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LOCALITY PLAN AND DRAWING INDEX				
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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.

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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 1.5m 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 3.0m 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.

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	WATER SERVICES ASSOCIATION OF AUSTRALIA
TRC	TOOWOOMBA REGIONAL COUNCIL
DTMR	DEPARTMENT OF TRANSPORT AND MAIN ROADS
ID	INSIDE DIAMETER
OD	OUTSIDE DIAMETER
DICL	DUCTILE IRON CEMENT LINED
HDPE	HIGH DENSITY POLYETHYLENE
RCP	REINFORCED CONCRETE PIPE
PRV	PRESSURE REDUCING VALVE
DN	NOMINAL DIAMETER

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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 1.5m 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 3.0m 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.

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.

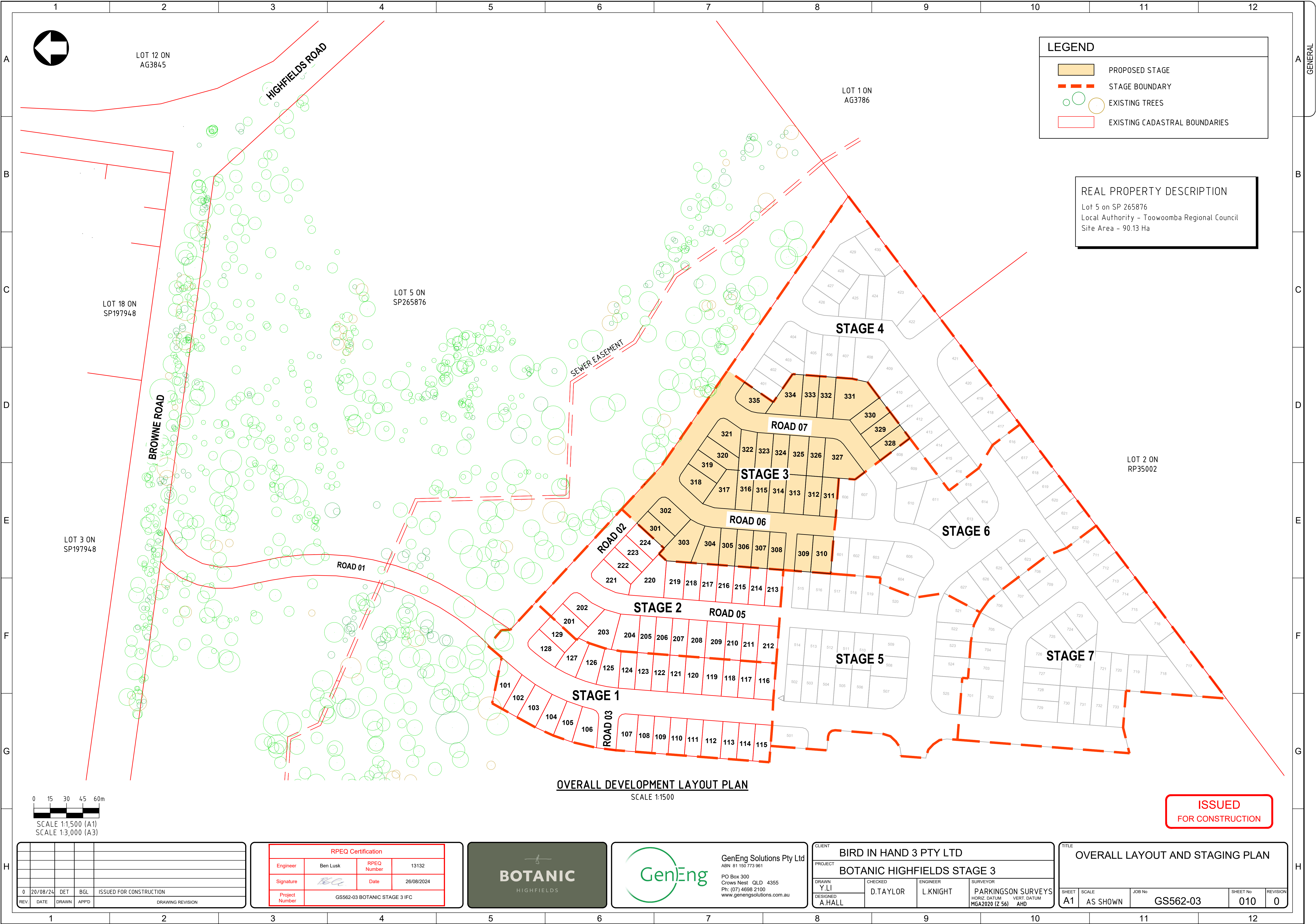
16. ALL MANHOLES TO HAVE LIDS AS SHOWN ON THE SEWER LONGITUDINAL SECTIONS.

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	WATER SERVICES ASSOCIATION OF AUSTRALIA
TRC	TOOWOOMBA REGIONAL COUNCIL
DTMR	DEPARTMENT OF TRANSPORT AND MAIN ROADS
ID	INSIDE DIAMETER
OD	OUTSIDE DIAMETER
DICL	DUCTILE IRON CEMENT LINED
HDPE	HIGH DENSITY POLYETHYLENE
RCP	REINFORCED CONCRETE PIPE
PRV	PRESSURE REDUCING VALVE
DN</	



LEGEND

PROPOSED STAGE

STAGE BOUNDARY

REAL PROPERTY DESCRIPTION

Lot 5 on SP 265876
Local Authority - Toowoomba Regional Council
Site Area - 90.13 Ha

OVERALL DEVELOPMENT LAYOUT PLAN
SCALE 1:1500

ISSUED
FOR CONSTRUCTION

0	20/08/24	DET	BGL	ISSUED FOR CONSTRUCTION
REV.	DATE	DRAWN	APPD	DRAWING REVISION

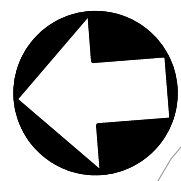
RPEQ Certification			
Engineer	Ben Lusk	RPEQ Number	13132
Signature		Date	26/08/2024
Project Number	GS562-03 BOTANIC STAGE 3 IFC		

BOTANIC
HIGHFIELDS

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 3			
DRAWN Y.LI	CHECKED D.TAYLOR	ENGINEER L.KNIGHT	SURVEYOR PARKINSON SURVEYS
DESIGNED A.HALL			HORIZ DATUM MGA2020 (2 56) VERT DATUM AHD

TITLE OVERALL LAYOUT AND STAGING PLAN				
SHEET A1	SCALE AS SHOWN	JOB No GS562-03	SHEET No 010	REVISION 0



NOTE:
THE CONTRACTOR IS TO OBTAIN AN ARBORICULTURAL IMPACT ASSESSMENT REPORT TO NOTE HOW TREES TO BE RETAINED (WITHIN 15m) ARE PROTECTED FROM HARM DURING CONSTRUCTION. REPORT TO BE SUBMITTED PRIOR TO THE COMMENCEMENT OF WORKS.

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)

BIO RETENTION BASIN
REFER SHEET 350

GROSS POLLUTANT
TRAP CLEAN OUT AREA.
REFER SHEET 310.

GRAVEL ACCESS TRACK. 200mm
DEEP ARRB SPEC GRAVEL.
REFER SHEET 260.

JOINS STAGE 2
REFER TO GS562-02 SET

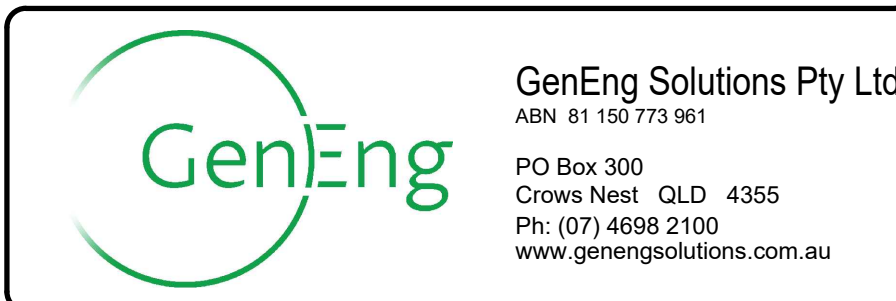
STAGE 3 DEVELOPMENT LAYOUT PLAN
SCALE 1:500

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

ISSUED
FOR CONSTRUCTION

REV.	DATE	DRAWN	APPD	DRAWING REVISION
4	04/03/25	DET	BGL	WALL FOR 310
3	14/02/25	DET	BGL	COUNCIL GIA APPROVAL
2	1/10/24	DET	BGL	SEWER CONNECTIONS TO STAGE 4
1	09/09/24	DET	BGL	RETAINING WALL HEIGHT CHANGES
0	20/08/24	DET	BGL	ISSUED FOR CONSTRUCTION

RPEQ Certification			
Engineer	Ben Lusk	RPEQ Number	13132
Signature		Date	26/08/2024
Project Number	GS562-03 BOTANIC STAGE 3 IFC		



CLIENT BIRD IN HAND 3 PTY LTD			
PROJECT BOTANIC HIGHFIELDS STAGE 3			
DRAWN Y.LI	CHECKED D.TAYLOR	ENGINEER L.KNIGHT	SURVEYOR PARKINSON SURVEYS
DESIGNED A.HALL			VERT. DATUM MGA2020 (2 56) AHD

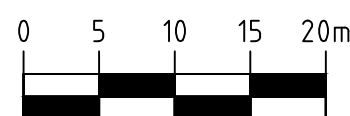
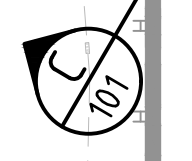
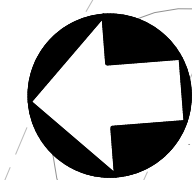
TITLE STAGE 3 DEVELOPMENT LAYOUT			
SHEET A1	SCALE AS SHOWN	JOB No GS562-03	SHEET No 020
			REVISION 4

EARTHWORKS QUANTITIES - STAGE 3

TOPSOIL STRIP	3,100m ³ (100mm THICK)
EARTHWORKS CUT	17,481m ³
FILL REQUIRED	3,641m ³
BALANCE	13,840m ³

NOTES:

- ALL VOLUMES INDICATED ARE SOLID VOLUMES
- ASSUMED TOPSOIL RE-SPREAD AT 100mm THICK
- EARTHWORKS QUANTITIES BASED ON COMPARISON BETWEEN BOXING DESIGN SURFACE AND COMPLETED EARTHWORKS SURFACE FROM STAGE 2, REFER PLANS GS562-02.
- REFER EARTHWORKS NOTES ON SHEET 101.
- 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.
- REFER TO LANDSCAPE PLANS BY SAUNDERS HAVILL FOR DETAILS ON RETAINING WALL FINISH.
- MINIMUM 0.5% FALL REQUIRED DIAGONALLY ACROSS ALL BLOCKS.



SCALE 1:500 (A1)
SCALE 1:1,000 (A3)

EARTHWORKS LAYOUT PLAN

SCALE 1:500

LEGEND

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

**ISSUED
FOR CONSTRUCTION**

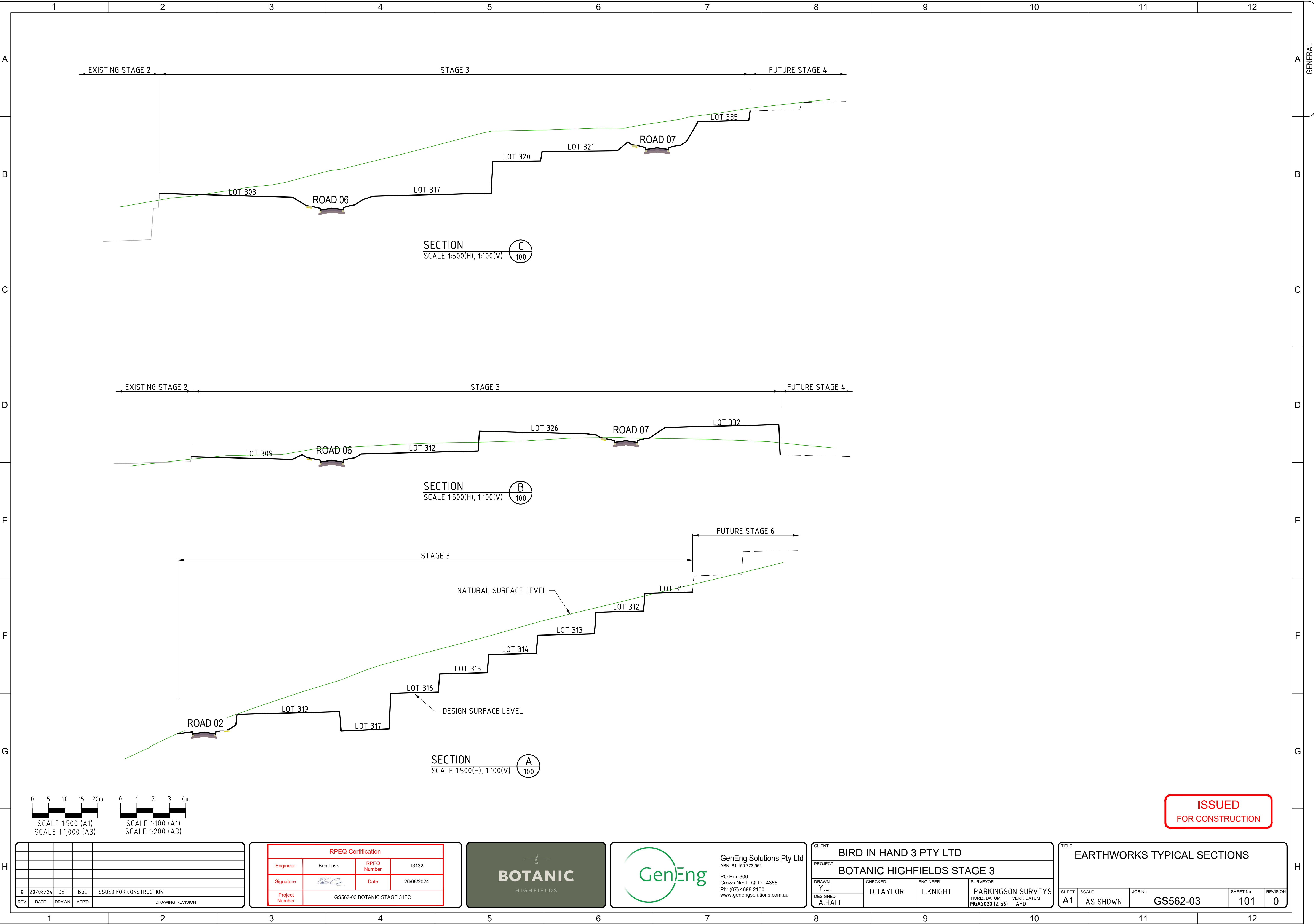
REV.	DATE	DRAWN	APPD	DESCRIPTION
3	04/03/25	DET	BGL	WALL TO LOT 310
2	14/02/25	DET	BGL	COUNCIL GIA APPROVAL
1	09/09/24	DET	BGL	RETAINING WALL HEIGHT CHANGES
0	20/08/24	DET	BGL	ISSUED FOR CONSTRUCTION

RPEQ Certification			
Engineer	Ben Lusk	RPEQ Number	13132
Signature		Date	26/08/2024
Project Number	GS562-03 BOTANIC STAGE 3 IFC		



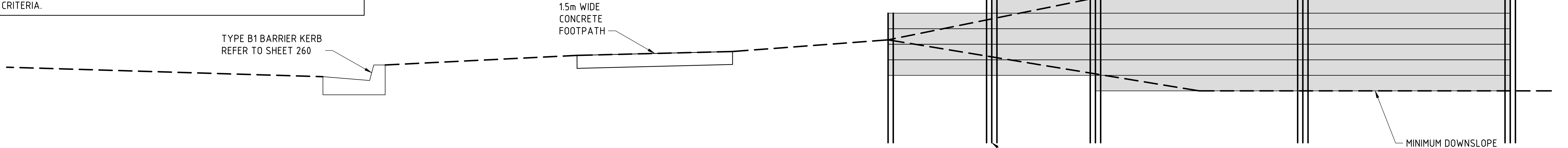
CLIENT BIRD IN HAND 3 PTY LTD			
PROJECT BOTANIC HIGHFIELDS STAGE 3			
DRAWN Y.LI	CHECKED D.TAYLOR	ENGINEER L.KNIGHT	SURVEYOR PARKINSON SURVEYS
DESIGNED A.HALL	VERT. DATUM MGA2020 (25 56) AHD		

TITLE EARTHWORKS LAYOUT PLAN			
SHEET A1	SCALE AS SHOWN	JOB No GS562-03	SHEET No 100
			REVISION 3



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

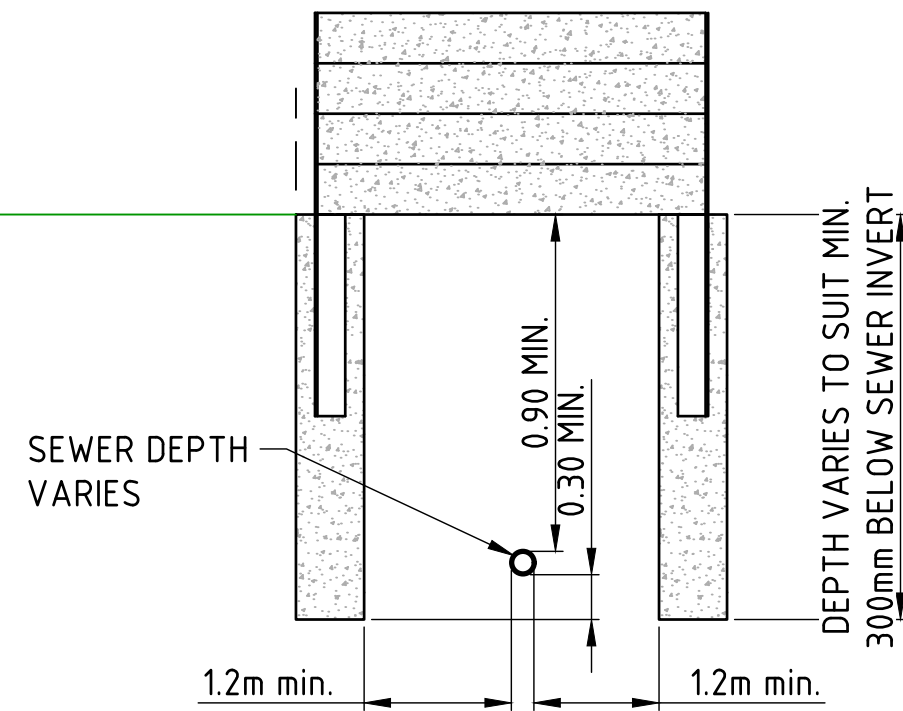
- WALL DESIGN BASED ON USE OF PROPRIETARY CONCRETE SLEEPER RETAINING WALL SYSTEM OR SIMILAR
- PROTECTION OF ADJACENT SEWER SERVICES TO MEET THE REQUIREMENTS OF QDC MP14.
- PERPENDICULAR CROSSING OF SEWER WITH RETAINING WALL - FOOTINGS TO EXTEND BELOW THE INVERT OF THE SEWER. REFER DETAIL.
- PARALLEL 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

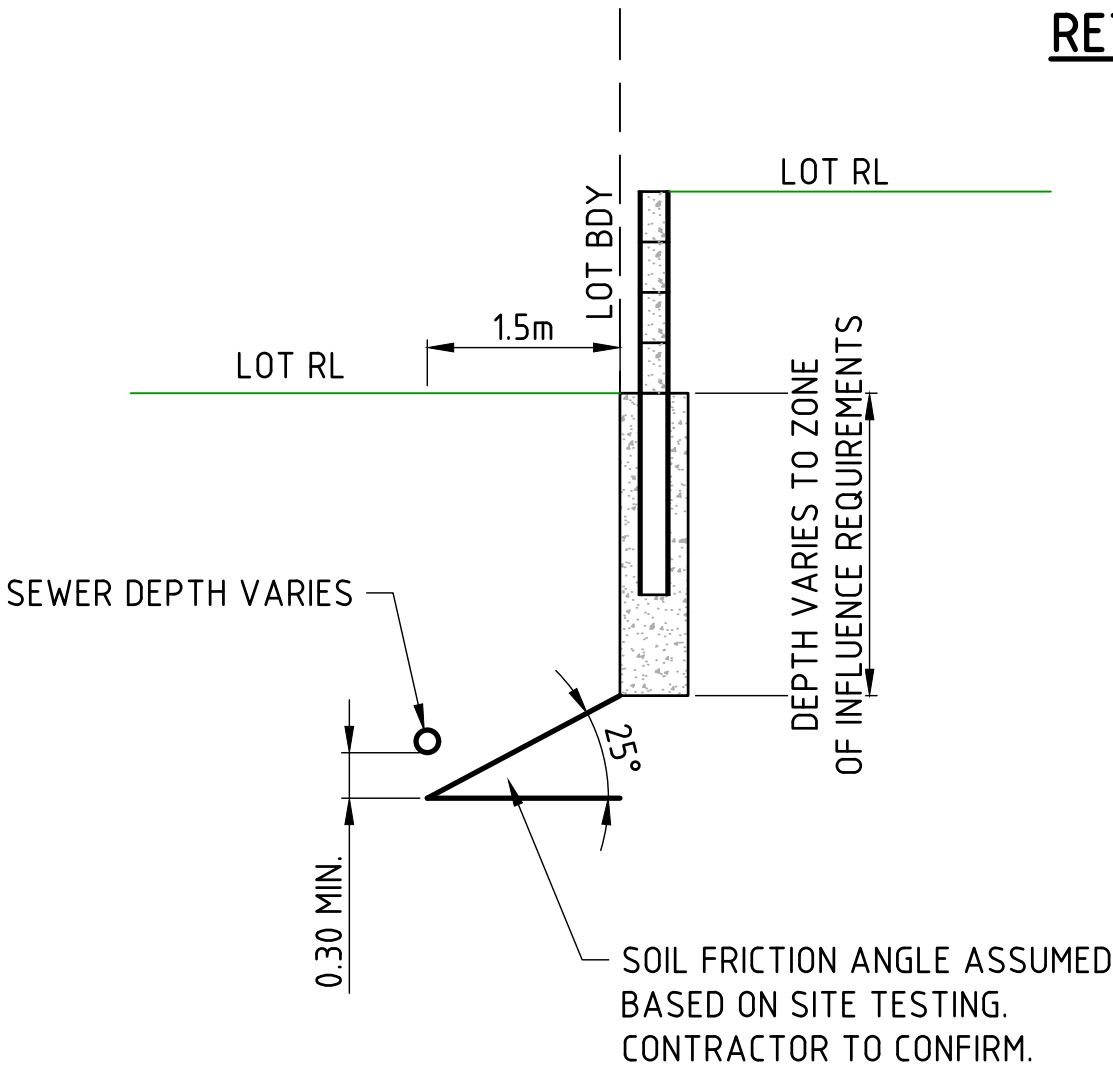
EXTRA POST AT 1m SPACING TO FRONT TRANSITION



