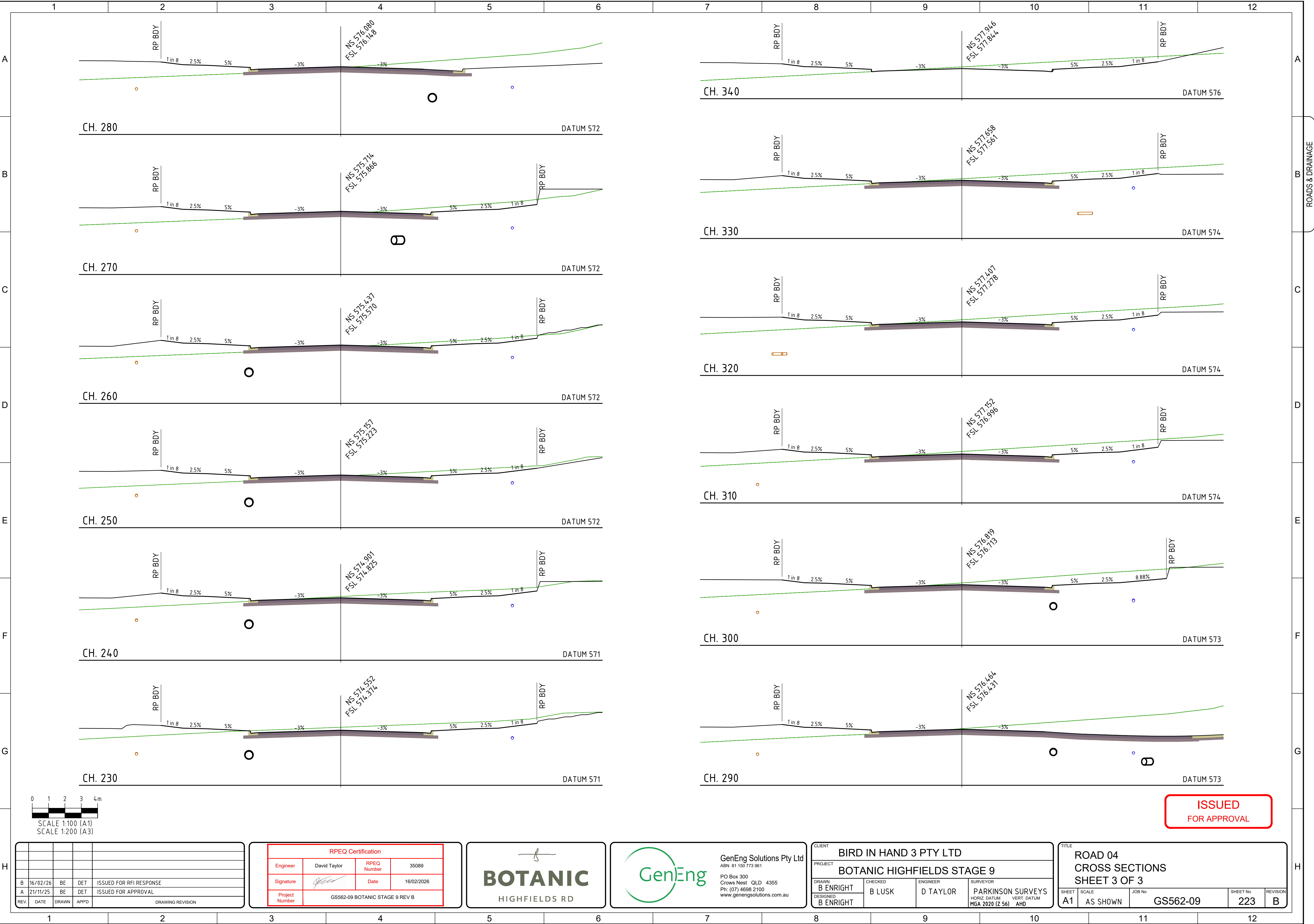


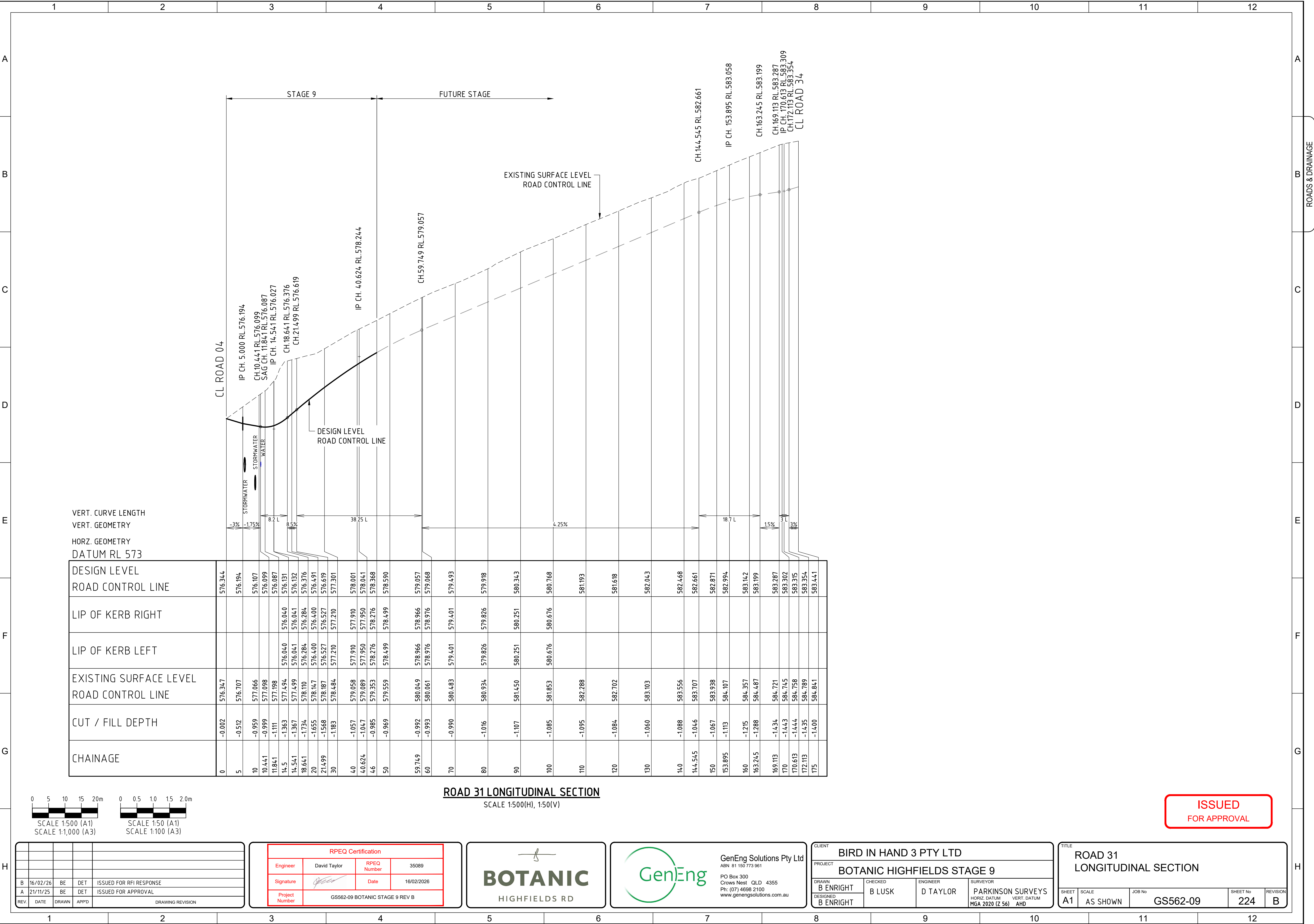
CLIENT BIRD IN HAND 3 PTY LTD			
PROJECT BOTANIC HIGHFIELDS STAGE 9			
DRAWN B ENRIGHT	CHECKED B LUSK	ENGINEER D TAYLOR	SURVEYOR PARKINSON SURVEYS
DESIGNED B ENRIGHT	HORIZ. DATUM MGA 2020 (Z 56)		VERT. DATUM AHD

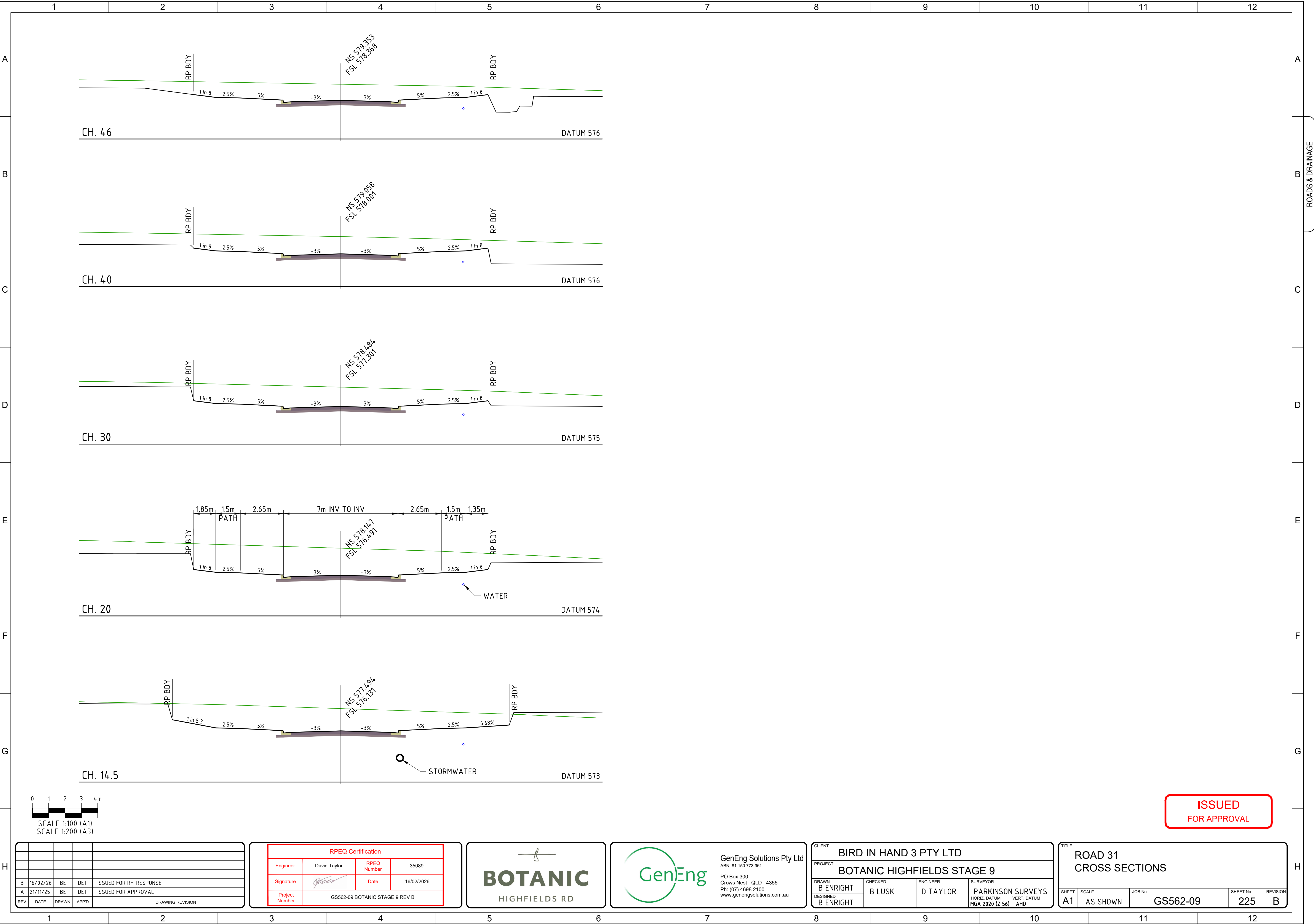
TITLE ROADS TYPICAL SECTIONS				
SHEET A1	SCALE AS SHOWN	JOB No GS562-09	SHEET No 210	REVISION B











0 1 2 3 4m
SCALE 1:100 (A1)
SCALE 1:200 (A3)

ISSUED
FOR APPROVAL

B	16/02/26	BE	DET	ISSUED FOR RFI RESPONSE
A	21/11/25	BE	DET	ISSUED FOR APPROVAL
REV	DATE	DRAWN	APPD	DRAWING REVISION

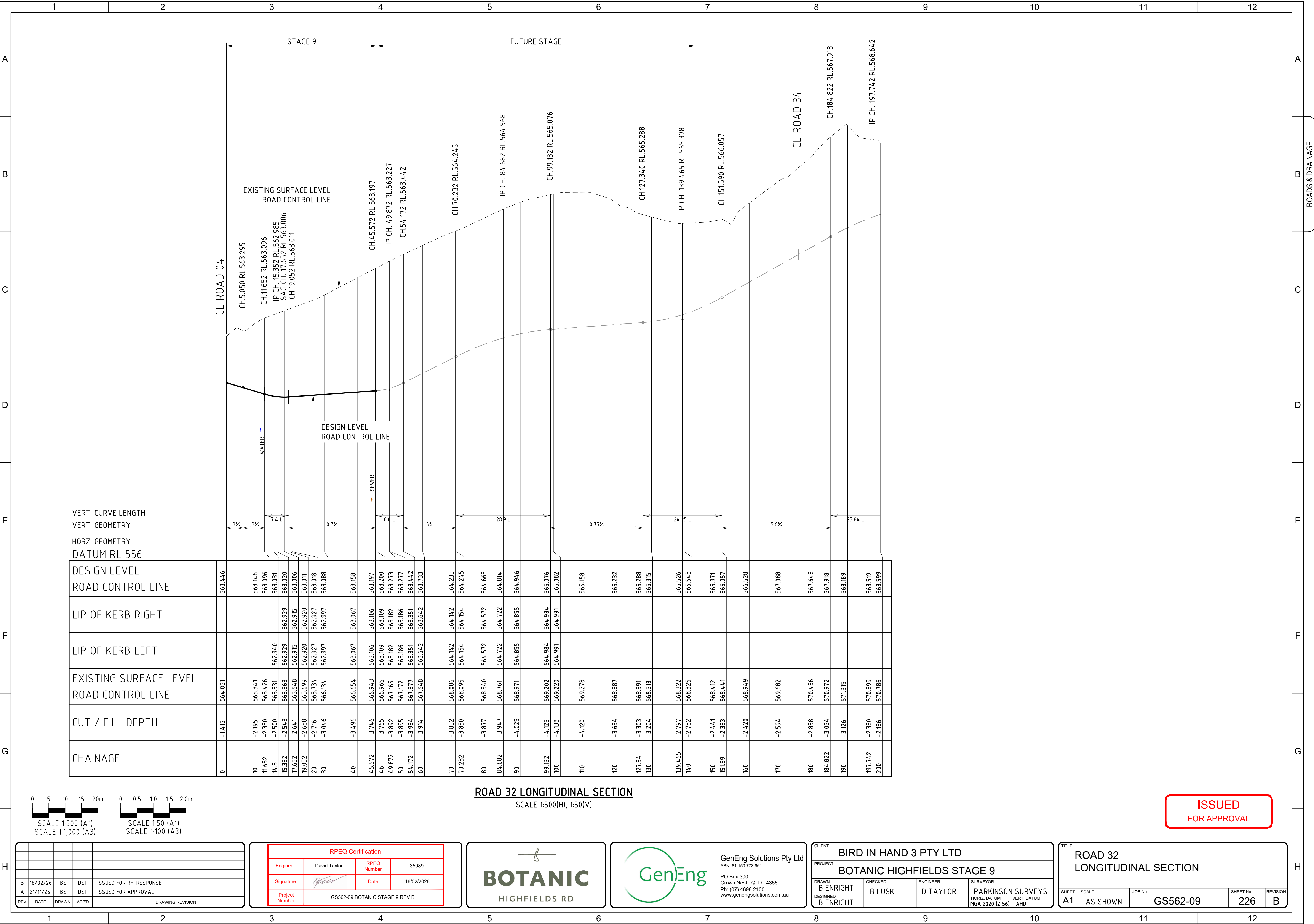
RPEQ Certification			
Engineer	David Taylor	RPEQ Number	35089
Signature		Date	16/02/2026
Project Number	GS562-09 BOTANIC STAGE 9 REV B		