RETAINING WALL BRIDGE OF SEWER DETAIL

TYPE 1

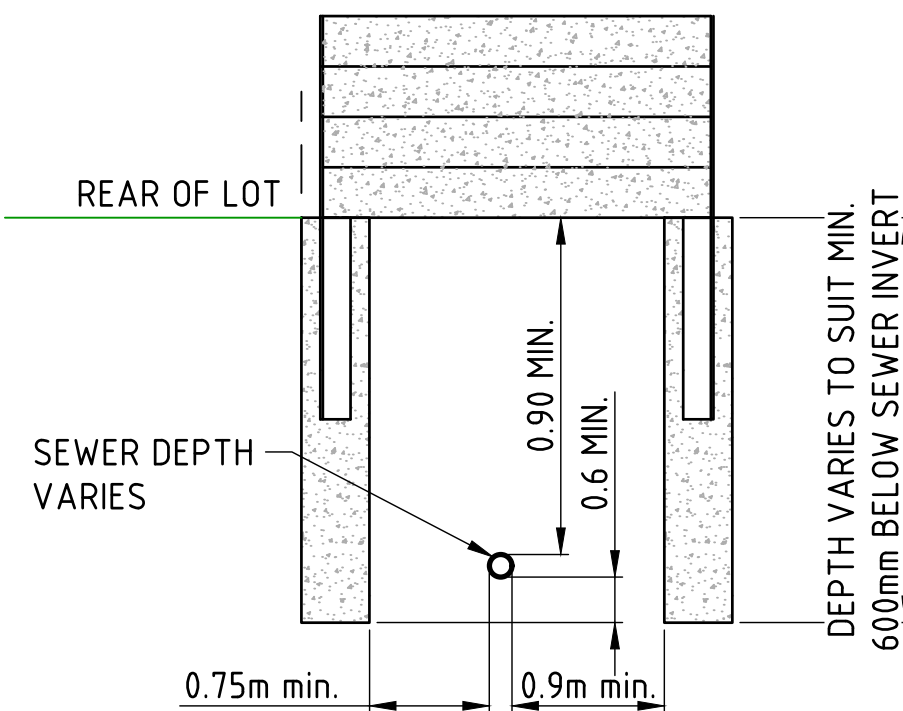
SCALE N.T.S



RETAINING WALL BRIDGE OF SEWER DETAIL

TYPE 2

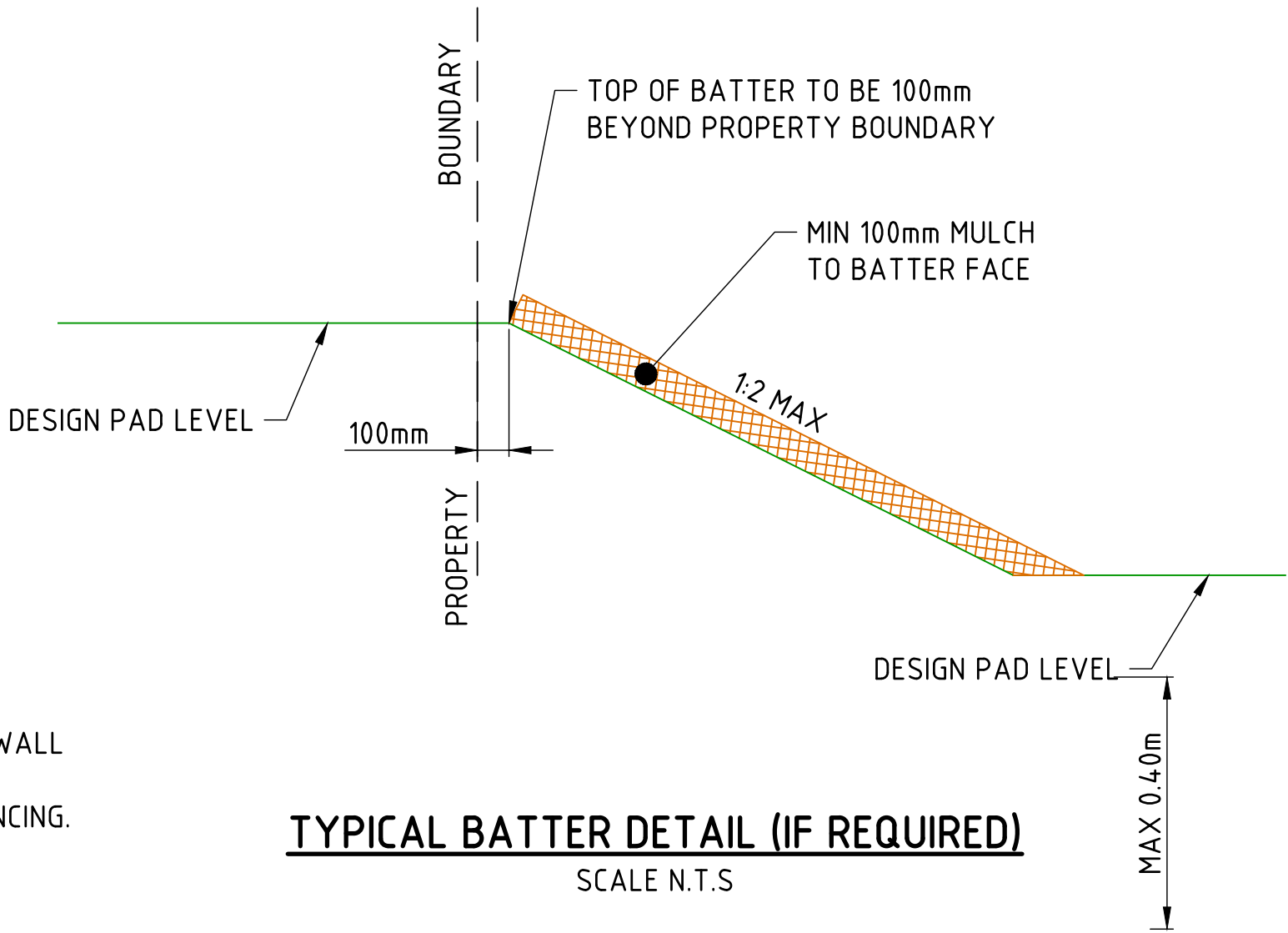
SCALE N.T.S



RETAINING WALL BRIDGE OF SEWER DETAIL

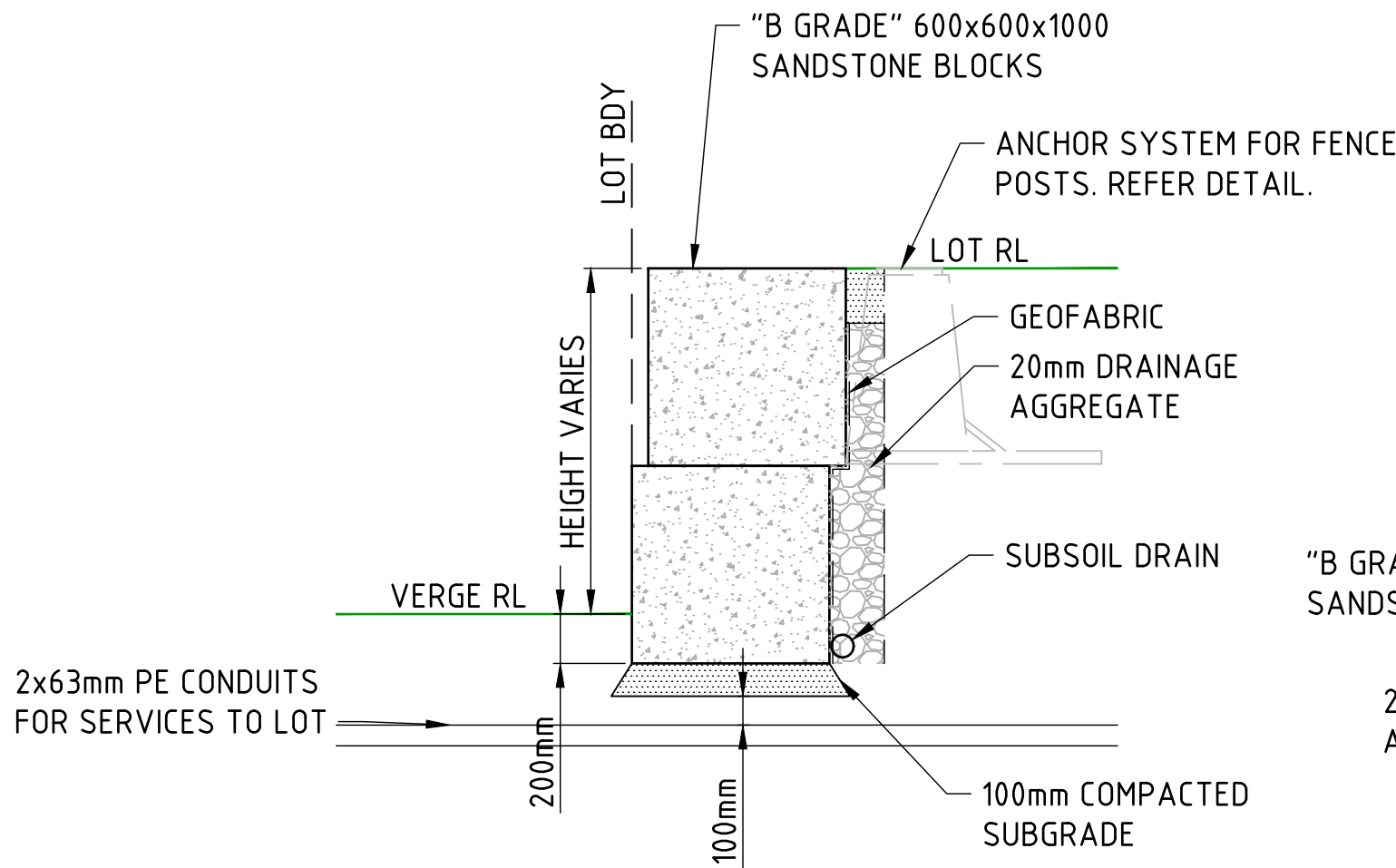
TYPE 3

SCALE N.T.S



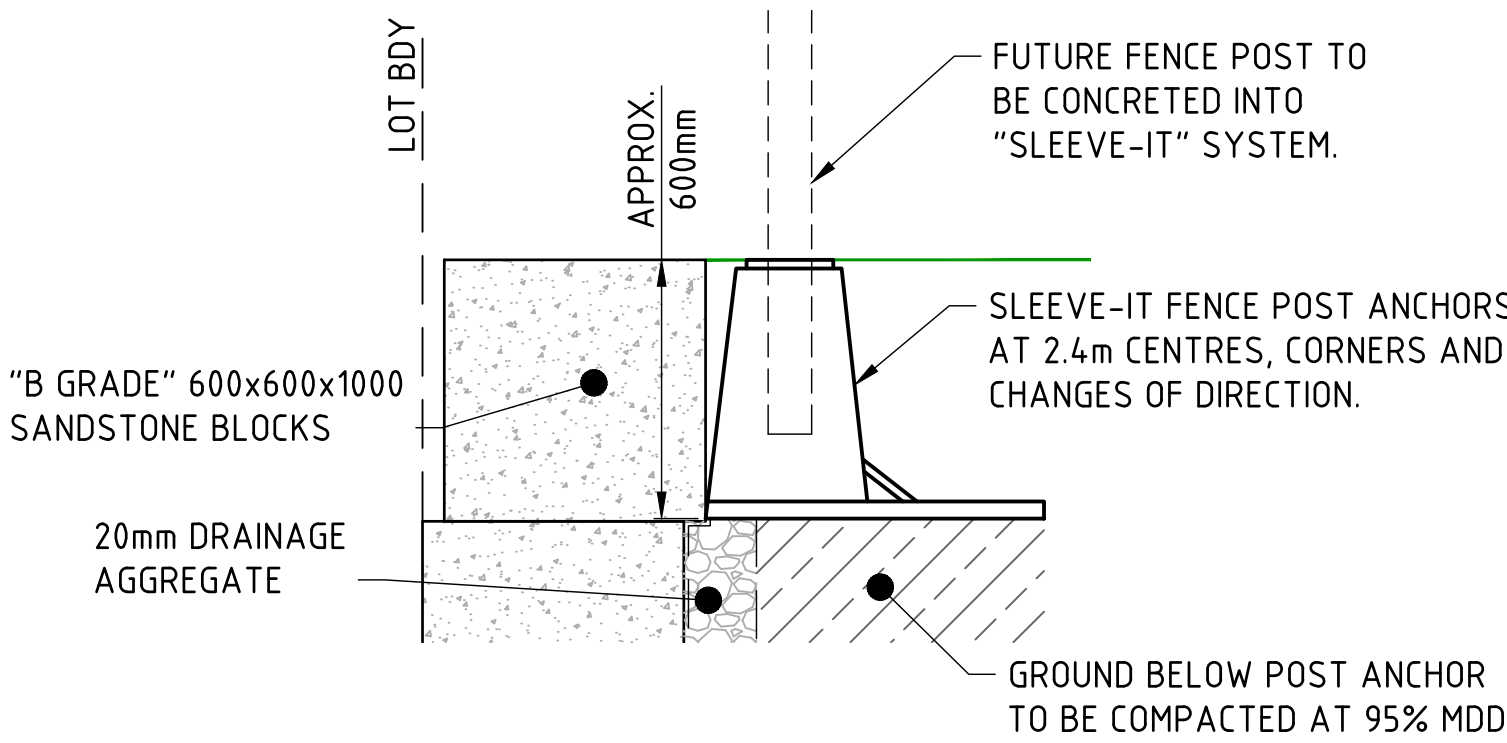
TYPICAL BATTER DETAIL (IF REQUIRED)

SCALE N.T.S



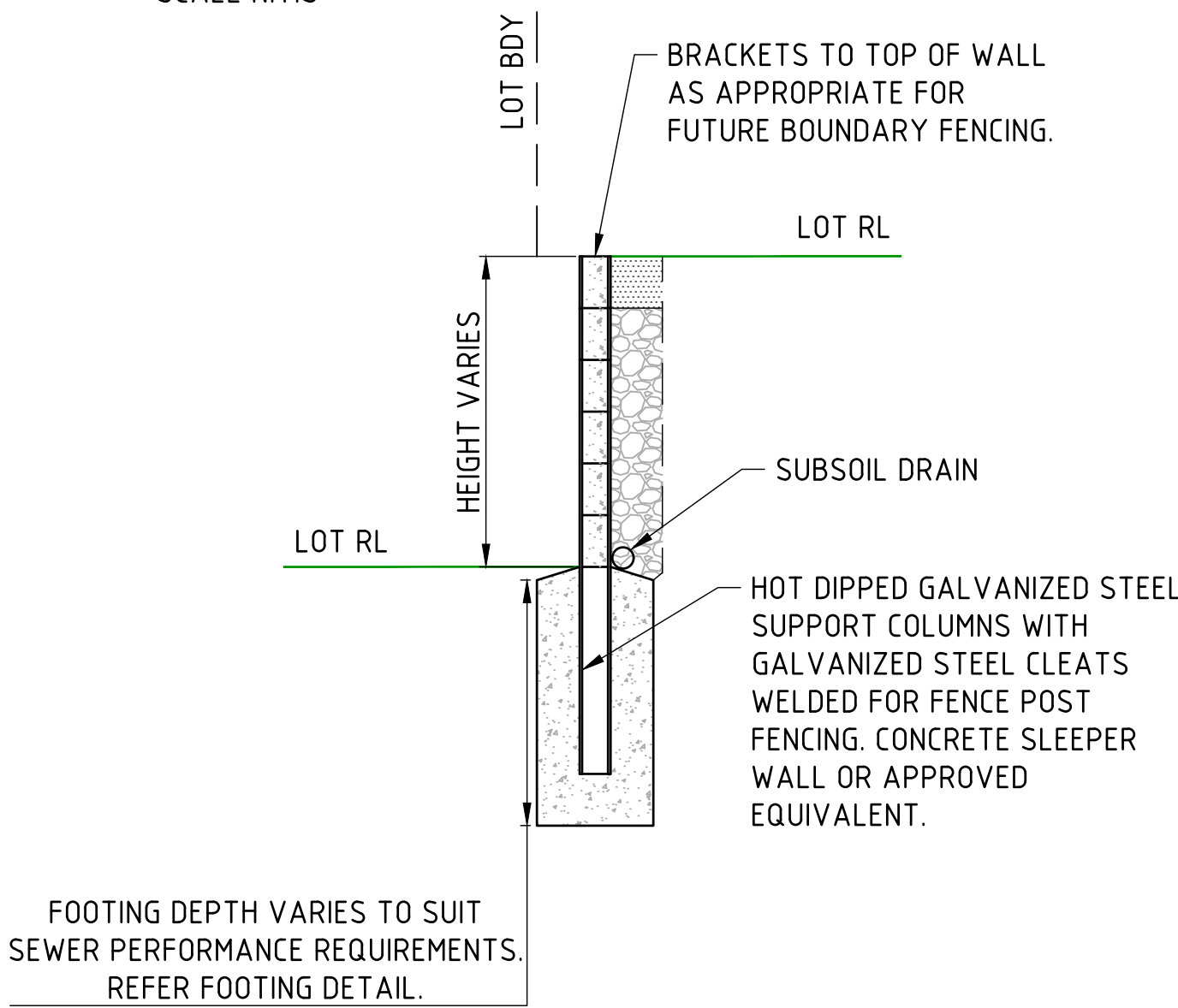
SANDSTONE BLOCK WALL AND SERVICE CONDUIT DETAIL

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 CONSTRUCTION



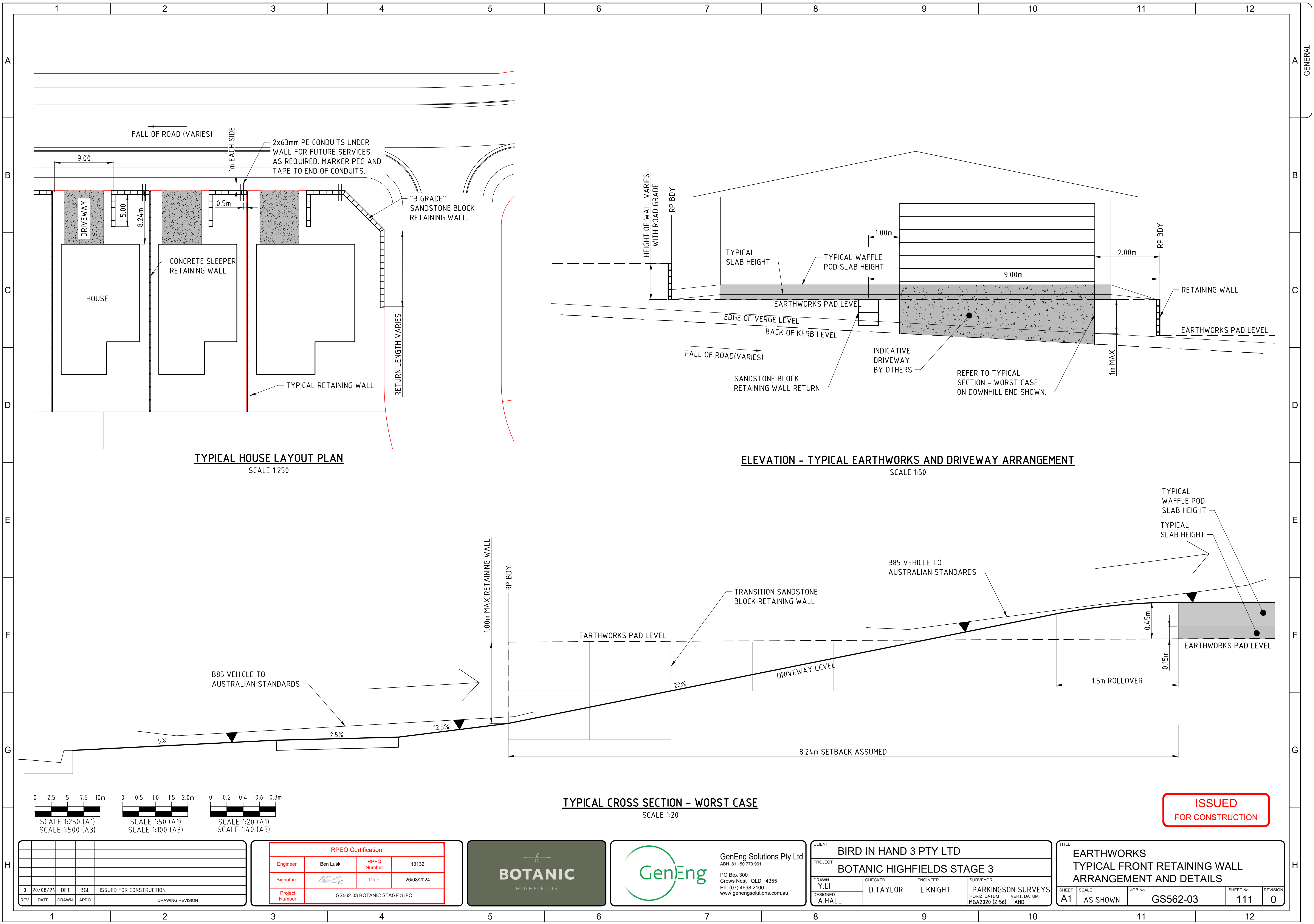
REV	DATE	DRAWN	APPD	DRAWING REVISION
1	09/09/24	DET	BGL	DRAFTING FIX
0	20/08/24	DET	BGL	ISSUED FOR CONSTRUCTION

RPEQ Certification			
Engineer	Ben Lusk	RPEQ Number	13132
Signature		Date	26/08/2024
Project Number	GS562-03 BOTANIC STAGE 3 IFC		



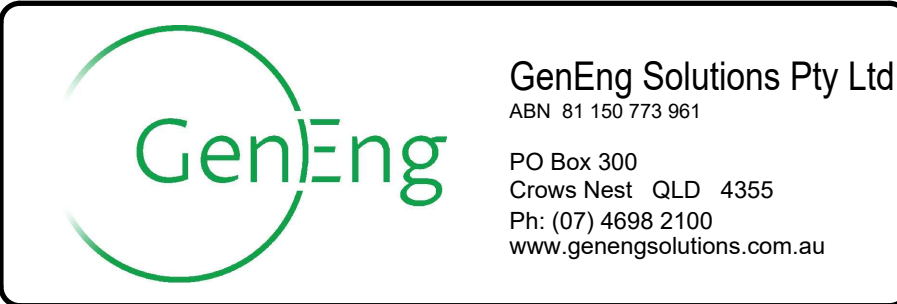
CLIENT BIRD IN HAND 3 PTY LTD			
PROJECT BOTANIC HIGHFIELDS STAGE 3			
DRAWN Y.LI	CHECKED D.TAYLOR	ENGINEER L.KNIGHT	SURVEYOR PARKINSON SURVEYS
DESIGNED A.HALL			HORIZ. DATUM MGA2020 (Z 56)
			VERT. DATUM AHD

TITLE EARTHWORKS TYPICAL RETAINING WALL AND BATTER DETAILS			
SHEET A1	SCALE AS SHOWN	JOB No GS562-03	SHEET No 110
			REVISION 1



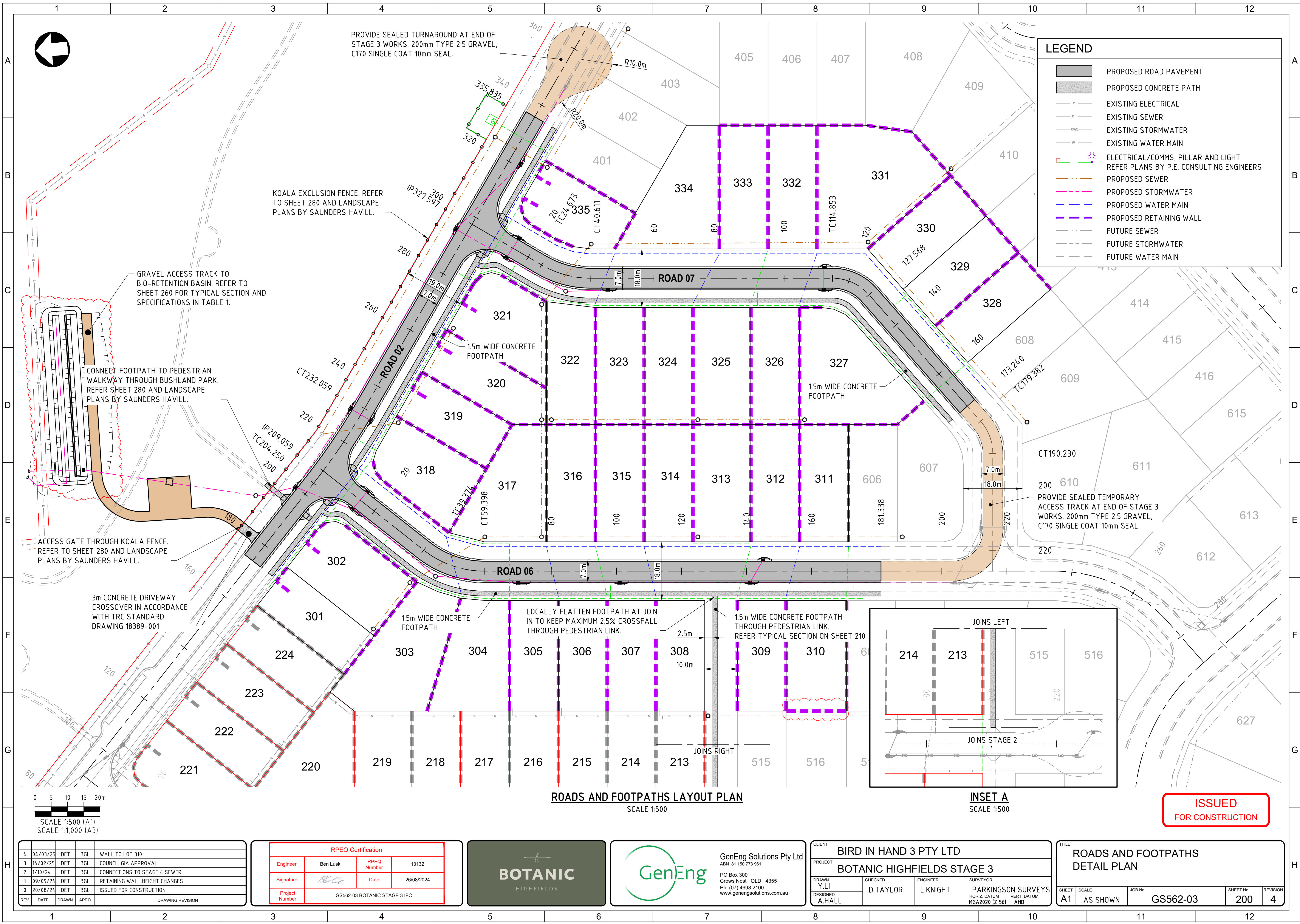
0	20/08/24	DET	BGL	ISSUED FOR CONSTRUCTION	
REV.	DATE	DRAWN	APPD	DRAWING REVISION	

RPEQ Certification			
Engineer	Ben Lusk	RPEQ Number	13132
Signature	<i>Ben Lusk</i>	Date	26/08/2024
Project Number	GS562-03 BOTANIC STAGE 3 IFC		