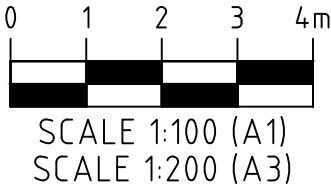
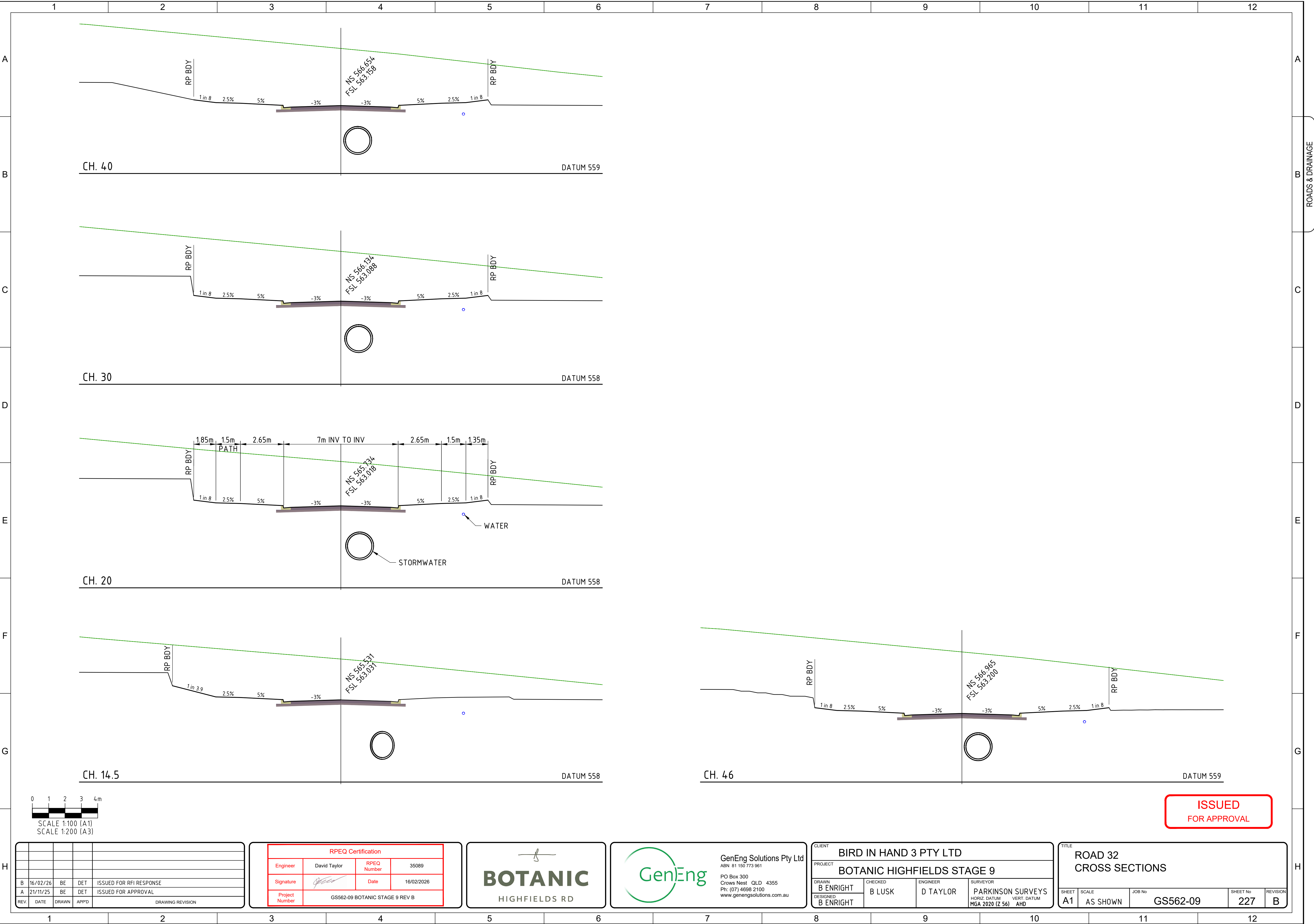
BOTANIC
HIGHFIELDS RD

GenEng Solutions Pty Ltd
ABN 81 150 773 961
PO Box 300
Crows Nest QLD 4355
Ph: (07) 4698 2100
www.genengsolutions.com.au

CLIENT BIRD IN HAND 3 PTY LTD			
PROJECT BOTANIC HIGHFIELDS STAGE 9			
DRAWN B ENRIGHT	CHECKED B LUSK	ENGINEER D TAYLOR	SURVEYOR PARKINSON SURVEYS
DESIGNED B ENRIGHT			HORIZ DATUM MGA 2020 (Z 56) AHD

TITLE ROAD 31 CROSS SECTIONS				
SHEET A1	SCALE AS SHOWN	JOB No GS562-09	SHEET No 225	REVISION B





B	16/02/26	BE	DET	ISSUED FOR RFI RESPONSE
A	21/11/25	BE	DET	ISSUED FOR APPROVAL
REV.	DATE	DRAWN	APPD	DRAWING REVISION

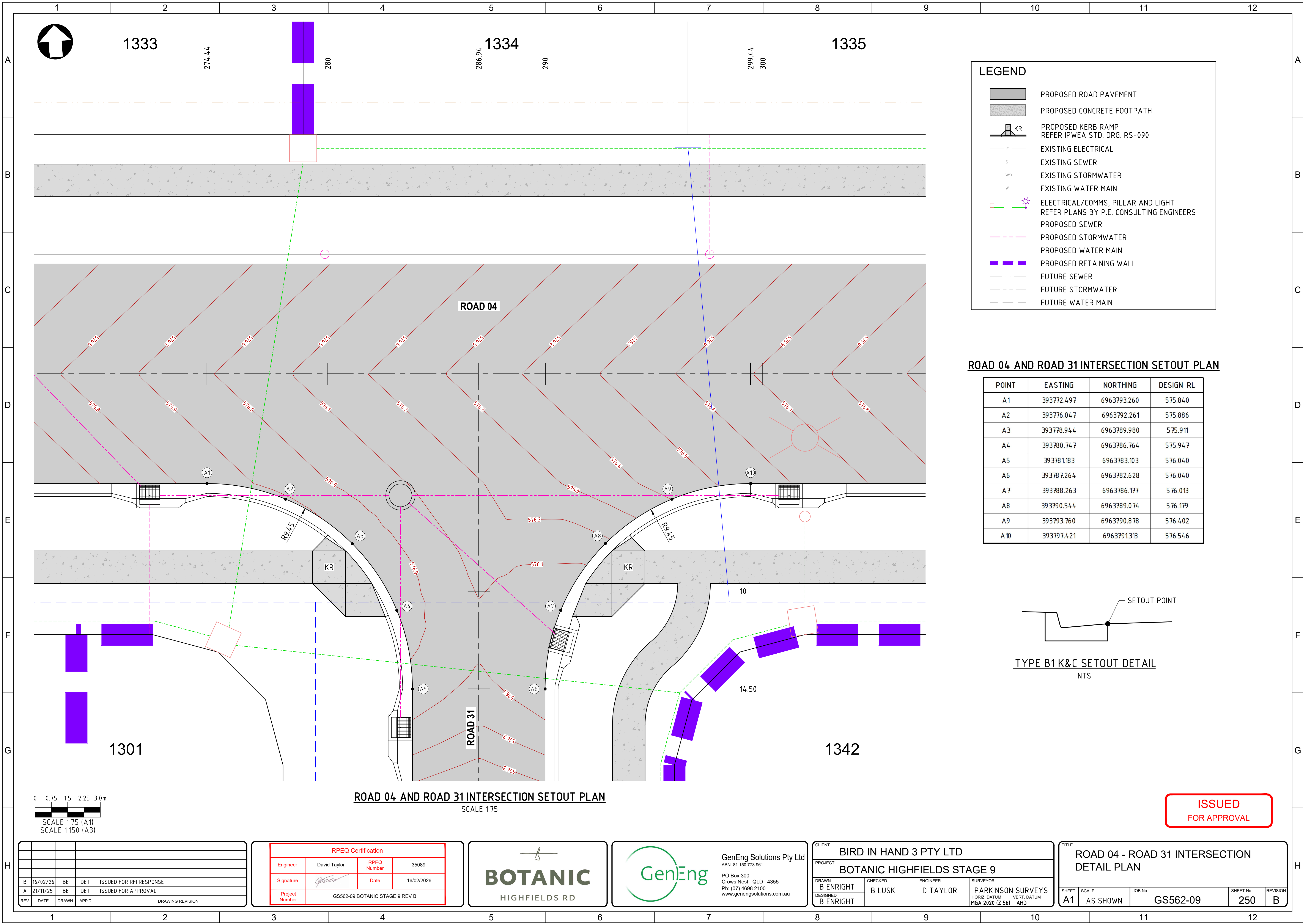
RPEQ Certification			
Engineer	David Taylor	RPEQ Number	35089
Signature		Date	16/02/2026
Project Number	GS562-09 BOTANIC STAGE 9 REV B		



CLIENT BIRD IN HAND 3 PTY LTD			
PROJECT BOTANIC HIGHFIELDS STAGE 9			
DRAWN B ENRIGHT	CHECKED B LUSK	ENGINEER D TAYLOR	SURVEYOR PARKINSON SURVEYS
DESIGNED B ENRIGHT	HORIZ DATUM MGA 2020 (Z 56)		VERT DATUM AHD

TITLE ROAD 32 CROSS SECTIONS			
SHEET A1	SCALE AS SHOWN	JOB No GS562-09	SHEET No 227
			REVISION B

ISSUED
FOR APPROVAL



LEGEND

PROPOSED ROAD PAVEMENT

PROPOSED CONCRETE FOOTPATH

KR

PROPOSED KERB RAMP
REFER IPWEA STD. DRG. RS-090

E

S

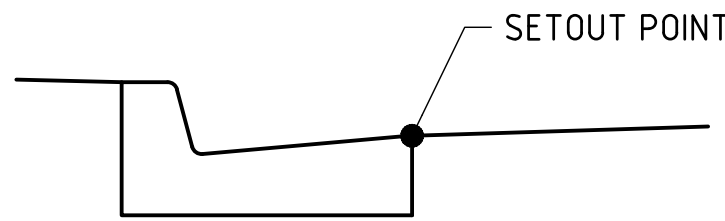
SWD

W

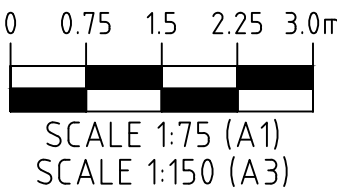
ELECTRICAL/COMMS, PILLAR AND LIGHT
REFER PLANS BY P.E. CONSULTING ENGINEERS

ROAD 04 AND ROAD 31 INTERSECTION SETOUT PLAN

POINT	EASTING	NORTHING	DESIGN RL
A1	393772.497	6963793.260	575.840
A2	393776.047	6963792.261	575.886
A3	393778.944	6963789.980	575.911
A4	393780.747	6963786.764	575.947
A5	393781.183	6963783.103	576.040
A6	393787.264	6963782.628	576.040
A7	393788.263	6963786.177	576.013
A8	393790.544	6963789.074	576.179
A9	393793.760	6963790.878	576.402
A10	393797.421	6963791.313	576.546



TYPE B1 K&C SETOUT DETAIL
NTS



ROAD 04 AND ROAD 31 INTERSECTION SETOUT PLAN
SCALE 1:75

ISSUED
FOR APPROVAL

REV.	DATE	DRAWN	APPD	DRAWING REVISION
B	16/02/26	BE	DET	ISSUED FOR RFI RESPONSE
A	21/11/25	BE	DET	ISSUED FOR APPROVAL

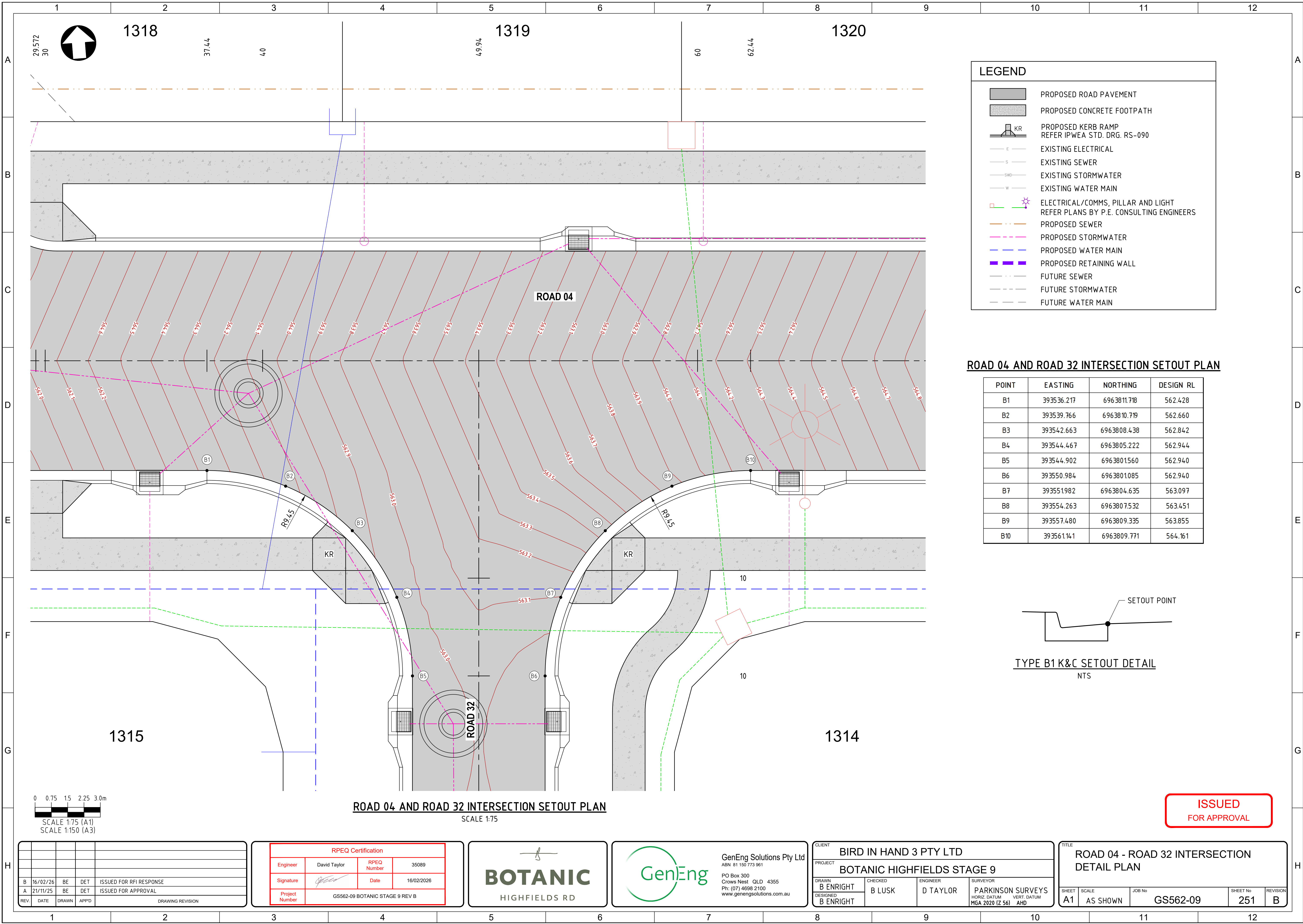
RPEQ Certification			
Engineer	David Taylor	RPEQ Number	35089
Signature		Date	16/02/2026
Project Number	GS562-09 BOTANIC STAGE 9 REV B		

BOTANIC
HIGHFIELDS RD

GenEng Solutions Pty Ltd
ABN 81 150 773 961
PO Box 300
Crows Nest QLD 4355
Ph: (07) 4698 2100
www.genengsolutions.com.au

CLIENT BIRD IN HAND 3 PTY LTD			
PROJECT BOTANIC HIGHFIELDS STAGE 9			
DRAWN B ENRIGHT	CHECKED B LUSK	ENGINEER D TAYLOR	SURVEYOR PARKINSON SURVEYS
DESIGNED B ENRIGHT			HORIZ DATUM MGA 2020 (Z 56) AHD

TITLE ROAD 04 - ROAD 31 INTERSECTION DETAIL PLAN			
SHEET A1	SCALE AS SHOWN	JOB No GS562-09	SHEET No 250
			REVISION B



LEGEND

PROPOSED ROAD PAVEMENT

PROPOSED CONCRETE FOOTPATH

PROPOSED KERB RAMP
REFER IPWEA STD. DRG. RS-090

EXISTING ELECTRICAL

EXISTING SEWER

EXISTING STORMWATER

EXISTING WATER MAIN

ELECTRICAL/COMMS, PILLAR AND LIGHT
REFER PLANS BY P.E. CONSULTING ENGINEERS

PROPOSED SEWER

PROPOSED STORMWATER

PROPOSED WATER MAIN

PROPOSED RETAINING WALL

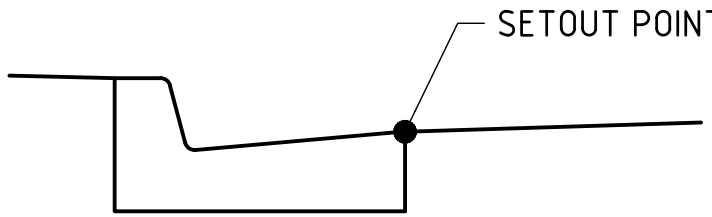
FUTURE SEWER

FUTURE STORMWATER

FUTURE WATER MAIN

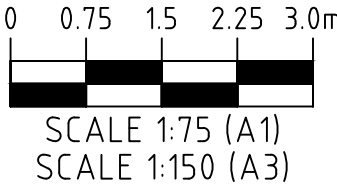
ROAD 04 AND ROAD 32 INTERSECTION SETOUT PLAN