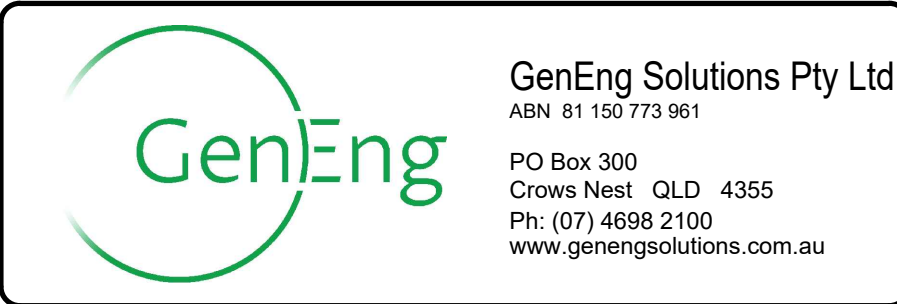
CLIENT BIRD IN HAND 3 PTY LTD			
PROJECT BOTANIC HIGHFIELDS STAGE 3			
DRAWN Y.LI	CHECKED D.TAYLOR	ENGINEER L.KNIGHT	SURVEYOR PARKINSON SURVEYS
DESIGNED A.HALL			HORIZ DATUM MGA2020 (2 56) VERT DATUM AHD

TITLE EARTHWORKS TYPICAL FRONT RETAINING WALL ARRANGEMENT AND DETAILS			
SHEET A1	SCALE AS SHOWN	JOB No GS562-03	SHEET No 111
			REVISION 0



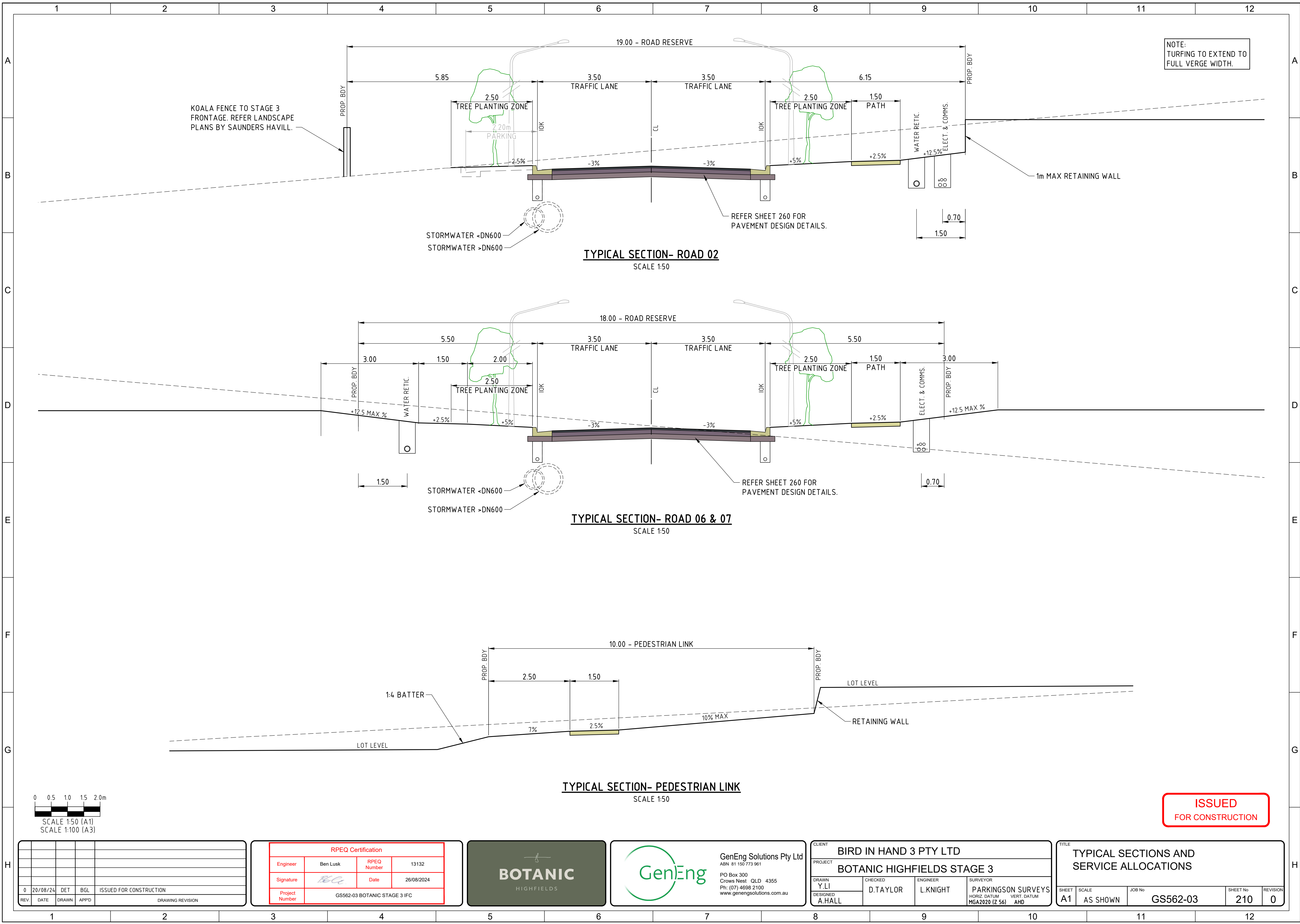
4	04/03/25	DET	BGL	WALL TO LOT 310
3	14/02/25	DET	BGL	COUNCIL GIA APPROVAL
2	1/10/24	DET	BGL	CONNECTIONS TO STAGE 4 SEWER
1	09/09/24	DET	BGL	RETAINING WALL HEIGHT CHANGES
0	20/08/24	DET	BGL	ISSUED FOR CONSTRUCTION
REV.	DATE	DRAWN	APPD	DRAWING REVISION

RPEQ Certification			
Engineer	Ben Lusk	RPEQ Number	13132
Signature		Date	26/08/2024
Project Number	GS562-03 BOTANIC STAGE 3 IFC		



CLIENT BIRD IN HAND 3 PTY LTD			
PROJECT BOTANIC HIGHFIELDS STAGE 3			
DRAWN Y.LI	CHECKED D.TAYLOR	ENGINEER L.KNIGHT	SURVEYOR PARKINSON SURVEYS
DESIGNED A.HALL			HORIZ DATUM MGA2020 (2 56) VERT DATUM AHD

TITLE ROADS AND FOOTPATHS DETAIL PLAN			
SHEET A1	SCALE AS SHOWN	JOB No GS562-03	SHEET No 200
			REVISION 4



0	20/08/24	DET	BGL	ISSUED FOR CONSTRUCTION
REV.	DATE	DRAWN	APPD	DRAWING REVISION

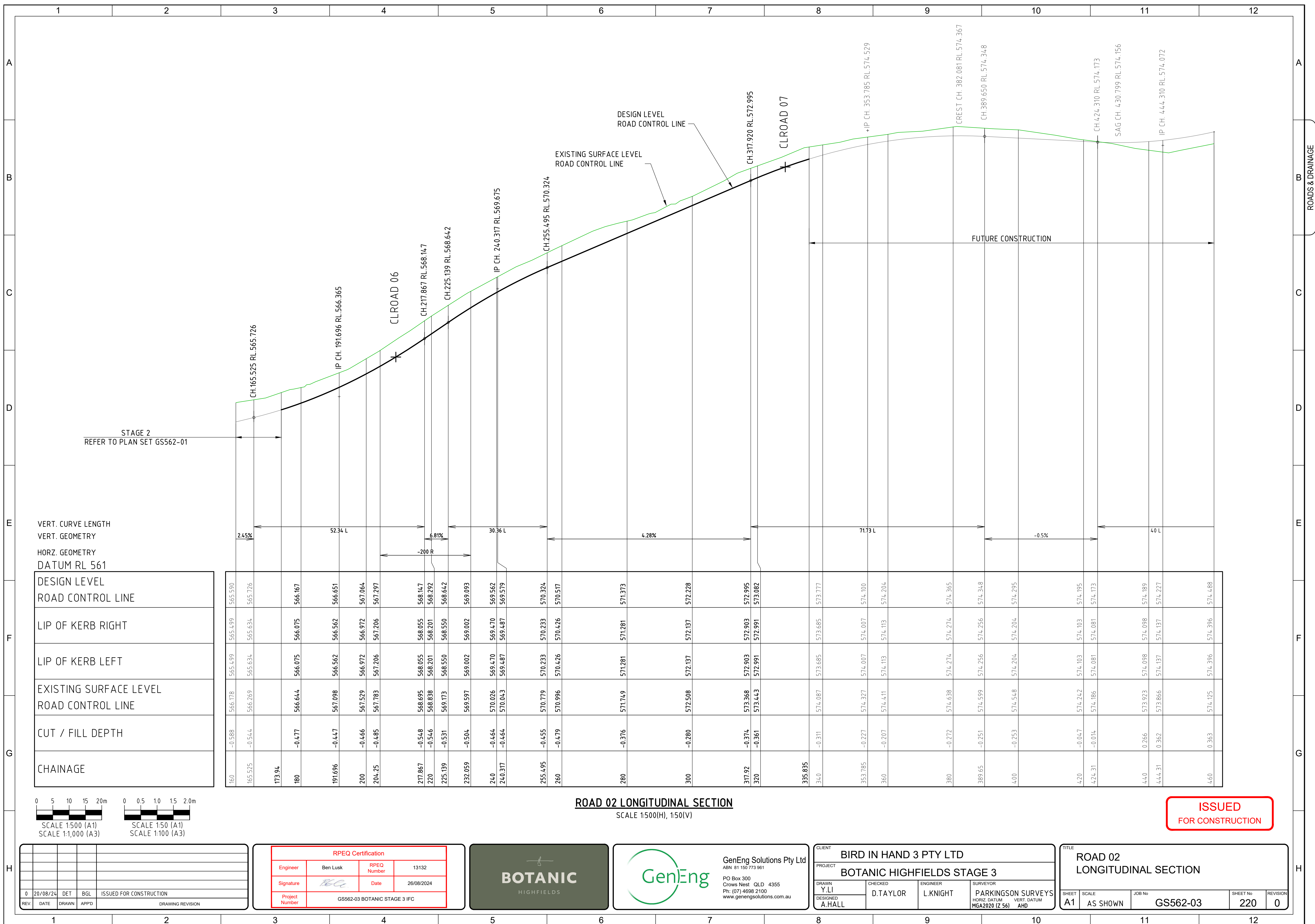
RPEQ Certification			
Engineer	Ben Lusk	RPEQ Number	13132
Signature	<i>BGL</i>	Date	26/08/2024
Project Number	GS562-03 BOTANIC STAGE 3 IFC		

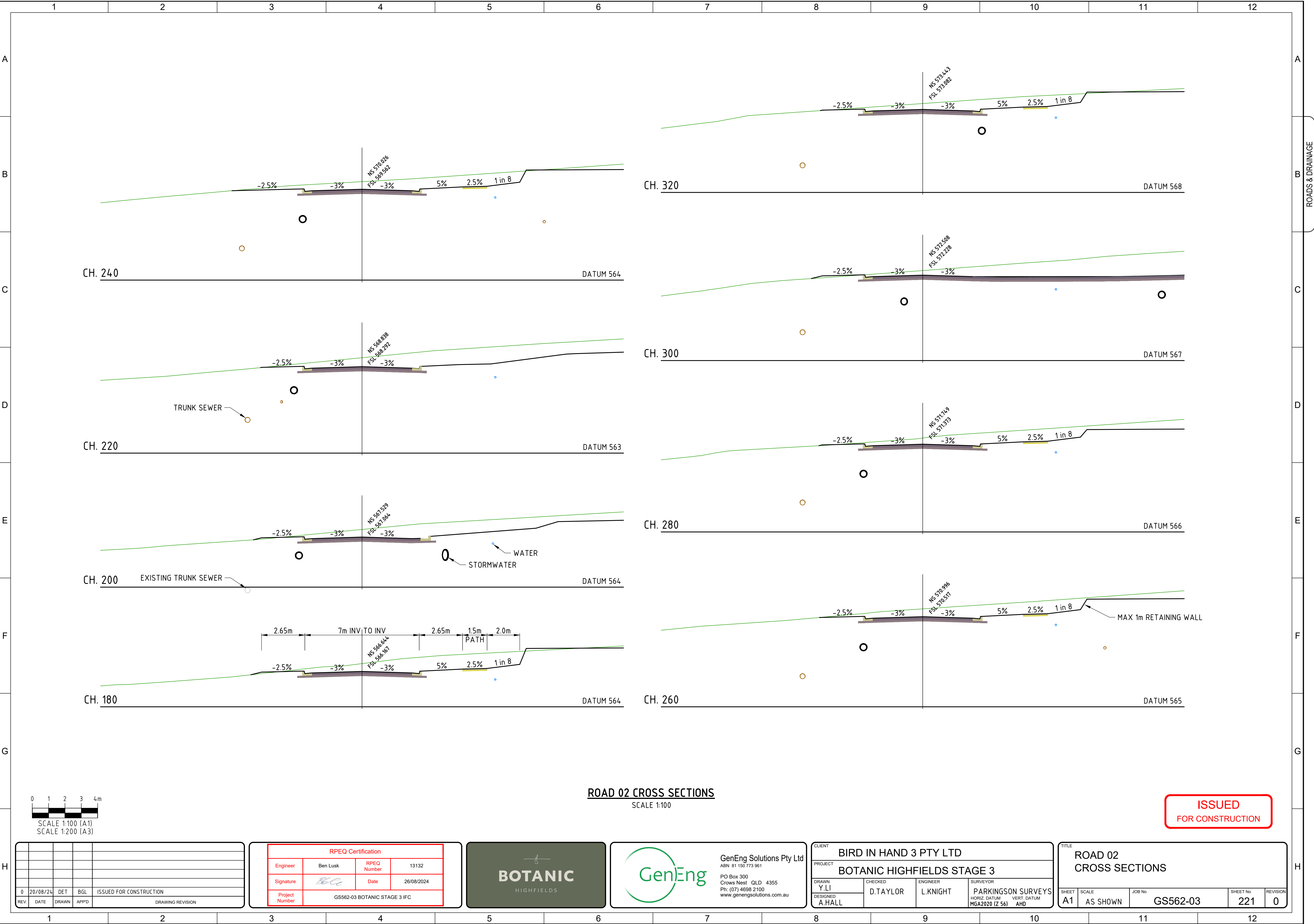


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ABN 81 150 773 961
PO Box 300
Crow's Nest QLD 4355
Ph: (07) 4698 2100
www.genengsolutions.com.au

CLIENT BIRD IN HAND 3 PTY LTD			
PROJECT BOTANIC HIGHFIELDS STAGE 3			
DRAWN Y.LI	CHECKED D.TAYLOR	ENGINEER L.KNIGHT	SURVEYOR PARKINSON SURVEYS
DESIGNED A.HALL			HORIZ DATUM MGA2020 (2 56) VERT DATUM AHD

TITLE TYPICAL SECTIONS AND SERVICE ALLOCATIONS				
SHEET A1	SCALE AS SHOWN	JOB No GS562-03	SHEET No 210	REVISION 0





ROAD 02 CROSS SECTIONS
SCALE 1:100

ISSUED
FOR CONSTRUCTION

0	20/08/24	DET	BGL	ISSUED FOR CONSTRUCTION
REV.	DATE	DRAWN	APPD	DRAWING REVISION

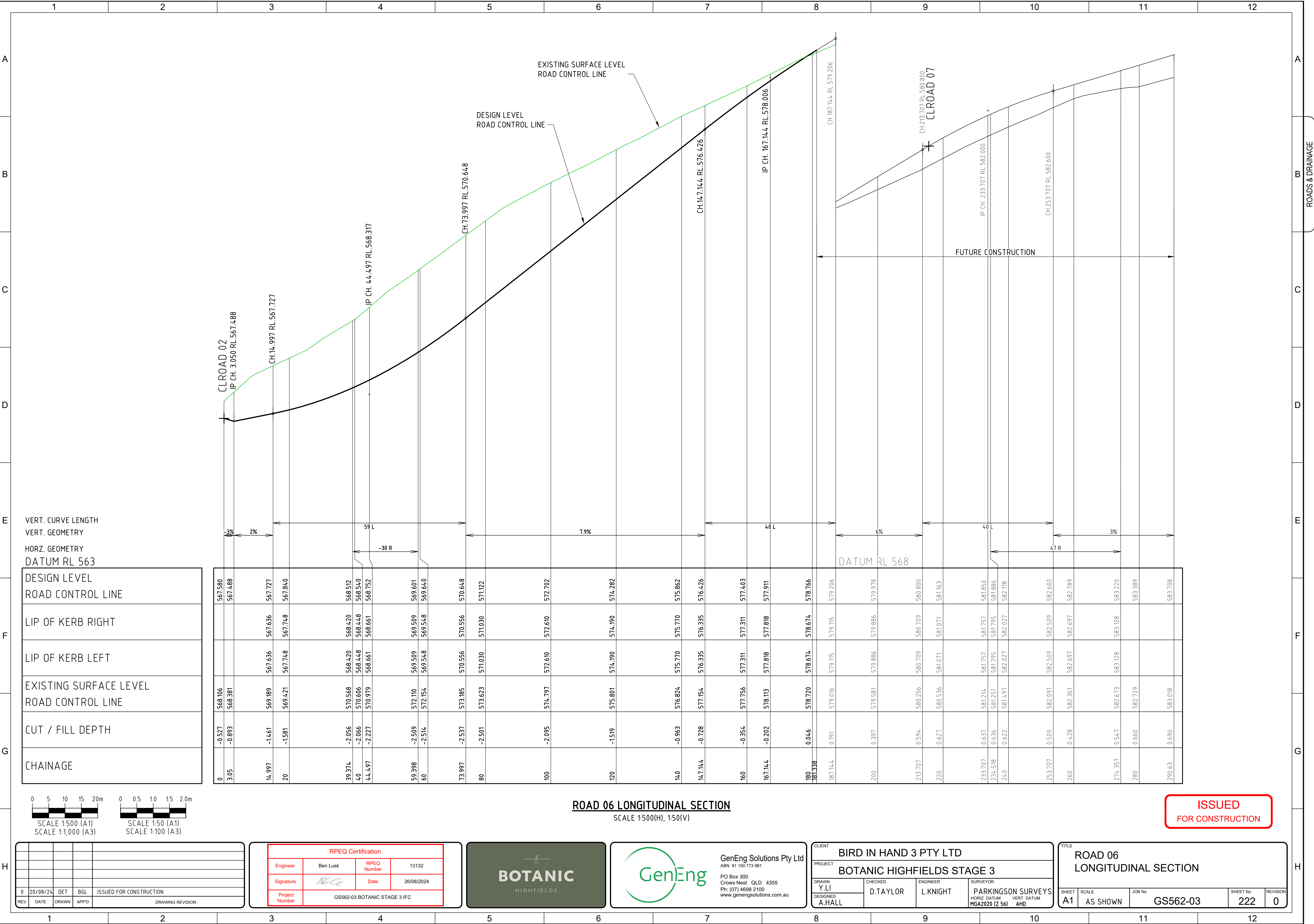
RPEQ Certification			
Engineer	Ben Lusk	RPEQ Number	13132
Signature	<i>BCL</i>	Date	26/08/2024
Project Number	GS562-03 BOTANIC STAGE 3 IFC		

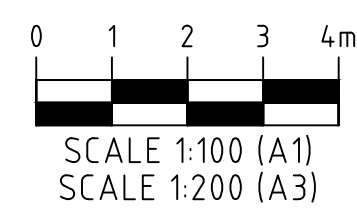
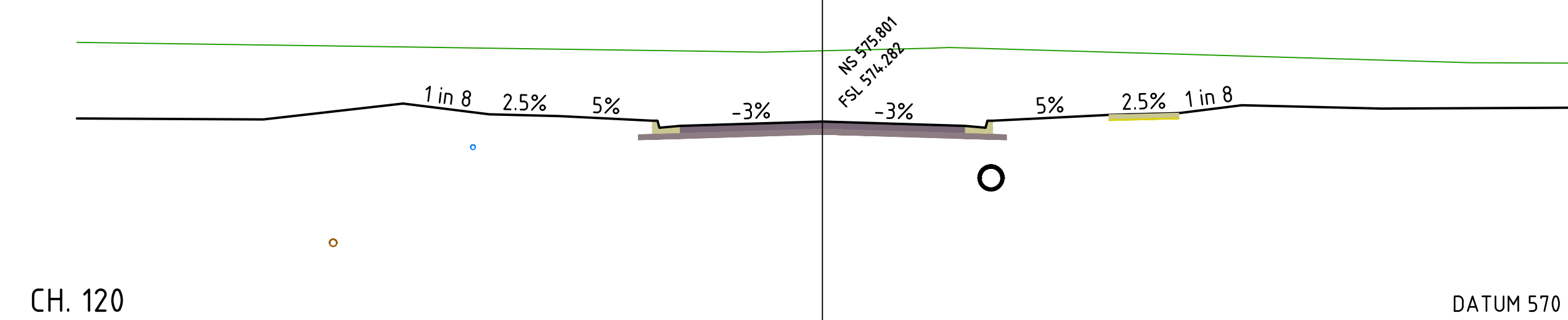
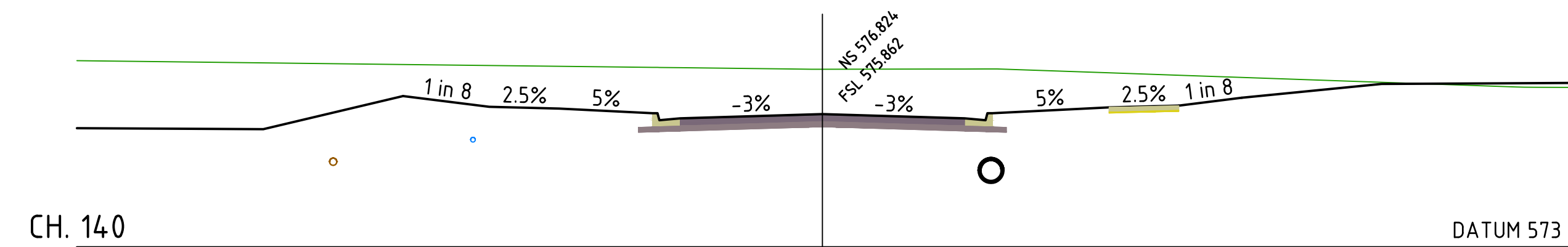
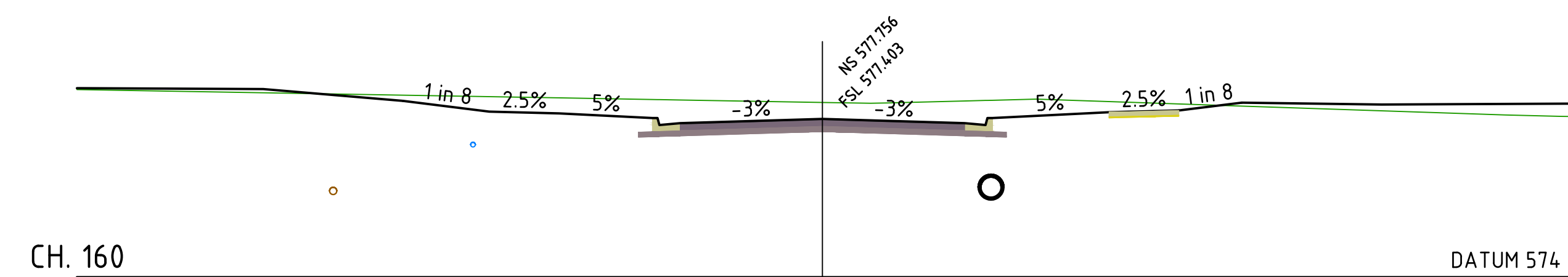
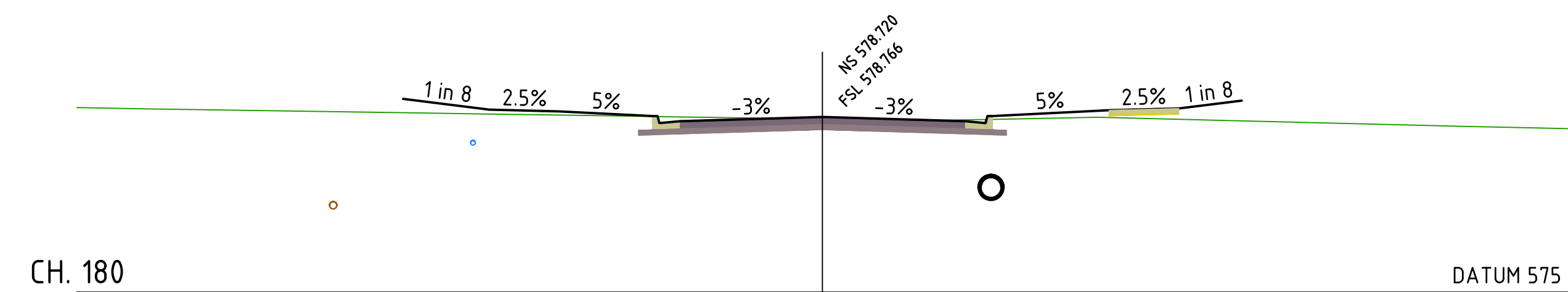
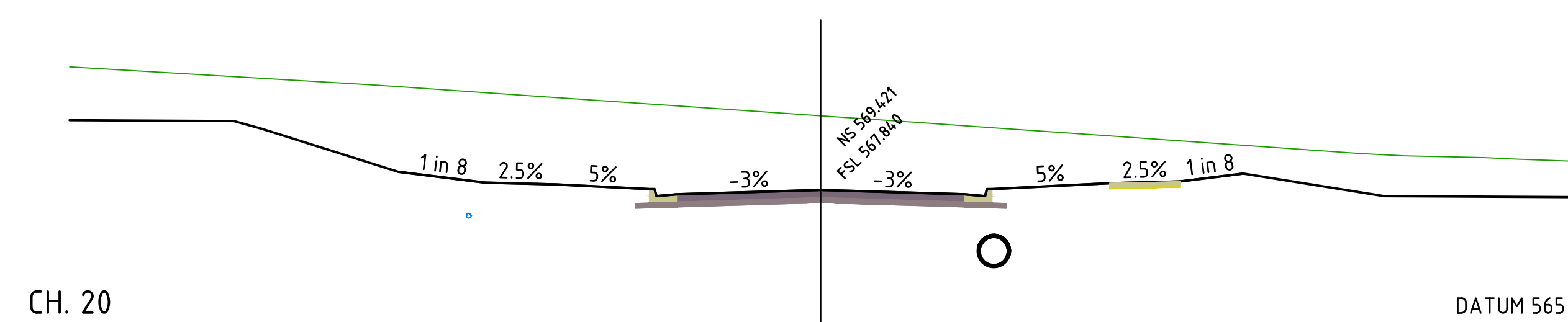
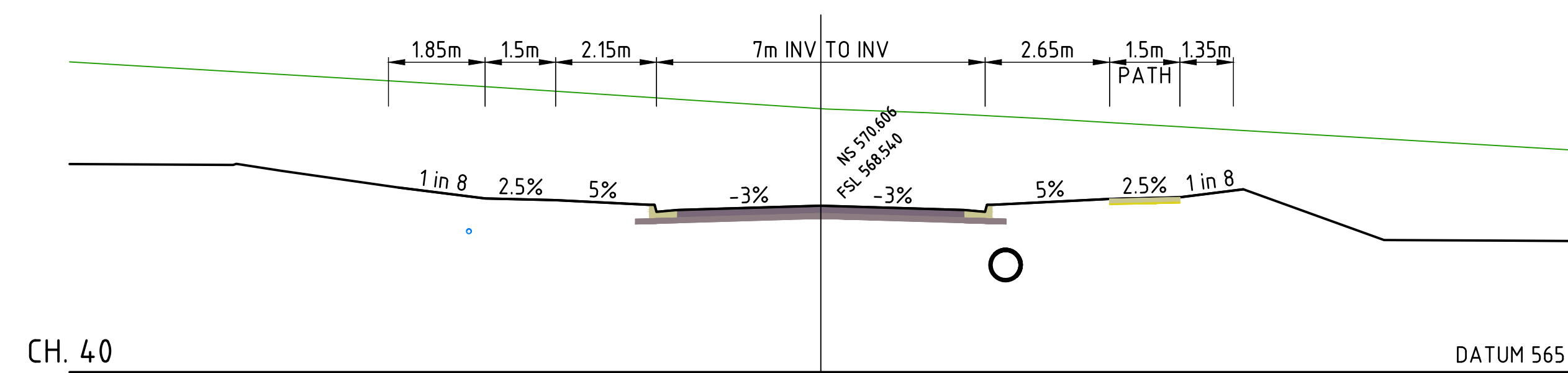
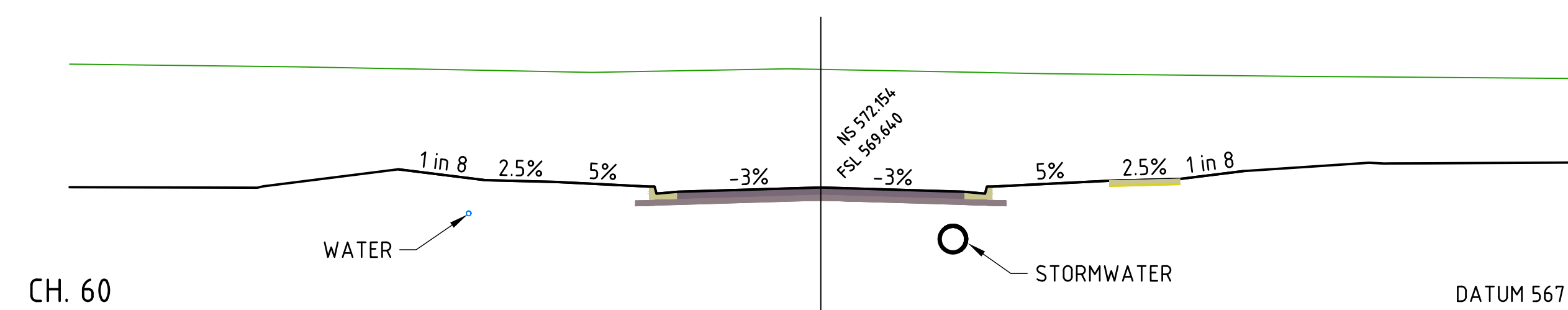
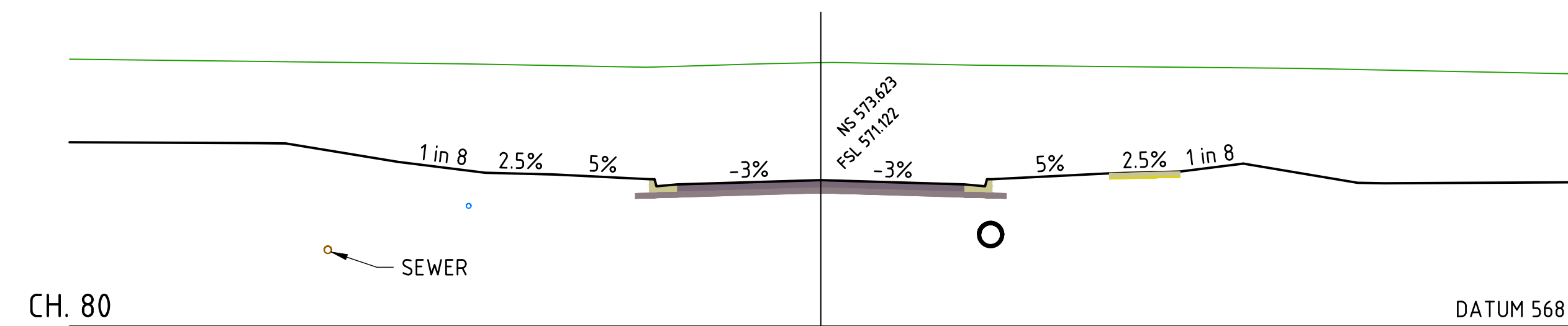
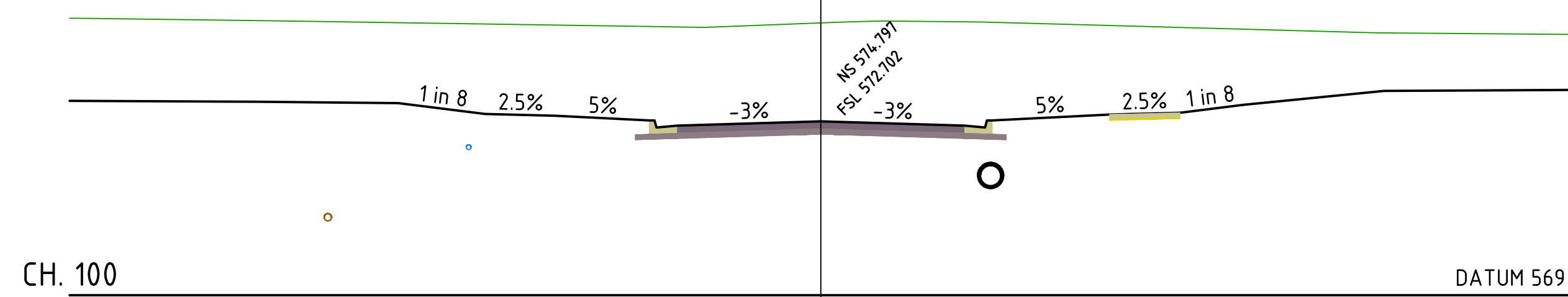


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CLIENT BIRD IN HAND 3 PTY LTD			
PROJECT BOTANIC HIGHFIELDS STAGE 3			
DRAWN Y.LI	CHECKED D.TAYLOR	ENGINEER L.KNIGHT	SURVEYOR PARKINSON SURVEYS
DESIGNED A.HALL			HORIZ DATUM MGA2020 (2 56) VERT DATUM AHD

TITLE ROAD 02 CROSS SECTIONS				
SHEET A1	SCALE AS SHOWN	JOB No GS562-03	SHEET No 221	REVISION 0





ROAD 06 CROSS SECTIONS

SCALE 1:100

ISSUED
FOR CONSTRUCTION

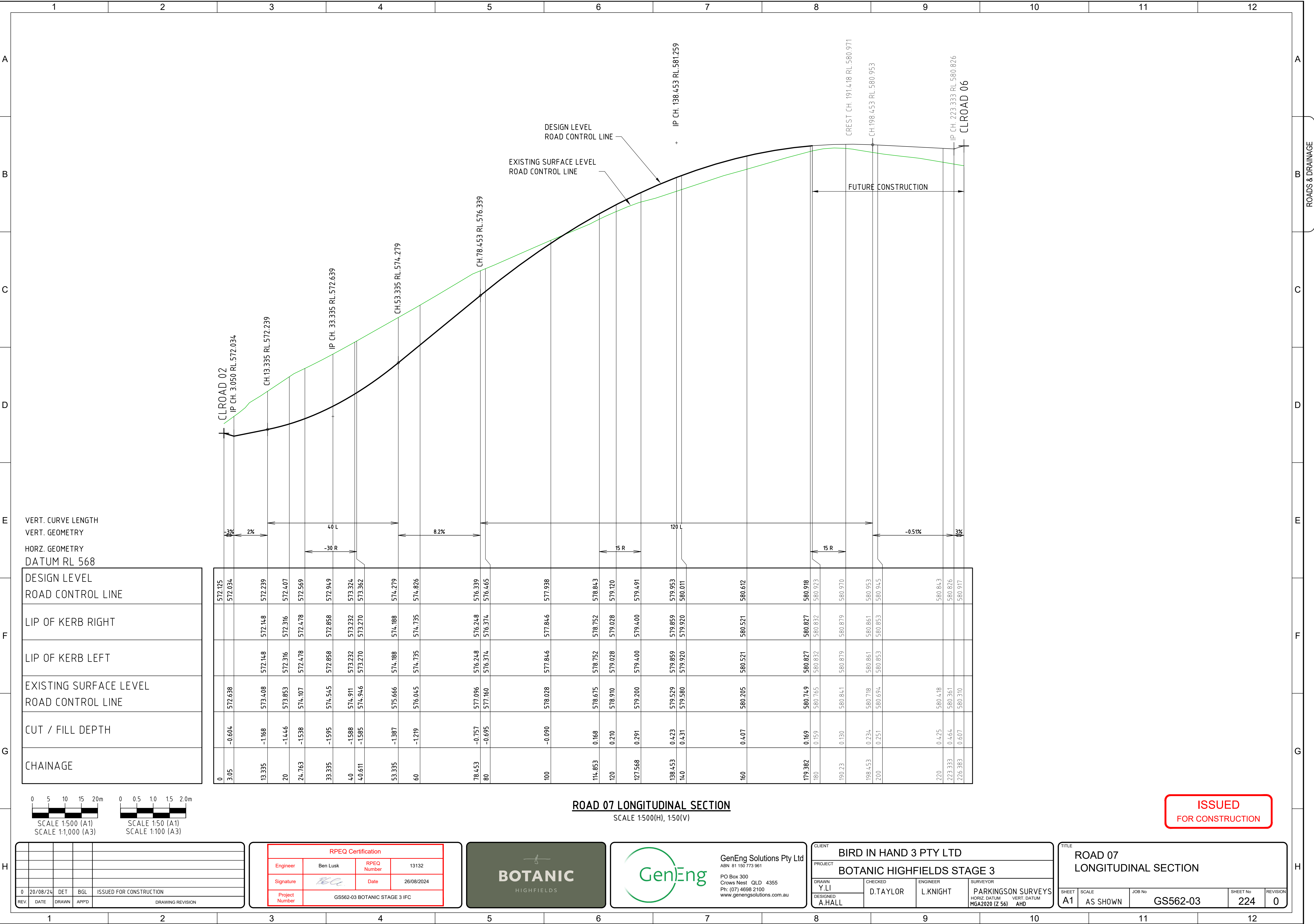
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REV.	DATE	DRAWN	APPD	DRAWING REVISION	

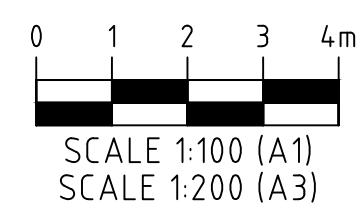
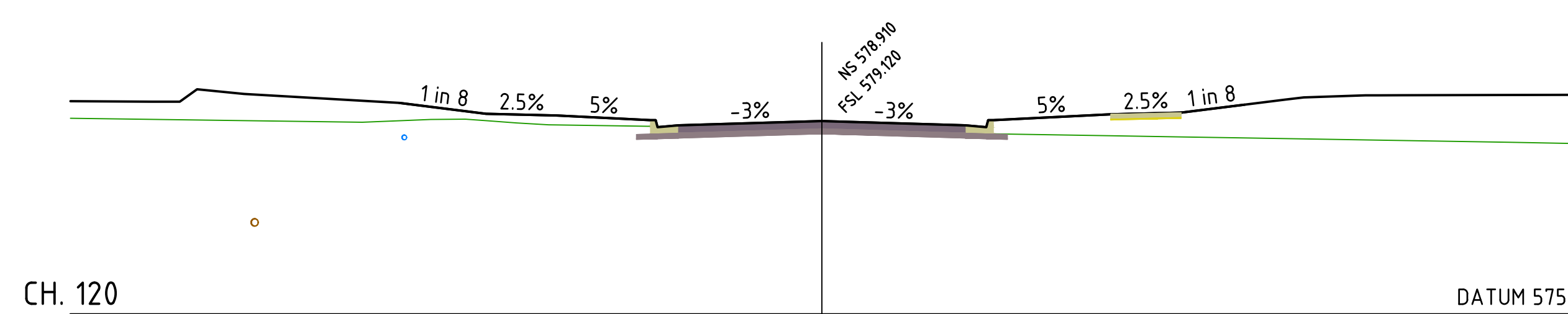
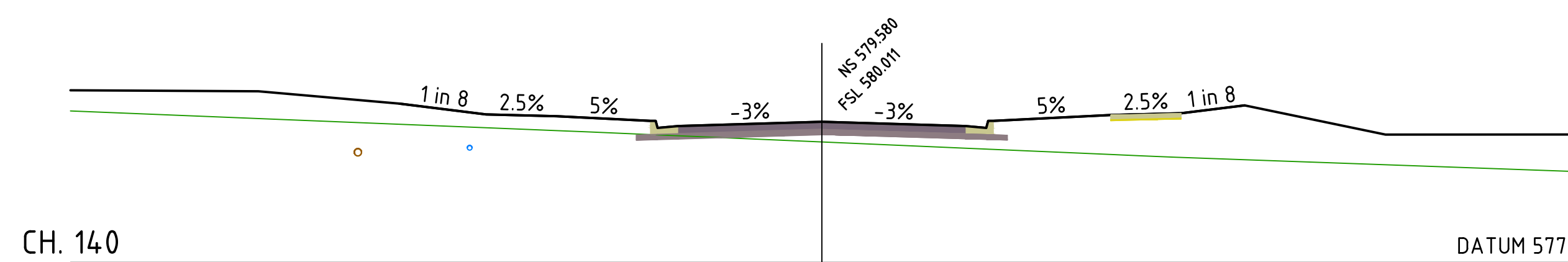
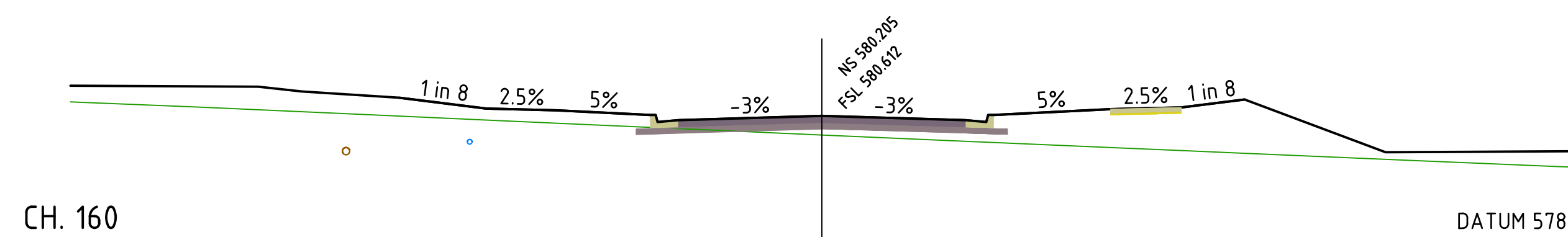
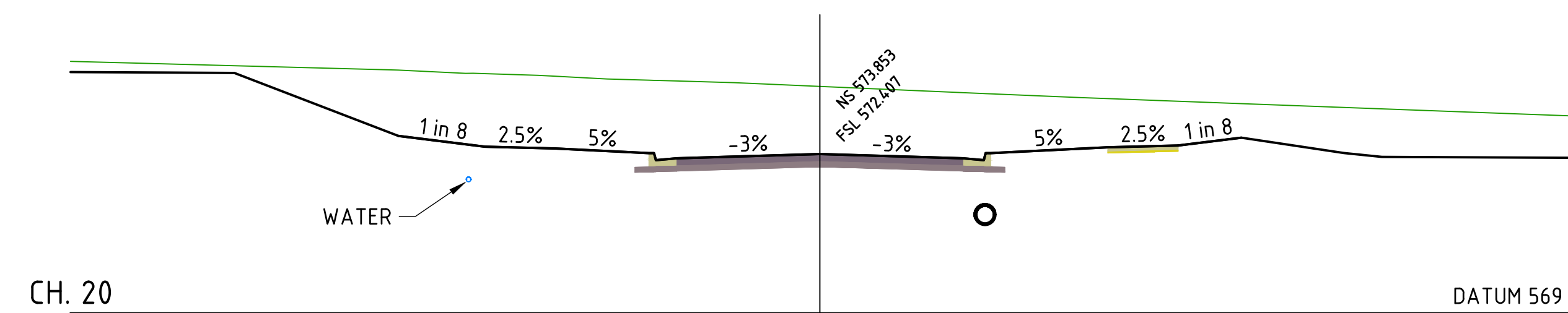
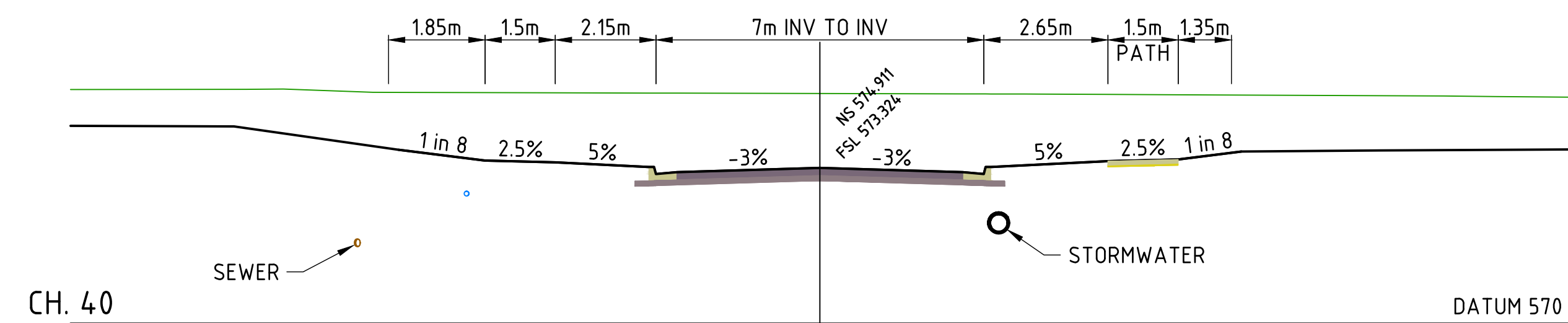
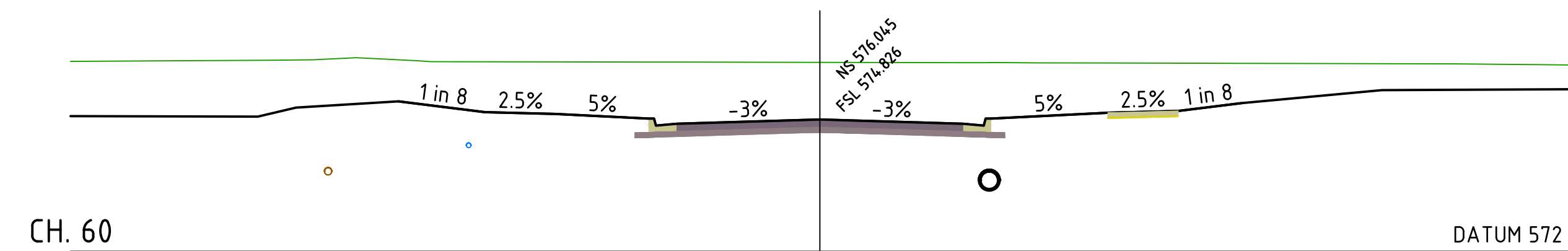
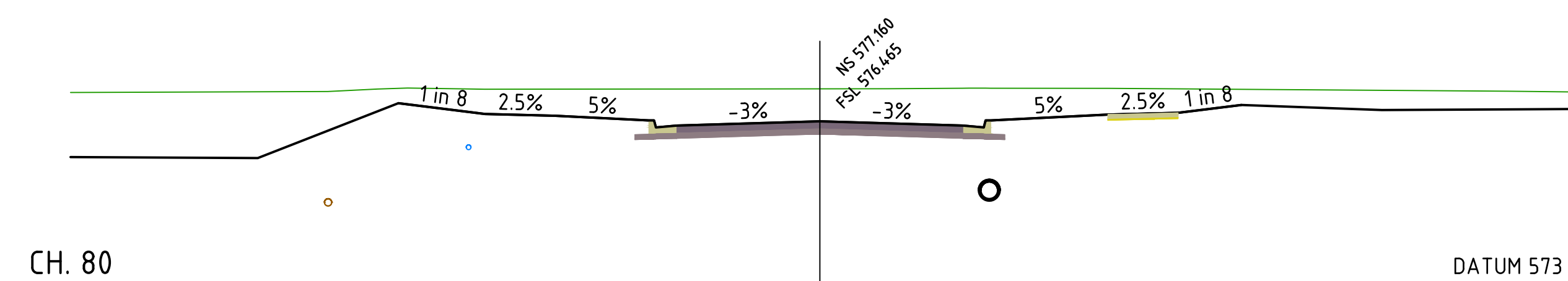
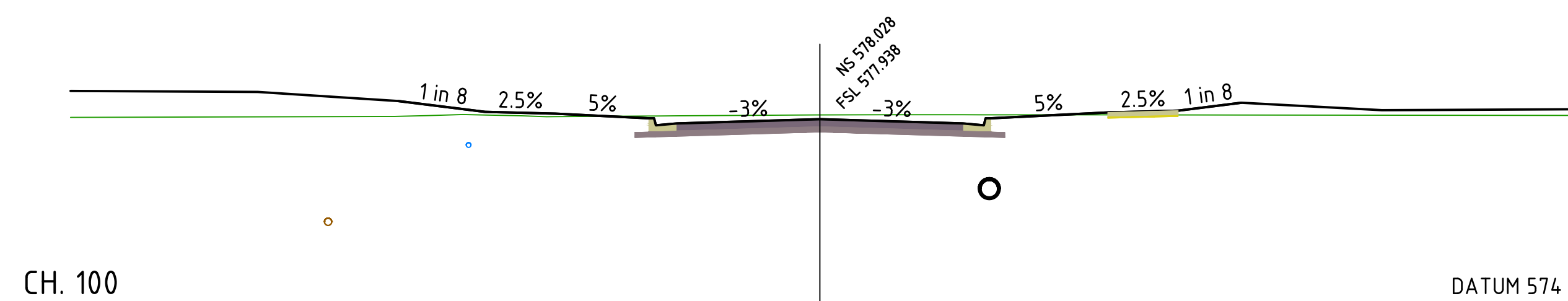
RPEQ Certification			
Engineer	Ben Lusk	RPEQ Number	13132
Signature		Date	26/08/2024
Project Number	GS562-03 BOTANIC STAGE 3 IFC		



CLIENT			
BIRD IN HAND 3 PTY LTD			
PROJECT			
BOTANIC HIGHFIELDS STAGE 3			
DRAWN Y.LI	CHECKED D.TAYLOR	ENGINEER L.KNIGHT	SURVEYOR PARKINSON SURVEY HOBART MGA2020 (Z,56) AHD
DESIGNED A.HALL			