POINT	EASTING	NORTHING	DESIGN RL
B1	393536.217	6963811.718	562.428
B2	393539.766	6963810.719	562.660
B3	393542.663	6963808.438	562.842
B4	393544.467	6963805.222	562.944
B5	393544.902	6963801560	562.940
B6	393550.984	6963801085	562.940
B7	393551.982	6963804.635	563.097
B8	393554.263	6963807.532	563.451
B9	393557.480	6963809.335	563.855
B10	393561.141	6963809.771	564.161



TYPE B1 K&C SETOUT DETAIL
NTS

ROAD 04 AND ROAD 32 INTERSECTION SETOUT PLAN
SCALE 1:75



REV.	DATE	DRAWN	APPD	DRAWING REVISION
B	16/02/26	BE	DET	ISSUED FOR RFI RESPONSE
A	21/11/25	BE	DET	ISSUED FOR APPROVAL

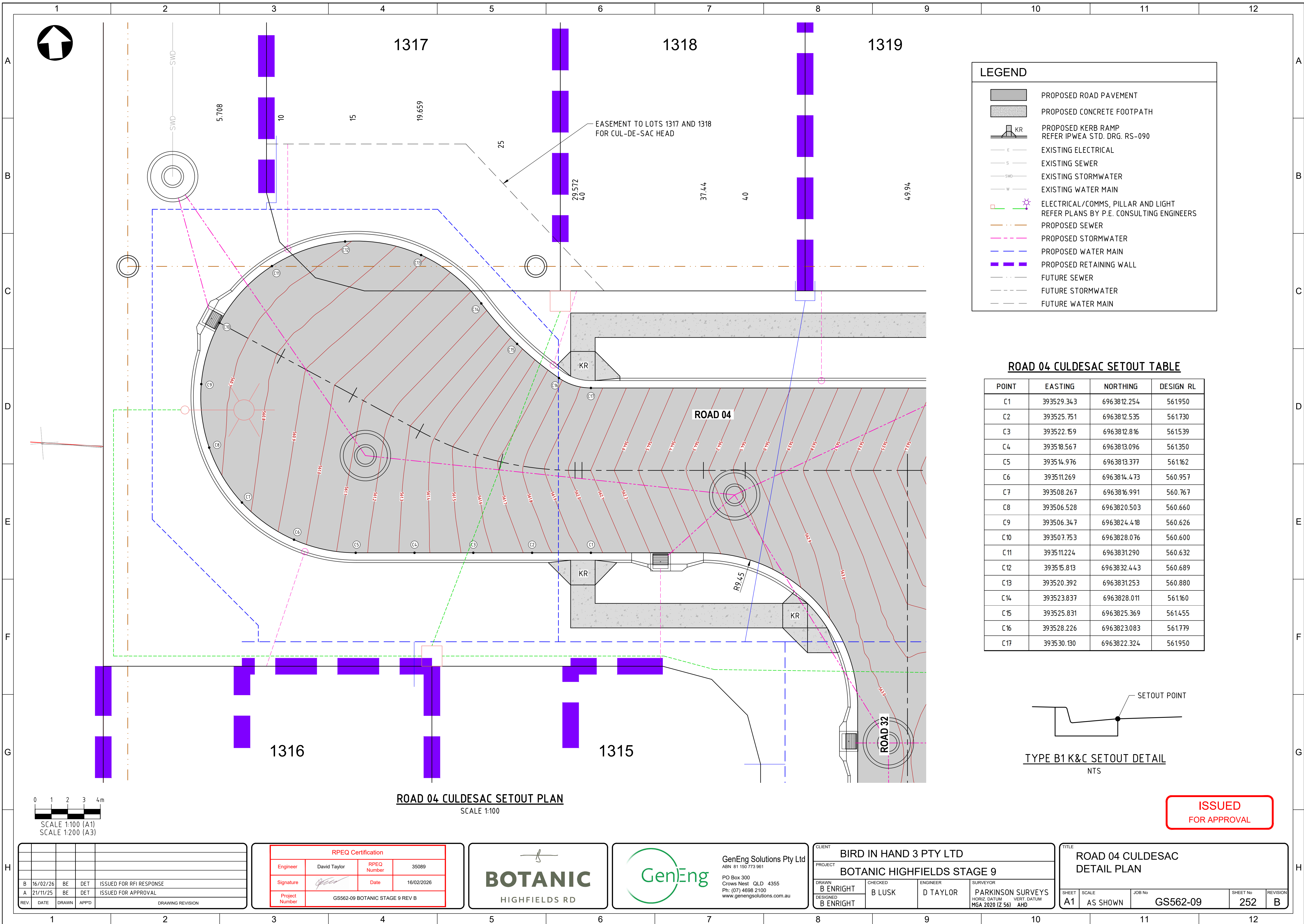
RPEQ Certification			
Engineer	David Taylor	RPEQ Number	35089
Signature		Date	16/02/2026
Project Number	GS562-09 BOTANIC STAGE 9 REV B		

GenEng Solutions Pty Ltd
ABN 81 150 773 961
PO Box 300
Crow's Nest QLD 4355
Ph: (07) 4698 2100
www.genengsolutions.com.au

CLIENT BIRD IN HAND 3 PTY LTD			
PROJECT BOTANIC HIGHFIELDS STAGE 9			
DRAWN B ENRIGHT	CHECKED B LUSK	ENGINEER D TAYLOR	SURVEYOR PARKINSON SURVEYS
DESIGNED B ENRIGHT			HORIZ DATUM MGA 2020 (Z 56) AHD

TITLE ROAD 04 - ROAD 32 INTERSECTION DETAIL PLAN			
SHEET A1	SCALE AS SHOWN	JOB No GS562-09	SHEET No 251
			REVISION B

ISSUED
FOR APPROVAL



LEGEND

E

S

SWD

W

PROPOSED ROAD PAVEMENT

PROPOSED CONCRETE FOOTPATH

PROPOSED KERB RAMP
REFER IPWEA STD. DRG. RS-090

EXISTING ELECTRICAL

EXISTING SEWER

EXISTING STORMWATER

EXISTING WATER MAIN

ELECTRICAL/COMMS, PILLAR AND LIGHT
REFER PLANS BY P.E. CONSULTING ENGINEERS

PROPOSED SEWER

PROPOSED STORMWATER

PROPOSED WATER MAIN

PROPOSED RETAINING WALL

FUTURE SEWER

FUTURE STORMWATER

FUTURE WATER MAIN

ROAD 04 CULDESAC SETOUT TABLE

POINT	EASTING	NORTHING	DESIGN RL
C1	393529.343	6963812.254	561.950
C2	393525.751	6963812.535	561.730
C3	393522.159	6963812.816	561.539
C4	393518.567	6963813.096	561.350
C5	393514.976	6963813.377	561.162
C6	393511.269	6963814.473	560.957
C7	393508.267	6963816.991	560.767
C8	393506.528	6963820.503	560.660
C9	393506.347	6963824.418	560.626
C10	393507.753	6963828.076	560.600
C11	393511.224	6963831.290	560.632
C12	393515.813	6963832.443	560.689
C13	393520.392	6963831.253	560.880
C14	393523.837	6963828.011	561.160
C15	393525.831	6963825.369	561.455
C16	393528.226	6963823.083	561.779
C17	393530.130	6963822.324	561.950

0 1 2 3 4m
SCALE 1:100 (A1)
SCALE 1:200 (A3)

ROAD 04 CULDESAC SETOUT PLAN
SCALE 1:100

ISSUED
FOR APPROVAL

B	16/02/26	BE	DET	ISSUED FOR RFI RESPONSE	
A	21/11/25	BE	DET	ISSUED FOR APPROVAL	
REV.	DATE	DRAWN	APPD	DRAWING REVISION	

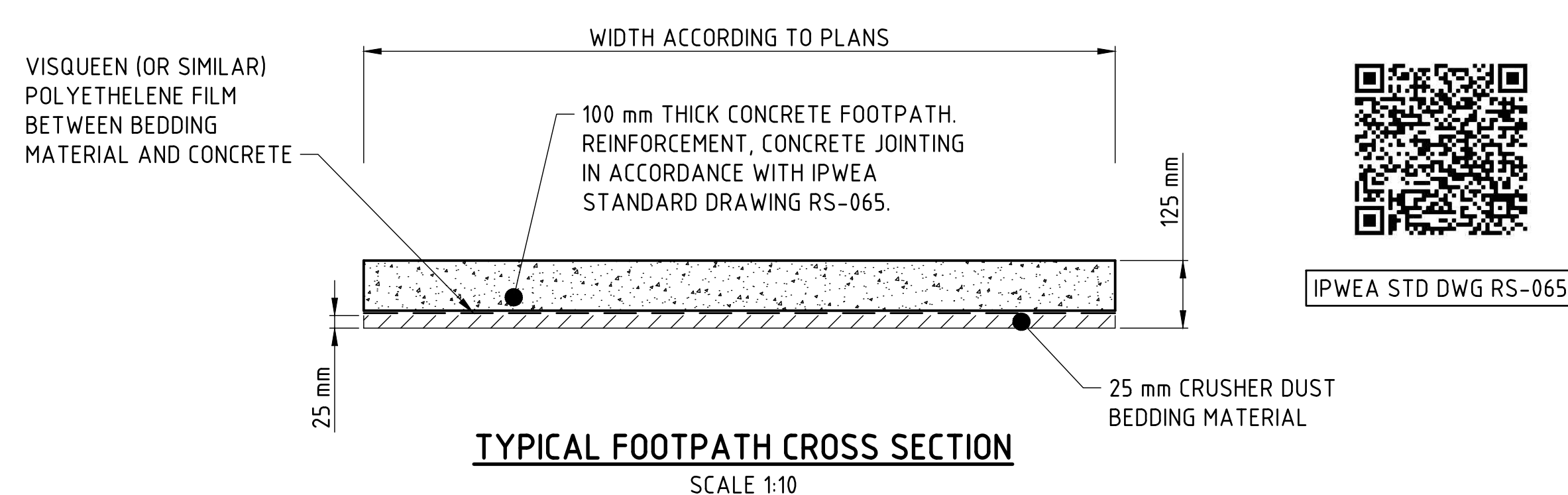
RPEQ Certification			
Engineer	David Taylor	RPEQ Number	35089
Signature		Date	16/02/2026
Project Number	GS562-09 BOTANIC STAGE 9 REV B		

BOTANIC
HIGHFIELDS RD

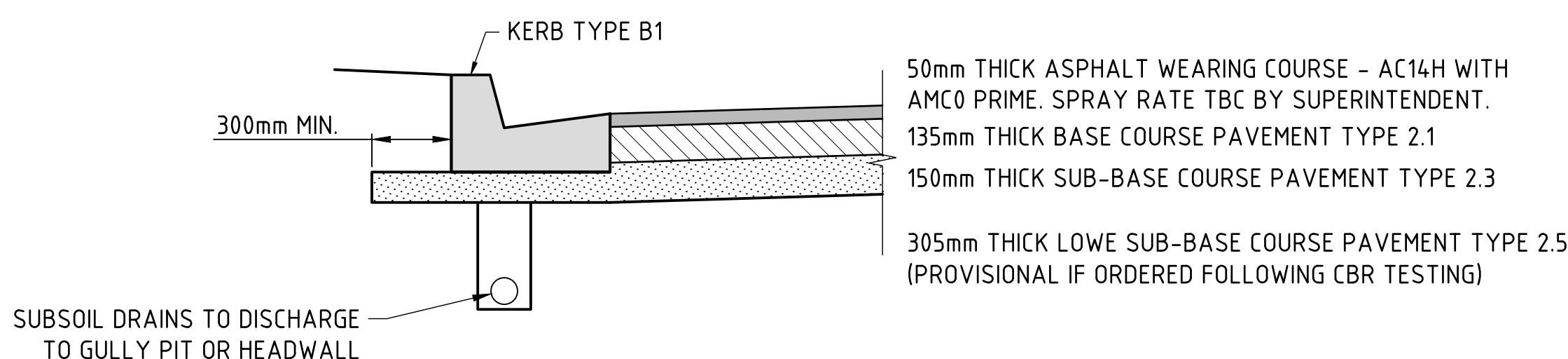
GenEng Solutions Pty Ltd
ABN 81 150 773 961
PO Box 300
Crow's Nest QLD 4355
Ph: (07) 4698 2100
www.genengsolutions.com.au

CLIENT BIRD IN HAND 3 PTY LTD			
PROJECT BOTANIC HIGHFIELDS STAGE 9			
DRAWN B ENRIGHT	CHECKED B LUSK	ENGINEER D TAYLOR	SURVEYOR PARKINSON SURVEYS
DESIGNED B ENRIGHT			HORIZ DATUM MGA 2020 (Z 56) AHD

TITLE ROAD 04 CULDESAC DETAIL PLAN			
SHEET A1	SCALE AS SHOWN	JOB No GS562-09	SHEET No 252
			REVISION B



TYPICAL FOOTPATH CROSS SECTION
SCALE 1:10



NEW PAVEMENT CONSTRUCTION - ROAD 04 (COLLECTOR ROAD)
SCALE 1:20

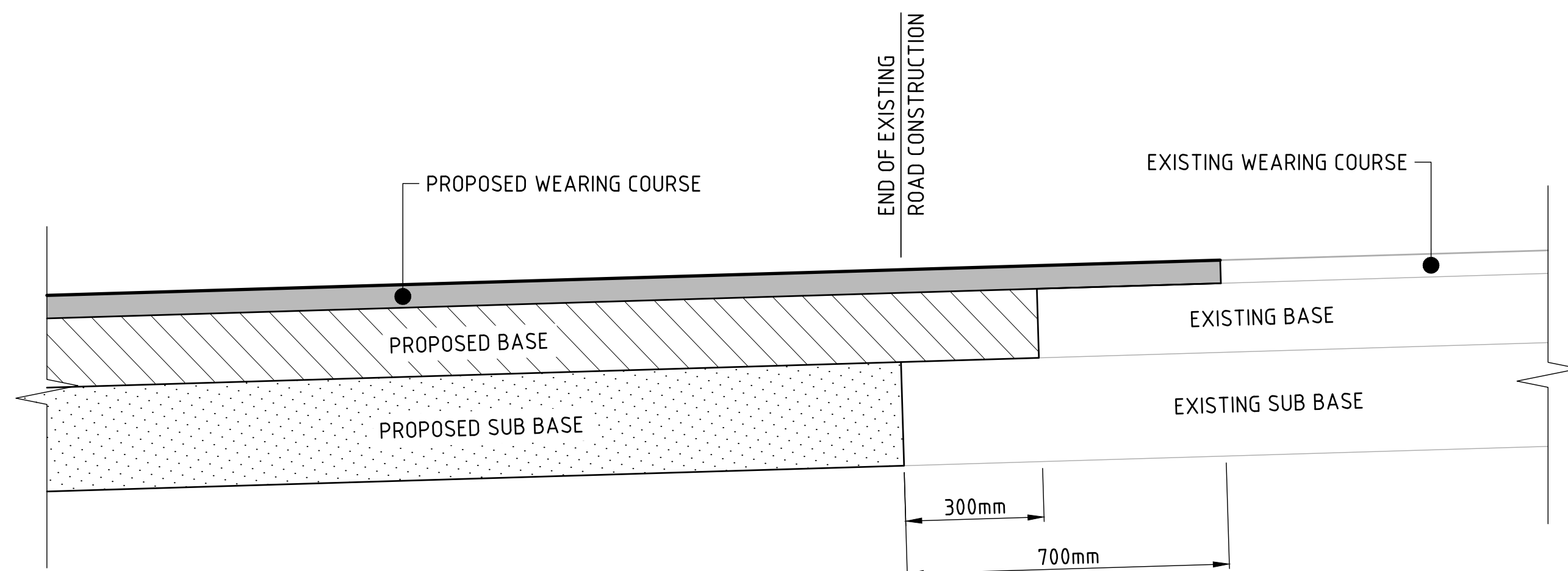
The diagram illustrates a cross-section of a road pavement structure. From top to bottom, the layers are:

- 35mm THICK ASPHALT WEARING COURSE - BCC TYPE 2 WITH AMCO PRIME. SPRAY RATE TBC BY SUPERINTENDENT
- 150mm THICK BASE COURSE PAVEMENT TYPE 2.1
- 100mm THICK SUB-BASE COURSE PAVEMENT TYPE 2.3
- 190mm THICK LOWER SUB-BASE COURSE PAVEMENT TYPE 2.5 (PROVISIONAL IF ORDERED FOLLOWING CBR TESTING)

Other features include:

- KERB TYPE B1**: A concrete curb on the left side.
- 300mm MIN.**: A dimension indicating the minimum width of the base course layer.
- SUBSOIL DRAINS TO DISCHARGE TO GULLY PIT OR HEADWALL**: A drainage system consisting of a pipe and a circular catchment at the bottom left.