TITLE				
ROAD 06 CROSS SECTIONS				
SHEET	SCALE	JOB No	SHEET No	REVISION
A1	AS SHOWN	GS562-03	223	0





ROAD 07 CROSS SECTIONS

SCALE 1:100

ISSUED
FOR CONSTRUCTION

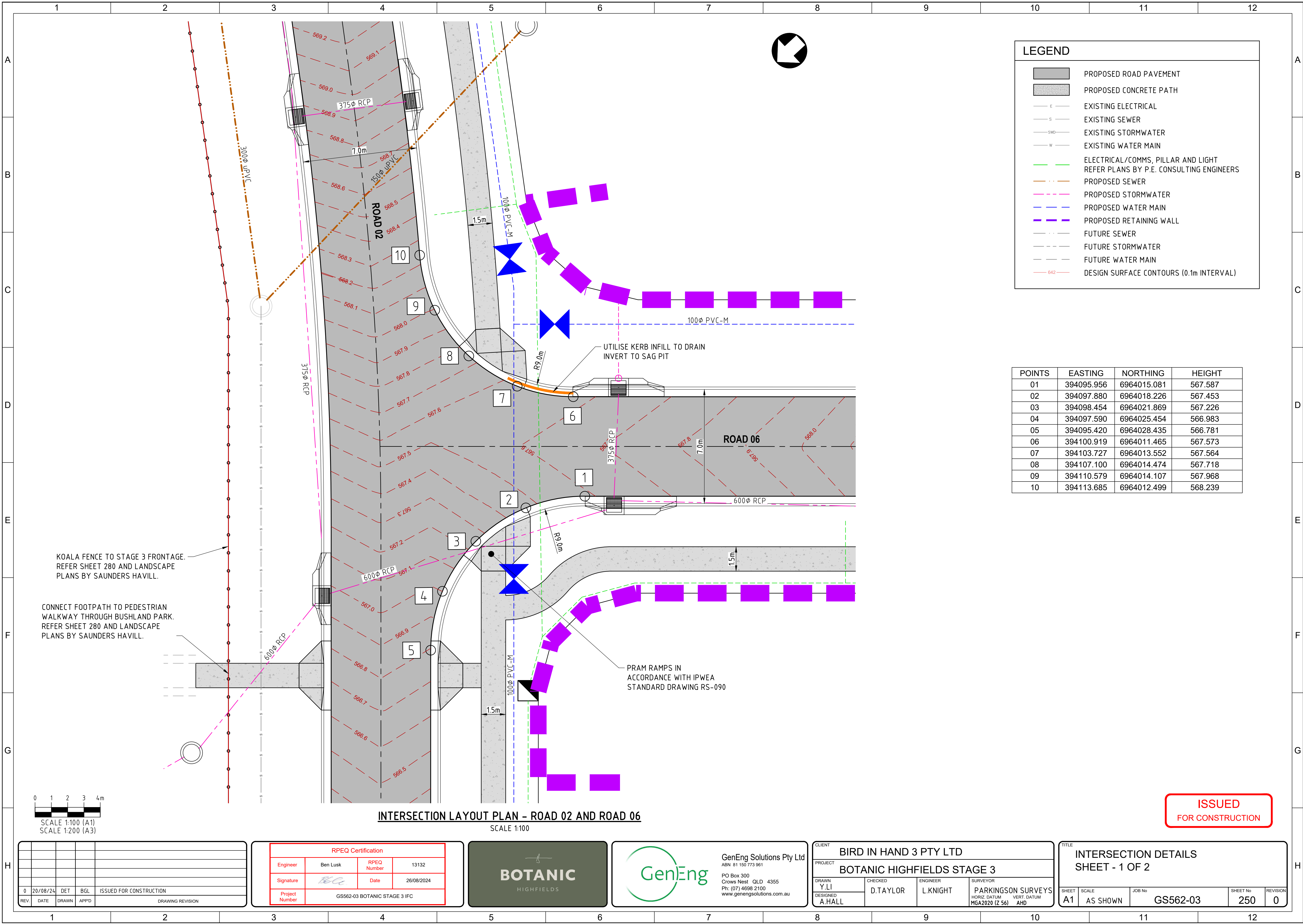
0	20/08/24	DET	BGL	ISSUED FOR CONSTRUCTION	
REV.	DATE	DRAWN	APPD	DRAWING REVISION	

RPEQ Certification			
Engineer	Ben Lusk	RPEQ Number	13132
Signature		Date	26/08/2024
Project Number	GS562-03 BOTANIC STAGE 3 IFC		



CLIENT				BIRD IN HAND 3 PTY LTD			
PROJECT				BOTANIC HIGHFIELDS STAGE 3			
DRAWN Y. LI		CHECKED D. TAYLOR		ENGINEER L. KNIGHT		SURVEYOR PARKINSON SURVEY HERB DATUM VERT DATUM MGA2020 (Z.56) AND	
DESIGNED A. HALL							

TITLE				
ROAD 07 CROSS SECTIONS				
SHEET	SCALE	JOB No	SHEET No	REVISION
A1	AS SHOWN	GS562-03	225	0



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
	DESIGN SURFACE CONTOURS (0.1m INTERVAL)

POINTS	EASTING	NORTHING	HEIGHT
01	394095.956	6964015.081	567.587
02	394097.880	6964018.226	567.453
03	394098.454	6964021.869	567.226
04	394097.590	6964025.454	566.983
05	394095.420	6964028.435	566.781
06	394100.919	6964011.465	567.573
07	394103.727	6964013.552	567.564
08	394107.100	6964014.474	567.718
09	394110.579	6964014.107	567.968
10	394113.685	6964012.499	568.239

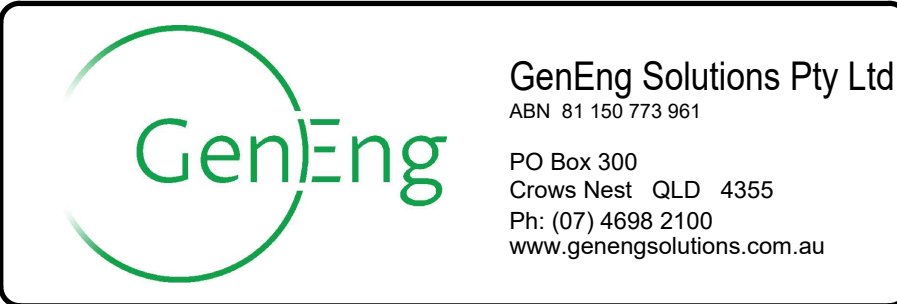
INTERSECTION LAYOUT PLAN - ROAD 02 AND ROAD 06

SCALE 1:100

ISSUED
FOR CONSTRUCTION

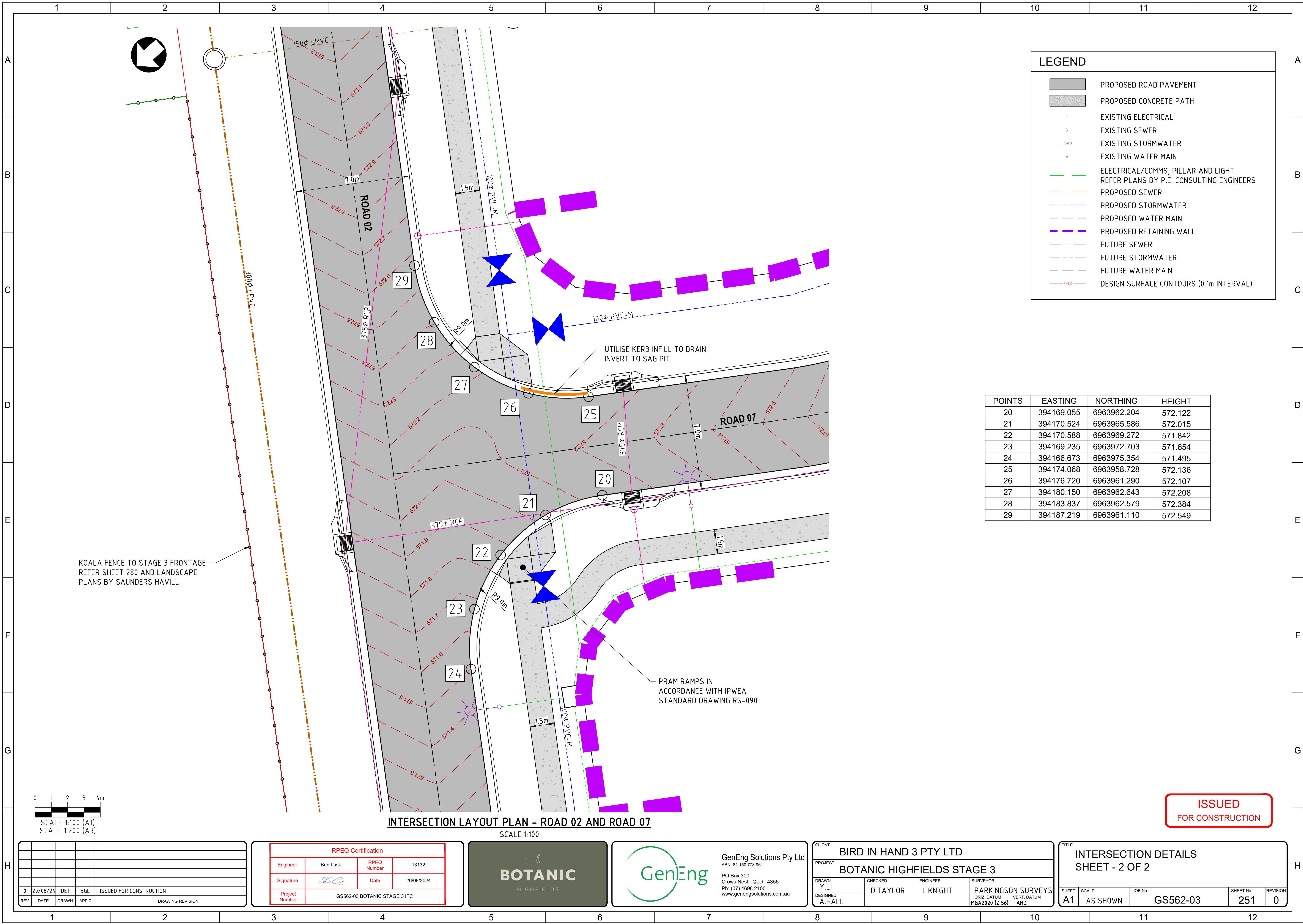
REV.	DATE	DRAWN	APPD	DRAWING REVISION
0	20/08/24	DET	BGL	ISSUED FOR CONSTRUCTION

RPEQ Certification			
Engineer	Ben Lusk	RPEQ Number	13132
Signature		Date	26/08/2024
Project Number	GS562-03 BOTANIC STAGE 3 IFC		



CLIENT BIRD IN HAND 3 PTY LTD			
PROJECT BOTANIC HIGHFIELDS STAGE 3			
DRAWN Y.LI	CHECKED D.TAYLOR	ENGINEER L.KNIGHT	SURVEYOR PARKINSON SURVEYS
DESIGNED A.HALL			VERT. DATUM MGA2020 (2 56) AHD

TITLE INTERSECTION DETAILS SHEET - 1 OF 2				
SHEET A1	SCALE AS SHOWN	JOB No GS562-03	SHEET No 250	REVISION 0



LEGEND

E

S

SWD

W

642

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
DESIGN SURFACE CONTOURS (0.1m INTERVAL)

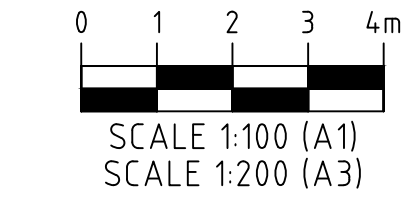
POINTS	EASTING	NORTHING	HEIGHT
20	394169.055	6963962.204	572.122
21	394170.524	6963965.586	572.015
22	394170.588	6963969.272	571.842
23	394169.235	6963972.703	571.654
24	394166.673	6963975.354	571.495
25	394174.068	6963958.728	572.136
26	394176.720	6963961.290	572.107
27	394180.150	6963962.643	572.208
28	394183.837	6963962.579	572.384
29	394187.219	6963961.110	572.549

ISSUED

FOR CONSTRUCTION

INTERSECTION LAYOUT PLAN - ROAD 02 AND ROAD 07

SCALE 1:100



0	20/08/24	DET	BGL	ISSUED FOR CONSTRUCTION
REV.	DATE	DRAWN	APPD	DRAWING REVISION

RPEQ Certification			
Engineer	Ben Lusk	RPEQ Number	13132
Signature		Date	26/08/2024
Project Number	GS562-03 BOTANIC STAGE 3 IFC		

BOTANIC

HIGHFIELDS

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ABN 81 150 773 961

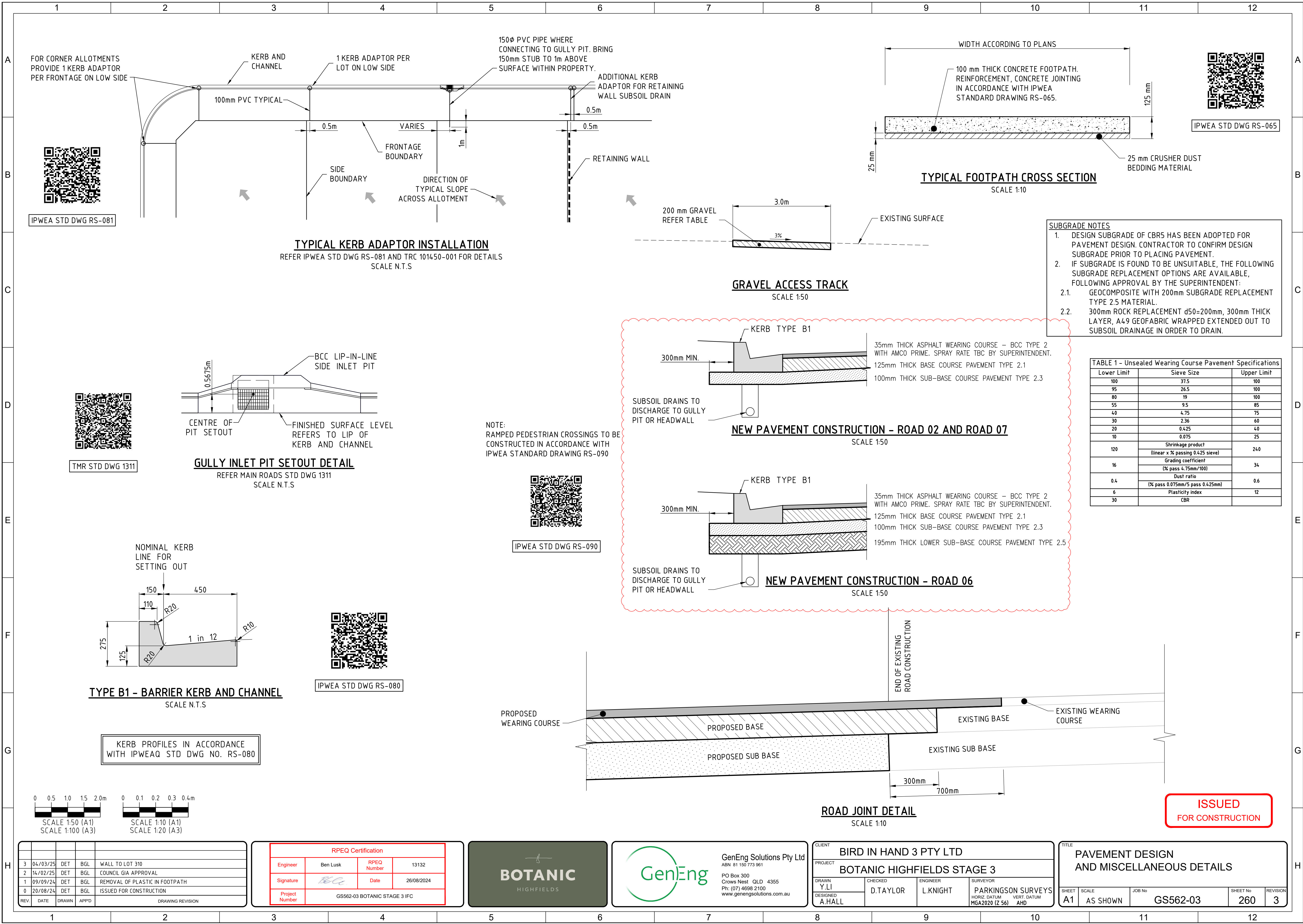
PO Box 300
Crows Nest QLD 4355

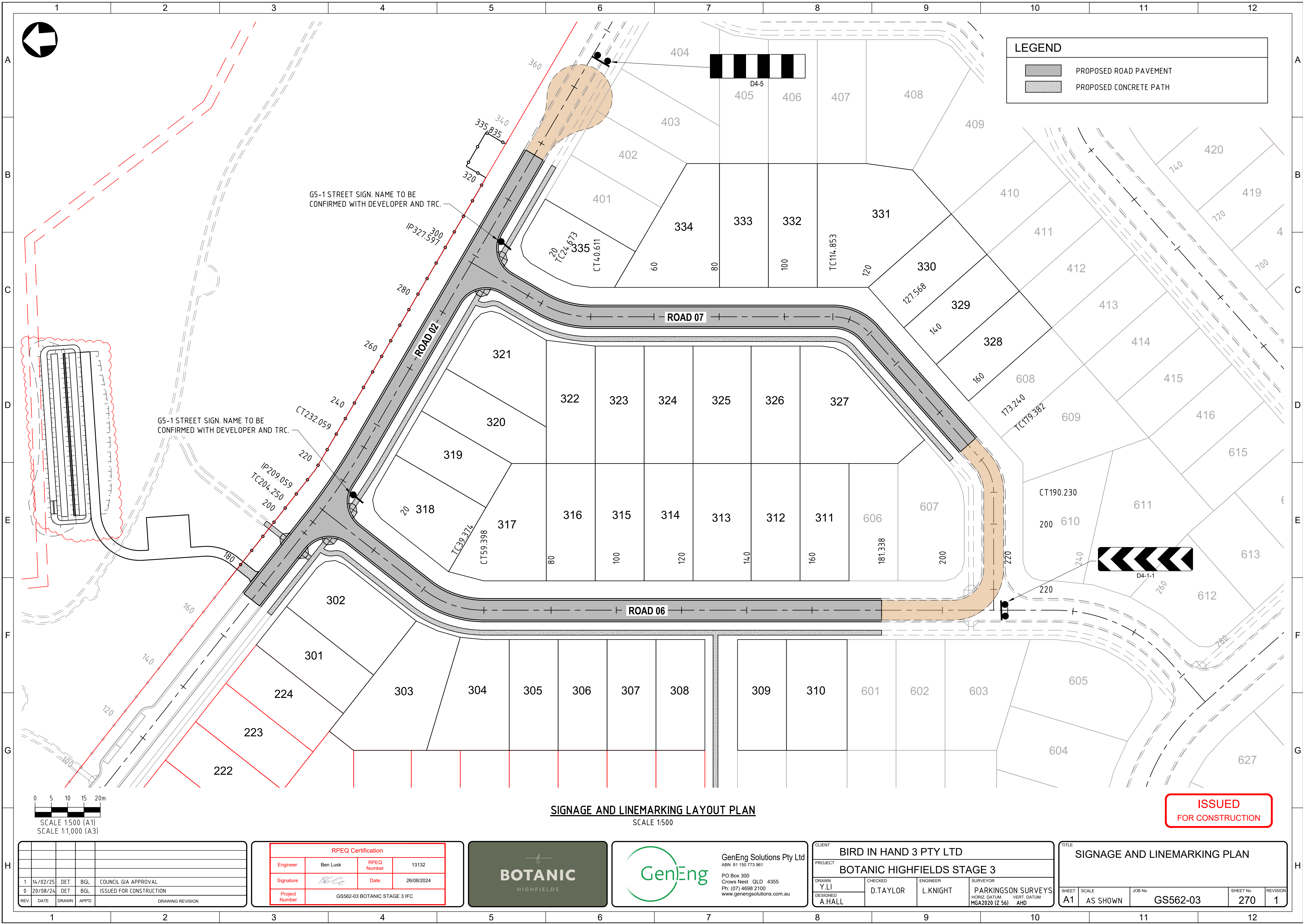
Ph: (07) 4698 2100

www.genengsolutions.com.au

CLIENT BIRD IN HAND 3 PTY LTD			
PROJECT BOTANIC HIGHFIELDS STAGE 3			
DRAWN Y.LI	CHECKED D.TAYLOR	ENGINEER L.KNIGHT	SURVEYOR PARKINSON SURVEYS
DESIGNED A.HALL			HORIZ DATUM MGA2020 (2 56) VERT DATUM AHD

TITLE INTERSECTION DETAILS SHEET - 2 OF 2			
SHEET A1	SCALE AS SHOWN	JOB No GS562-03	SHEET No 251 REVISION 0





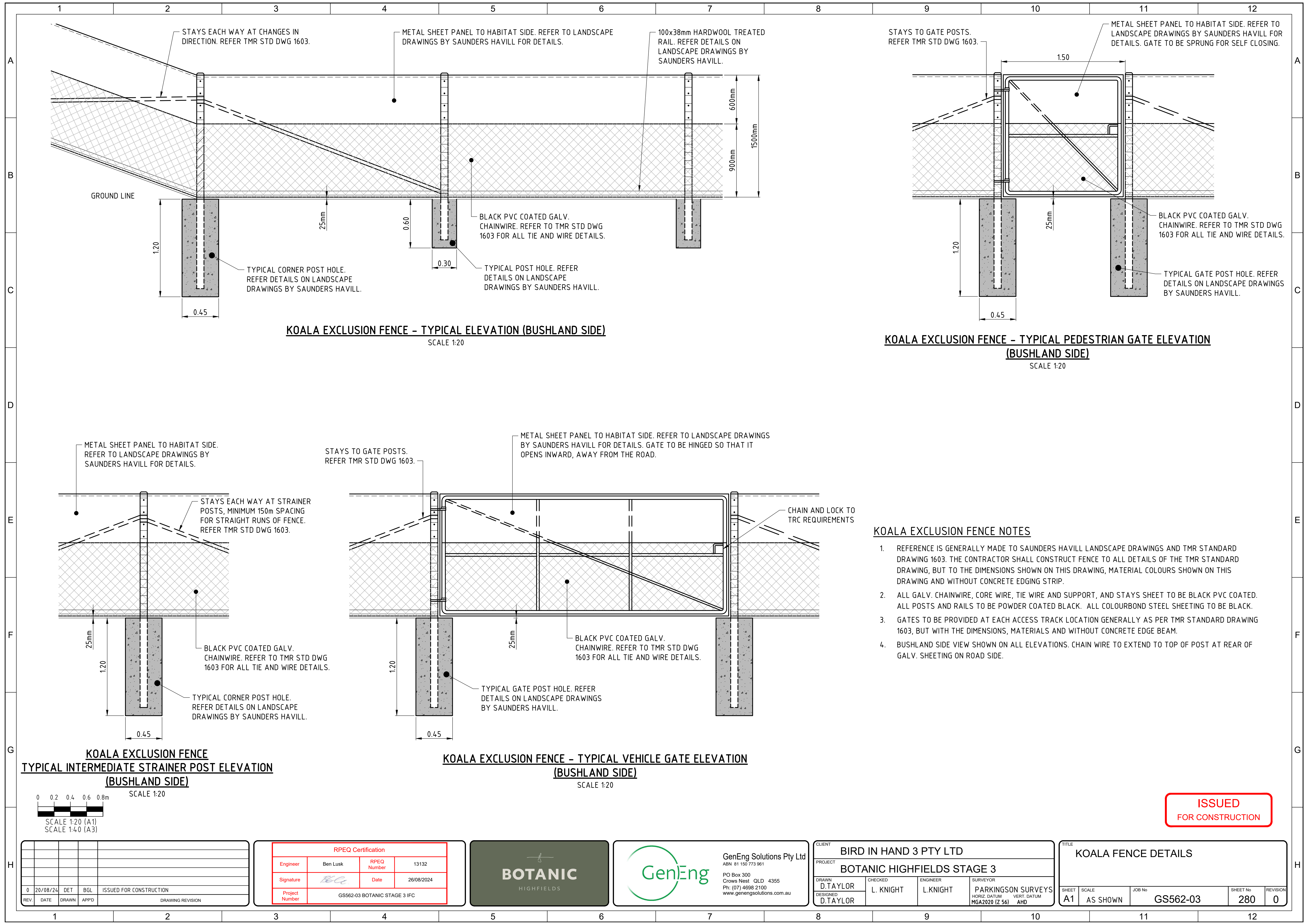
1	14/02/25	DET	BGL	COUNCIL GIA APPROVAL
0	20/08/24	DET	BGL	ISSUED FOR CONSTRUCTION
REV.	DATE	DRAWN	APPD	DRAWING REVISION

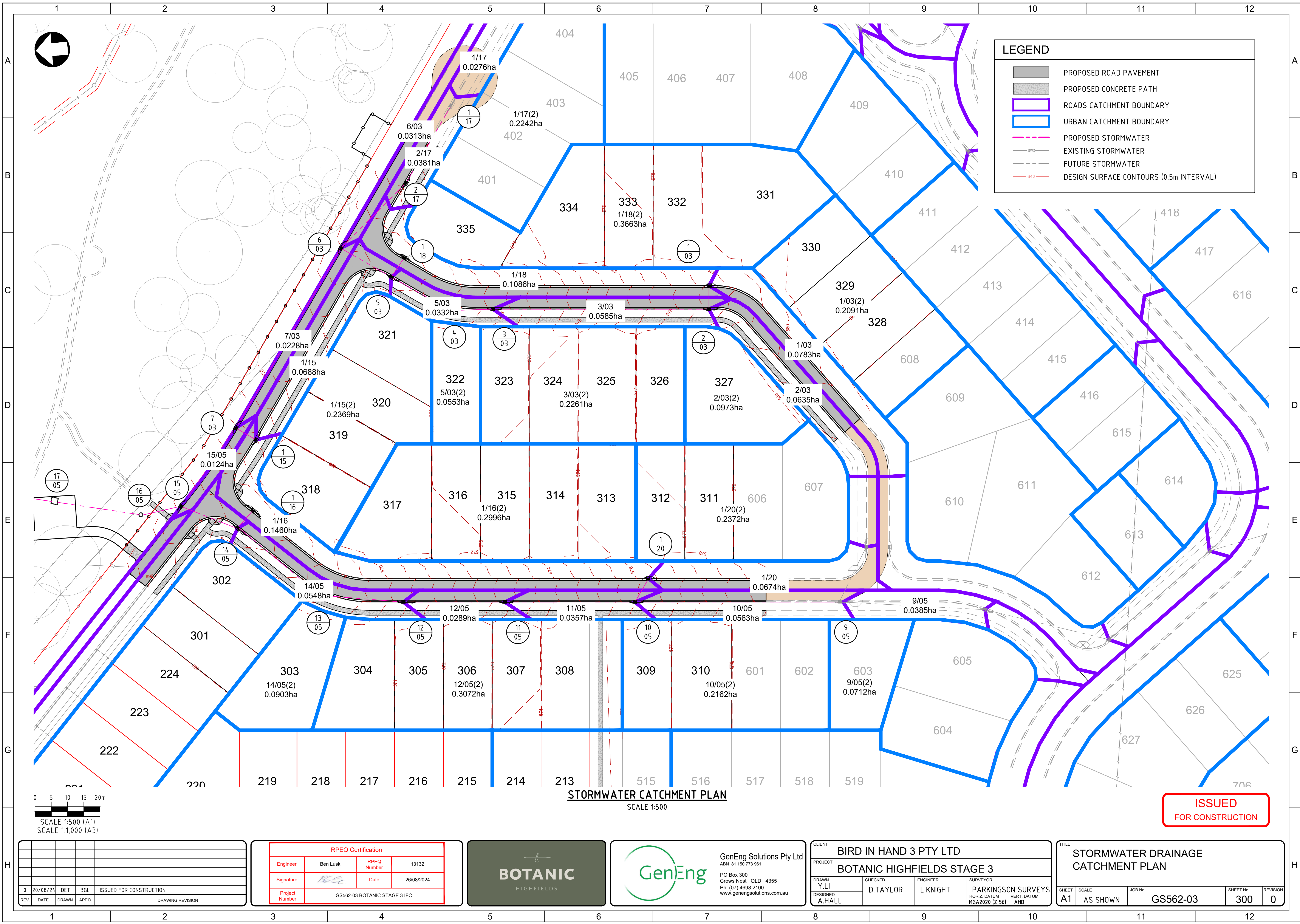
RPEQ Certification			
Engineer	Ben Lusk	RPEQ Number	13132
Signature		Date	26/08/2024
Project Number	GS562-03 BOTANIC STAGE 3 IFC		



CLIENT BIRD IN HAND 3 PTY LTD			
PROJECT BOTANIC HIGHFIELDS STAGE 3			
DRAWN Y.LI	CHECKED D.TAYLOR	ENGINEER L.KNIGHT	SURVEYOR PARKINSON SURVEYS
DESIGNED A.HALL			HORIZ DATUM MGA2020 (2 56) VERT DATUM AHD

TITLE SIGNAGE AND LINEMARKING PLAN			
SHEET A1	SCALE AS SHOWN	JOB No GS562-03	SHEET No 270
			REVISION 1





LEGEND

- PROPOSED ROAD PAVEMENT
- PROPOSED CONCRETE PATH
- ROADS CATCHMENT BOUNDARY
- URBAN CATCHMENT BOUNDARY
- PROPOSED STORMWATER
- EXISTING STORMWATER
- FUTURE STORMWATER
- DESIGN SURFACE CONTOURS (0.5m INTERVAL)

STORMWATER CATCHMENT PLAN
SCALE 1:500

**ISSUED
FOR CONSTRUCTION**

0	20/08/24	DET	BGL	ISSUED FOR CONSTRUCTION
REV	DATE	DRAWN	APPD	DRAWING REVISION

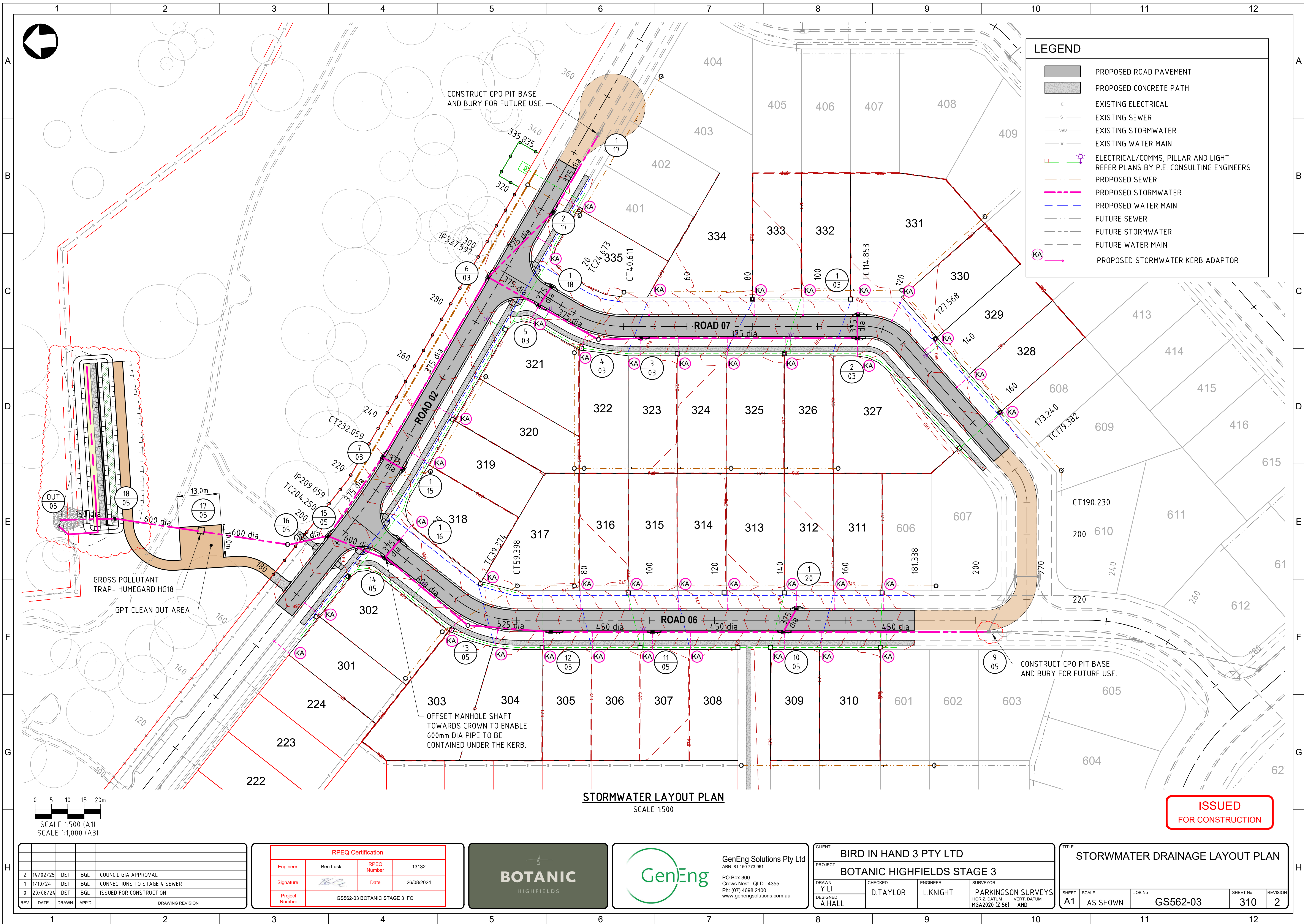
RPEQ Certification			
Engineer	Ben Lusk	RPEQ Number	13132
Signature	<i>[Signature]</i>	Date	26/08/2024
Project Number	GS562-03 BOTANIC STAGE 3 IFC		



GenEng
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CLIENT BIRD IN HAND 3 PTY LTD			
PROJECT BOTANIC HIGHFIELDS STAGE 3			
DRAWN Y.LI	CHECKED D.TAYLOR	ENGINEER L.KNIGHT	SURVEYOR PARKINSON SURVEYS
DESIGNED A.HALL			HORIZ DATUM MGA2020 (2 56) VERT DATUM AHD

TITLE STORMWATER DRAINAGE CATCHMENT PLAN			
SHEET A1	SCALE AS SHOWN	JOB No GS562-03	SHEET No 300
			REVISION 0



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

STORMWATER LAYOUT PLAN
SCALE 1:500

ISSUED
FOR CONSTRUCTION

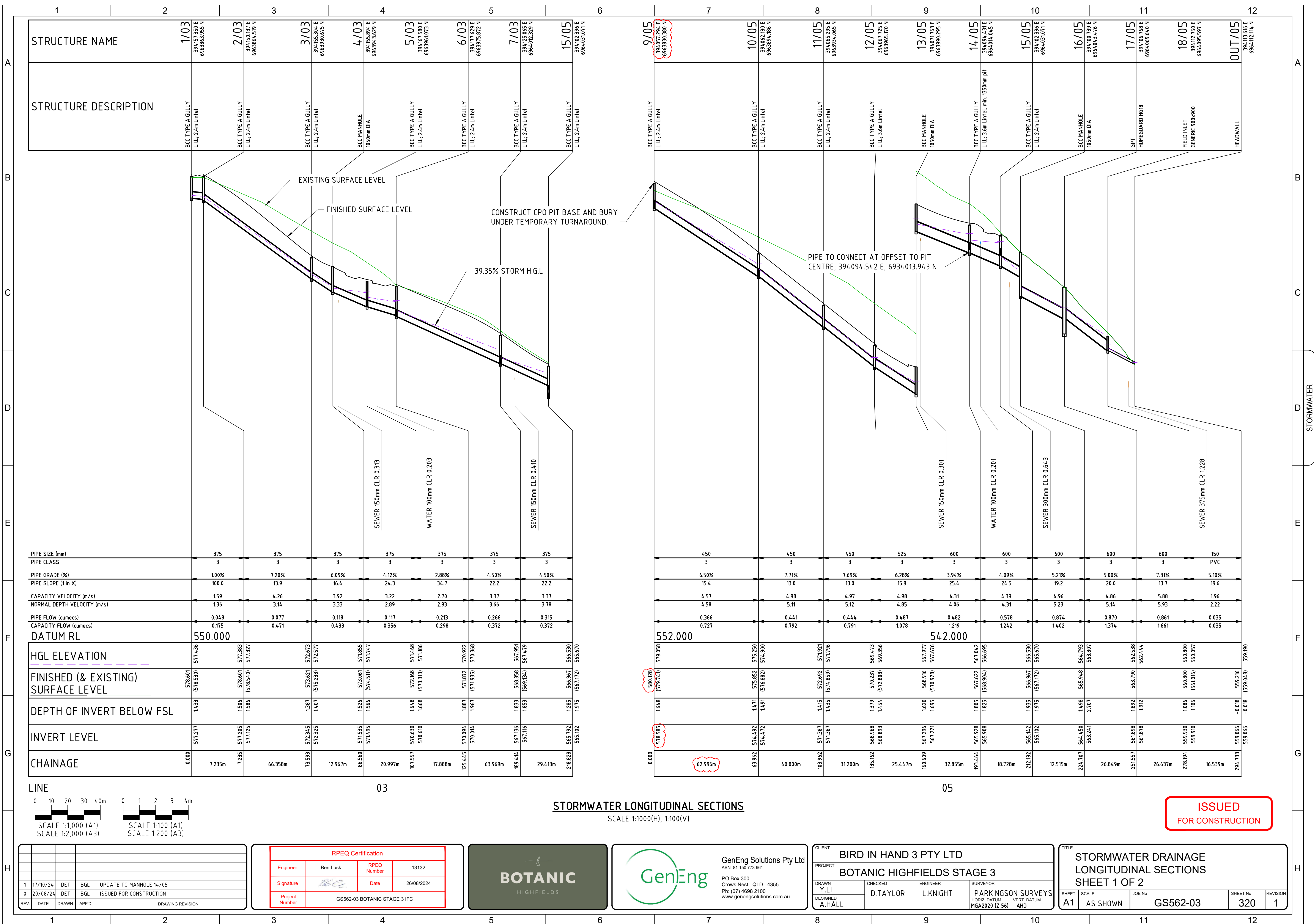
REV.	DATE	DRAWN	APPD	DRAWING REVISION
2	14/02/25	DET	BGL	COUNCIL GIA APPROVAL
1	1/10/24	DET	BGL	CONNECTIONS TO STAGE 4 SEWER
0	20/08/24	DET	BGL	ISSUED FOR CONSTRUCTION

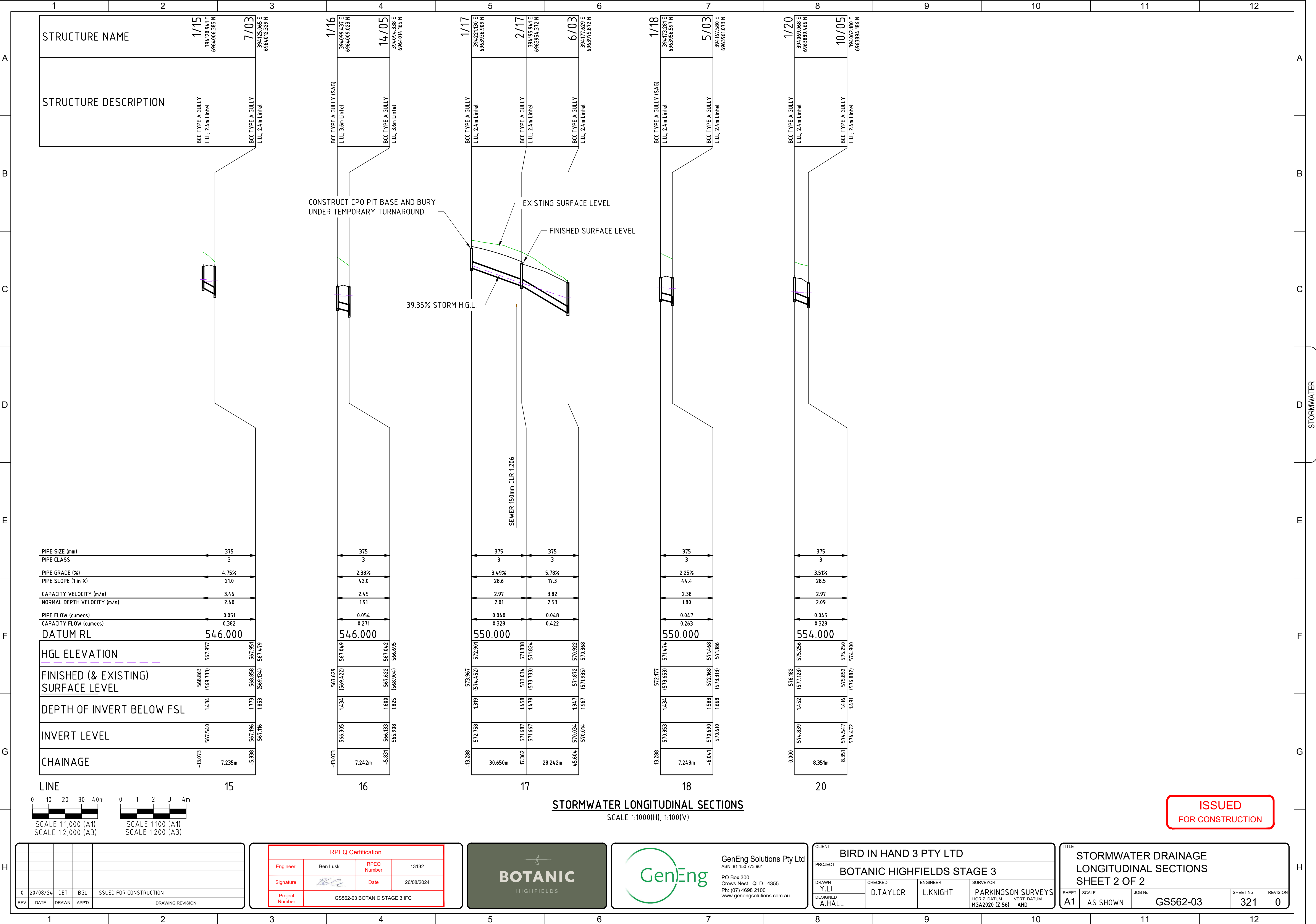
RPEQ Certification			
Engineer	Ben Lusk	RPEQ Number	13132
Signature		Date	26/08/2024
Project Number	GS562-03 BOTANIC STAGE 3 IFC		



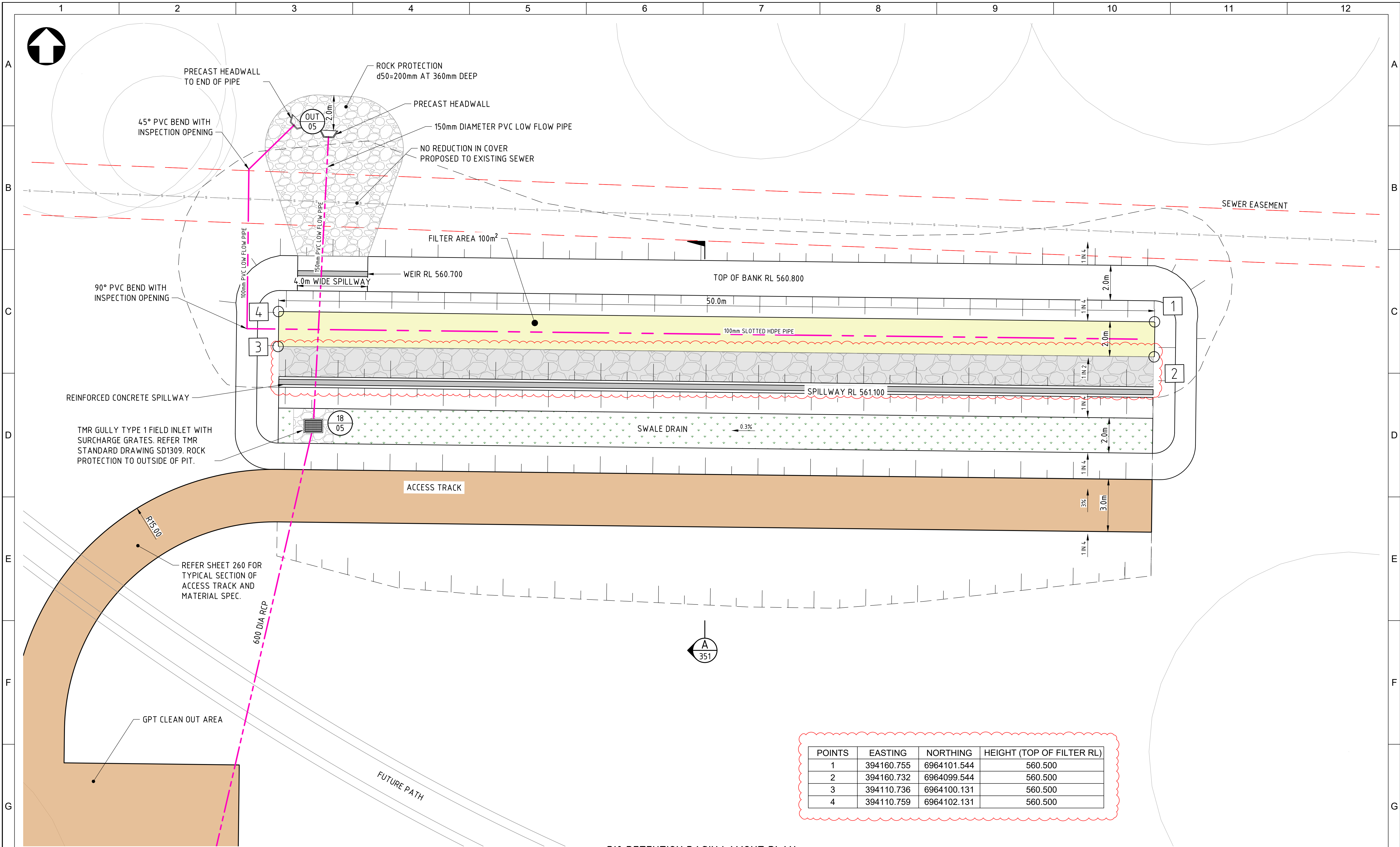
CLIENT BIRD IN HAND 3 PTY LTD			
PROJECT BOTANIC HIGHFIELDS STAGE 3			
DRAWN Y.LI	CHECKED D.TAYLOR	ENGINEER L.KNIGHT	SURVEYOR PARKINSON SURVEYS
DESIGNED A.HALL			VERT. DATUM MGA2020 (2 56) AHD

TITLE STORMWATER DRAINAGE LAYOUT PLAN			
SHEET A1	SCALE AS SHOWN	JOB No GS562-03	SHEET No 310
			REVISION 2





[illegible]



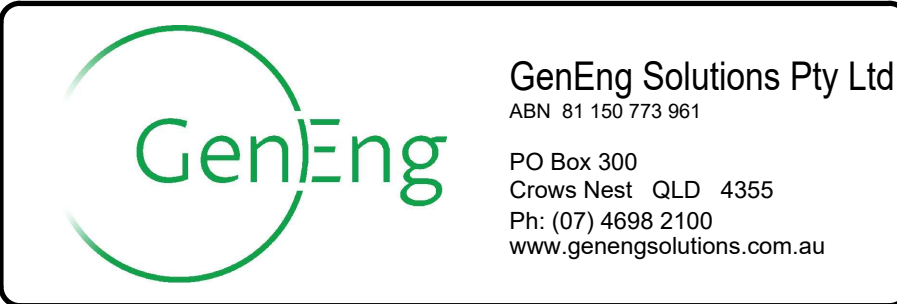
BIO RETENTION BASIN LAYOUT PLAN
SCALE 1:100

POINTS	EASTING	NORTHING	HEIGHT (TOP OF FILTER RL)
1	394160.755	6964101.544	560.500
2	394160.732	6964099.544	560.500
3	394110.736	6964100.131	560.500
4	394110.759	6964102.131	560.500

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

REV.	DATE	DRAWN	APPD	DRAWING REVISION
1	14/02/25	DET	BGL	COUNCIL GIA APPROVAL
0	20/08/24	DET	BGL	ISSUED FOR CONSTRUCTION

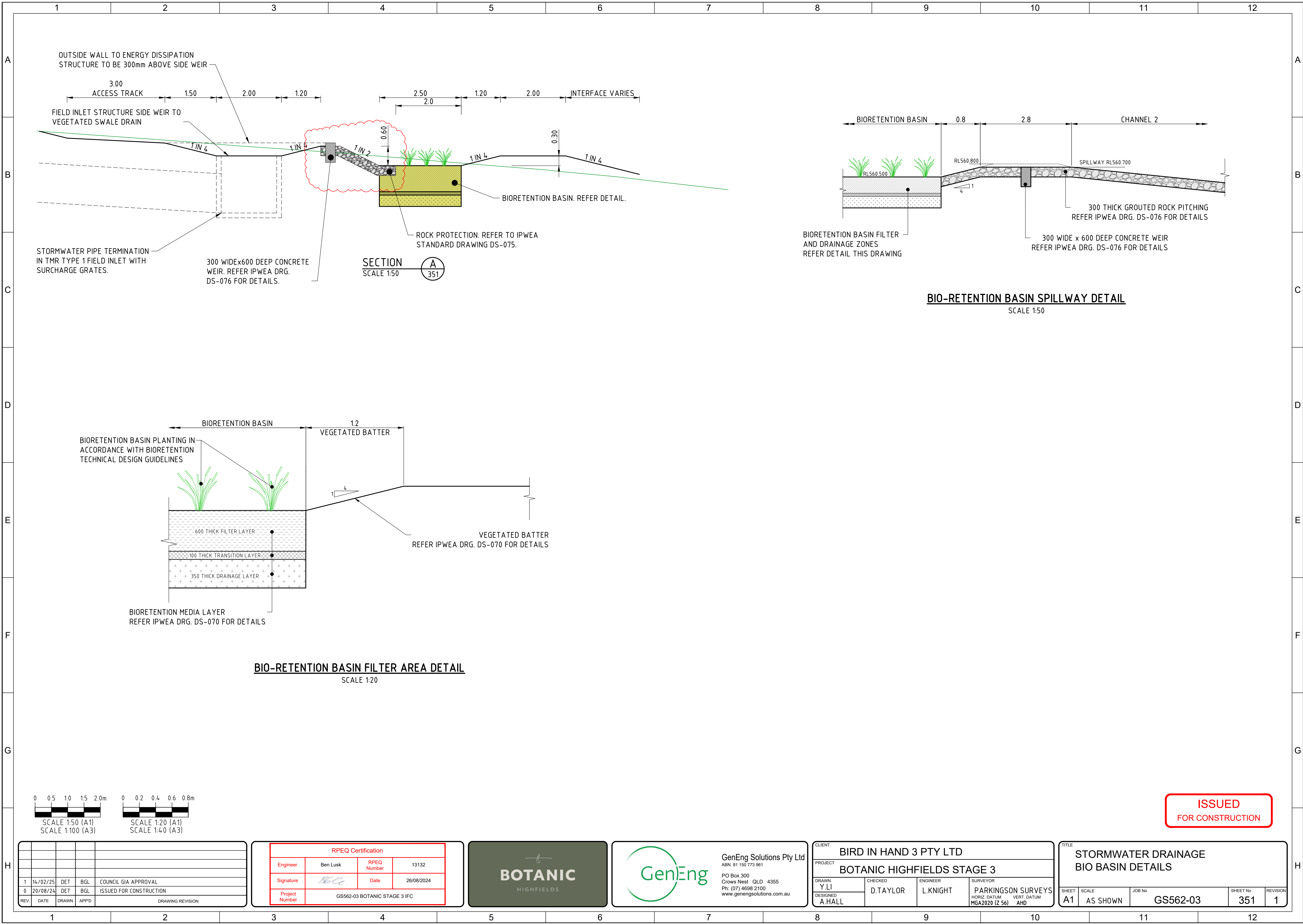
RPEQ Certification			
Engineer	Ben Lusk	RPEQ Number	13132
Signature		Date	26/08/2024
Project Number	GS562-03 BOTANIC STAGE 3 IFC		