NEW PAVEMENT CONSTRUCTION - ROADS 31 AND 32 (LOCAL ACCESS ROAD)
SCALE 1:20



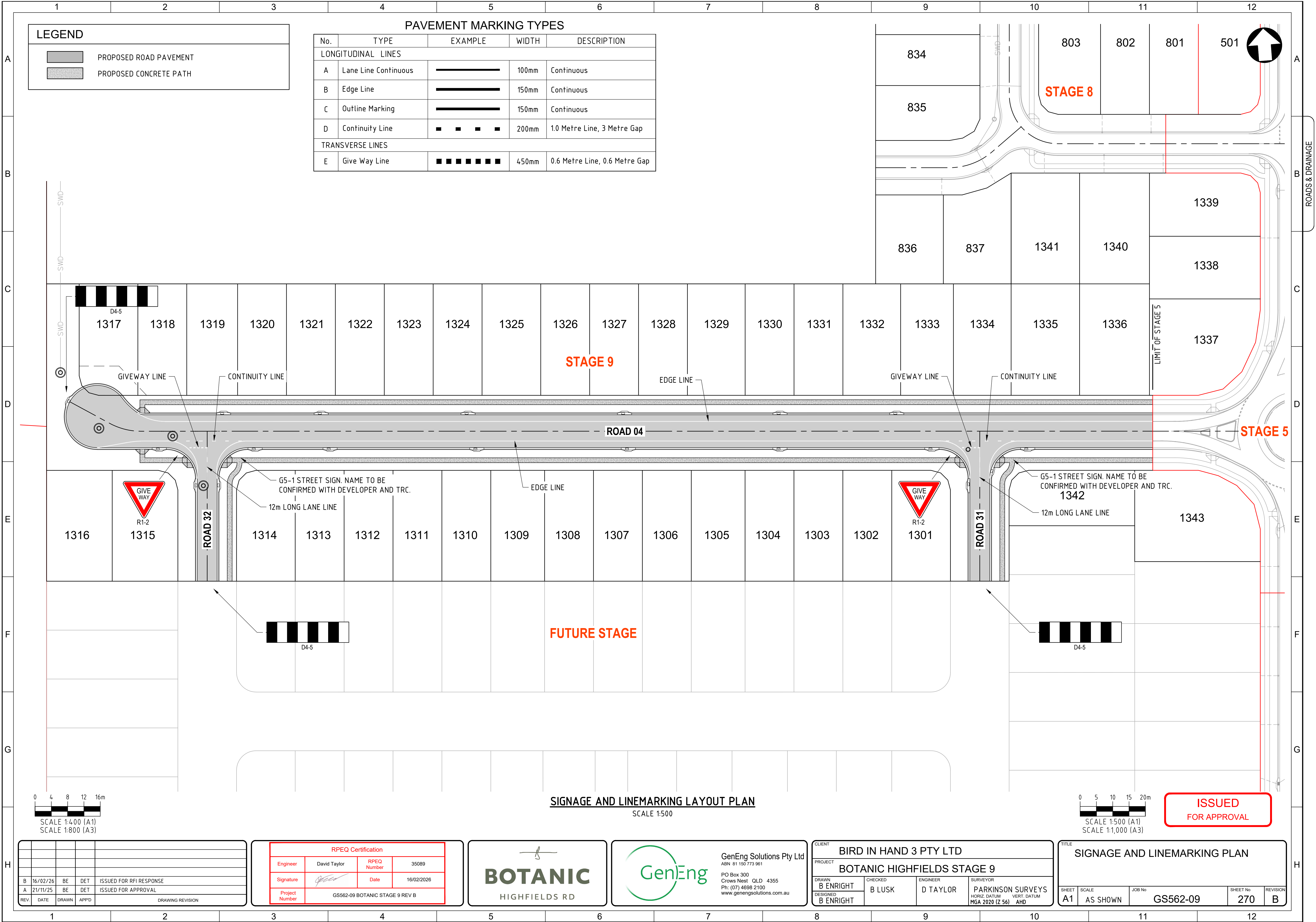
ROAD JOINT DETAIL
SCALE 1:10

SUBGRADE NOTES

1. THE PAVEMENT DESIGN FOR ALL ROADS MUST BE CONFIRMED AFTER IN-SITU SUBGRADE TESTING PRIOR TO CONSTRUCTION OF THE PAVEMENT. PAVEMENT DESIGN DETAILS AND TEST RESULTS MUST BE SUBMITTED AND APPROVED BY COUNCIL A MINIMUM OF FIVE (5) BUSINESS DAYS PRIOR TO COMMENCEMENT OF PAVEMENT WORKS ON THE SUBJECT LAND.
2. IF SUBGRADE IS FOUND TO BE UNSUITABLE, THE FOLLOWING SUBGRADE REPLACEMENT OPTIONS ARE AVAILABLE, FOLLOWING APPROVAL BY THE SUPERINTENDENT:
 - 2.1. GEOCOMPOSITE WITH 200mm SUBGRADE REPLACEMENT TYPE 2.5 MATERIAL.
 - 2.2. 300mm ROCK REPLACEMENT d50=200mm, 300mm THICK LAYER, A49 GEOFABRIC WRAPPED EXTENDED OUT TO SUBSOIL DRAINAGE IN ORDER TO DRAIN.

ISSUED
FOR APPROVAL

TITLE				
PAVEMENT DETAILS				
SHEET A1	SCALE AS SHOWN	JOB No GS562-09	SHEET No 260	REVISION B

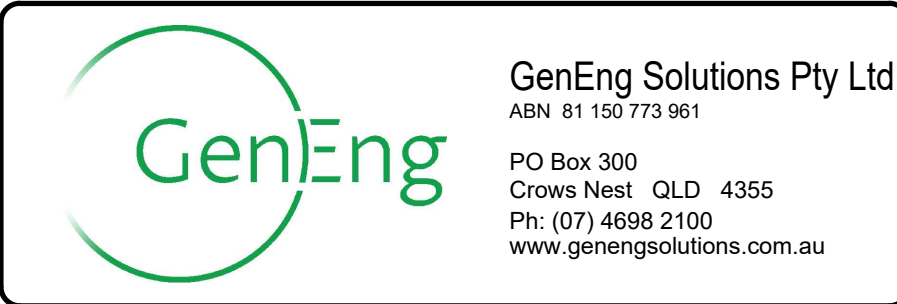


SIGNAGE AND LINEMARKING LAYOUT PLAN
SCALE 1:500

ISSUED
FOR APPROVAL

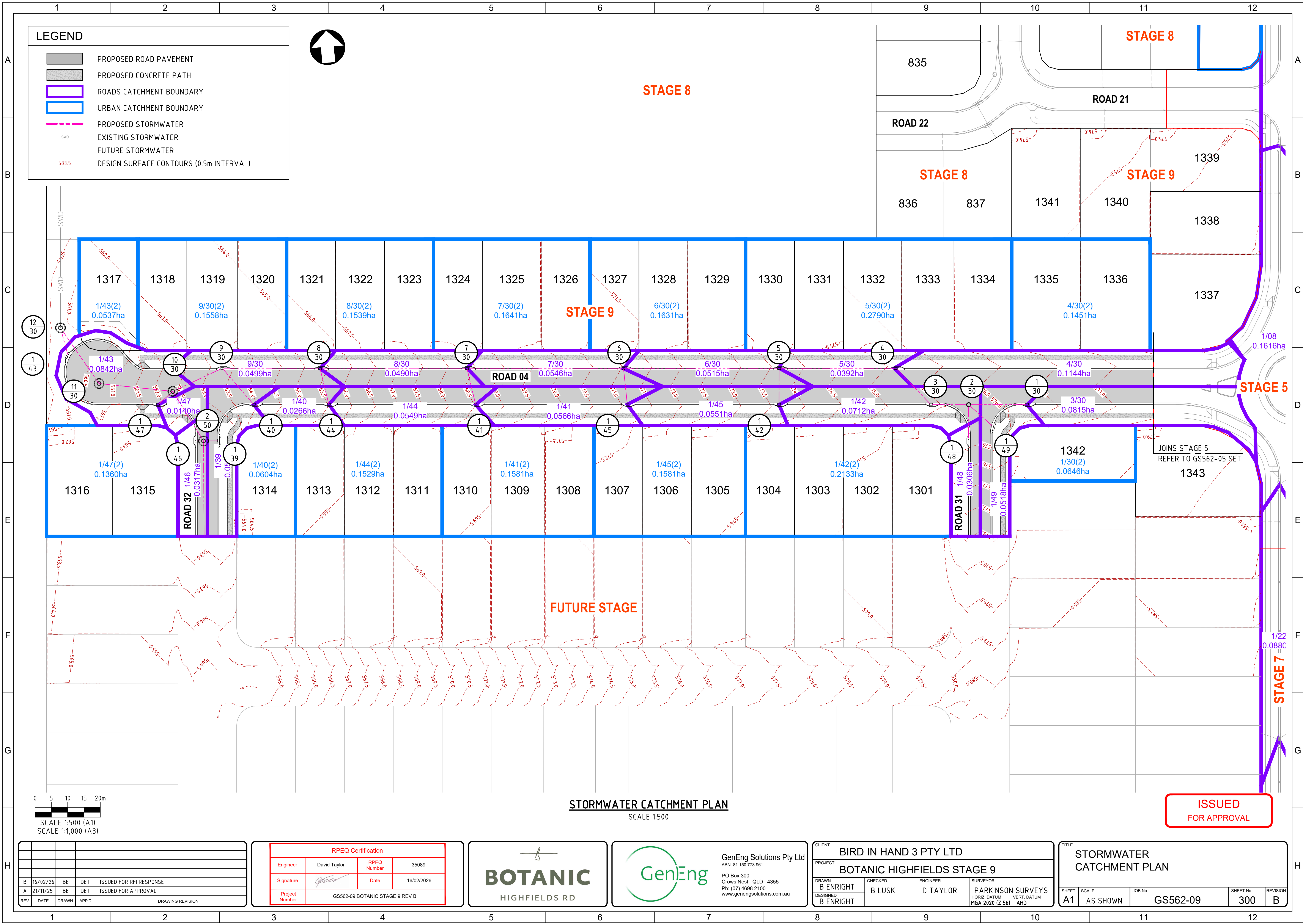
B	16/02/26	BE	DET	ISSUED FOR RFI RESPONSE	
A	21/11/25	BE	DET	ISSUED FOR APPROVAL	
REV.	DATE	DRAWN	APPD	DRAWING REVISION	

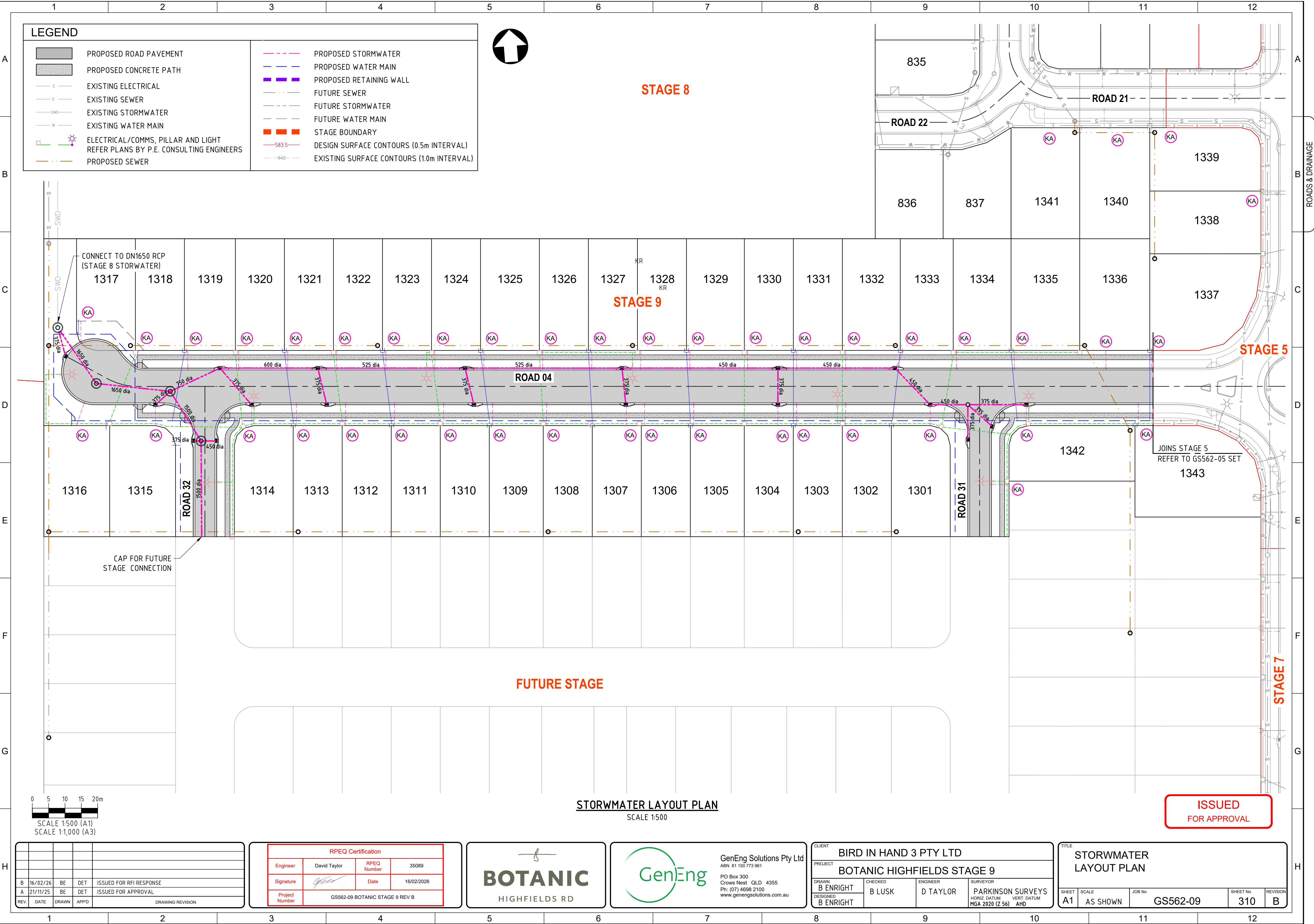
RPEQ Certification			
Engineer	David Taylor	RPEQ Number	35089
Signature		Date	16/02/2026
Project Number	GS562-09 BOTANIC STAGE 9 REV B		