CLIENT BIRD IN HAND 3 PTY LTD			
PROJECT BOTANIC HIGHFIELDS STAGE 3			
DRAWN Y.LI	CHECKED D.TAYLOR	ENGINEER L.KNIGHT	SURVEYOR PARKINSON SURVEYS
DESIGNED A.HALL			HORIZ DATUM MGA2020 (2 56) VERT DATUM AHD

TITLE STORMWATER DRAINAGE BIO BASIN LAYOUT PLAN			
SHEET A1	SCALE AS SHOWN	JOB No GS562-03	SHEET No 350
			REVISION 1

ISSUED
FOR CONSTRUCTION



BIO-RETENTION BASIN FILTER AREA DETAIL
SCALE 1:20

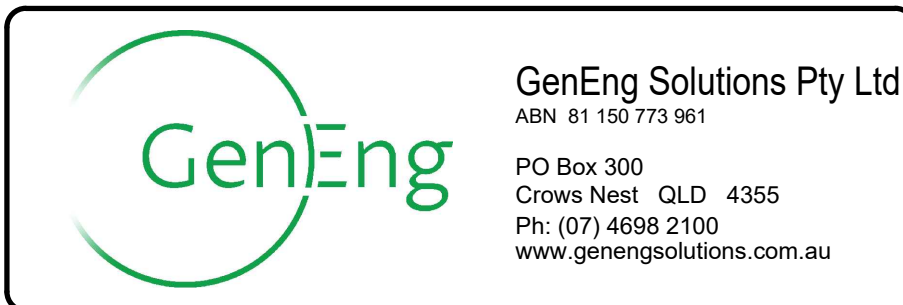
BIO-RETENTION BASIN SPILLWAY DETAIL
SCALE 1:50

0 0.5 1.0 1.5 2.0m
SCALE 1:50 (A1)
SCALE 1:100 (A3)

0 0.2 0.4 0.6 0.8m
SCALE 1:20 (A1)
SCALE 1:40 (A3)

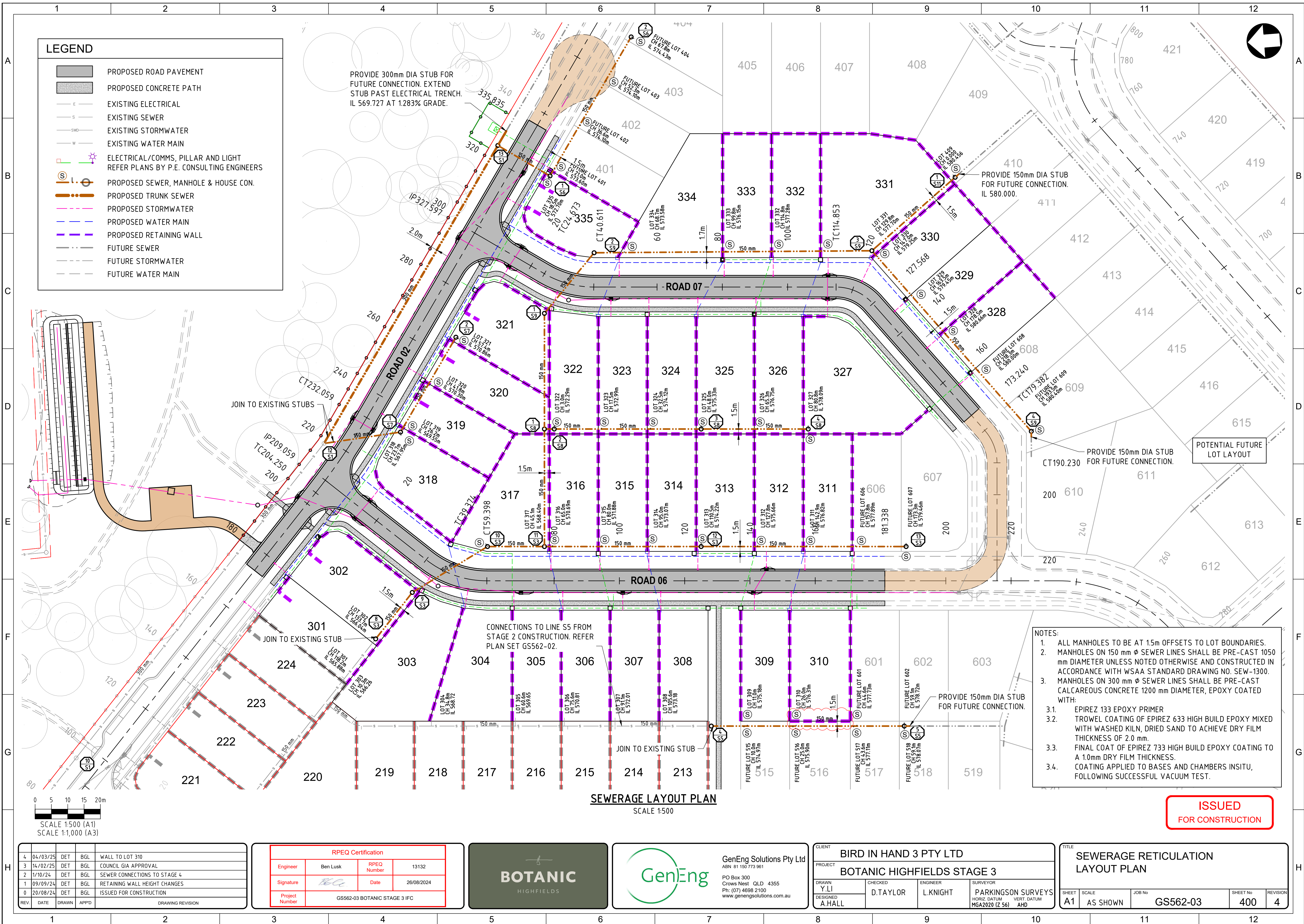
REV.	DATE	DRAWN	APPD	DRAWING REVISION
1	14/02/25	DET	BGL	COUNCIL GIA APPROVAL
0	20/08/24	DET	BGL	ISSUED FOR CONSTRUCTION

RPEQ Certification			
Engineer	Ben Lusk	RPEQ Number	13132
Signature	<i>BCL</i>	Date	26/08/2024
Project Number	GS562-03 BOTANIC STAGE 3 IFC		



CLIENT BIRD IN HAND 3 PTY LTD			
PROJECT BOTANIC HIGHFIELDS STAGE 3			
DRAWN Y.LI	CHECKED D.TAYLOR	ENGINEER L.KNIGHT	SURVEYOR PARKINSON SURVEYS
DESIGNED A.HALL			HORIZ DATUM MGA2020 (2 56) VERT DATUM AHD

TITLE STORMWATER DRAINAGE BIO BASIN DETAILS				
SHEET A1	SCALE AS SHOWN	JOB No GS562-03	SHEET No 351	REVISION 1



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, MANHOLE & HOUSE CON.
- PROPOSED TRUNK SEWER
- PROPOSED STORMWATER
- PROPOSED WATER MAIN
- PROPOSED RETAINING WALL
- FUTURE SEWER
- FUTURE STORMWATER
- FUTURE WATER MAIN

NOTES:

- ALL MANHOLES TO BE AT 1.5m OFFSETS TO LOT BOUNDARIES.
- 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.
- MANHOLES ON 300 mm Ø SEWER LINES SHALL BE PRE-CAST CALCREOUS CONCRETE 1200 mm DIAMETER, EPOXY COATED WITH:
 - EPIREZ 133 EPOXY PRIMER
 - TROWEL COATING OF EPIREZ 633 HIGH BUILD EPOXY MIXED WITH WASHED KILN, DRIED SAND TO ACHIEVE DRY FILM THICKNESS OF 2.0 mm.
 - FINAL COAT OF EPIREZ 733 HIGH BUILD EPOXY COATING TO A 1.0mm DRY FILM THICKNESS.
 - COATING APPLIED TO BASES AND CHAMBERS INSITU, FOLLOWING SUCCESSFUL VACUUM TEST.

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

SEWERAGE LAYOUT PLAN
SCALE 1:500

**ISSUED
FOR CONSTRUCTION**

4	04/03/25	DET	BGL	WALL TO LOT 310
3	14/02/25	DET	BGL	COUNCIL GIA APPROVAL
2	1/10/24	DET	BGL	SEWER CONNECTIONS TO STAGE 4
1	09/09/24	DET	BGL	RETAINING WALL HEIGHT CHANGES
0	20/08/24	DET	BGL	ISSUED FOR CONSTRUCTION
REV.	DATE	DRAWN	APPD	DRAWING REVISION

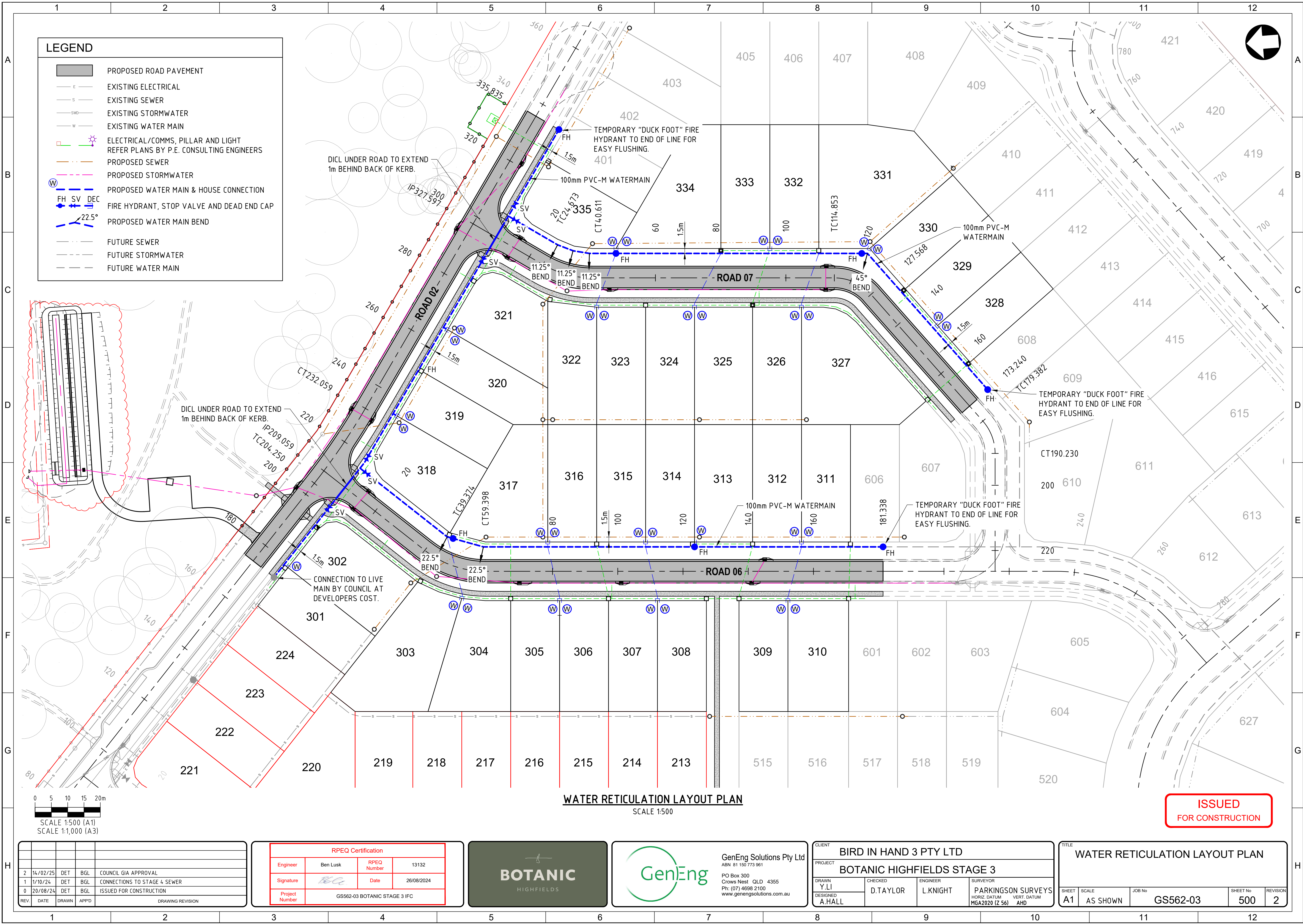
RPEQ Certification			
Engineer	Ben Lusk	RPEQ Number	13132
Signature		Date	26/08/2024
Project Number	GS562-03 BOTANIC STAGE 3 IFC		



GenEng
GenEng Solutions Pty Ltd
ABN 81 150 773 981
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Crowe Nest QLD 4355
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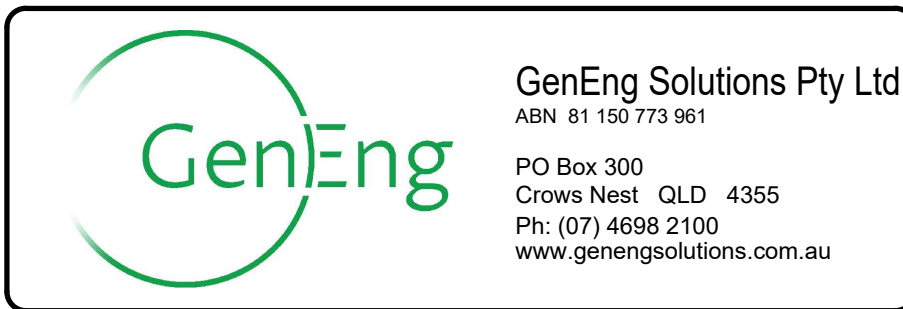
CLIENT BIRD IN HAND 3 PTY LTD			
PROJECT BOTANIC HIGHFIELDS STAGE 3			
DRAWN Y.LI	CHECKED D.TAYLOR	ENGINEER L.KNIGHT	SURVEYOR PARKINSON SURVEYS
DESIGNED A.HALL			HORIZ DATUM MGA2020 (25 56) VERT DATUM AHD

TITLE SEWERAGE RETICULATION LAYOUT PLAN			
SHEET A1	SCALE AS SHOWN	JOB No GS562-03	SHEET No 400
			REVISION 4



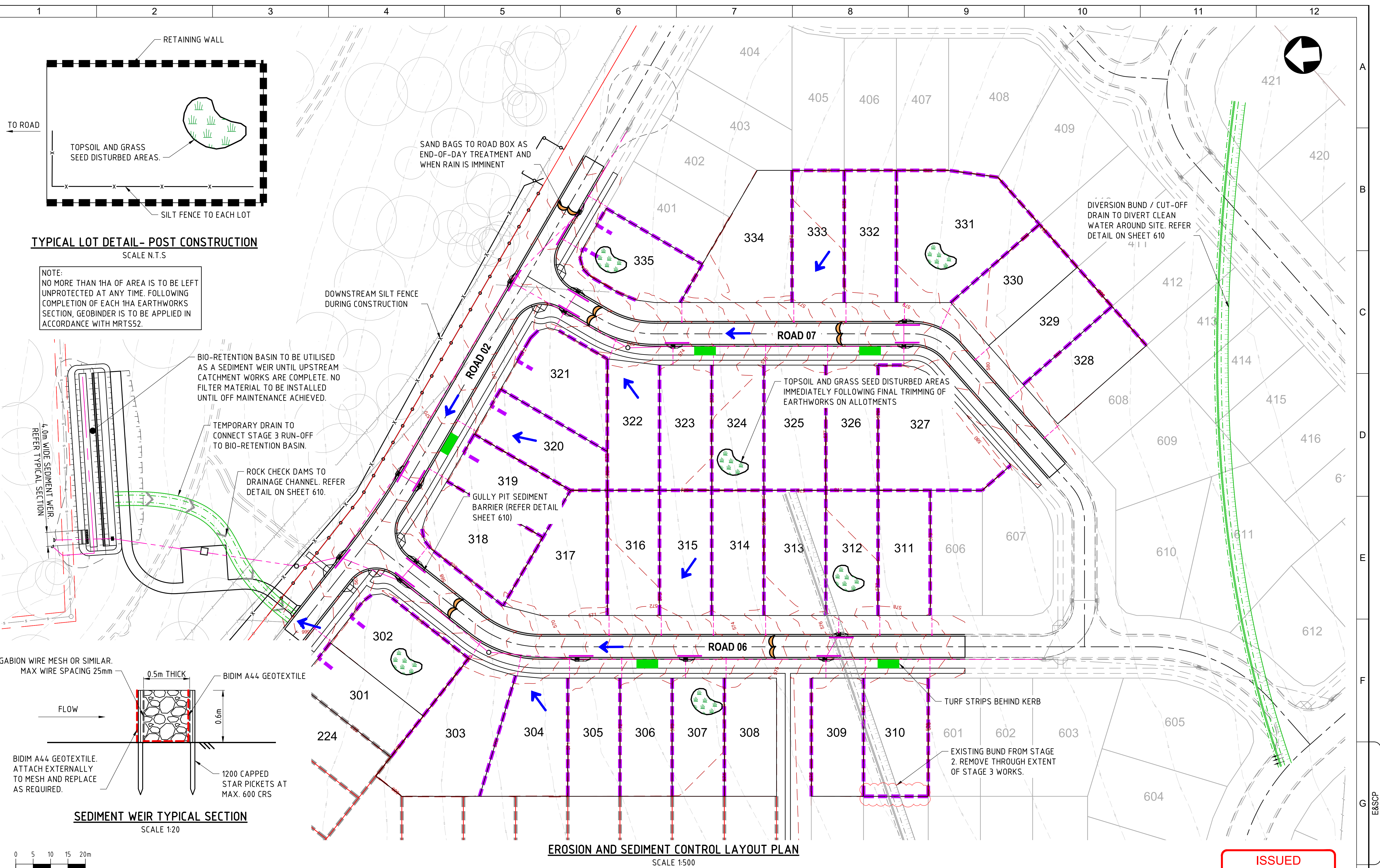
REV.	DATE	DRAWN	APPD	DRAWING REVISION
2	14/02/25	DET	BGL	COUNCIL GIA APPROVAL
1	1/10/24	DET	BGL	CONNECTIONS TO STAGE 4 SEWER
0	20/08/24	DET	BGL	ISSUED FOR CONSTRUCTION

RPEQ Certification			
Engineer	Ben Lusk	RPEQ Number	13132
Signature		Date	26/08/2024
Project Number	GS562-03 BOTANIC STAGE 3 IFC		



CLIENT			
BIRD IN HAND 3 PTY LTD			
PROJECT			
BOTANIC HIGHFIELDS STAGE 3			
DRAWN	CHECKED	ENGINEER	SURVEYOR
Y.LI	D.TAYLOR	L.KNIGHT	PARKINSON SURVEYS
DESIGNED	VERT. DATUM		
A.HALL	MGA2020 (2 56) AHD		

TITLE			
WATER RETICULATION LAYOUT PLAN			
SHEET	SCALE	JOB No	SHEET No
A1	AS SHOWN	GS562-03	500
REVISION			2



ISSUED
FOR CONSTRUCTION

3	04/03/25	DET	BGL	WALL TO LOT 310
2	14/02/25	DET	BGL	COUNCIL GIA APPROVAL
1	09/09/24	DET	BGL	RETAINING WALL HEIGHT CHANGES
0	20/08/24	DET	BGL	ISSUED FOR CONSTRUCTION
REV.	DATE	DRAWN	APPD	DRAWING REVISION

RPEQ Certification			
Engineer	Ben Lusk	RPEQ Number	13132
Signature		Date	26/08/2024
Project Number	GS562-03 BOTANIC STAGE 3 IFC		



CLIENT		BIRD IN HAND 3 PTY LTD	
PROJECT		BOTANIC HIGHFIELDS STAGE 3	
DRAWN Y.LI	CHECKED D. TAYLOR	ENGINEER L. KNIGHT	SURVEYOR PARKINSON SURVEYS HORIZ. DATUM MGA2020 (Z 56) VERT. DATUM AHD
DESIGNED A.HALL			

TITLE				
EROSION AND SEDIMENT CONTROL LAYOUT PLAN				
SHEET A1	SCALE AS SHOWN	JOB No GS562-03	SHEET No 600	REVISION 3

EROSION AND SEDIMENT CONTROL ASSESSMENT

1. ASSESSMENT OF EROSION RISK WAS CARRIED OUT IN ACCORDANCE WITH URBAN STORMWATER QUALITY PLANNING GUIDELINES 2010. ASSESSMENT DETERMINED THE SITE AS A HIGH 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 IS PROPOSED AT THE LOCATION OF THE FUTURE BIORETENTION BASIN. A TEMPORARY DIVERSION CHANNEL IS TO BE USED TO TAKE WATER FROM THE STAGE 3 CATCHMENT TO THIS WEIR.

STAGING

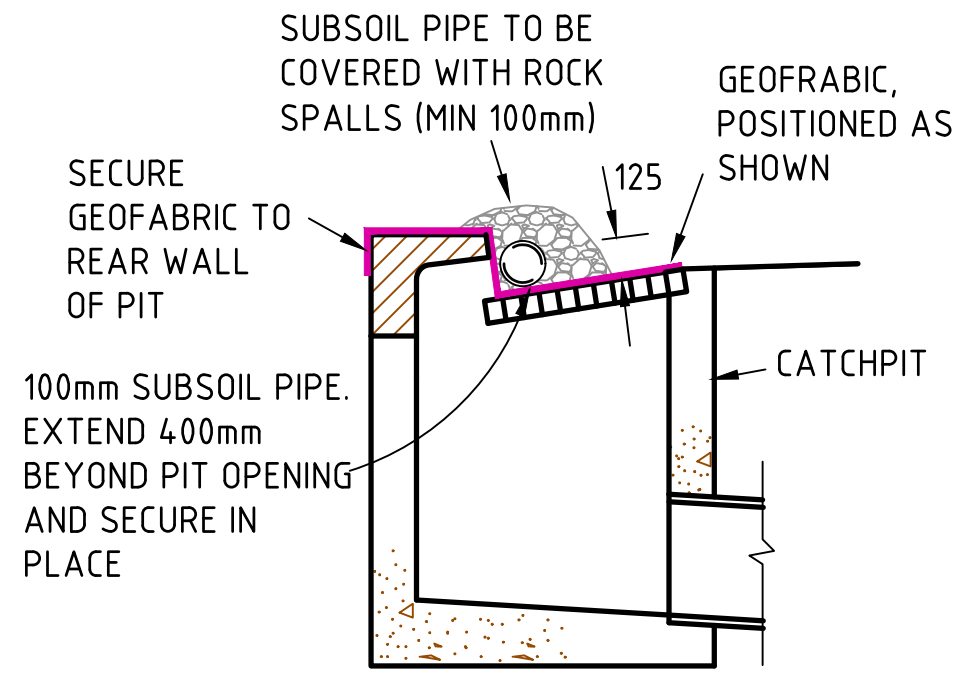
1. EROSION CONTROL DEVICES TO BE INSTALLED PRIOR TO COMMENCEMENT OF EARTHWORKS.
2. SITE STRIPPING OF GROUND COVER AND TOPSOIL SHALL BE MINIMISED SO THAT ONLY SMALL AREAS ARE EXPOSED AT ANY ONE TIME.
3. DISTURBED AREAS ARE TO BE REINSTATED AS SOON AS POSSIBLE AFTER CONSTRUCTION LEVELS ARE ACHIEVED.
4.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

GENERAL NOTES

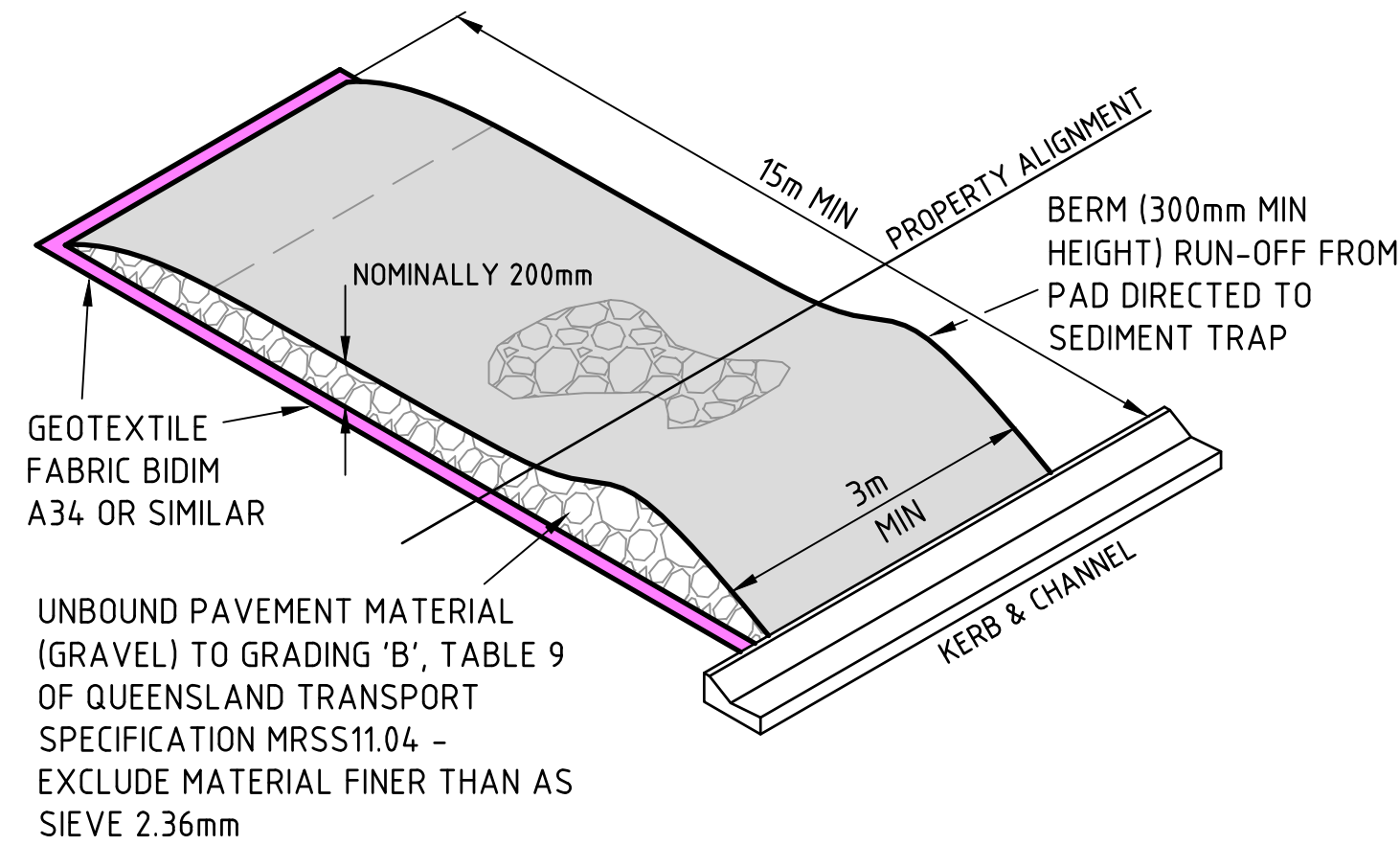
ALL SEDIMENT AND EROSION CONTROL MEASURES IMPLEMENTED DURING THE CONSTRUCTION ARE TO BE IN ACCORDANCE WITH LOCAL/STATE AUTHORITY REQUIREMENTS.