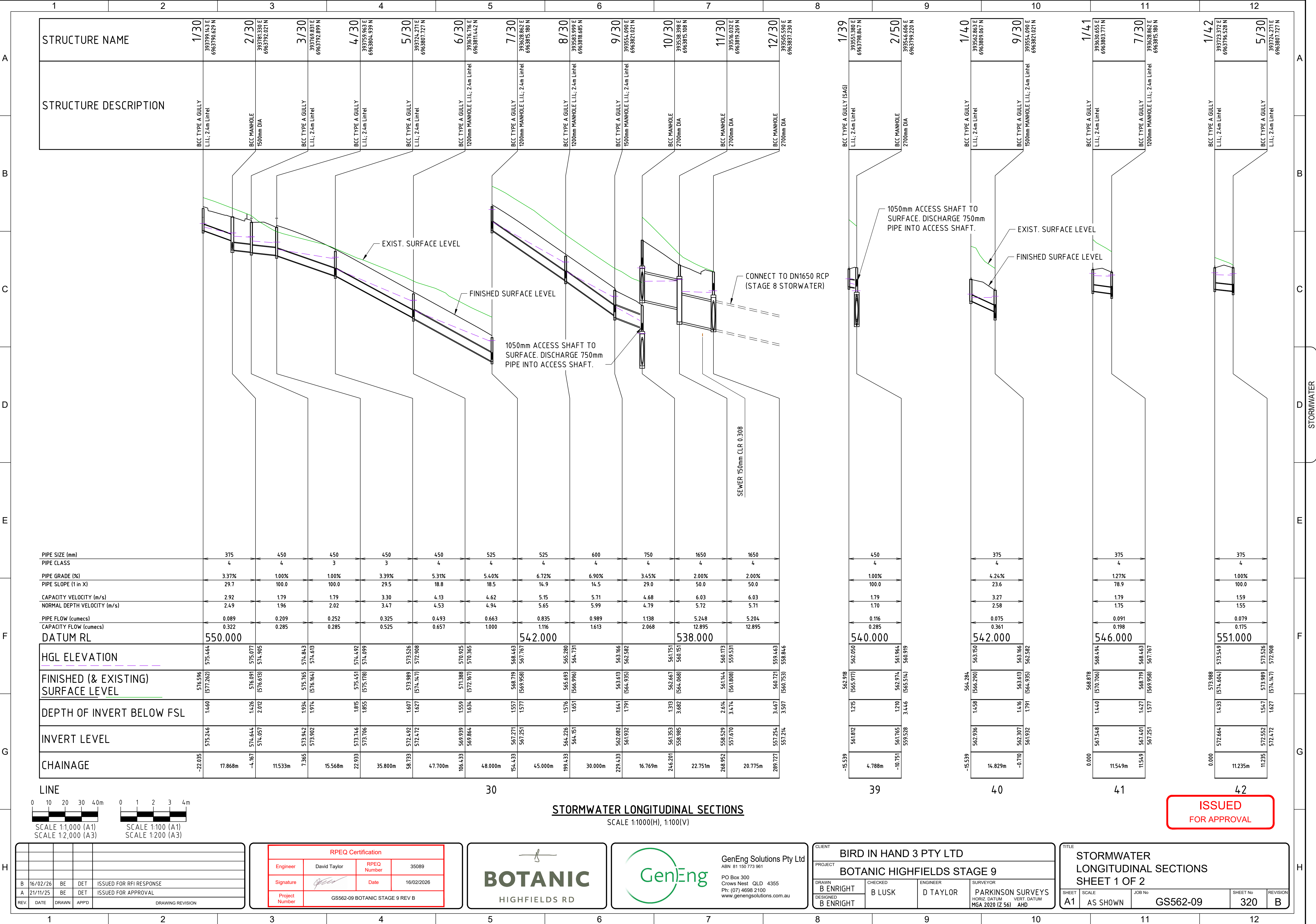


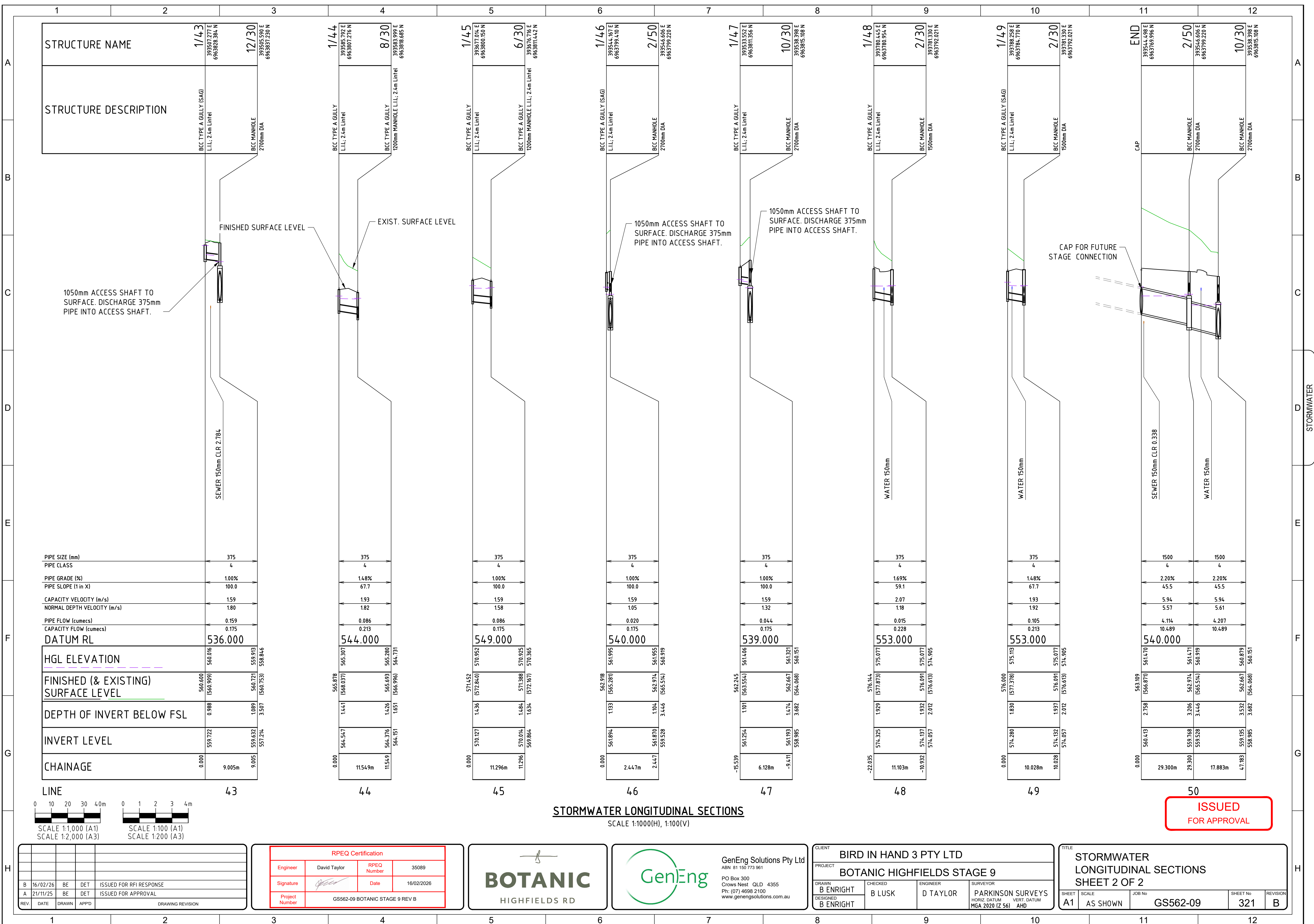
CLIENT BIRD IN HAND 3 PTY LTD			
PROJECT BOTANIC HIGHFIELDS STAGE 9			
DRAWN B ENRIGHT	CHECKED B LUSK	ENGINEER D TAYLOR	SURVEYOR PARKINSON SURVEYS
DESIGNED B ENRIGHT			HORIZ. DATUM MGA 2020 (Z 56) AHD

TITLE SIGNAGE AND LINEMARKING PLAN			
SHEET A1	SCALE AS SHOWN	JOB No GS562-09	SHEET No 270
			REVISION B









A												A											
B												B											
C												C											
D												D											
E												E											
F												F											
G												G											
H												H											

AEP	STRUCTURE	SUB-CATCHMENT RUNOFF						INLET DESIGN						DRAIN DESIGN														HEAD LOSSES						PART FULL				DESIGN LEVELS						STRUCTURE							
DESIGN AEP %	STRUCTURE No.	DRAIN SECTION	TC SUB-CATCHMENT TIME OF CONC. min	I RAINFALL INTENSITY mm/h	A SUB-CATCHMENT AREA ha	CA EQUIVALENT AREA ha	Qc SUB-CATCHMENT DISCHARGE L/s	Qa FLOW IN K&C (INC. BYPASS) L/s	HALF ROAD CAPACITY L/s	FLOW WIDTH m	FLOW DEPTH m	FLOW D&V mm ² /s	ROAD GRADE AT INLET %	ROAD XFALL AT INLET %	INLET TYPE	INLET CURVE	Qg FLOW INTO INLET L/s	Qb BYPASS FLOW L/s	BYPASS STRUCTURE No.	TC CRITICAL TIME OF CONC. min	I RAINFALL INTENSITY mm/hr	CA TOTAL (C x A) ha	Qrat PEAK FLOW L/s	Q PIPE FLOW L/s	L REACH LENGTH m	S PIPE GRADE %	PIPE SIZE mm	PIPE CLASS	VF=Q/A FULL PIPE VELOCITY m/s	Qcap CAPACITY FLOW L/s	Vcap CAPACITY VELOCITY m/s	Vt TRAVEL VELOCITY m/s	CHART(S) USED	Vf/2g VELOCITY HEAD m	Ku U/S HEAD LOSS COEFFICIENT	hu U/S HEAD LOSS m	Kw W.S.E COEFFICIENT	hw CHANGE IN W.S.E m	Sf PIPE FRICTION SLOPE %	hf PIPE FRICTION HEAD LOSS m	dn NORMAL DEPTH m	Vn NORMAL DEPTH VEL m/s	PIPE U/S I.L m	PIPE D/S I.L m	PIPE U/S H.G.L m	PIPE D/S H.G.L m	W.S.E m	GRATE LEVEL m	STRUCTURE No.		
39.35	1/30	1/30 to 2/30		5	119	0.043	0.029	10	10	957	0.663	0.046	0.035	2.83		3 AL2E	2G,3.3X	10	0	1/49	5	119	0.029	10	10	17.868	3.37	375	4	0.09	322	2.92	2 G1		0	7	0.003		0.003		3.51	0.564	0.045	1.31	575.246	574.644	575.316	574.688	575.318	576.054	1/30
39.35	2/30	2/30 to 3/30		5	119											MH1500					5.15	118	0.084	28	28	11.533	1	450	4	0.17	285	1.79	2 T9/T10	0.002	2.45	0.004	2.76	0.004	1	0.115	0.094	1.13	574.057	573.942	574.17	574.055	574.174	576.051	2/30		
39.35	3/30	3/30 to 4/30		5	119	0.073	0.054	18	18	957	1.016	0.057	0.047	2.83		3 AL2E	2G,3.3X	18	0	1/42	5.25	118	0.138	45	45	15.568	1	450	3	0.28	285	1.79	2 T6/T9	0.004	1.92	0.008	2.51	0.01	0.63	0.129	1.31	573.902	573.746	574.047	573.949	574.057	576.004	3/30			
39.35	4/30	4/30 to 5/30		5	119	0.2	0.141	47	47	1006	1.606	0.074	0.078	3.07		3 AL2E	4G,3.3X	47	0	5/30	5.32	118	0.279	91	91	35.8	3.39	450	3	0.57	525	3.3	2 G1/T6/T9	0.017	1.97	0.033	2.61	0.044	2.83	1.074	0.127	2.48	573.706	572.492	573.915	572.904	573.959	576.004	4/30		
39.35	5/30	5/30 to 6/30		5	119	0.221	0.152	56	50	1274	1.493	0.071	0.091	4.95		3 AL2E	4G,3.3X	49	1	6/30	5.61	116	0.579	187	186	47.7	5.31	450	4	1.17	657	4.13	2 T3/T6	0.07	1.83	0.128	2.34	0.164	5.18	2.515	0.164	3.56	572.472	569.939	572.776	570.304	572.94	573.949	5/30		
39.35	6/30	6/30 to 7/30		5	119	0.155	0.108	36	37	1336	1.255	0.064	0.079	5.5		3 AL2E	4G,3.3X	37	0	7/30	6.01	115	0.8	255	255	48	5.4	525	4	1.18	1000	4.62	2 T1/T3	0.071	1.4	0.099	1.67	0.118	5.08	2.514	0.181	3.86	569.864	567.271	570.205	567.765	570.323	571.348	6/30		
39.35	7/30	7/30 to 8/30		5	119	0.159	0.11	37	37	1396	1.222	0.063	0.081	5.97		3 AL2E	4G,3.3X	37	0	8/30	6.23	113	1.02	322	322	45	6.72	525	4	1.49	1116	5.15	2 T1/T3	0.113	1.16	0.13	1.34	0.151	6.64	3.018	0.193	4.45	567.251	564.226	567.636	564.65	567.787	568.679	7/30		
39.35	8/30	8/30 to 9/30		5	119	0.147	0.102	34	34	1500	1.13	0.06	0.081	6.93		3 AL2E	8G,3.3X	34	0	9/30	6.6	112	1.235	383	383	40	6.9	600	4	1.36	1613	5.71	2 T1/T3	0.094	0.99	0.093	1.13	0.106	7.12	2.04	0.199	4.68	564.151	562.082	564.557	562.42	564.663	565.653	8/30		
39.35	9/30	9/30 to 10/30		5	119	0.149	0.104	34	34	1500	1.139	0.06	0.081	6.93		3 AL2E	8G,3.3X	34	0	1/43	6.72	111	1.383	427	427	16.769	3.45	750	4	0.97	2068	4.68	2 T3/T6	0.048	1.83	0.087	2.17	0.103	4.46	0.215	0.231	3.69	561.932	561.353	562.333	561.585	562.436	563.573	9/30		
39.35	10/30	10/30 to 11/30		5	119											MH2700					6.16	114	5.811	1836	1836	22.751	2	1650	4	0.86	12895	6.03	2 T6/T9	0.038	2.38	0.09	2.67	0.101	3.12	0.032	0.421	4.27	558.985	558.529	559.66	558.95	559.76	562.667	10/30		
39.35	11/30	11/30 to 1/30		5	119											MH2700					6.35	113	5.811	1822	1822	20.775	2	1650	4	0.85	12895	6.03	2 T6/T9	0.037	2.16	0.08	2.47	0.092	1.83	0.412	0.419	4.26	557.67	557.254	558.342	557.962	558.434	561.25	11/30		
39.35	1/30	1/30 to 2/30		5	119	0.064	0.045	15	15	1500	0.651	0.046	0.055	6.93		3 AL2E	8G,3.3X	15	0	1/39	5	119	0.045	15	15	14.829	4.24	375	4	0.13	361	3.27	2 G2	0.001	9.7	0.009		0.009	4.06	0.618	0.052	1.61	562.936	562.307	563.022	562.42	563.031	564.244	1/40		
39.35	9/30	1/40 to 9/30		5	119	0.149	0.104	34	34	1500	1.139	0.06	0.081	6.93		3 AL2E	8G,3.3X	34	0	1/43	5	119	0.045	15	15	14.829	4.24	375	4	0.13	361	3.27	2 T3/T6		1.83	0.087	2.17	0.103					562.936	562.307	563.022	562.42	563.031	564.244	1/40		
39.35	1/41	1/41 to 7/30		5	119	0.156	0.109	36	36	1381	1.221	0.063	0.08	5.83		3 AL2E	4G,3.3X	36	0	1/44	5	119	0.109	36	36	11.549	1.27	375	4	0.33	198	1.79	2 G2	0.005	9.7	0.053		0.053	-0.03	0.006	0.109	1.36	567.548	567.401	567.763	567.766	567.816	568.838	1/41		
39.35	7/30	7/30 to 8/30		5	119	0.159	0.11	37	37	1396	1.222	0.063	0.081	5.97		3 AL2E	4G,3.3X	37	0	8/30	5	119	0.109	36	36	11.549	1.27	375	4	0.33	198	1.79	2 T3/T6		1.16	0.13	1.34	0.151					567.548	567.401	567.763	567.766	567.816	568.838	7/30		
39.35	1/42	1/42 to 5/30		5	119	0.206	0.144	48	48	1274	1.453	0.07	0.088	4.95		3 AL2E	4G,3.3X	48	0	1/45	5	119	0.144	48	48	11.235	1	375	4	0.43	175	1.59	2 G2	0.009	9.7	0.092		0.092	-0.01	0.01	0.133	1.35	572.664	572.552	572.903	572.904	572.994	573.948	1/42		
39.35	5/30	5/30 to 6/30		5	119	0.221	0.152	50	50	1274	1.493	0.071	0.091	4.95		3 AL2E	4G,3.3X	49	1	6/30	5	119	0.144	48	48	11.235	1	375	4	0.43	175	1.59	2 T3/T6		1.83	0.128	2.34	0.164					572.994	573.948	574.174	574.055	574.174	576.051	2/30		
39.35	1/43	1/43 to 1/30		5	119	0.112	0.08	26	26	374				0.8		3 AL2E	SAG	26	0		5	119	0.08	26	26	9.005	1	375	4	0.24	175	1.59	2 G2	0.003	9.7	0.028		0.028	1.2	0.083	0.098	1.14	559.722	559.632	559.839	559.731	559.867	560.56	1/43		
39.35	1/30	1/30 to 2/30		5	119	0.151	0.106	35	35	1500	1.151	0.061	0.082	6.93		3 AL2E	8G,3.3X	35	0	1/40	5	119	0.106	35	35	11.549	1.48	375	4	0.32	213	1.93	2 T3/T6		1.94	0.073	2.28	0.086					559.722	559.632	559.839	559.731	559.867	560.56	1/43		
39.35	1/44	1/44 to 8/30		5	119	0.147	0.102	34	34	1500	1.13	0.06	0.081	6.93		3 AL2E	8G,3.3X	34	0	9/30	5	119	0.106	35	35	11.549	1.48	375	4	0.32	213	1.93	2 G2	0.005	9.7	0.05		0.05	0.27	0.072	0.103	1.42	564.547	564.376	564.681	564.65	564.731	565.838	1/44		
39.35	1/45	1/45 to 6/30		5	119	0.155	0.108	36	36	1336	1.236	0.063	0.078	5.5		3 AL2E	4G,3.3X	36	0	1/41	5	119	0.108	36	36	11.296	1	375	4	0.32	175	1.59	2 T1/T3	0.005	9.7	0.052		0.052	-0.08	0.012	0.115	1.25	570.127	570.014	570.295	570.304	570.347	571.412	1/45		
39.35	6/30	6/30 to 7/30		5	119	0.155	0.108	36	37	1336	1.255	0.064	0.079	5.5		3 AL2E	4G,3.3X	37	0	7/30	5	119	0.108	36	36	11.296	1	375	4	0.32	175	1.59	2 T1/T3	0.005	9.7	0.052		0.052	-0.08	0.012	0.115	1.25	570.127	570.014	570.295	570.304	570.347	571.412	1/45		
39.35	1/47	1/47 to 10/30		5	119	0.103	0.071	23	23	1500	0.917	0.054	0.068	6.93		3 AL2E	8G,3.3X	23	0	1/43	5	119	0.071	23	23	6.128	1	375	4	0.21	175	1.59	2 G2	0.002	9.7	0.022		0.022	1.27	0.055	0.093	1.1	561.254	561.193	561.363	561.285	561.386	562.205	1/47		
39.35	10/30	10/30 to 11/30		5	119											MH2700					5	119	0.071	23	23	6.128	1	375	4	0.21	175	1.59	2 T6/T9		2.38	0.09	2.67	0.101					559.76	562.667	563.573	562.42	563.031	564.244	10/30		
39.35	1/48	1/48 to 2/30		5	119	0.028	0.02	7	7	435	0.39	0.034	0.034	7.07		3 AL2E	8G,3.3X	7	0	3/30	5	119	0.02	7	7	11.103	1.69	375	4	0.06	228	2.07	2 G1		0	7	0.001		0.001	1.81	0.178	0.044	0.92	574.325	574.137	574.382	574.181	574.384	576.104	1/48	
39.35	2/30	2/30 to 3/30		5	119											MH1500					5	119	0.02	7	7	11.103	1.69	375	4	0.06	228	2.07	2 T9/T10		2.45	0.004	2.76	0.004					574.325	574.137	574.382	574.181	574.384	576.104	2/30		
39.35	1/49	1/49 to 2/30		5	119	0.047	0.034	11	11	296				1.87		1.59 S AL2E	SAG	11	0	1/48	5	119	0.034	11																											

LEGEND

PROPOSED ROAD PAVEMENT

PROPOSED CONCRETE PATH

E

EXISTING ELECTRICAL

S

EXISTING SEWER

SWD

EXISTING STORMWATER

W

EXISTING WATER MAIN

ELECTRICAL/COMMS, PILLAR AND LIGHT

REFER PLANS BY P.E. CONSULTING ENGINEERS

S

1

PROPOSED SEWER, MANHOLE & HOUSE CON.

PROPOSED STORMWATER

PROPOSED WATER MAIN

PROPOSED RETAINING WALL

FUTURE SEWER

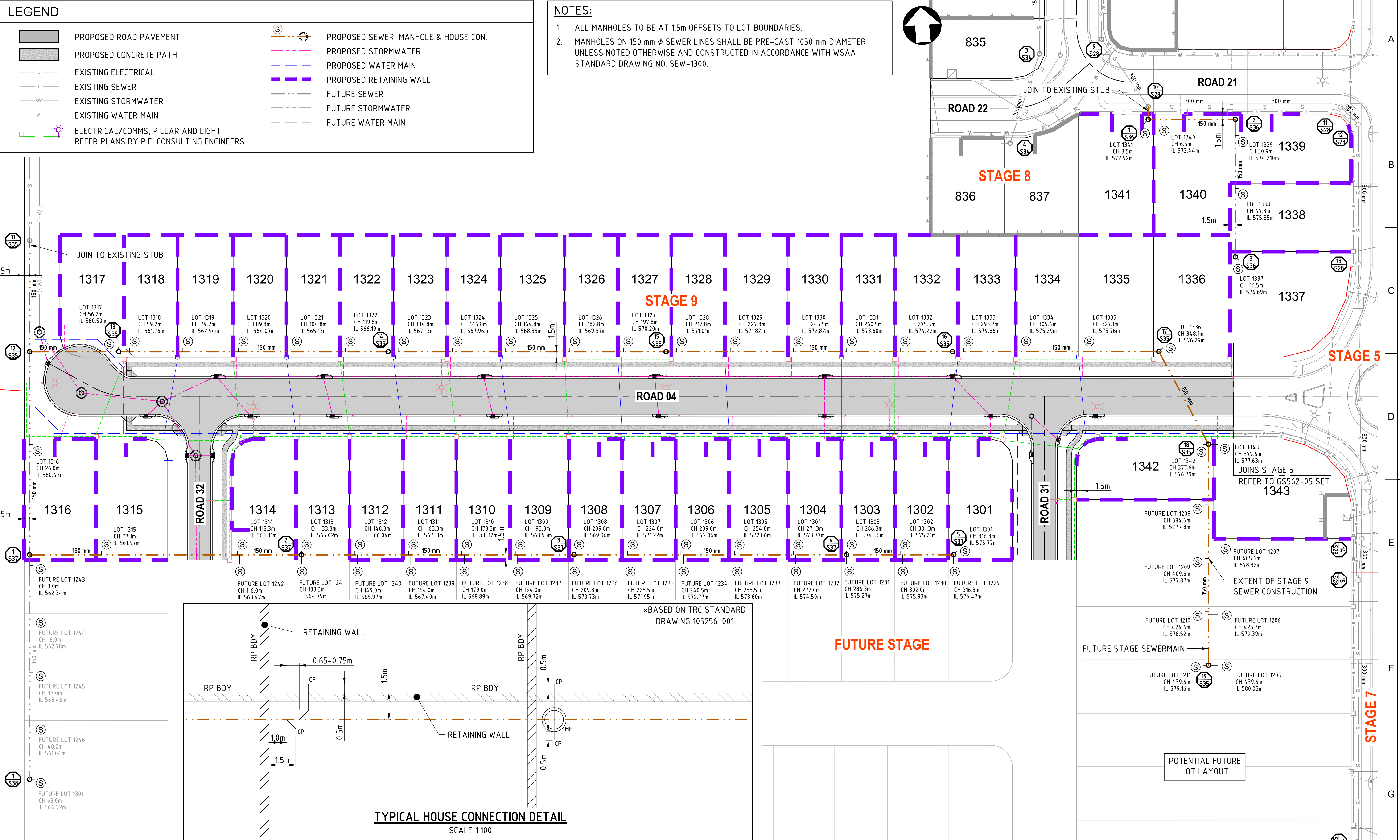
FUTURE STORMWATER

FUTURE WATER MAIN

NOTES:

1. ALL MANHOLES TO BE AT 1.5m OFFSETS TO LOT BOUNDARIES.

2. MANHOLES ON 150 mm Ø SEWER LINES SHALL BE PRE-CAST 1050 mm DIAMETER UNLESS NOTED OTHERWISE AND CONSTRUCTED IN ACCORDANCE WITH WSA STANDARD DRAWING NO. SEW-1300.



SEWERAGE LAYOUT PLAN
SCALE 1:500

ISSUED
FOR APPROVAL

REV.	DATE	DRAWN	APPD	DRAWING REVISION
B	16/02/26	BE	DET	ISSUED FOR RFI RESPONSE
A	21/11/25	BE	DET	ISSUED FOR APPROVAL

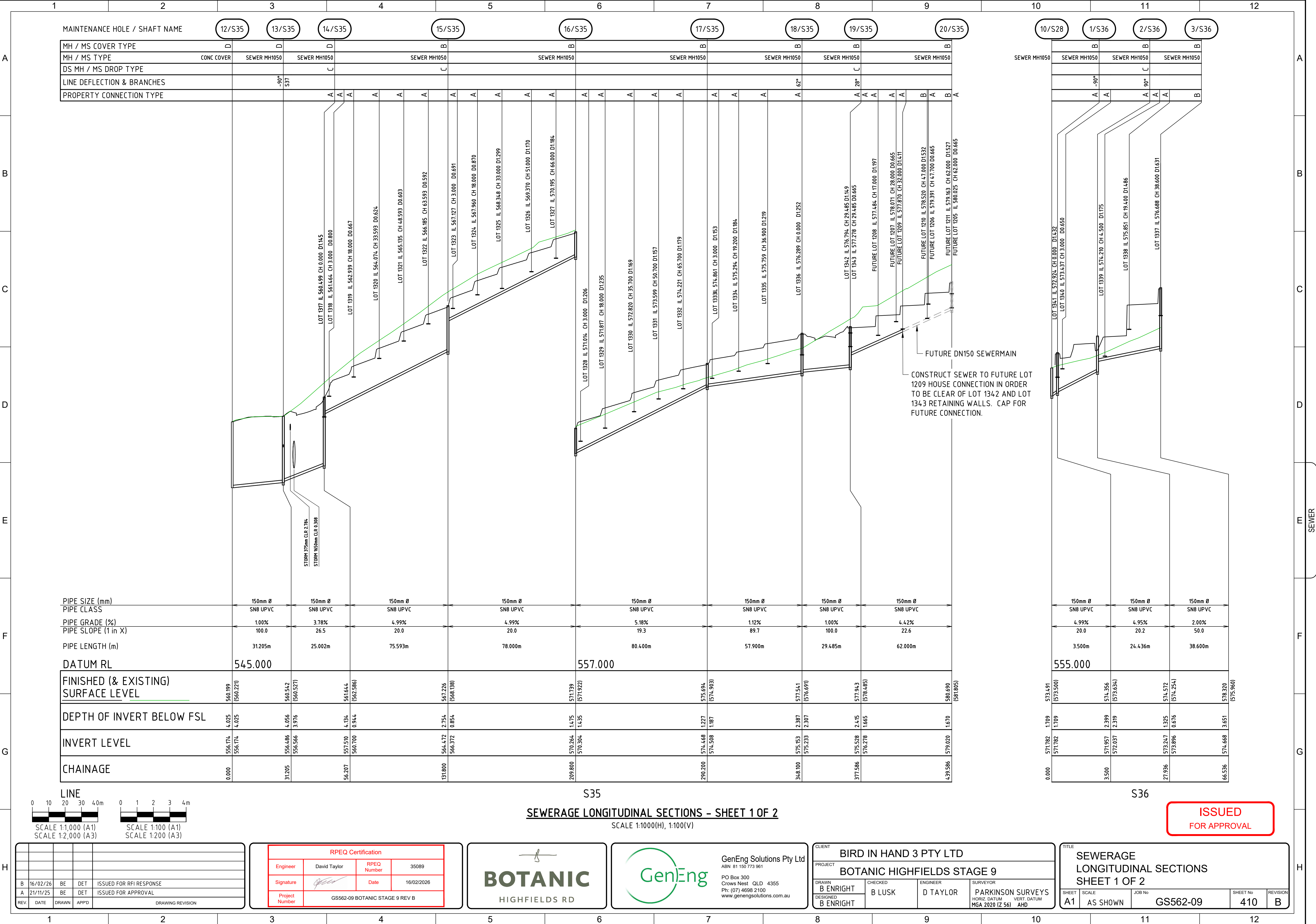
RPEQ Certification			
Engineer	David Taylor	RPEQ Number	35089
Signature		Date	16/02/2026
Project Number	GS562-09 BOTANIC STAGE 9 REV B		

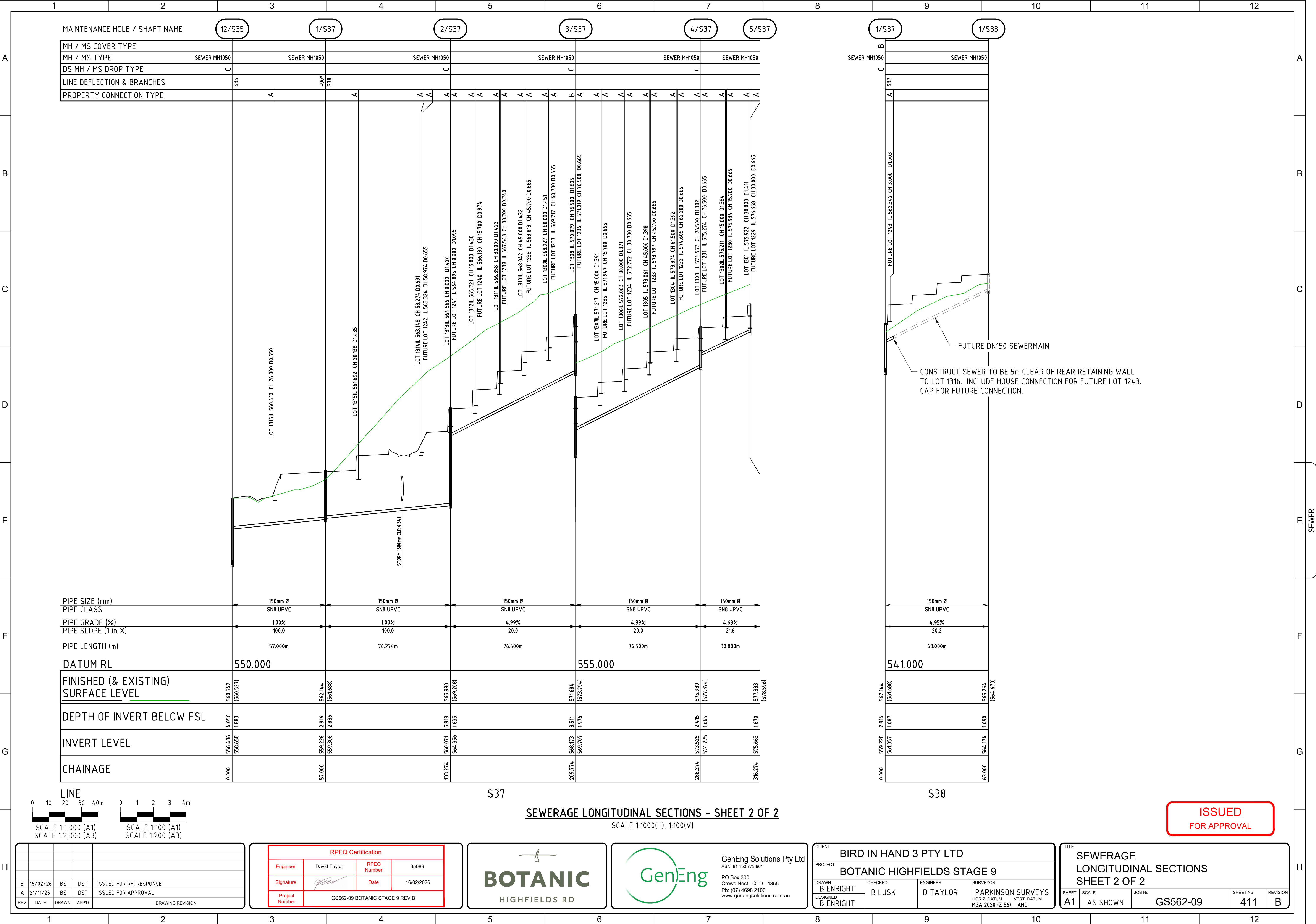
BOTANIC
HIGHFIELDS RD

GenEng Solutions Pty Ltd
ABN 81 150 773 961
PO Box 300
Crowe Nest QLD 4355
Ph: (07) 4698 2100
www.genengsolutions.com.au

CLIENT BIRD IN HAND 3 PTY LTD			
PROJECT BOTANIC HIGHFIELDS STAGE 9			
DRAWN B ENRIGHT	CHECKED B LUSK	ENGINEER D TAYLOR	SURVEYOR PARKINSON SURVEYS
DESIGNED B ENRIGHT			VERT. DATUM MGA 2020 (Z 56) AHD