THE GUIDELINES PROVIDE THE NECESSARY REQUIREMENTS AND STANDARD DRAWINGS (SD) AS REFERENCED INDIVIDUALLY BELOW.

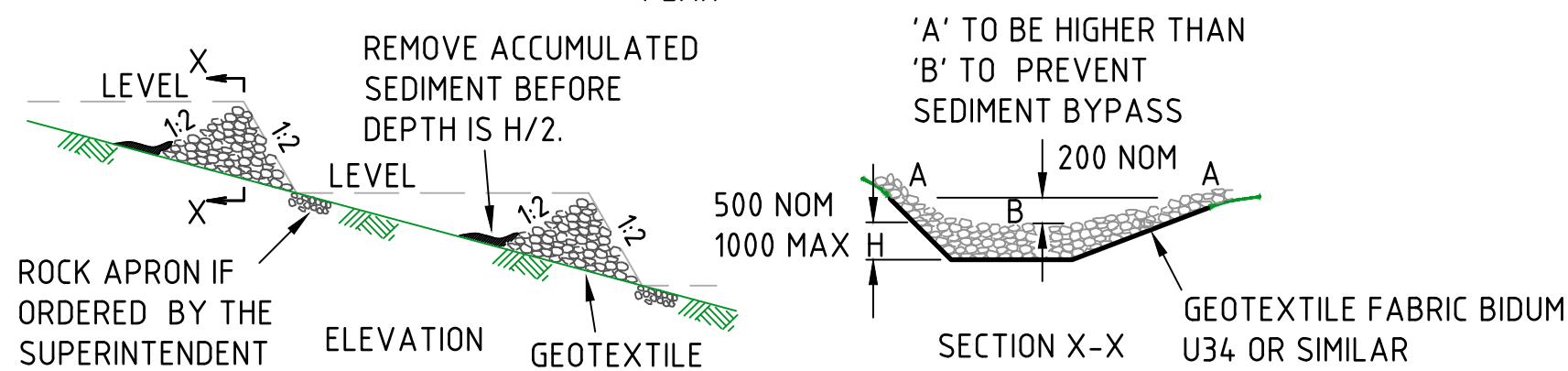
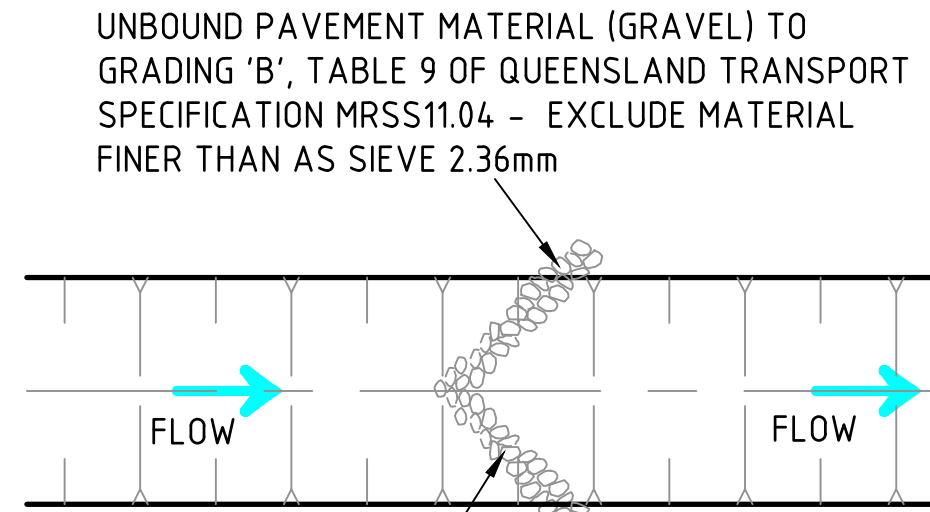
1. GENERAL
- (A) TEMPORARY DRAINAGE CONTROL. FLOW SHOULD BE DIVERTED AROUND THE WORK SITE WHERE POSSIBLE. (SD 5-5 & 5-6)
- (B) ALL DRAINAGE, EROSION AND SEDIMENT CONTROLS TO BE INSTALLED AND BE OPERATIONAL BEFORE COMMENCING UP-SLOPE EARTHWORKS.
- (C) ALL SEDIMENT & EROSION CONTROL DEVICES MUST BE REGULARLY 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.
2. SEDIMENT CONTROL FENCE (SD 6-7)
- (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.
3. 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.
4. SAFETY ISSUES MUST BE CONSIDERED AT ALL TIMES - INCORPORATE TRAFFIC CONTROL DEVICES .
5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ALL SEDIMENT AND EROSION CONTROL MEASURES HAVE BEEN ADDRESSED AS STIPULATED.
6. 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.
7. ADDITIONAL OR DIFFERENT SEDIMENT & EROSION CONTROL DEVICES MAY BE REQUIRED DURING CONSTRUCTION PHASE TO COMPLY WITH THE ABOVE.



GULLY PIT SEDIMENT BARRIER
N.T.S.

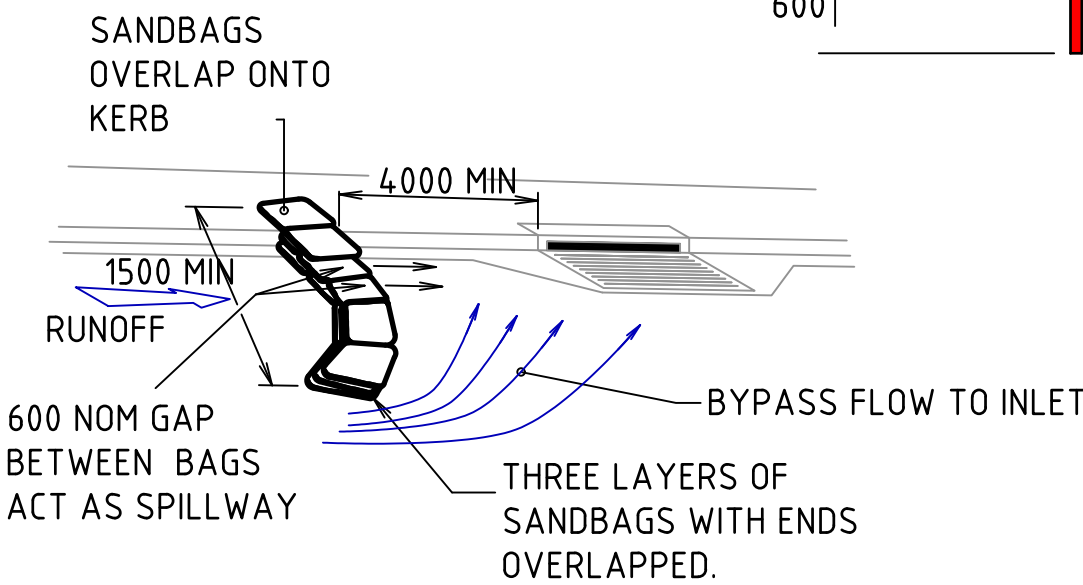


TEMPORARY CONSTRUCTION ACCESS / EXIT
N.T.S.

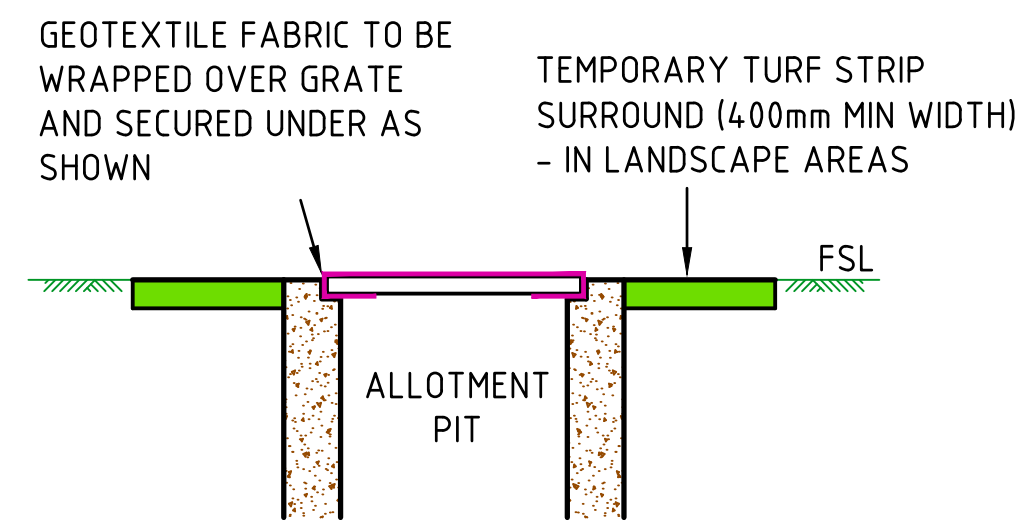


TEMPORARY CHECK DAMS - FLOW CONTROL
N.T.S.

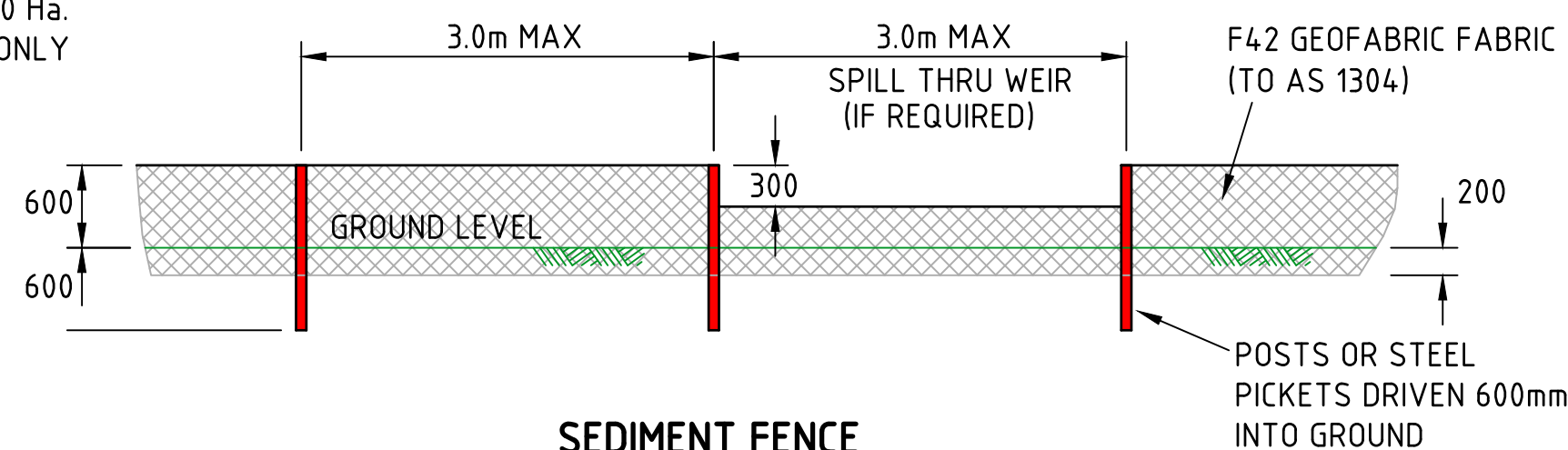
NOTE:
CHECK DAM CATCHMENT AREA LIMITED TO 4.00 Ha.
DEVICE IS INTENDED FOR VELOCITY CONTROL ONLY
- SEDIMENT COLLECTION IS A SECONDARY PURPOSE.



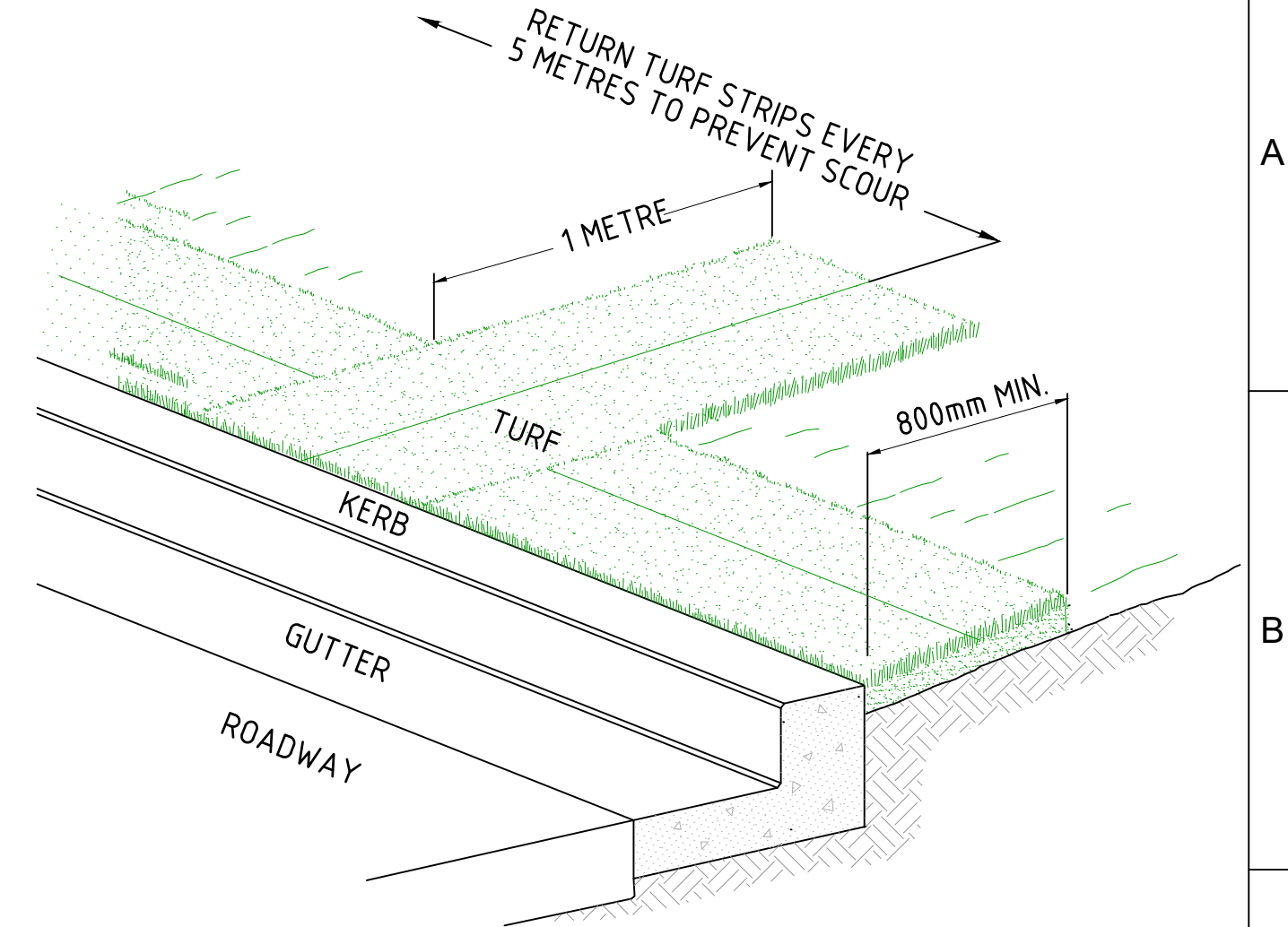
CHECK DAM (SANDBAG) DETAIL
N.T.S.



ALLOTMENT PIT PROTECTION
N.T.S.



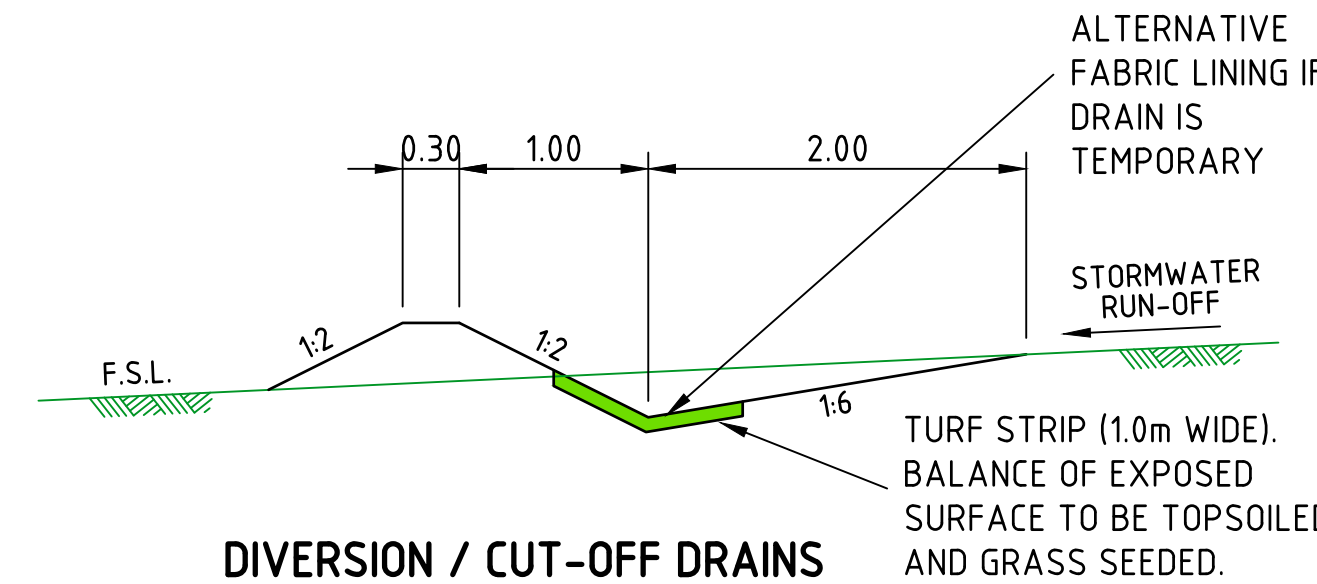
SEDIMENT FENCE
N.T.S.



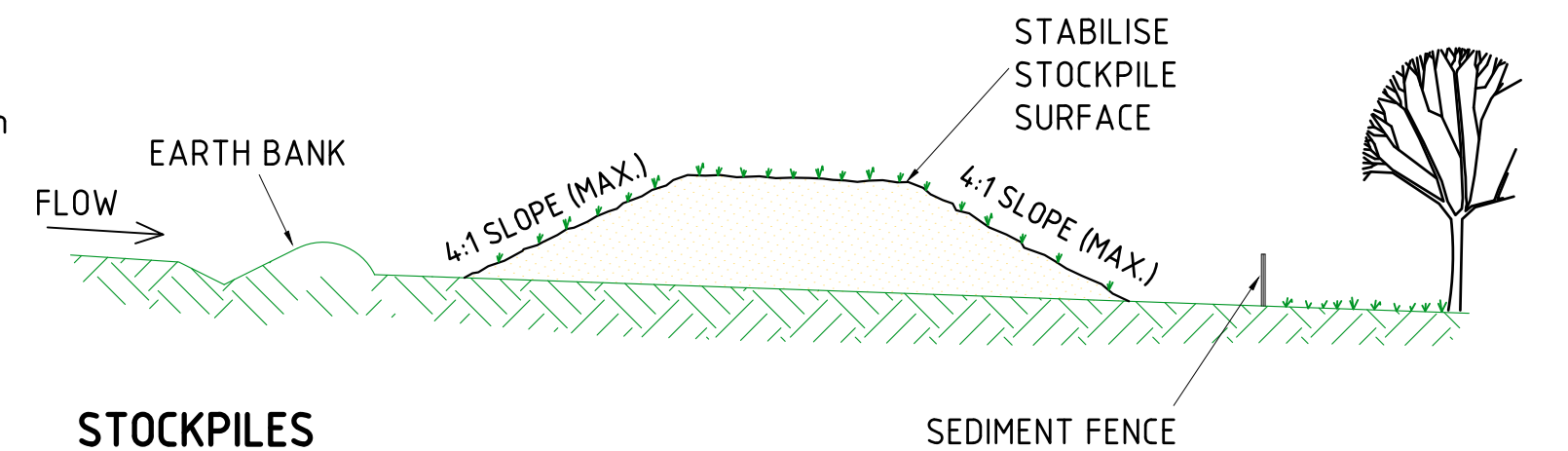
TURF FILTER STRIP DETAIL
N.T.S.

CONSTRUCTION NOTES

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.



DIVERSION / CUT-OFF DRAINS
N.T.S.



STOCKPILES
N.T.S.

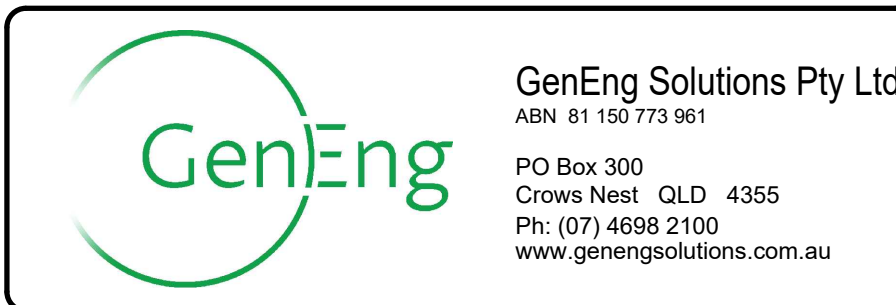
CONSTRUCTION NOTES

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

ISSUED
FOR CONSTRUCTION

REV.	DATE	DRAWN	APPD	DRAWING REVISION
0	20/08/24	DET	BGL	ISSUED FOR CONSTRUCTION

RPEQ Certification			
Engineer	Ben Lusk	RPEQ Number	13132
Signature		Date	26/08/2024
Project Number	GS562-03 BOTANIC STAGE 3 IFC		



CLIENT BIRD IN HAND 3 PTY LTD			
PROJECT BOTANIC HIGHFIELDS STAGE 3			
DRAWN Y.LI	CHECKED D.TAYLOR	ENGINEER L.KNIGHT	SURVEYOR PARKINSON SURVEYS
DESIGNED A.HALL			HORIZ DATUM MGA2020 (2 56) VERT DATUM AHD

TITLE EROSION AN SEDIMENT CONTROL DETAILS AND NOTES			
SHEET A1	SCALE AS SHOWN	JOB No GS562-03	SHEET No 610
			REVISION 0