TITLE SEWERAGE LAYOUT PLAN			
SHEET A1	SCALE AS SHOWN	JOB No GS562-09	SHEET No 400
			REVISION B

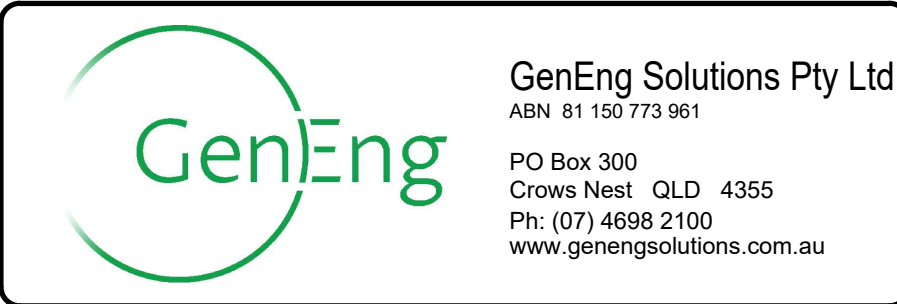




ISSUED
FOR APPROVAL

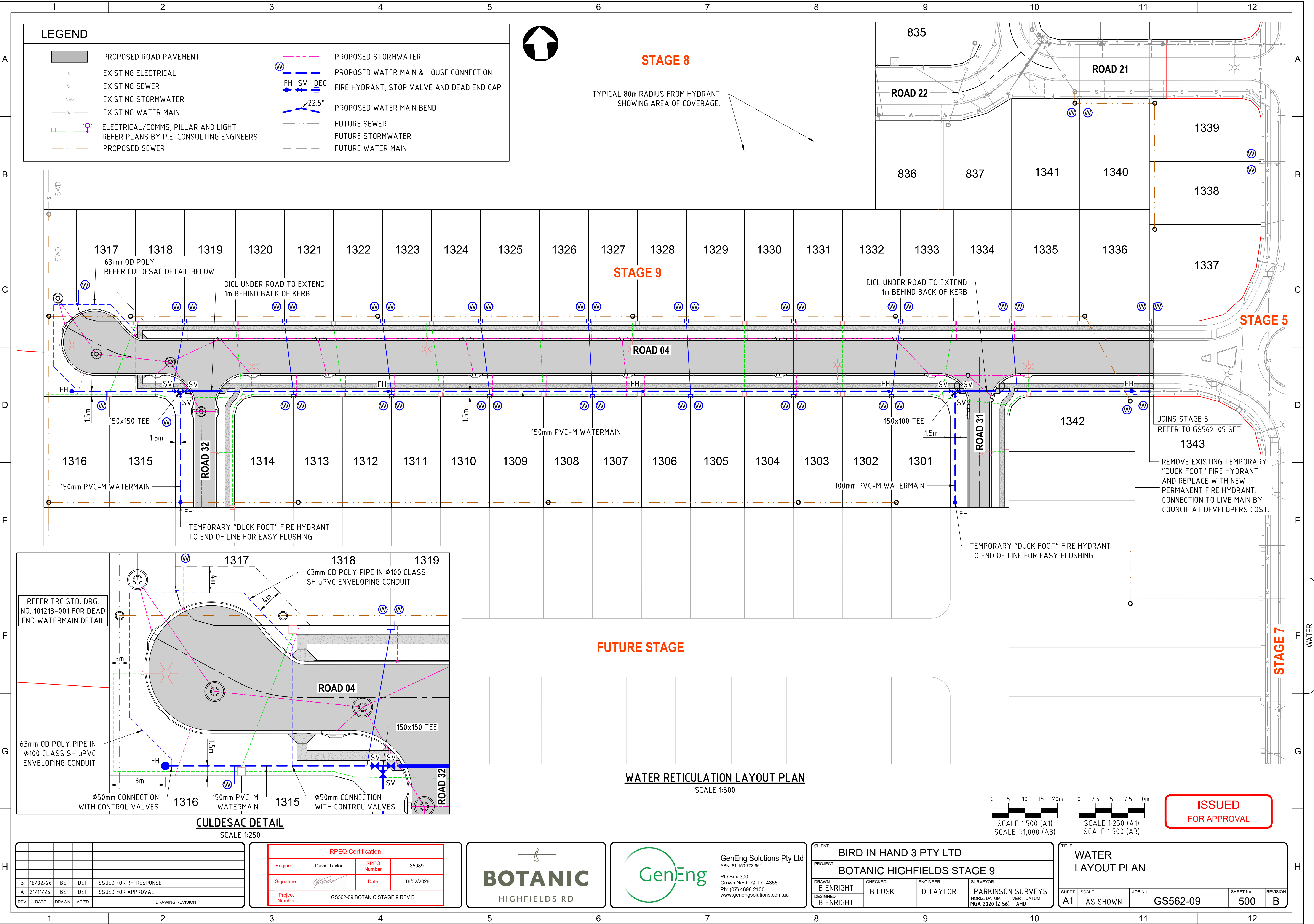
B	16/02/26	BE	DET	ISSUED FOR RFI RESPONSE	
A	21/11/25	BE	DET	ISSUED FOR APPROVAL	
REV	DATE	DRAWN	APPD	DRAWING REVISION	

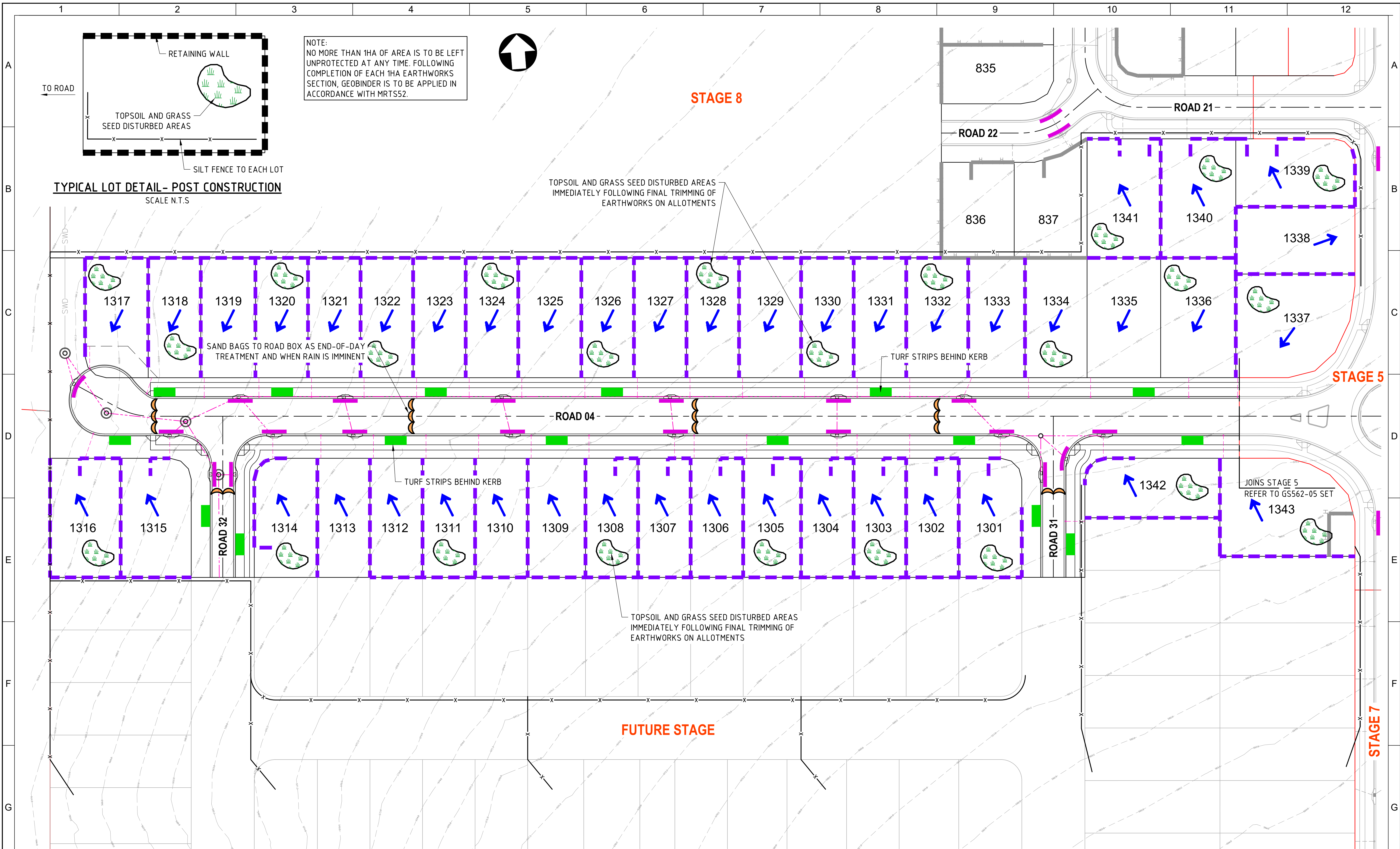
RPEQ Certification			
Engineer	David Taylor	RPEQ Number	35089
Signature		Date	16/02/2026
Project Number	GS562-09 BOTANIC STAGE 9 REV B		



CLIENT BIRD IN HAND 3 PTY LTD			
PROJECT BOTANIC HIGHFIELDS STAGE 9			
DRAWN B ENRIGHT	CHECKED B LUSK	ENGINEER D TAYLOR	SURVEYOR PARKINSON SURVEYS
DESIGNED B ENRIGHT			HORIZ DATUM MGA 2020 (Z 56) AHD

TITLE SEWERAGE LONGITUDINAL SECTIONS SHEET 2 OF 2			
SHEET A1	SCALE AS SHOWN	JOB No GS562-09	SHEET No 411
			REVISION B





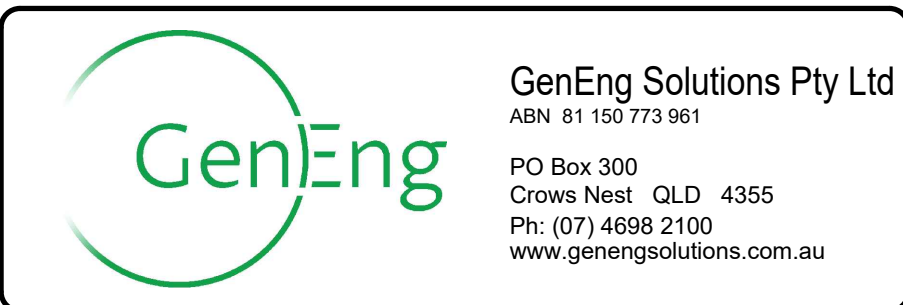
0 5 10 15 20m
SCALE 1:500 (A1)
SCALE 1:1,000 (A3)

EROSION AND SEDIMENT CONTROL LAYOUT PLAN
SCALE 1:500

ISSUED
FOR APPROVAL

REV	DATE	DRAWN	APPD	DRAWING REVISION
B	16/02/26	BE	DET	ISSUED FOR RFI RESPONSE
A	21/11/25	BE	DET	ISSUED FOR APPROVAL

RPEQ Certification			
Engineer	David Taylor	RPEQ Number	35089
Signature		Date	16/02/2026
Project Number	GS562-09 BOTANIC STAGE 9 REV B		



CLIENT BIRD IN HAND 3 PTY LTD			
PROJECT BOTANIC HIGHFIELDS STAGE 9			
DRAWN B ENRIGHT	CHECKED B LUSK	ENGINEER D TAYLOR	SURVEYOR PARKINSON SURVEYS
DESIGNED B ENRIGHT			HORIZ DATUM MGA 2020 (Z 56) VERT DATUM AHD

TITLE ESC LAYOUT PLAN			
SHEET A1	SCALE AS SHOWN	JOB No GS562-09	SHEET No 600
			REVISION B

1. ASSESSMENT OF EROSION RISK WAS CARRIED OUT IN ACCORDANCE WITH URBAN STORMWATER QUALITY PLANNING GUIDELINES 2010. ASSESSMENT DETERMINED THE SITE AS A LOW RISK SITE
2. SOIL LOSS, CALCULATED VIA THE RUSLE EQUATION IS EXPECTED TO BE 86 t/ha/year ASSUMING A 40m LENGTH ACROSS EACH LOT. IN ACCORDANCE WITH IECA, TYPE 2 TREATMENTS ARE REQUIRED, PROVIDED ONLY 1HA OF AREA IS LEFT EXPOSED AT ONE TIME.
3. A SEDIMENT WEIR WAS SELECTED AS A SUITABLE TREATMENT MEASURE AND WAS CONSTRUCTED IN THE STAGE 1 WORKS IN THE NORTH-WEST CORNER. A TEMPORARY DIVERSION BOUND IS TO BE USED TO TAKE WATER FROM THE STAGE 5 CATCHMENT TO THIS WEIR.

1. EROSION CONTROL DEVICES TO BE INSTALLED PRIOR TO COMMENCEMENT OF EARTHWORKS.
2. SITE STRIPPING OF GROUND COVER AND TOPSOIL SHALL BE MINIMISED SO THAT ONLY SMALL AREAS ARE EXPOSED AT ANY ONE TIME.
3. DISTURBED AREAS ARE TO BE REINSTATED AS SOON AS POSSIBLE AFTER CONSTRUCTION LEVELS ARE ACHIEVED.
4. EROSION CONTROL STRUCTURES ARE TO REMAIN IN PLACE UNTIL VEGETATION IS APPROPRIATELY ESTABLISHED.

ALL SEDIMENT AND EROSION CONTROL MEASURES IMPLEMENTED DURING THE CONSTRUCTION ARE TO BE IN ACCORDANCE WITH LOCAL/STATE AUTHORITY REQUIREMENTS. THE GUIDELINES PROVIDE THE NECESSARY REQUIREMENTS AND STANDARD DRAWINGS (SD) AS REFERENCED INDIVIDUALLY BELOW.

- (A) TEMPORARY DRAINAGE CONTROL. FLOW SHOULD BE DIVERTED AROUND THE WORK SITE WHERE POSSIBLE. (SD 5-5 & 5-6)
- (B) ALL DRAINAGE, EROSION AND SEDIMENT CONTROLS TO BE INSTALLED AND BE OPERATIONAL BEFORE COMMENCING UP-SLOPE EARTHWORKS.
- (C) ALL SEDIMENT & EROSION CONTROL DEVICES MUST BE REGULARLY INSPECTED AND MAINTAINED BY THE CONTRACTOR. INSPECTIONS SHOULD OCCUR ON A WEEKLY BASIS (MINIMUM), ALONG WITH BEFORE AND AFTER SIGNIFICANT RUNOFF PRODUCING STORMS.
- (D) ALL DISTURBED LAND MUST BE RENDERED EROSION-PROOF BY THE ESTABLISHMENT OF 70% EFFECTIVE GROUND COVER WITHIN 28 DAYS OF FINAL EARTHWORKS TRIM.
- (E) IN AREAS WHERE RUNOFF TURBIDITY IS TO BE CONTROLLED, EXPOSED SURFACES TO BE EITHER MULCHED, COVERED WITH EROSION CONTROL BLANKETS OR TURFED, IF EARTHWORKS ARE EXPECTED TO BE DELAYED FOR MORE THAN 14 DAYS.
- (F) STRAW BALE SEDIMENT TRAPS ARE A SECONDARY OPTION WHICH GENERALLY SHOULD NOT BE USED IF OTHER OPTIONS ARE AVAILABLE.

- (A) NOT TO BE LOCATED IN AREAS OF CONCENTRATED FLOW.
- (B) NORMALLY LOCATED ALONG THE CONTOUR WITH A MAXIMUM CATCHMENT AREA 0.6 HA PER 100M LENGTH OF FENCE.
- (C) WOVEN FABRICS ARE PREFERRED, NON-WOVEN FABRICS MAY BE USED ON SMALL WORK SITES, I.E. OPERATIONAL PERIOD LESS THAN 6 MONTHS OR ON SITES WHERE SIGNIFICANT SEDIMENT RUNOFF IS NOT EXPECTED.
- (D) FENCES ARE REQUIRED 2M MIN FROM TOE OF CUT OR FILL BATTERS. WHERE NOT PRACTICAL, ONE FENCE CAN BE AT THE TOE WITH A SECOND FENCE 1M MIN AWAY. FENCE SHOULD NOT BE LOCATED PARALLEL WITH TOE IF CONCENTRATION OF FLOW WILL OCCUR BEHIND THE FENCE.

TEMPORARY CONSTRUCTION ENTRY/EXIT SEDIMENT TRAP (SD 6-9).

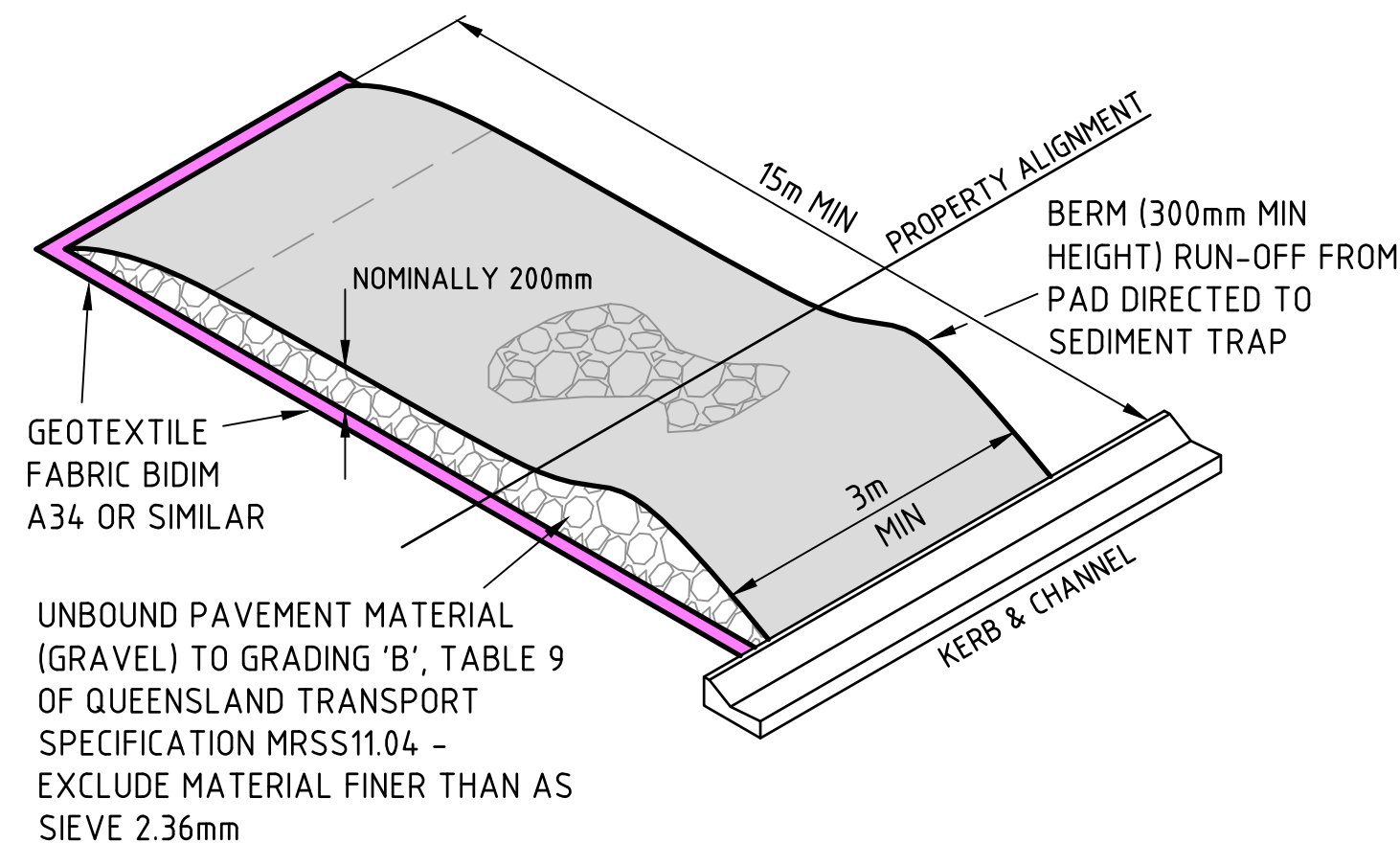
- (A) ADJACENT STORMWATER RUNOFF TO BE DIVERTED AWAY FROM ENTRY/EXIT.
- (B) WHEEL-WASH OR SPRAY UNIT MAY BE REQUIRED DURING WET WEATHER.

SAFETY ISSUES MUST BE CONSIDERED AT ALL TIMES - INCORPORATE TRAFFIC CONTROL DEVICES .

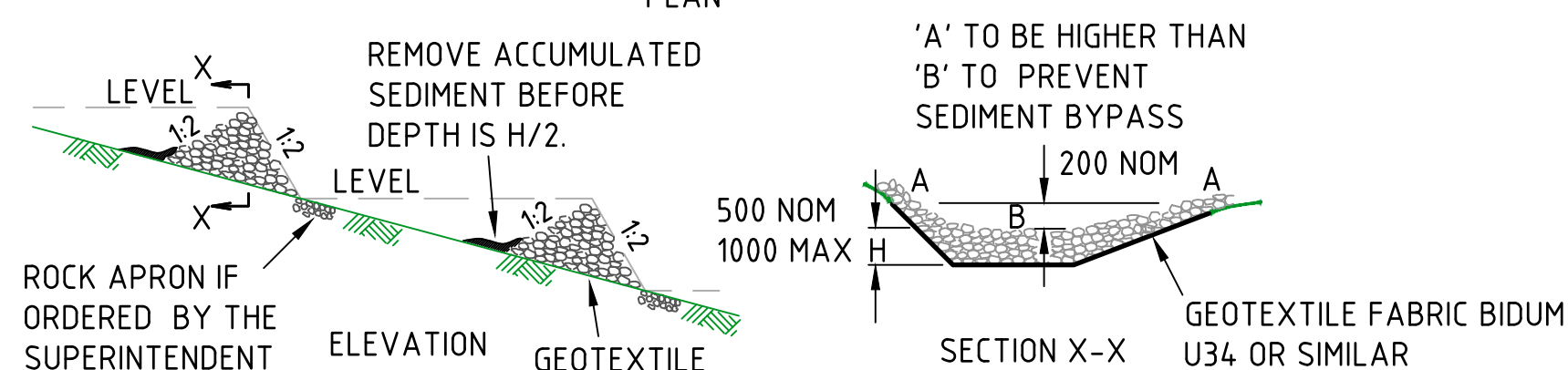
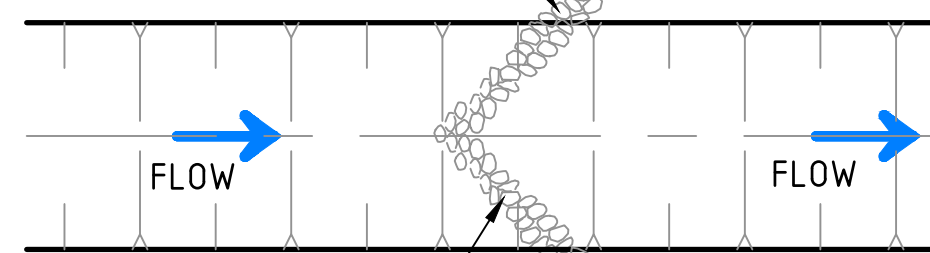
IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ALL SEDIMENT AND EROSION CONTROL MEASURES HAVE BEEN ADDRESSED AS STIPULATED.

TEMPORARY STOCKPILES TO HAVE 2:1 SIDE BATTERS (MAXIMUM) AND BE SHAPED TO ENSURE RUN-OFF IS TREATED AND MANAGED TO THE SATISFACTION OF THE SUPERINTENDENT. ALL EXPOSED STOCKPILE SURFACES TO BE GRASS SEEDDED. SEDIMENT FENCES AND CUT-OFF DRAINS MAY BE REQUIRED.

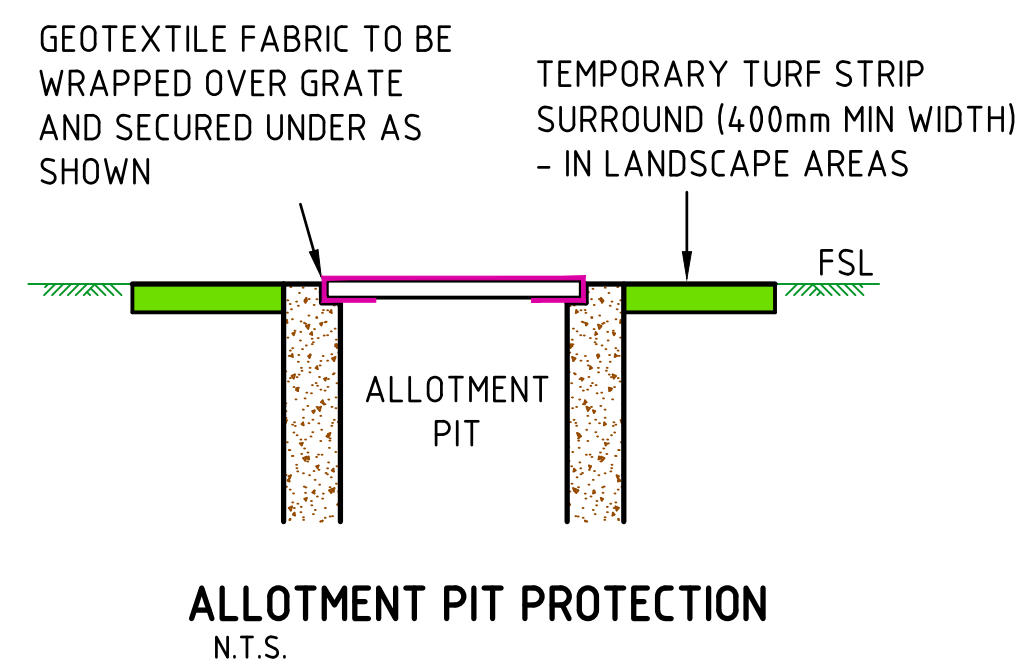
ADDITIONAL OR DIFFERENT SEDIMENT & EROSION CONTROL DEVICES MAY BE REQUIRED DURING CONSTRUCTION PHASE TO COMPLY WITH THE ABOVE.



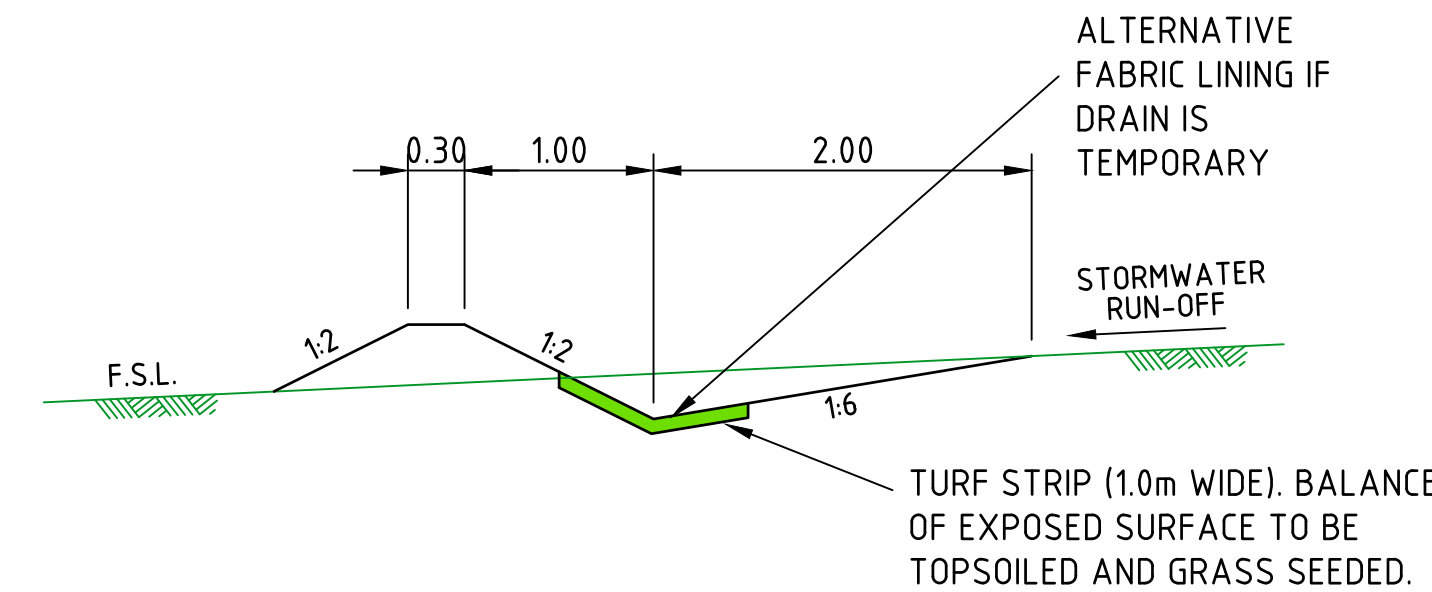
UNBOUND PAVEMENT MATERIAL (GRAVEL) TO GRADING 'B', TABLE 9 OF QUEENSLAND TRANSPORT SPECIFICATION MRSS11.04 - EXCLUDE MATERIAL FINER THAN AS SIEVE 2.36mm



NOTE:
CHECK DAM CATCHMENT AREA LIMITED TO 4.00 Ha. DEVICE IS
INTENDED FOR VELOCITY CONTROL ONLY - SEDIMENT
COLLECTION IS A SECONDARY PURPOSE.

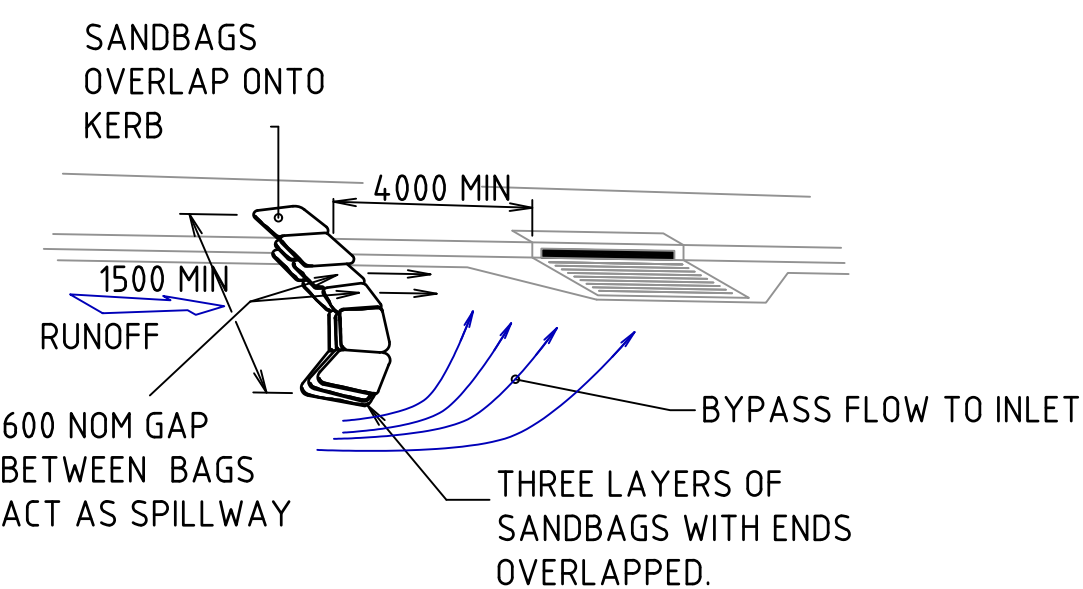


1. INSTALL A 2 x 400mm MINIMUM WIDE ROLL OF TURF ON THE VERGE NEXT TO THE KERB AND AT THE SAME LEVEL AS THE TOP OF THE KERB.
2. LAY 1.8m LONG TURF STRIPS NORMAL TO THE KERB EVERY 5 METRES.



The diagram illustrates a cross-section of a sediment control system. On the left, an arrow labeled 'FLOW' points to the right. An 'EARTH BANK' is shown as a small mound. Following the bank, the slope rises at a '4:1 SLOPE (MAX.)', indicated by a dashed line and green vegetation. The top of the slope is a 'STABILISE STOCKPILE SURFACE', also shown with green vegetation. The slope then descends at another '4:1 SLOPE (MAX.)', again indicated by a dashed line and green vegetation. At the base of the slope, a 'SEDIMENT FENCE' is represented by a vertical line. To the right of the fence, a tree is shown. The ground surface is depicted with diagonal hatching.

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.



0.5m THICK

BIDIM A44 GEOTEXTILE

0.6m

FLOW

BIDIM A44 GEOTEXTILE.
ATTACH EXTERNALLY
TO MESH AND REPLACE
AS REQUIRED.

1200 CAPPED
STAR PICKETS AT
MAX. 600 CRS

B	16/02/26	BE	DET	ISSUED FOR RFI RESPONSE	
A	21/11/25	BE	DET	ISSUED FOR APPROVAL	
REV.	DATE	DRAWN	APPD	DRAWING REVISION	

RPEQ Certification			
Engineer	David Taylor	RPEQ Number	35089
Signature		Date	16/02/2026
Project Number	GS562-09 BOTANIC STAGE 9 REV B		



GenEng Solutions Pty Ltd
ABN 81 150 773 961
PO Box 300
Crows Nest QLD 4355
Ph: (07) 4698 2100
www.genengsolutions.com.au

CLIENT				BIRD IN HAND 3 PTY LTD			
PROJECT				BOTANIC HIGHFIELDS STAGE 9			
DRAWN B ENRIGHT		CHECKED B LUSK		ENGINEER D TAYLOR		SURVEYOR	
DESIGNED B ENRIGHT						PARKINSON SURVEYS HORZ DATUM VERT DATUM MGA 2020 (S 56) AHD	

TITLE				
ESC DETAILS AND NOTES				
SHEET A1	SCALE AS SHOWN	JOB No GS562-09	SHEET No 610	REVISION B

ISSUED
FOR APPROVAL